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「海上搜索與救助人力訓練制度之
規劃建立及培訓作業」
出國報告
附錄

服務機關：交通部
運輸研究所

出國人 職 稱：工程司

姓 名：吳 熙 仁

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THE MARITIME AND COASTGUARD AGENCY

PERSONAL PERFORMANCE PLAN

GUIDANCE NOTES



Maritime and Coastguard Agency

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PART 1 INTRODUCTION

The purpose of performance appraisal

The Maritime and Coastguard Agency is committed to the training and development of all staff. We will help you to reach your full potential, and to contribute fully to the overall success of the Agency. We will ensure you have a clear understanding of your role, what is expected of you, how you can best achieve it and what the Agency can do to help you improve and develop. As an organisation, MCA will ensure that these issues are clearly communicated to everyone and will listen to what you tell us.

The performance appraisal system forms an essential part of the performance management process, providing you with valuable information about how well you are doing, where you need to improve, and allowing informed decisions to be made about staff training and development needs. To make the best use of your performance appraisal system to the full benefit of Agency and staff, we need to ensure that it addresses all the key areas effectively.

The MCA performance appraisal system has been designed to meet a number of requirements. These are set out below, and are explained throughout these guidance notes.

The performance appraisal system is designed to:

establish the main purpose and responsibilities of your job. It enables you to set and agree work objectives and identify performance standards for each job through a framework of competencies, thus ensuring that everyone knows what is expected of them

establish a consistent framework for dialogue between you and your line managers providing for continual feedback on objectives and performance throughout the appraisal year

it assists you, and your line managers to reach informed decisions about training and development needs

identify areas where you may need to improve

motivate, help and encourage you to improve your performance and develop your potential

ensure that everyone is treated fairly, enabling opportunities to discuss specific individual needs

provide a basis for an open, honest and fair assessment of performance

provide information for decisions about performance related pay.

Equal Opportunities

The Maritime and Coastguard Agency is an equal opportunities employer. This means that all staff are entitled to receive fair and equal treatment in all areas of their working life, irrespective of sex, marital status, sexual orientation, age, race, colour, nationality, ethnic or national origin, religion, disability or part-time status.

We are committed to an appraisal system that is fair, open, objective, and based solely on performance. We are all responsible for ensuring that the Agency's legal obligations and equal opportunity policies are put into effect. Particular care should be taken to guard against the more subtle and unconscious varieties of discrimination arising from pre-conceived ideas about capabilities or characteristics of particular groups.

Staff working part-time or reduced hours should be assessed against what could reasonably be expected in their actual hours, not what might be achieved in full-time hours.

Care should be taken not to judge part-time jobs as less demanding than full-time jobs at the same grade, and to give staff in such jobs lower performance markings on this basis alone. This would be unfair, and since part-time jobs are more likely to be filled by women, would also be discriminatory. Similarly, staff with domestic responsibilities are more likely to be women, and may be less able to be flexible with hours of attendance. If working longer hours is taken into account when assessing the demands of a job, and hence assessing performance, that may be discriminatory. This applies equally to full-time working.

Care should also be taken not to discriminate against staff who do not appear to join in what may be considered "normal" team and social activities such as social events outside the office, due to constraints on their working hours, or for other personal or cultural reasons.

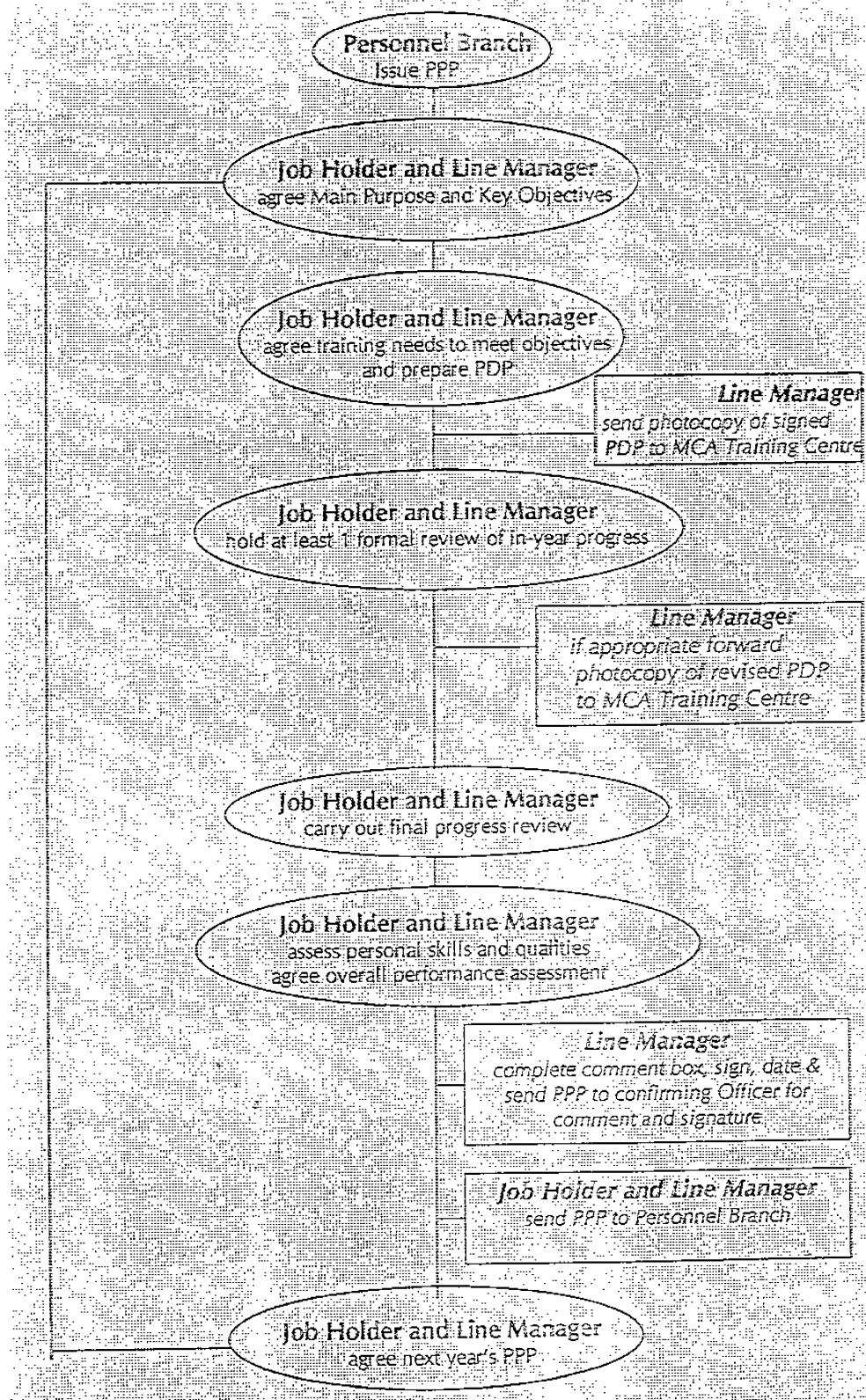
Staff with disabilities should be assessed according to the same standards as other staff. The Agency is prepared to consider special arrangements for staff who are disabled to help them perform to the full extent of their ability, such as

- * physical adaptation to buildings
- * the provision of physical aids or equipment
- * restructuring of individual jobs within the requirements of the grade

The Agency is also committed to ensure that no member of staff suffers harassment or bullying, from management or peers, either as a result of personal attributes or from pre-conceived ideas about capabilities or characteristics of particular groups.

Further advice and guidance on equal opportunities issues can be obtained from the equal opportunities officer, Sheri Lang, 1/18 Spring Place, Tel 01703 329267.

PERSONAL PERFORMANCE PLAN - THE PROCESS



PART 2 WHO IS INVOLVED

The role of the jobholder

We have already stated that MCA is committed to helping each of you develop to reach your full potential, and the personal performance appraisal system forms an integral part of this process. Your personal performance plan (PPP), including your personal development plan (PDP), are the tools that enable you to plan your development, training opportunities and career path. It forms your performance, training and development record throughout your career with MCA and it is you, the Job Holder, who must play an active part in ensuring it is completed accurately, promptly, objectively, and that it fairly represents a true picture of each year's performance. You should keep your PPP, ensure it is reviewed, and that copies of the relevant sections are sent to Personnel and the Training Centre. You should ensure that you have a good understanding of the personal performance appraisal system, and that you regularly refresh your knowledge of the personal performance plan procedures.

As a Job Holder, it is your responsibility, in discussion with your line manager, to:

agree the main purpose and key objectives of your job

agree your personal development plan

*ensure regular communication with your Line Manager **throughout** the year to discuss your performance - nothing should come as a surprise at a formal progress review meeting*

review your in-year progress, making any amendments to your plan as may be necessary

review your end of year progress and assess your overall performance

agree next year's personal performance plan.

Although you should ensure that you maintain regular communication with your Line Manager, there must be at least one formal in-year review and a year end review. The following gives you, the Job Holder, advice on best practice about formal reviews and how to ensure that you and your Line Manager, make the most effective use of them.

before a formal review

consider the relevant sections of your PPP paying particular attention to your agreed job specific objectives

be prepared to give examples of your achievements against your objectives

be prepared to give any reasons why you were unable to achieve your objectives

be prepared to demonstrate your skill levels against the Competence Framework,

consider your training and development needs and the opportunities available to help you reach your potential

consider the role your Line Manager has played in supporting and guiding you to achieve your objectives and consider their role as a manager, referring to the Profile of the Good People Manager, (Annex A)

at the final review, prepare to discuss your objectives for the forthcoming year

during a formal review

actively contribute to the dialogue to discuss your performance and listen constructively to feedback from your Line Manager and use it to improve your performance

you should be able to talk about your performance, giving examples of any difficulties you may have experienced, and proposing any ideas you may have on how work can be re-organised to be more effective and efficient

if you have undertaken any training and development activities discuss how these opportunities have helped you to improve your performance

discuss the proposed assessments and comments made by your Line Manager - you should aim to resolve any disagreements with your Line Manager before the form is completed

at the final progress review, agree pages 2 and 3 of the PPP for the coming year

initiate discussion on your longer term development, if appropriate

if requested, offer your line manager feedback on how they can help you improve your performance.

The role of the Line Manager

As a Line Manager you must ensure that your staff are performing to the required standard, are contributing to the Agency's objectives by meeting their own key objectives, and that they are properly trained and equipped to meet those objectives. You should be able to effectively monitor performance, appraise it fairly, objectively and openly. Through continual dialogue you should support and guide your staff on progress against objectives and suggest how performance could be improved.

There are 2 publications which will help you in your role as Line Manager, and give sound guidance about getting the best from your staff

- * MCA "Profile of the Good people Manager" which is included at Annex A
- * Booklet "Developing People - the Line Manager's Job", a copy of which has been made available to all staff attending the PPP training course

It is your responsibility, in discussion with the Job Holder, to:

agree the main purpose and key objectives of the job,

agree a personal development plan for each of your staff

*ensure regular communication with the Job Holder **throughout** the year to discuss their performance. Nothing should come as a surprise at a formal progress review meeting*

review the in-year progress, making any amendments to each of your staff's plans as may be necessary

review the end of year progress and assess their overall performance

make sure any training that has been identified has been carried out effectively

agree next year's personal performance plan for each of your staff.

Although you should ensure that you maintain regular communication with the Job Holder, there must be at least one formal in-year review and a year end review. The following gives you, the Line Manager, advice on best practice about formal reviews and how to ensure that you, and the Job Holder, make the most effective use of them.

Before a formal review

arrange the appraisal discussion giving the Job Holder sufficient notice (about 2 weeks)

prepare well for the appraisal discussion, read the guidance notes and consider specific examples to support your assessment of the Job Holder, seeking views from others if relevant

refer to notes you have made throughout the performance cycle and at in-year review(s)

ensure there will be no interruptions during the discussion

allow sufficient time to ensure all aspects affecting performance are discussed - there is no set time for a performance review, it should take as long as it needs - Refer to the "Profile of the Good People Manager".

During a formal review

outline the purpose of the discussion and its structure

encourage a joint approach to develop new ideas and tackle problems, try to create a relaxed atmosphere

review performance by discussing objectives, how competencies required in the job are being demonstrated, identify strengths, weaknesses, opportunities and problems

establish the reasons for any problems, including any reasons beyond the Job Holder's control as well as those which can be attributed to the Job Holder's behaviour

recognise work well done, balanced by any reservations or criticisms - praise and criticisms must be supported by examples

listen to the Job Holder's point of view, and encourage the Job Holder to give you upward feedback on your management style and role in helping them achieve their objectives

discuss any training and development activities the Job Holder may have undertaken and discuss what further support or guidance they require from you to ensure the learning is put into practice

be prepared to discuss longer term career development needs and career goals and discuss what will be expected of the Job Holder in the next PPP cycle.

The role of the Confirming Officer

The Confirming Officer, who is your Line Manager's Manager should ensure that the objectives of all the teams, and the individuals within those teams contribute to MCA objectives in a coherent and consistent way. At the beginning of the performance cycle the Confirming Officer should ensure, by positive leadership, that the vision of the organisation is clearly communicated to staff at all levels and that teams and individuals fully understand the direction of MCA and their contribution to it. Throughout the performance cycle, the Confirming Officer should ensure that:

team and individual's objectives are consistent with and support MCA objectives

standards set within the Competence Framework are understood and consistently applied throughout their area of responsibility and with other Confirming Officers

fair and consistent appraisal standards are applied in relation to performance

where necessary, help is provided to the Line Manager and Job Holder to reach agreement on objectives and competence standards

staff training and development needs are addressed

in-year and year end reviews are carried out effectively and timeously.

The role of Personnel Branch

In addition to administering the system, Personnel Branch are responsible for:

advising senior management and line managers on all aspects of performance appraisal, including consistency of marking, fairness and objectivity

reviewing the system and procedures and recommending changes where necessary and revising policy

assisting with resolution of disputes and disagreements if necessary

providing Quality Assurance procedures for the PPP

providing information for performance related pay awards.

The role of the Training Centre

The Training Centre is responsible for:

analysis of personal development plans to identify training and development needs

advising senior management on identified training and development needs and the best way to meet those needs

provision and procurement of relevant off the job training and development activity

ensuring, via a Quality Assurance system, that PDPs are used correctly and that Job Holders and Line Managers are making effective use of them

evaluating the effect of all training and development activity on the performance of individuals, teams and the Agency

providing advice, guidance and support on any training and development issue to all staff.

PART 3

THE START OF THE PERFORMANCE CYCLE

At the beginning of the performance cycle, you will need to discuss and agree with your Line Manager each of the various aspects of your job, its main purpose, your key objectives and any training and development needs. This section takes you through those issues, one by one.

MAIN PURPOSE AND RESPONSIBILITIES OF YOUR JOB

This section refers to Page 2 of the PPP

This should include a fairly short description of your job encapsulating the MAIN purpose and OVERALL responsibility.

This is a change from the more traditional Civil Service approach of a full job description which in practice tended to be a list of specific tasks. We are moving in a new direction because we want a more dynamic and flexible approach, enabling job performance to be enhanced by developing a competency framework with the emphasis on continual development rather than the historical concentration on specific tasks and functions.

This new approach will enable you to fulfil your role more effectively and meet the agreed key objectives of your job by developing the knowledge, skills and attributes required.

AGREED KEY OBJECTIVES

This section refers to Page 2 of the PPP

Each year the Agency publishes its Business Plan in April, which identifies objectives, targets and major developments planned for the financial year. Each of us at organisational, team and individual level must support the aims of the Agency by agreeing team and individual key objectives.

Directorates, Regions and Branches will also produce business plans setting out their role and aims for the year ahead and how they contribute to the overall strategic aims of the MCA.

Line Managers must ensure at the beginning of each performance cycle that clear objectives are identified and agreed for all staff. It is important that both Job Holder and the Line Manager clearly understand and agree how,

- * the individual's objectives fit into and support the Agency's objectives, targets and major developments
- * the Job Holder is to proceed with the objectives during the year, with a clear idea of method and approach
- * the Line Manager can help and support the Job Holder to achieve the objectives

Job Specific

These objectives are the ones which have a significant impact on the main purpose of the job. Without meeting the job specific objectives, the Job Holder will be unable to fulfil the main purpose of the job i.e. JOB SPECIFIC OBJECTIVES are those that make a DIFFERENCE, where failure would adversely affect the overall team performance. When agreeing objectives, Job Holders and Line Managers should bear in mind not

only the Agency's Business Plan, but also those of their own directorates, regions or branch. Ideally, most people should have between 4 and 6 Job Specific Objectives.

In preparing and agreeing objectives, Job Holders and Line Managers should follow the SMARTA principle, i.e. ensure that each objective is

Specific	clearly identified and understood by both Job Holder and Line Manager and is free from ambiguity.
Measurable	performance and progress can be measured against pre-determined criteria.
Achievable	the objective should be challenging, but within the Job Holder's power to achieve.
Realistic	the objective must be meaningful and relevant to the main purpose of the job, it will make a significant difference.
Timebound	set a date for completion, or agree timescale/turnround time. Where the objective extends over more than one year, or is ongoing, milestones should be set within each performance cycle.
Agreed	both the Job Holder and the Line Manager have discussed the objective and agreed the way to proceed.

Keeping the Same Objective(s) Each Year

Some objectives will remain the same from year to year. For instance, a typist may have an objective to produce word processed documents with a high level of accuracy. In future years it might be unrealistic to increase the level of accuracy, so next year's objective would be to maintain the standard.

People With the Same Objective(s)

Some people in the same team/work group may have the same objective e.g. where people in the same grade are doing the same job. It would be helpful for all concerned to get together to agree common objectives.

Each objective should be entered separately on the form and clearly identified by allocating it a number, which will identify it throughout the performance cycle, e.g. JS1 for Job Specific objective No. 1. These identifiers will remain with the objective throughout the performance cycle. It is important to concentrate on the Key objectives, the more minor and routine aspects do not need to be separately identified. Completion of this box is mandatory.

Projects

Job Holders and their Line Managers may like to consider the use of specific project work during the course of the year. This is optional, but a carefully selected project can assist in meeting organisational objectives, and contribute greatly to an individual's personal development. Project work need only be considered where it is thought likely to be of benefit and is practical in terms of other work commitments during the year. However, where a project is identified it should follow the SMARTA principles.

Self development:

The PPP system encourages Job Holders to take responsibility for their own learning and development. Self development is a plan of action enabling the individual to achieve his or her full potential for growth. It should be geared to the future needs and objectives of the organisation and the individual. Continuous self development integrates learning and work so that operational objectives and the ability to learn can be achieved in the same process.

Identifying a self development objective is optional but if one is agreed it should follow the SMARTA principles.

Signatures

Once the Main Purpose and Responsibilities, and the Key Objectives have been agreed between the Job Holder and the Line Manager, both must sign the form to confirm that agreement has been reached.

PERSONAL DEVELOPMENT PLAN

This section refers to page 3 of the PPP

Staff appraisal is not just about assessing someone over the performance cycle, it is also about identifying personal development and training needs and considering how these needs should be met. An integral part of the Personal Performance Plan is the Personal Development Plan (PDP).

The overriding principle in the use of PDPs is to develop people in line with business aims and objectives. Therefore, any training and development activities should be geared towards enhancing job specific knowledge and skills to enable staff to perform more effectively in their current jobs. Of equal importance is the development and enhancement of an individual's *Personal Skills and Qualities*, which will lead to superior performance in their current jobs and will be of value throughout their career.

Having agreed key objectives for the performance period, the Job Holder and Line Manager in discussion must:

- identify if any training is required to assist in meeting the objectives,
- identify who is to be responsible for providing the training - colleagues, manager, college, Training Centre or external provider
- assess whether the training identified is a high, medium or low priority

The entry in the column "By When" of page 3, should be the same as that entered in the "By When" column on page 2. This information is particularly relevant to the Training Centre who are responsible for the delivery and monitoring of all training and development.

All of this information should be clearly noted on the PDP before being sent to the Training Centre.

In assessing the priority level of any training and/or development activity consider the following:-

High Priority	where the training need is critical to the immediate ability of the Job Holder to carry out the job to the required standard, or to fulfil all the required tasks and functions, or where specific qualifications are required to enable the Job Holder to operate - <i>must have</i> .
Medium Priority	where the training need would be of significant benefit in the longer term to enable the Job Holder to perform the job more effectively - <i>should have</i> .
Low Priority	where the training need would be of some long term benefit to the Job Holder, or would assist with more general development, but is not an immediate requirement - <i>could have</i> .

Training and Development

So far, throughout this guide we have talked about training and development. We need to be clear about the differences between the various forms of training and development, and how each can be used effectively to develop staff.

Training is about acquiring an area of predetermined knowledge or defined skills applicable to a particular type of work. It is concerned with immediate needs and is a shorter-term, systematic process.

Development on the other hand is a plan of action enabling an individual to achieve his or her full potential for growth. It is geared to the future needs and objectives of the organisation and the individual.

Staff should be actively encouraged to contribute fully to the debate about their training and development needs.

On the job training and development

This encompasses any training and development activity that can take place during normal everyday work activities, using actual job related work as the training and development tool. There are a number of advantages with this type of training activity;

the training and development activity is tailor-made to suit the learning objectives of the trainee within the organisational context

the training is highly relevant to the trainee by focusing on actual organisational needs

the trainee will be amongst his/her peer group, which may facilitate learning

in house resources can be used which may be more effective and economical than external courses.

Line Managers should be aware of their staff's training and development needs and should continually be reviewing those needs as part of their routine work. Thinking about arranging and designing learning opportunities should be a normal part of a Line Managers day to day work.

Off the job training and development

This is any training and development activity that occurs away from the work place. This will include, formal courses at Colleges, Universities and Training establishments, attendance at workshops, seminars or conferences as well as access to open and distance learning programmes. Similarly, to broaden outlook and enhance experience, staff could spend a period of time job shadowing, or on secondment to another part of the organisation.

The potential advantages of this approach are;

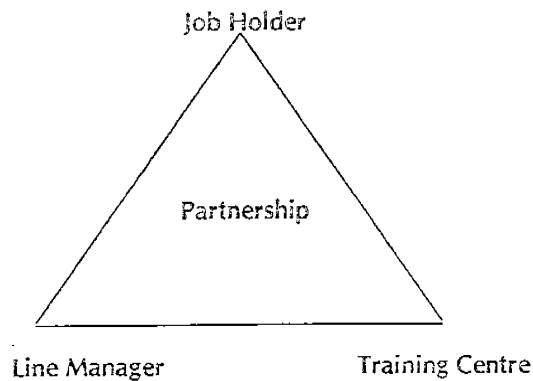
it can use expertise from a number of specialist sources, and may provide a range of facilities, which are not available locally

it can facilitate valuable cross-fertilisation between different parts of the organisation, enhancing spread and preventing stagnation of ideas

it enables learning to take place away from the distractions of daily working life.

Responsibility for training and development

MCA is committed to training and developing all of us to reach our full potential. The responsibility for ensuring this happens lies with all of us; in essence it is a partnership between Job Holders, Line Managers and the Training Centre. To enable the Training Centre to plan training and development activity, evaluate the effect of training and development activity, and to carry out the quality assurance role, a copy of all PDPs must be sent to the Training Centre within one month of agreement.



Signatures

The form should be signed by Job Holder and Line Manager to indicate that they have both read and agreed the items entered on the PDP.

IN-YEAR PROGRESS REVIEWS

This section refers to page 4 of the PPP

A formal in-year progress review **must** be carried out, at least **once** during the performance cycle, however further reviews may be undertaken if considered necessary. Ideally, communication between Job Holders and Line Managers should be continual to ensure that objectives are being met and that Job Holders are fully aware of their performance, how well they are meeting their objectives and what, if any, improvements need to be made.

Although a formal in-year review is required only once, they can take place more frequently. They need not be long and drawn out, a simple and fairly short discussion may be sufficient to establish the facts - the important issue is to identify progress against objectives and to ensure that both Job Holder and Line Manager understand and agree the position. The frequency of reviews should rest with the Line Manager and Job Holder however if the Job Holder is under training, or is falling seriously behind with the objectives more frequent reviews would be expected. Other reasons for reviews include if objectives are met early and/or exceptionally well or if priorities change. The reviews should be planned, giving both Job Holder and Line Manager time to prepare - don't spring them on people, it is neither fair nor will it enable either of you to gain the most benefit from them.

The performance reviews are designed to be a discussion between the Job Holder and the Line Manager. The same general principles apply whether the review is at the end of the performance cycle, or one of the in-year progress reviews. The purpose of the review is to provide a formal occasion when:

the Job Holder's achievement of objectives and demonstration of competencies required in the job can be formally reviewed

activities that have gone well and those that have gone less well can be discussed and the reasons identified and agreed

ways of overcoming obstacles can be identified

progress towards satisfying training and development needs can be reviewed

means in which the Line Manager, or other parties, can contribute to improved performance in the future can be identified

action can be agreed

the Job Holder and Line Manager can look ahead to the Personal Development Plan for the next performance cycle.

The formal review is not a substitute for the continuing dialogue between the Line Manager and the Job Holder throughout the performance cycle.

Both the Job Holder and the Line Manager should make brief notes on page 4 or 4a, if appropriate, these notes should indicate if any training/development has taken place. Please feel free to use a continuation sheet if necessary.

ISSUES FOR DISCUSSION

Progress towards key Objectives

The progress of each key objective should be assessed. This should be a fair assessment of actual progress to date. Progress of each objective should be measured against what could be realistically expected at the time of the review, and whether the objective is likely to be attained within the allotted time-scale. The fact that a Job Holder is falling behind in one or more objectives need not necessarily be viewed as poor performance, other factors such as changes to priorities, external influences, the need to concentrate on other objectives etc. will need to be taken into consideration and commented upon in the remarks section.

The Line Manager will also need to take into consideration the relative importance of each objective, for instance, falling behind on 2 or 3 lesser priority objectives may not be viewed as serious at this stage if the most pressing priorities are being addressed and are not affecting performance overall. However, if a major objective is behind schedule, this may possibly be considered a serious failing, even if all the lesser priority objectives are being met. At this stage, if there are problems, action should be taken to correct them, including considering training and development activity.

Ahead - this marking should be awarded in cases where the Job Holder has completed significantly more of the objective to the required standard than would reasonably be expected at the time of review, or appears to be ahead of the expected timescale

On - this marking should be awarded where the Job Holder appears to be on course to complete the objective to the required standard within the originally designated (or amended) timescale.

Behind - this marking should be awarded where the Job Holder is significantly behind the planned objective, either in terms of required standard or timescale. But refer to the above note explaining that this is not necessarily a reflection of poor performance overall.

If, however, it appears that the Job Holder's overall performance is falling below an acceptable standard, and that, unless remedial action is taken, the Job Holder is likely to attain an "Under" marking in the Overall Performance Assessment at the Final Progress Review, a written warning must be given. Separate guidance on poor performance is available from Personnel.

Signatures

The form should be signed by Job Holder and Line Manager to indicate that they have both read and agreed the items entered on the PPP.

CHANGES TO AGREED KEY OBJECTIVES AND PDPS

This section refers to supplementary pages 2a, 3a and 4a of the PPP

When measuring progress against objectives, consideration should also be given to amending the original Personal Performance Plan, e.g. do any new objectives need to be included, do any need to be deleted or amended, are the timescales still realistic, is the overall workload achievable etc. Think SMARTA !

The performance plan agreed between the Job Holder and the Line Manager at the outset of the performance cycle may, for a variety of reasons, need to be altered during the year e.g. changes to business objectives, organisational restructuring, etc. In such cases, the respective sections on page 2 of the Personal Performance Plan should be reconsidered in light of the new situation and where necessary, revised using page 2a. It is important that the same principles are applied when discussing and agreeing amendments to the Personal Performance Plan and that both the Job Holder and the Line Manager sign page 2a to confirm that agreement has been reached.

After discussion between the Job Holder and Line Manager at the in-year progress review(s), it is possible that the PDP may need to be revised. If this is the case, page 3a should be used to update the original information provided on page 3.

Where more than one formal in-year progress review is considered necessary, page 4a should be used to provide updated information.

Where changes and updated information are required (pages 2a, 3a and 4a) - this should follow the same pattern and principles that were employed when completing the original form at the beginning of the performance cycle. The page(s) should be signed by Job Holder and Line Manager to indicate that they have both read and agreed the items entered.

Revised PDPs must be copied to the Training Centre to enable continued planning, evaluation and quality assurance of training and development activity. The revised PDP's, completed on page 3a, will replace the original PDP.

FINAL PROGRESS REVIEW

This section refers to page 5 of the PPP

At the end of the performance cycle the Job Holder and the Line Manager must review progress over the whole of the performance period. Key objectives should be assessed, as at the in-year stage, taking into account all the various factors that may have affected the outcome. The comments section should indicate relevant facts such as obstacles and how they were overcome.

Exceeded - the Job Holder has

- * exceeded the objective in every aspect, including quantity and quality,
- or
- * met the objective whilst dealing with significant obstacles and changed priorities

Achieved - the Job Holder has

- * met the objective and has met the planned timescale

Not Met - the Job Holder has

- * not completed the objective to the required standard

PERSONAL SKILLS AND QUALITIES

This section refers to pages 6 and 7 of the PPP

This section of the PPP relates to the knowledge, skills and qualities you need to do your job effectively. The word used to describe knowledge, skills and qualities in this context is competency.

Competences are used in all sectors of the economy, public and private, to help people work more effectively. We generally perform better if we know clearly and precisely what we should be doing to be effective in our jobs.

Competencies are aspects of behaviour that can generate improved job performance, they describe what people need to be able to do, to do a job well. They are about stripping the job down into its component parts and bringing out what has to be done to what standard.

So competency is the term used to describe an individual's ability to perform in the workplace to a defined standard.

Competencies are descriptions of *performance* which answer the questions:

“What do people need to be good at doing to be effective in their job?”

and

“How does an individual know that he/she is carrying out the job effectively?”

Standards are normally expressed as:

- A set of performance criteria which are observable, measurable (where possible) and assessable.
- A desired outcome of the competence.

Standards answer the questions:

“What would we observe a competent person doing?”

and

“How would someone judge the success of the outcome?”

The Competence Framework

The MCA Competence Framework, includes core competences Annex B, which everyone needs, to be effective in all jobs across the Agency, whether they are in a generalist or specialist post. Job specific competencies for every job within the agency are being compiled. Core competencies will therefore serve as the foundation blocks and will be complemented by job specific competencies once they have been developed.

Defining competences against which all staff are assessed helps to secure consistent appraisal standards across the MCA. The Competence Framework will be used for a number of purposes:-

- By Job Holders, to identify what level of performance is expected of them. To assess for themselves how well they are doing and to identify any area where they would benefit from training or other development action
- By Line Managers to assess performance in conjunction with achievement of objectives. To assist in the identification of training or development activity to improve performance
- By Personnel for recruitment and selection interviewing
- By the Training Centre to ensure that relevant off the job training is procured and/or delivered.

The list of performance criteria in each core competence covers a range of types of job and work. They are a guide to the types of behaviour that will indicate whether or not someone possesses the particular skill or quality.

The core competency framework uses the levels, 1,2 and 3. The levels correspond generally to grades, but also take into account the nature of the individual's job:-

Level 1	Band A & B: AA/CWA & AO/WO or equivalent - caseworker/support staff
Level 2	Band C & D: EO/ADO & HEO/DO/MS2 or equivalent - junior and middle managers
Level 3	Band E,F & G: SEO/RI/MS1 to Grade 6 or equivalent - senior managers, professionals and specialists.

However, there is a great deal of similarity across the levels, with people in the higher grades building on the knowledge and skills they acquired when they were in more junior grades.

The progression of the *performance criteria* through the levels is designed to reflect the increasing complexity and variety of work circumstances faced by individuals as they progress through the grades. For example, for an AA or AO equivalent, Delivery of Results in the competence, **Self Management**, involves focusing on the job in hand and getting the task completed even when there are distractions. For an HEO or equivalent, Delivery of Results involves deploying staff effort to ensure that priority tasks are completed. A Grade 6 will have to involve others in the delivery of many of the results they are responsible for and think about how new tasks will be organised in the Region/Division. They must also plan ahead for dealing with foreseeable difficulties so that results are nonetheless achieved to standard, within deadlines.

In many competences, all the *performance criteria* are the same for all levels. The difference in assessing the different levels comes from behaviour in context. For instance someone at level 1 will face far fewer competing priorities and a less complex work situation than someone at level 2 who will be expected to display the same behaviours but in more challenging circumstances.

A comment on pages 6 & 7 of the PPP is not required for every aspect of a competence but if a jobholder has a particular strength or weakness a comment with an example(s) is recommended to support the assessment rating. →

OVERALL PERFORMANCE ASSESSMENT

This section refers to page 8 of the PPP

At the end of the performance cycle The Line Manager must make an assessment of the Job Holder's overall performance, which takes into account all the information available.

Under - the Job Holder has

- * not achieved, or did not make significant progress on the majority of objectives
- * demonstrated serious shortcomings in the competencies required in the job. Weaknesses have no compensating strengths, There were no significant obstacles to achieving progress

- Full -** the Job Holder has
- * achieved all high priority key objectives and significant progress was made on others, or
 - * made significant progress on all objectives despite significant obstacles, and
 - * demonstrated satisfactorily the competencies required in the job, which could include occasional remedial action offset by strengths elsewhere, and
 - * any weaknesses were compensated for by strengths elsewhere
- High -** the Job Holder has
- * achieved all objectives and exceeded in some, or,
 - * achieved most objectives but those that were not were due to significant obstacles and were offset by exceeding in a range of others, or,
 - * achieved most objectives despite significant obstacles, and
 - * consistently demonstrated a particular strength in a number of competencies required in the job, but may have included the occasional developmental need
- Excel -** the Job Holder has
- * exceeded all the objectives, or,
 - * achieved all objectives and exceeded in most despite some obstacles, or,
 - * achieved all objectives and exceeded in a number despite significant obstacles, and,
 - * consistently demonstrated a particular strength in a range of competencies required in the job, but may have included the occasional developmental need

Line Manager Comments

The Line Manager should use this section to summarise the year's work and to add any further information relevant to the overall performance assessment. Any disagreements should be noted here.

Confirming Officer Comments

The Confirming Officer should use this section to validate the content of the PPP and to add any further information relevant to the performance assessment. Any disagreements not resolved by the Job Holder and Line Manager that were referred to the Confirming Officer should be noted here.

Job Holder Comments

The Job Holder should use this section to add any further comments relevant to the performance assessment, including any disagreements with the Line Manager.

Signatures

It is important that Job Holder, Line Manager and Confirming Officer sign the relevant sections to confirm that they have read and agree the PPP.
The PPP should now be sent to Personnel Branch who will return the form to the Job Holder after all necessary action has been completed.

PART 6 OTHER FACTORS

Completion of the PPP

PPPs will be completed on an annual basis:-

SEO/RI/MS1 to Grade 6 or equivalent	1 February
EO/ADO & HEO/DO/MS2 or equivalent	1 March
AA/CWA & AO/WO or equivalent	1 April

PPPs will be issued to Heads of Branch for distribution to Job Holders by the Personnel Branch approximately one month before the completion date. Transfer and Special Performance reports will be issued as required.

Appraisal Cycle - conversion to the new system

The new system has been designed to be forward looking, and all staff will need to convert to the new system at the BEGINNING of the cycle, i.e. agreeing the main purpose and objectives for the coming year. Completion of the previous year's performance review will therefore need to conclude both the old system, AND commence the new system. Therefore staff will expect one final report using the existing procedures, but should also be prepared to adopt the new system at the same time.

Disagreements

Cases where Job Holders and Line Managers cannot agree on one or more sections of the PPP should be referred to the Confirming Officer. If still no agreement can be reached the disagreement should be referred further up the line.

A Job Holder is entitled to refuse to sign one or more sections of the PPP if agreement cannot be reached. However, the PPP will stand as the official record of performance (unsigned) as MCA will still need a record of performance for such things as performance pay.

PPP Helpline

During the early stages of the new system, a Helpline via e:mail will be in operation at the Training Centre. Staff who have queries regarding any aspect of the system should refer them to the Training Centre at hclf.mcagency.org.uk - Staff at the Training Centre will investigate and respond as soon as possible. If the enquiry is of a general nature then the query, and the appropriate answer, will be notified to all staff for information.

Probation Reports

New staff who join the Agency will of course be required to undergo a period of probation, normally 12 months. During this time their performance will be monitored and assessed by Line Management on a PPP. An interim probation report will be issued by Personnel after 4 months and the final probation report will be completed on the PPP at 9 months. Successful completion of probation is confirmed at 12 months. On occasions, it may be necessary to extend the period probation for a Job Holder if performance is not fully satisfactory. Once probation is completed, the Job Holder slots in to the normal PPP cycle for the grade.

Transfer Reports

If a PPP has not been completed within the previous 4 months of the date of transfer (lateral or promotion), one must be completed. The responsibility to complete one PPP and commence the next lies with the Job Holder and Line Manager.

If the Job Holder transfers job but remains under the management of the same Line Manager, the Revised sections (pp 2a, 3a, 4a) of the PPP should be completed as appropriate. If the Job Holder transfers to a new Line Manager, the current PPP should be completed and a new one issued for the new job.

Promotion and Lateral Transfer

The new system does not include provision for a promotion marking. Staff who wish to apply for jobs, either on promotion or lateral transfer will be assessed at the application stage for their suitability. Applicants should complete the relevant Internal Reference Form (IRF) and forward it to their Line Manager. The Line Manager and Confirming Officer will then complete the "assessment of suitability" for the post applied for. Information contained in the PPP will of course be considered with the application, along with other relevant information. As part of the application, the Job Holder may wish to attach pages 6 and 7 of a recent PPP to the IRF to illustrate that he/she has attained the necessary skills and qualities for the post.

Permanent, Fixed Term and Casual Staff

The PPP arrangements and procedures described in these guidance notes apply to all permanent staff, including full and part-time staff and those on fixed term contracts. Separate arrangements are in place for casual staff.

Inefficiency

Staff who, at the end of the appraisal cycle, i.e. at Final Progress Review, have not met the required standard must be given an "Under" marking in the Overall Performance Assessment. N. B. before an overall performance marking of "Under" can be given, the Job Holder must have been given at least one written warning that performance is unsatisfactory, and given the opportunity to improve their performance.

Staff who attain an overall performance marking of "Under" will be expected to reach the required standard within a prescribed timescale, normally 6 months. A special performance review will be completed at the end of the 6 month period. At this review, the Job Holder must be marked either "Under" or "Full". If performance has improved and a "Full" marking can be awarded, the job Holder will return to the normal personal performance cycle. If however, performance does not improve, and a further "Under" marking is appropriate, a further special performance review will be completed. If there is no improvement at the end of this period there are a number of options available, these include:-

- * moving jobs under a different line manager
- * reverting to a lower grade
- * early retirement
- * dismissal on grounds of inefficiency

Full guidance can be obtained from the Personnel Branch.

Quality Assurance by Heads of Branch / Division/Region

The PPP cycle revolves around the Job Holder, Line Manager and Confirming Officer. However, whilst there is no official section for comment or signature by higher management, this should not mean that higher management need not become involved. In particular, higher management should take an active interest in the overall objectives, standards and development of their staff and at each stage of the PPP cycle may wish to overview the whole procedure within their area, including reviewing the completed PPP forms.

Profile of the Good People Manager

The key features of good people management are:-

openness
honesty
fairness
communication
teamwork
delegation

The good people manager:

Communicates the broad MCA aim and objectives by:

- * ensuring staff understand the Agency's overall aim and how their work fits into the wider context of their team, division and directorate, and of MCA as a whole,
- * keeping staff informed of organisational developments, ministerial priorities, management decisions and the reasons why,
- * ensuring staff are applying the Agency's Equal Opportunities Policy,
- * ensuring staff are aware of the structure of central government, DETR and its Agencies, and our relationship with them.

Lets staff know what is expected of them by:

- * ensuring they have meaningful Personal Development Plans (PDPs) and understand the performance expected of them,
- * helping them plan and prioritise their work to meet objectives in the time available,
- * addressing with staff the implications of new tasks and changing requirements, particularly where difficult choices need to be made,
- * ensuring staff understand the roles and responsibilities of managers and colleagues with whom they work closely, and know where to go for direction, support and information,
- * ensuring staff understand their responsibilities for managing and developing staff, and are equipped to do so effectively,
- * encouraging good team spirit, shared purpose, social interaction; and tackling internal team difficulties,
- * ensuring they understand, and can use, procedures relevant to their job, including standard formats for communication.

Gives feedback on performance by:

- * giving constructive feedback on the work and effectiveness of staff, and the skills and knowledge they demonstrate,
- * giving clear recognition for good performance,
- * taking a firm and fair line when necessary, and acting promptly to deal with poor performance,
- * giving negative feedback in a constructive way and offering help to achieve the improvement required,
- * supporting staff in carrying out their responsibilities,
- * using the appraisal system fairly and completing all stages to the MCA timetable,
- * ensuring privacy and confidentiality is respected when discussing (potentially) sensitive issues.

Encourages upward communication and involvement by:

- * spending time getting to know and understand the work of staff and representing them up the line,
- * actively seeking staff ideas and being receptive to their opinions in making decisions,
- * encouraging staff to contribute to decisions,
- * leading by example, in terms of assertive behaviour and effective communication,
- * regularly checking out with staff how you, as Line Manager, are doing.

Demonstrates commitment to development and training by:

- * encouraging staff to develop their skills and improve performance,
- * ensuring staff are aware of the MCA development and training strategy,
- * working with staff to identify development and training needs, making time and resources available to meet them and ensuring agreed development takes place,
- * providing on-the-job coaching appropriate to the learning needs of staff,
- * discussing career development with staff, offering appropriate career advice and signposting to other sources of help,
- * using the PPP system to review staff development,
- * giving staff opportunities for experience and development through delegation,

- * helping staff assess the skills and knowledge they need to acquire when taking up or aiming for new responsibilities,
- * being conscious of your own development needs in order to manage and develop staff effectively.

Evaluates development and training activities:

- * before a development activity takes place, agreeing with staff what they want it to achieve (the objectives) and what will show this achievement,
- * after it has taken place, discussing with staff how well their objectives were met and how they will apply the learning to their job,
- * by evaluating at a later stage the difference development activity has made.

Competence Cluster 1: SELF MANAGEMENT

Outcome: We understand what is expected of us and show a consistent, reliable approach even under work pressure. We are ready to adapt to changing circumstances whilst working productively towards achieving MCA business objectives.

Competence	Performance Criteria	Levels		
		1	2	3
1.1 Coping with Pressure	1.1.1 Remains calm in difficult or uncertain situations.	✓	✓	✓
	1.1.2 Gives a consistent and stable performance under pressure.	✓	✓	✓
	1.1.3 Makes progress with non-routine tasks or projects despite the pressure of day-to-day work.		✓	✓
1.2 Problem Solving	1.2.1 Able to interpret oral and written instructions and grasp key points.	✓	✓	✓
	1.2.2 Gets all the relevant facts and/or documents to hand and thinks things through logically.	✓	✓	✓
	1.2.3 Considers options before taking a course of action and draws on experience.	✓	✓	✓
	1.2.4 Knows when to consult or inform others.	✓	✓	✓
	1.2.5 Suggests how to achieve tasks rather than waiting to be told.	✓	✓	✓
	1.2.6 Assimilates a lot of information quickly and identifies the key points.		✓	✓
	1.2.7 Develops a number of ideas or solutions with clear recommendations for the way forward.		✓	✓
	1.2.8 Is able to view problems - solutions from others perspectives.		✓	✓

Competence Cluster 1: SELF MANAGEMENT

Competence	Performance Criteria	Levels		
		1	2	3
1.3 Judgement	1.3.1 Knows where to obtain information and/or advice.	✓	✓	✓
	1.3.2 Understands the limits of own authority and takes decisions accordingly.	✓	✓	✓
	1.3.3 Makes considered and rational decisions when under pressure.	✓	✓	✓
	1.3.4 Identifies the pros and cons of options for own and others decisions.		✓	✓
	1.3.5 Consults others to assess the potential impact of decisions on other areas.	✓	✓	
	1.3.6 Demonstrates a sensitivity to political and departmental issues.			✓
1.4 Prioritising	1.4.1 Asks questions to clarify priorities and determine the time available to carry out tasks.	✓	✓	✓
	1.4.2 Makes effective use of time in dealing with work priorities.	✓	✓	✓
	1.4.3 Has a disciplined approach to work and does not neglect routine tasks or put aside difficult tasks.	✓	✓	✓
	1.4.4 Plans ahead, sets realistic timetables, allowing time for handling contingencies.		✓	✓
	1.4.5 Prioritises own and staff's work in line with team/organisational objectives and priorities.	✓	✓	
	1.4.6 Responds promptly and effectively to changes in priorities and deadlines.	✓	✓	

Competence Cluster 1: SELF MANAGEMENT

Competence	Performance Criteria	Levels		
		1	2	3
1.5 Motivation	1.5.1 Adopts a positive attitude to the job.	✓	✓	✓
	1.5.2 Responds positively and constructively to new ways of working or new tasks.	✓	✓	✓
	1.5.3 Welcomes opportunities to develop personal skills and qualities.	✓	✓	✓
1.6 Flexibility	1.6.1 Is willing to learn new skills.	✓	✓	✓
	1.6.2 Has a flexible attitude to team roles and can cover for other team members.	✓	✓	✓
	1.6.3 Is flexible and adapts to changing circumstances.	✓	✓	✓
	1.6.4 Rapidly assimilates the essentials of any new role, task or situation and is able to deal with the unexpected.		✓	✓
	1.6.5 Responds and adapts to a variety of situations, individuals or groups, whilst maintaining effectiveness.			✓
1.7 Delivery of Results	1.7.1 Is clear about how own work contributes to the aims of the team/organisation.	✓	✓	✓
	1.7.2 Presents basic facts and summarises information in a clear and logical manner.	✓	✓	✓
	1.7.3 Focuses on the objectives to be achieved and is not easily deflected.	✓	✓	✓
	1.7.4 Ensures own contribution adds value and does not duplicate others efforts.	✓	✓	✓

Competence Cluster 1: SELF MANAGEMENT

Competence	Performance Criteria	Levels		
		1	2	3
	1.7.5 Written work complies with MCA standards and layouts, and is clearly presented.		✓	✓
	1.7.6 Chooses style and language to suit the audience and context.		✓	✓
	1.7.7 Looks for ways of improving on current procedures and working practices.		✓	✓
	1.7.8 Produces focussed written drafts, identifying options and proposing a way ahead.		✓	✓
	1.7.9 Operates effectively and delivers reliably within the constraints of time and cost.		✓	✓
	1.7.10 Strategic aims are translated into practical plans.			✓

Competence Cluster 2: MANAGEMENT OF OTHERS

Outcome: We manage and develop our people towards achieving individual, team and organisational objectives.

Competence	Performance Criteria	Levels		
		1	2	3
2.1 Developing Others	2.1.1 Delegates interesting and challenging work where possible.		✓	✓
	2.1.2 Knows individuals' strengths and weaknesses and allocates work to provide staff with opportunities to improve their performance.		✓	✓
	2.1.3 Gives regular and constructive feedback on performance.		✓	✓
	2.1.4 Explains tasks, fosters initiative and provides support if honest mistakes result.		✓	✓
	2.1.5 Encourages and supports staff in developing their skills and careers.		✓	✓
	2.1.6 Encourages staff to innovate or consider new ways of working.		✓	✓
2.2 Giving Direction	2.2.1 Keeps staff informed about what is happening within the team/branch.		✓	✓
	2.2.2 Establishes and communicates the standards of performance expected.		✓	✓
	2.2.3 Able to explain new working practices and communicate them effectively to the team.		✓	✓
	2.2.4 Ensures staff understand how their work fits into the wider MCA picture.			✓
	2.2.5 Initiates and implements change in line with MCA and DETR aims and objectives.			✓

Competence Cluster 2: MANAGEMENT OF OTHERS

Competence	Performance Criteria	Levels		
		1	2	3
2.3 Motivating Others	2.3.1 Creates a climate where staff are encouraged to develop their skills and improve their performance.		✓	✓
	2.3.2 Encourages and recognises achievement.		✓	✓
	2.3.3 Motivates and enthuses others.		✓	✓
2.4 Negotiating	2.4.1 Is at ease in dealing with colleagues of all grades.		✓	✓
	2.4.2 Listens as well as talks; asks questions and probes to check understanding.		✓	✓
	2.4.3 Negotiates assertively without causing offence.		✓	✓

Competence Cluster 3: RESOURCE MANAGEMENT

Outcome: We allocate, manage and use resources effectively to meet own and MCA business objectives.

Competence	Performance Criteria	Levels		
		1	2	3
3.1 Use of Resources	3.1.1 Understands and applies the correct procedures for economical use of MCA resources.	✓	✓	✓
	3.1.2 Identifies and acts on opportunities to improve efficiency and value for money.		✓	✓
	3.1.3 Deploys resources and staff flexibly to meet MCA targets and objectives.			✓
3.2 Control of Resources	3.2.1 Understands and applies Departmental/MCA procedures for control of resources.		✓	✓
	3.2.2 Provides advice on the resource implications of proposals.			✓
	3.2.3 Is familiar with the main stages of the budgeting process and implications for use of resources.			✓
	3.2.4 Initiates action to deal with significant variance from tasks, objectives or timetable in the use of resources within own control.			✓
3.3 Control of External Suppliers/ Contractors	3.3.1 Aware of the performance and quality standards provided by external sources.	✓	✓	✓
	3.3.2 Monitors the level and quality of service provided by contractors and external agencies to ensure it meets agreed standards.		✓	✓
	3.3.3 Negotiates with contractors and service providers to obtain best value for money.		✓	✓

Competence Cluster 4: MAKING THINGS HAPPEN

Outcome: We take responsibility and work wholeheartedly to meet our own and MCA's objectives.

Competence	Performance Criteria	Levels		
		1	2	3
4.1 Influencing Others	4.1.1 Makes and presents a case persuasively and convincingly.		✓	✓
	4.1.2 Makes effective contributions to meetings as a member or chairperson.		✓	✓
	4.1.3 Produces focused and persuasive written work, identifying the key issues, examining options and promoting a way ahead.			✓
	4.1.4 Communicates complex or technical matters so that the intended audience can understand the issue.			✓
4.2 Analysing and Planning	4.2.1 Identifies a problem and recognises root causes without being distracted by irrelevant detail.	✓	✓	✓
	4.2.3 Considers the consequences/implications of a variety of options.		✓	✓
	4.2.4 Develops ideas and solutions with clear recommendations on the way ahead.		✓	✓
	4.2.5 Able to identify trends and understand their implications.			✓
	4.2.6 Grasps a wide range of issues, can see the relationship between them and identifies the key issues.			✓

Competence Cluster 4: MAKING THINGS HAPPEN

Competence	Performance Criteria	Levels		
		1	2	3
4.3 Taking the Initiative	4.2.7 Looks ahead, identifies risks to current plans and makes contingency plans.			✓
	4.3.1 Takes the initiative.	✓	✓	✓
	4.3.2 Encourages initiative and is supportive if things go wrong.		✓	✓
	4.3.3 Is confident and takes the initiative when representing MCA externally.		✓	✓
	4.3.4 Is prepared to challenge the status quo, explore all legitimate options and change established procedures.			✓
4.4 Decision Making	4.4.1 Understands limits of own authority and takes decisions accordingly.	✓	✓	✓
	4.4.2 The wider impact of decisions are recognised and taken into account.		✓	✓
	4.4.3 Weighs up the pros and cons of an issue before taking a decision.		✓	✓
	4.4.4 Recognises when the wrong decision has been made and takes action to correct it.		✓	✓
	4.4.5 Knows when to consult, especially on specialist matters, and takes account of the opinions of others before making a decision.			✓

Competence Cluster 4: MAKING THINGS HAPPEN

Competence	Performance Criteria	Levels		
		1	2	3
4.5 Resilience and Determination	4.4.6 Able to make decisions on a number of difficult or competing issues at once, taking account of MCA priorities.			✓
	4.5.1 Is not easily deflected from the task in hand by interruptions or minor setbacks.	✓	✓	✓
	4.5.2 Does not let matters drift.	✓	✓	✓
	4.5.3 Shows patience and determination in getting to the root of a problem and resolving it.	✓	✓	✓
	4.5.4 Maintains own commitment and positive attitude in the face of change.		✓	✓
	4.5.5 Takes steps to maintain staff morale and standard of service in changing circumstances.			✓
4.6 Accepting Responsibility	4.6.1 Takes responsibility for own work and follows things through to completion with minimum supervision.	✓	✓	✓
	4.6.2 Willingly accepts work delegated by line manager.	✓	✓	✓
	4.6.3 Willingly accepts responsibility and is able to work independently.		✓	✓
	4.6.4 Specialist work is accurate and of a high quality, and responsibility is taken for the outputs.			✓

Competence Cluster 5: TEAMWORK

Outcome: We deal with each other and our external customers in a businesslike, helpful and constructive manner. We work together to engender a good team spirit.

Competence	Performance Criteria	Levels		
		1	2	3
5.1 Building and Leading a Team	5.1.1 Is open, honest and fair in all dealings with staff.		✓	✓
	5.1.2 Spends time getting to know staff and understanding their needs, and is able to represent their views up the line.		✓	✓
	5.1.3 Ensures staff understand how their work fits into the overall activities of the team/organisation.		✓	✓
	5.1.4 Encourages and assists staff to make suggestions on how systems/procedures could be improved.		✓	✓
	5.1.5 Carries out effective performance appraisals on time.		✓	✓
	5.1.6 Ensures equality of opportunity and fairness for all staff so that no member of the team is discriminated against.		✓	✓
5.2 Valuing the Contribution of Others	5.2.1 Makes an effort to get to know and understand other members of the team.	✓	✓	✓
	5.2.2 Listens to others and is willing to take on board their views.	✓	✓	✓
	5.2.3 Accepts that fellow team members may hold different views.	✓	✓	✓
	5.2.4 Is honest, open and fair in all dealings with fellow team members.	✓	✓	✓

Competence Cluster 5: TEAMWORK

Competence	Performance Criteria	Levels		
		1	2	3
5.3 Sensitivity to Others Needs	5.3.1 Makes time to be available to support others.	✓	✓	✓
	5.3.2 Reinforces others self-worth and value in what they do.	✓	✓	✓
	5.3.3 Offers advice and help with sensitivity.	✓	✓	✓
	5.3.4 Treats all colleagues with courtesy and respect, and in line with MCA's equal opportunity policy.	✓	✓	✓
5.4 Contribution to Team Effort	5.4.1 Expresses him/herself clearly, concisely and accurately. Asks questions to check listeners understanding.	✓	✓	✓
	5.4.2 Has a friendly, helpful and polite manner.	✓	✓	✓
	5.4.3 Appreciates team's goals, willingly co-operates with colleagues and readily helps out when necessary.	✓	✓	✓
	5.4.4 Shares knowledge and experience with team members.	✓	✓	✓
	5.4.5 Keeps team colleagues informed of developments which affect their work.	✓	✓	✓
	5.4.6 Promises and undertakings to others are honoured, taking account of other priorities and commitments.	✓	✓	✓
	5.4.7 Keeps the line manager informed about activities and progress as appropriate.	✓	✓	✓

Competence Cluster 5: TEAMWORK

Competence	Performance Criteria	Levels		
		1	2	3
5.5 Building effective Relationships outside the Team	5.5.1 Establishes and maintains effective relationships with other people at all levels (colleagues, the public, external organisations).	✓	✓	✓
	5.5.2 Is confident speaking to colleagues in all grades, external contacts and the public.		✓	✓

0.3 Level statements for individual Performance Criteria

Level 0 No knowledge required

Level 1 Overview knowledge, an appreciation of the subject

The jobholder needs to have knowledge of the key principles but is not expected to apply the knowledge in detail.

Level 2 Basic knowledge and experience

The jobholder has to have a good grasp of the fundamentals of the areas of knowledge but needs to refer to other sources for detailed information when required to deal with other than the most straightforward situations. Supervision and guidance from more experienced colleagues is expected.

Level 3 Detailed knowledge with more experience

The jobholder needs to have built on basic knowledge and experience of a range of applications and deals with the majority of situations encountered on own initiative.

Level 4 Specialist

The jobholder needs to consistently apply a detailed knowledge and experience and is an acknowledged source of guidance and advice in the most difficult and complex areas.

Level 4, "Specialist" would be a level to which very few officers would be required to perform at routinely. The key attributes to this particular level of expertise are (a) how many times is the jobholder regarded as a "guru" by colleagues and (b) who could the specialist turn to for advice. If the answers to (a) and (b) are "all the time" and "nobody" then level 4 will most certainly apply.

UNCONTROLLED

1.0 Competence 1

Search Planning

Outcomes: *Coastguard Officers are able to predict the likely movement of various types of targets drifting at sea by employing established methods, understanding the effects of individual drift factors and the causes and likely magnitudes of predictable errors required for the calculation of search areas. Coastguard Officers are able to plan searches on the shore for any target using established procedures. In both cases Coastguard Officers are able to effectively allocate suitable resources and prioritise search effort so that persons at risk could be located within their predicted survival time.*

100. Applies a knowledge of the cause and effect of wind, tide, current and other drift factors upon various drifting targets.
101. Applies a knowledge of vector addition to construct datum positions.
102. Applies a knowledge of accounting for probable errors arising in the construction of datum positions to construct error circles and search areas around the datum positions.
103. Applies a knowledge of the theory and practice of current search planning methodology to determine the most appropriate solution using the Rapid Response method.
104. Applies a knowledge of the theory and practice of current search planning methodology to determine the most appropriate solution from Datum Point, Datum Area or Backtrack.
105. Applies incident information to search area determination to produce legitimate and practical search areas ready for plotting onto nautical charts.
106. Applies a knowledge of the predicted behaviour of shore targets to determine a feasible shore search area.
107. Applies a knowledge of shore search techniques to plan an effective search.
108. Applies a knowledge of the capabilities and limitations of search and rescue units to properly resource offshore searches.
109. Applies a knowledge of the capabilities and limitations of search and rescue units to properly resource shore searches.
110. Applies a knowledge of the risks and gains associated with differing search patterns when resourcing search areas.
111. Applies a knowledge of the relationship between sweep width, track spacing and coverage factor to predict the likely effectiveness of a given search.
112. Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to assess the effectiveness of plans devised by others.

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113. Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to describe the effectiveness of existing plans to outside agencies or individuals.
114. Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to determine the point at which an unsuccessful search should be terminated.
115. Able to operate the SARIS search planning system.
116. Applies a knowledge of the performance of visual and electronic detection aids, and their implications when allocating search effort.

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2.0 Competence 2

Operational Communications

Outcome: • *Coastguard Officers are able to successfully prosecute Search and Rescue incidents and maintain an effective operational state of readiness using the telecommunications infrastructure within the Global Maritime Distress and Safety System. Coastguard Officers should be able to operate telecommunications equipment, and use it to transmit and receive ideas and information in the most effective manner, and in compliance with established procedures.*

200. Able to deal with incident telephone traffic in a positive and professional manner.
201. Able to deal with 999 telephone traffic in a positive and professional manner, so that the information required to make an effective response is wherever possible gleaned from the caller.
202. Applies a knowledge of the terrestrial and mobile telephone networks when dealing with and making incident calls.
203. Able to transmit clearly over radio speech circuits with due regard to rhythm, speed, volume and pitch.
204. Applies a knowledge of maritime radio practice and procedures, and those employed specifically by HMCG.
205. Applies a knowledge of Distress, Safety and Urgency procedures to receive and rebroadcast alerts and safety information.
206. Applies a knowledge of Distress, Safety and Urgency broadcast formats to compile effective broadcasts from incident information.
207. Able to produce effective reports i.e. SITREPS, HAZREPS, DEFREPS, MAREPS using incident information.
208. Able to keep an effective radio log.
209. Applies a knowledge of radio frequency allocation when receiving and transmitting routine and incident traffic.
210. Applies a knowledge of radio frequency allocation to the devising of major incident communications plans.
211. Applies a knowledge of radio propagation theory when assessing the performance radio communications equipment, and selecting the most appropriate remote aerial site.
212. Able to encode and transmit paging signals over VHF radio.

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213. Applies a knowledge of VHF radio direction finding to determine and classify bearing information received from mobile stations.
214. Able to operate the radio communications keypad of CCDS equipment.
215. Able to operate portable VHF equipment, including boat and vehicle sets.
216. Applies a knowledge of the ITU regulations with regard to infringements, silence periods, calling procedures and the control of communications during distress working.
217. Able to receive and rebroadcast distress and urgency alerts via VHF and MF DSC.
218. Applies a knowledge of MMSI protocols and can identify a ship or shore station from the appropriate database.
219. Able to transmit and receive telex messages, and ensure that such messages are properly recorded in the signal log.
220. Able to transmit messages by fax, and to ensure that such messages are properly recorded in the signal log.
221. Applies a knowledge of the GMDSS carriage requirements for vessels of 300GRT when considering the most suitable broadcast and/or communications means.
222. Applies a knowledge of the COSPAS/SARSAT system to interpret and act upon beacon alert messages.
223. Applies a knowledge of the COSPAS/SARSAT system to determine the integrity and accuracy of potential and actual beacon alerts.
224. Applies a knowledge of the INMARSAT system to interpret and act upon alert messages.
225. Applies a knowledge of the NAVTEX system to encode initial distress or urgency alerts for broadcast.
226. Able to assess the effectiveness of the District and/or Regional communications infrastructure, and make appropriate recommendations if required.

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3.0 Competence 3

Coast Rescue

Outcome: Coastguard Officers are able to plan, manage and execute the rescue of persons in difficulty in littoral areas using established procedures and equipment, together with Auxiliary Coastguards and other resources. Coastguard Officers are able to supervise the maintenance of an effective state of operational readiness.

300. Applies a knowledge of the safe storage and proper inspection of rescue equipment, including pyrotechnics.
301. Applies a knowledge of coast rescue techniques, with regard to the needs of the casualty, the actual and potential hazards to rescuers and the casualty, and the identification of possible escape routes.
302. Applies a knowledge of the safe operation of safety harnesses issued as coast rescue equipment.
303. Applies a knowledge of the safe operation of head protection issued as coast rescue equipment.
304. Applies a knowledge of the safe operation of lifejackets issued as coast rescue equipment.
305. Applies a knowledge of the safe operation of drysuits issued as coast rescue equipment.
306. Applies a knowledge of the safe operation of other personal safety equipment issued as coast rescue equipment.
307. Applies a knowledge of standard rope rescue techniques whenever appropriate to assist in the rigging of approved rope rescue systems.
308. Applies a knowledge of standard rope rescue techniques whenever appropriate to supervise the rigging of approved rope rescue systems.
309. Applies a knowledge of shore search procedures whenever appropriate.
310. Applies a knowledge of mud rescue procedures whenever appropriate.
311. Able to operate pyrotechnics safely and effectively during Search and Rescue operations.
312. Applies a knowledge of the Coastguard Boat syllabus at the class of certificate appropriate for the crew duty performed.
313. Applies a knowledge of the Road Traffic Act in relation to the safe operation of Coastguard vehicles during emergency response and routine duties.
314. Applies a knowledge of the Road Traffic Act as applied to the towing of trailers.
315. Applies a knowledge of driving techniques for the appropriate terrain, conditions and vehicle type.

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- 316. Applies a knowledge of the Code Of Practice For The Carriage Of Personnel And Equipment.
- 317. Applies a knowledge of helicopter co-operation.
- 318. Applies a knowledge of casualty care during evacuation, including the administration of First Aid.
- 319. Applies a knowledge of multi agency working during coastal incidents.
- 320. Applies a knowledge of the role of the Incident Officer during coastal incidents.

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4.0 Competence 4

Chart and Map Work

Outcome: Coastguard Officers are able to successfully prosecute Search and Rescue incidents by applying navigational and plotting skills to Admiralty Charts and associated publications, as well as Ordnance Survey maps.

400. Applies a knowledge of Mercator's Projection when interpreting latitude and Longitude scales, measuring distances on charts, and converting OS Grid positions to latitude/longitude and vice versa.
401. Able to plot a position on a map or chart to a level of accuracy commensurate with the scale and the task at hand.
402. Able to lay off distances and ranges on a map or chart to a level of accuracy commensurate with the scale and the task at hand.
403. Able to lay off true bearings and apply scalar information to produce vectors to a level of accuracy commensurate with the scale and the task at hand.
404. Applies a knowledge of the magnetic compass to translate compass bearings into true bearings and vice versa.
405. Applies a knowledge of plotting skills to construct a running fix or intercept, accounting for tide if appropriate.
406. Applies a knowledge of plotting skills to transfer search plans onto a chart of an appropriate scale.
407. Able to transpose information from VHF D/F onto a map or chart.
408. Applies a knowledge of the relationship between speed, distance and time.
409. Applies a knowledge of chart and map symbology to identify dangers to navigation.
410. Applies a knowledge of tidal theory and tidal information.
411. Applies a knowledge of plotting to make reasonable allowances for tide and leeway on the predicted track of a vessel.
412. Applies a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to reconstruct the most likely track of a vessel reported as overdue.
413. Applies a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to devise a safe passage plan for a Coastguard Boat or Cutter.
414. Able to assess the nature of the terrain by examining the contours on an OS Map.
415. Applies a knowledge of the ephemeris to calculate the predicted times of twilight, sunrise and sunset.

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416. Applies a knowledge of the means by which charts and navigational publications are kept up to date, including making corrections and recording them.

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5.0 Competence 5

General Maritime

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, effectively liaise with all sections of the maritime community and contribute to incident prevention by providing timely and meaningful safety information to the public, demonstrating an understanding of the marine environment as experienced by the full range of sea and coastal users.*

500. Applies a knowledge of the characteristics and construction of principle ship types to Search and Rescue operations.
501. Applies a knowledge of offshore oil and gas industry practices and procedures to Search and Rescue operations
502. Applies a knowledge of the construction and characteristics of workboats, fishing vessels and pleasure craft to Search and Rescue operations.
503. Able to provide safety information to all sea and coastal users with due regard to their particular needs and limitations.
504. Applies a knowledge of the IALA buoyage system and other aids to navigation to Search and Rescue operations, and Coastguard Boat operations.
505. Applies a knowledge of the International Rules For The Prevention Of Collision At Sea when dealing with reports of hazardous incidents, and for Coastguard Boat operations.
506. Applies a knowledge of the Emergency Towing Protocol and the Secretary of States Powers of Intervention.
507. Applies a knowledge of the Coast Protection Act in conjunction with local legislation and local practices to monitor, measure and report upon works carried out on the foreshore.
508. Applies a knowledge of current Merchant Shipping legislation to monitor and report upon the measurement, registration and marking of registered fishing vessels under 24 metres in length.
509. Applies a knowledge of current Merchant Shipping legislation, in conjunction with the relevant Codes of Practice, to monitor and report upon actual and potential infringements.
510. Applies a knowledge of current agreements with other agencies when making reports of maritime activity.
511. Applies a knowledge of current agreements with the Hydrographic Office and General Lighthouse Authorities when dealing with reports of Hazards to Navigation.
512. Applies a knowledge of current Merchant Shipping legislation to provide assistance to the Receiver of Wreck.

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513. Applies a knowledge of the provisions of the International Convention on the Safety Of Life At Sea (SOLAS) when dealing with vessels to which the provisions of the Convention apply.
514. Applies a knowledge of agreed procedures and/or local byelaws to advise mariners and the public of activity within coastal ranges, exercise areas and recreational areas.
515. Applies a knowledge of current marine legislation relating to the transportation by sea of hazardous materials to raise reports and monitor the progress of such shipments.
516. Applies a knowledge of the IMO hazardous cargo classifications.
517. Applies a knowledge of the licensing and carriage regulations for radio equipment carried by small commercial and pleasure craft.
518. Applies a knowledge of current agreements with BT Marine when dealing with reports of fouled undersea cables.
519. Applies a knowledge of international conventions and other instruments concerning Search and Rescue.
520. Applies a knowledge of other regulations, recommendations and codes when dealing with vessels and other craft which are not subject to the provisions of SOLAS.

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6.0 Competence 6

Counter Pollution

Outcome: *Coastguard Officers are able to support the activities of the Counter Pollution Organisation, local government bodies and other interested parties during Counter Pollution operations employing established procedures, personnel and equipment.*

- 600. Applies a knowledge of c/p procedures to assess, classify and report upon actual or potential pollution incidents.
- 601. Applies a knowledge of c/p procedures to support c/p reconnaissance and spraying aircraft operations.
- 602. Applies a knowledge of c/p procedures and international agreements to format standard reports and notifications to external agencies.
- 603. Applies a knowledge of c/p procedures to act for the Principal Counter Pollution Officer if required.
- 604. Applies a knowledge of the contact and callout procedures for other agency's key staff during c/p incidents.
- 605. Applies a knowledge of the contact and callout arrangements for Maritime & Coastguard Agency key staff during c/p incidents.
- 606. Applies a knowledge of the National Contingency Plan.
- 607. Applies a knowledge of other external contingency plans.
- 608. Applies a knowledge of Explosive Ordnance Disposal procedures.

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7.0 Competence 7

Meteorology

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations; provide weather information to the public and the mariner, assess the effects of weather on the operational state of readiness and contribute to incident prevention by demonstrating an understanding of meteorology, using established procedures and information supplied by the Meteorological Office. Coastguard Officers are able to enhance the quality of this information by observing the weather and making reports using established procedures and equipment.*

- 700. Able to obtain weather information for mariners and coastal users from the UK weather information service.
- 701. Applies a knowledge of meteorological terms to interpret weather information.
- 702. Applies a knowledge of meteorology to describe the effects of air masses upon North Atlantic weather patterns.
- 703. Applies a knowledge of meteorology to describe the formation of North Atlantic weather systems, and their observable effects.
- 704. Able to interpret a synoptic chart.
- 705. Able to encode the National Climatological Message.
- 706. Able to identify the phenomena associated with the onset of bad weather.
- 707. Applies a knowledge of meteorology to identify the causes of reduced visibility, and the causes by which poor visibility may improve.
- 708. Applies a knowledge of meteorology to identify the causes of sea and land breezes.
- 709. Applies a knowledge of the effects of meteorological phenomena upon Search and Rescue effort.
- 710. Applies a knowledge of the effect of wind upon sea state, and the effect of sea state upon Search and Rescue effort.

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8.0 Competence 8

Search and Rescue Co-ordination

Outcome: *Coastguard Officers are able to successfully co-ordinate Search and Rescue operations, maintain an effective operational state of readiness and cause all parties involved to work together by demonstrating an understanding of the national and international organisation of Search and Rescue, established procedures and the aims of the Maritime and Coastguard Agency (MCA).*

- 800. Applies a knowledge of current Search and Rescue policy and procedures.
- 801. Applies a knowledge of emergency phase classification.
- 802. Applies a knowledge of the status of search and rescue facilities used to conduct SAR operations.
- 803. Applies a knowledge of the duties and responsibilities of the SMC, OSC and ACO.
- 804. Able to enter, extract and analyse incident information using CMIS, CDATE, ADAS and other relevant publications as appropriate.
- 805. Applies a knowledge of the UK Search and Rescue Organisation.
- 806. Applies a knowledge of the intent and procedures of the various memoranda of understanding that exist between the MCA and other agencies.
- 807. Applies a knowledge of the emergency contact and callout arrangements that exist between HMCG and declared rescue facilities.
- 808. Applies a knowledge of the RNLI Regulations (The Green Book) in relation to Search and Rescue operations.
- 809. Applies a knowledge of the command and control structure likely to be put in place when dealing with major incidents.
- 810. Applies a knowledge of the function and composition of the UK SAR Committee.
- 811. Applies a knowledge of emergency and contingency plans employed by external agencies for their areas of responsibility.
- 812. Applies a knowledge of the procedures for co-operating with foreign Search and Rescue agencies.
- 813. Applies a knowledge of the procedures restricting the use of airspace during emergency operations.

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- 814. Applies a knowledge of the procedures restricting the movement of vessels during emergency operations.
- 815. Applies the required standard of local knowledge to incident information when prosecuting SAR operations.
- 816. Applies a knowledge of exercise planning.

13.0 Table 5 - Competence Profile for Sector Manager

100	3	300	3	505	3	806	3
101	2	301	4	506	2	807	3
102	2	302	3	507	4	808	3
103	3	303	3	508	3	809	3
104	2	304	3	509	3	810	2
105	3	305	3	510	3	811	2
106	4	306	3	511	3	812	2
107	4	307	4	512	3	813	2
108	3	308	4	513	3	814	2
109	4	309	4	514	4	815	3
110	2	310	4	515	2	816	3
111	2	311	4	516	2		
112	3	312	3	517	4		
113	3	313	4	518	2		
114	3	314	4	519	2		
115	1	315	3	520	3		
116	3	316	3				
		317	3	600	3		
200	3	318	3	601	2		
201	3	319	3	602	2		
202	2	320	3	603	1		
203	3			604	1		
204	3	400	4	605	1		
205	3	401	4	606	2		
206	4	402	4	607	2		
207	2	403	4	608	3		
208	2	404	4				
209	3	405	3	700	3		
210	3	406	4	701	3		
211	3	407	3	702	2		
212	2	408	4	703	2		
213	2	409	4	704	2		
214	2	410	4	705	0		
215	3	411	4	706	3		
216	3	412	3	707	3		
217	2	413	4	708	3		
218	2	414	4	709	3		
219	2	415	3	710	3		
220	2	416	3				
221	2			800	3		
222	2	500	2	801	3		
223	2	501	2	802	3		
224	2	502	3	803	2		
225	2	503	3	804	2		
226	3	504	3	805	3		

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9.0 Table 1 - levels of competence for each PC - all grades

PC	CWA	WO	WM	SM	OM	DDC	DC	Rinsp
100	1	3	3	3	3	3	3	3
101	1	3	3	2	3	3	3	3
102	0	3	3	2	3	3	3	3
103	0	3	3	3	3	3	3	3
104	0	3	3	2	3	3	3	3
105	0	3	3	3	3	3	3	3
106	0	2	2	4	2	3	3	3
107	0	2	2	4	3	3	3	3
108	0	3	3	3	3	3	3	3
109	0	2	2	4	2	3	3	3
110	1	3	3	2	3	3	3	3
111	1	3	3	2	3	3	3	3
112	0	2	3	3	3	4	4	4
113	0	2	3	3	3	3	3	4
114	0	2	3	3	3	4	4	4
115	1	3	3	1	3	2	2	1
116	1	3	3	3	3	3	3	3
200	2	3	3	3	3	3	2	1
201	3	3	3	3	3	3	2	1
202	2	3	3	2	2	2	3	3
203	3	3	3	3	3	3	3	3
204	3	3	3	3	3	3	3	3
205	2	3	3	3	3	3	3	1
206	2	3	3	4	2	2	2	1
207	2	3	3	2	3	2	2	2
208	3	3	3	2	3	2	2	1
209	2	3	3	3	3	3	3	1
210	2	3	3	3	3	3	4	4
211	2	3	3	3	3	2	2	1
212	3	3	3	2	3	2	2	1
213	3	3	3	2	2	2	2	1
214	3	3	3	2	2	2	2	2
215	2	2	2	3	3	3	2	2
216	2	3	3	3	3	3	3	3
217	2	3	3	2	3	2	2	1
218	3	3	3	2	3	2	2	1
219	3	3	3	2	3	2	2	1
220	3	3	3	2	3	2	2	1
221	2	3	3	2	3	3	3	2
222	2	3	3	2	3	3	3	1
223	2	3	3	2	3	3	3	1
224	2	3	3	2	3	3	3	1
225	2	3	3	2	3	2	2	1
226	2	3	3	3	3	3	4	3

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9.0 Table 1 - levels of competence for each PC - all grades

PC	CWA	WO	WM	SM	OM	DDC	DC	Rlnsp
300	1	2	2	3	3	3	3	2
301	0	1	2	4	3	3	3	2
302	0	1	1	3	3	3	3	2
303	0	1	1	3	2	3	3	2
304	0	1	1	3	2	3	3	2
305	0	1	1	3	2	3	2	1
306	0	1	1	3	2	3	3	1
307	0	1	1	4	2	3	3	2
308	0	1	1	4	3	3	3	2
309	1	1	2	4	3	3	3	1
310	1	1	2	4	2	3	3	1
311	0	2	2	4	2	3	3	2
312	0	1	1	3	2	3	3	2
313	1	1	2	4	2	3	3	2
314	0	1	2	4	2	3	3	1
315	0	1	2	3	2	2	2	1
316	1	1	2	3	1	3	3	2
317	1	2	2	3	2	2	2	2
318	1	2	2	3	2	2	2	1
319	1	1	2	3	3	3	4	4
320	1	2	2	3	3	3	3	3
400	2	3	4	4	4	3	3	2
401	3	3	4	4	4	3	3	2
402	3	3	4	4	4	3	3	2
403	3	3	4	4	4	3	3	2
404	3	3	4	4	4	3	3	2
405	2	3	4	3	4	3	3	2
406	3	3	4	4	4	3	3	2
407	3	3	4	3	4	3	3	2
408	3	3	4	4	4	3	3	2
409	2	3	4	4	4	3	3	2
410	2	3	4	4	4	3	3	2
411	2	3	4	4	4	3	3	2
412	1	3	4	3	4	3	3	2
413	1	2	2	4	2	2	2	2
414	2	3	3	4	3	3	3	2
415	2	3	3	3	3	2	2	1
416	2	3	3	3	2	2	2	1

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9.0 Table 1 - levels of competence for each PC - all grades

PC	CWA	WO	WM	SM	OM	DDC	DC	RInsp
500	2	3	3	2	3	3	3	2
501	2	2	3	2	3	3	3	2
502	2	2	3	3	3	3	3	2
503	2	3	3	3	3	3	3	2
504	2	3	3	3	3	3	3	2
505	2	3	3	3	3	3	3	2
506	1	2	3	2	3	3	3	4
507	1	1	1	4	2	3	4	2
508	1	1	1	3	2	2	2	1
509	1	2	2	3	3	3	3	2
510	2	2	3	3	3	3	3	2
511	2	3	3	3	3	3	3	2
512	1	2	2	3	3	3	3	3
513	2	3	3	3	3	3	3	2
514	2	3	3	4	3	3	3	2
515	1	3	3	2	3	3	3	2
516	1	3	3	2	3	3	3	2
517	2	2	2	4	2	2	3	2
518	2	3	3	2	2	2	2	3
519	1	2	2	2	3	3	4	4
520	1	2	2	3	3	3	3	4
600	2	3	3	3	3	3	3	4
601	1	3	3	2	3	3	3	4
602	2	3	3	2	3	3	3	3
603	1	1	1	1	2	2	3	4
604	2	3	3	1	3	3	3	4
605	2	3	3	1	3	3	3	4
606	1	2	2	2	2	2	3	4
607	1	2	2	2	2	2	3	2
608	1	3	3	3	2	2	2	2
700	3	3	3	3	2	2	2	1
701	3	3	3	3	3	3	3	2
702	1	2	2	2	2	2	2	1
703	1	2	2	2	2	2	2	1
704	2	2	2	2	2	2	2	2
705	3	3	2	0	0	0	0	0
706	2	3	3	3	3	3	3	2
707	3	3	3	3	3	3	3	2
708	3	3	3	3	3	3	3	2
709	2	3	3	3	3	3	3	3
710	2	3	3	3	3	3	3	3

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9.0 Table 1 - levels of competence for each PC - all grades

PC	CWA	WO	WM	SM	OM	DDC	DC	Rinsp
800	2	3	3	3	3	3	4	4
801	2	3	3	3	3	3	4	4
802	3	3	3	3	3	3	3	2
803	2	3	3	2	3	3	4	4
804	3	3	3	2	2	2	2	2
805	2	3	3	3	3	3	4	4
806	2	3	3	3	3	3	4	4
807	3	3	3	3	3	3	3	3
808	2	3	3	3	2	2	3	1
809	1	3	3	3	3	3	4	4
810	2	2	2	2	2	2	4	4
811	2	2	2	2	2	2	4	4
812	2	2	3	2	3	3	4	4
813	1	2	3	2	2	2	3	3
814	1	2	3	2	3	3	4	4
815	3	3	3	3	3	3	3	2
816	2	2	3	3	3	3	3	4

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附錄二 英國訓練中心初級課程

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SECTION 1

INTRODUCTION

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1.1 ABOUT MSAR (F)

1.1.1 THE MSAR TRAINING PROGRAMME

A co-ordinated three-tier programme has been developed by the Training Centre to support the training of operational Coastguard staff from new entry through to Watch or Sector Manager.

It is known as the Maritime Search and Rescue (MSAR) programme and is in three levels;

MSAR (F) - Foundation	(to qualified CWA level)
MSAR (I) - Intermediate	(to qualified Watch Officer level)
MSAR (A) - Advanced	(to Watch/Sector manager level and beyond)

As a new entry CWA (O) you will complete MSAR (F), the foundation part.

1.1.2 MSAR (F)

This is probably the most important part of the MSAR programme. It is the part upon which the Intermediate and Advanced levels build and, as any civil engineer will tell you, the overall stability of a structure greatly depends upon the quality of the foundations!

The MSAR (F) training programme can be broken down into five separate phases preceded by an Induction and Pre-course training period. These are:

- Part 1 – Two week course at the MCA Training Centre
- Part 2 – Eight weeks workplace experience supported by a workbook
- Part 3 – One-week course at the MCA Training Centre
- Part 4 – 7 months workplace experience supported by a workbook
- Part 5 – Three days revision and qualifying examinations

Induction & Pre-Course Training

This is the period between joining your station and attending the Part 1 Course. Your learning curve will be at it's steepest during the first few weeks and you will need time to assimilate and digest all the new information you are receiving.

This initial learning period naturally lends itself to the reading-up on various subjects, gaining basic hands-on experience with equipment, familiarisation with procedures, and generally obtaining a good overview of the MRCC/SC and of what the post actually entails. Section 2 of this Workbook will guide you through this period.

It is recommended that you have at least six weeks on station to complete the Pre-Course tasks. It is most important that they are completed prior to attending the MSAR (F) Part 1 Course. This phase is the base on which the Part 1 Course

will build and must be sound in order to gain the maximum benefit from the course.

MSAR (F) Part 1

Part 1 is a two-week structured learning course, held at the MCA Training Centre in Highcliffe. It is designed to provide you with a solid grounding in aspects of the job including the skills, knowledge and attitudes required of a CWA. Details of the course content can be found in Section 3.

MSAR (F) Part 2

This is an eight-week period back at your station supported by a Workbook. It builds on the learning from the Part 1 Course and will prepare you for the Part 3 Course. Section 4 of this Workbook will guide you through this period.

It is most important that this section is completed prior to attending the MSAR (F) Part 3 Course. This phase is the base on which the Part 3 Course will build and must be sound to gain the maximum benefit from the course.

MSAR (F) Part 3

Part 3 is a one-week structured learning course, again held at the MCA Training Centre in Highcliffe. It is designed to provide you with further grounding in all aspects of the job adding to the skills, knowledge and attitudes required of a CWA. Details of the course content can be found in Section 5.

MSAR (F) Part 4

This is a thirty-week period of on-the-job training back at your station supported by this Workbook. It is a period of consolidation that builds on the learning from the Part 1 and Part 3 Courses. During this time you will improve and increase your individual skill levels, knowledge and experience working in the operations room.

The tasks and projects in Section 6 of this Workbook are designed to support and guide you through this period.

MSAR (F) Part 5

Part 5 consists of three days at the MCA Training Centre in Highcliffe and will consist of revision and the qualifying examinations. The exam must be taken within a week of, but no earlier than, thirty weeks from the last day of the Part 3 Course. There is more information about the exam in Section 7 of this Workbook.

1.2 JOB DESCRIPTION & COMPETENCY PROFILES

1.2.1 CWA JOB DESCRIPTION

The Coastguard Watch Assistant (CWA) will be supervised by Watch Officers (WO) as directed by the Watch Manager (WM). As a full or part-time watch member or occasional day worker, CWAs shall perform the following duties:

1. Operate and carry out *user* checks on all Coastguard communications equipment contained within the Combined Control & Distribution System (CCDS) consoles, and other stand-alone communications equipment within the rescue centre, including master radio-pagers, telephones, radio, telex, fax, NAVTEX, and archive tape recorders, reporting any faults or problems immediately to the WO or WM as directed;
2. Under direct supervision, carry out *first-line* fault rectification on rescue centre communications equipment, such as changing spent fuses and indicator bulbs, and formulating defect reports for other faults as appropriate;
3. Operate the Action Data System (ADAS), recording incident and routine messages, and routinely amending *front-end* database information as directed;
4. Monitor, and respond to calls on, the international VHF and MF Distress Safety & Urgency (DSU) frequencies (including Digital Selective Calling (DSC) frequencies as appropriate), logging all necessary information, and immediately reporting all DSU and other potential incident cases to the WO or WM, and taking appropriate broadcast action as directed;
5. As directed, alert, and monitor the progress of, search and rescue (SAR) and other facilities;
6. Perform basic chartwork plotting functions in support of SAR and other operations, including, as directed, the operation of the search planning computer in the production of basic search plans;
7. Answer routine and 999 telephone calls, logging all necessary information and immediately reporting all potential or actual incident cases to the WO or WM as directed;
8. Carry out routine administrative tasks as directed, such as dealing with visitors, and amending rescue centre and other publications, including day-to-day filing;
9. Participate in SAR accident prevention projects and public relations events as required.
10. Undertake routine meteorological observations, encode and report to the Meteorological Office as required.

1.2.2 LEVEL STATEMENTS FOR INDIVIDUAL PERFORMANCE CRITERIA

Level 0 No knowledge required

Level 1 Overview knowledge, an appreciation of the subject

The jobholder needs to have knowledge of the key principles but is not expected to apply the knowledge in detail.

Level 2 Basic knowledge and experience

The jobholder has to have a good grasp of the fundamentals of the areas of knowledge but needs to refer to other sources for detailed information when required to deal with other than the most straightforward situations. Supervision and guidance from more experienced colleagues is expected.

Level 3 Detailed knowledge with more experience

The jobholder needs to have built on basic knowledge and experience of a range of applications and deals with the majority of situations encountered on own initiative

Level 4 Specialist

The jobholder needs to consistently apply a detailed knowledge and experience and is an acknowledged source of guidance and advice in the most difficult and complex areas.

Level 4, "Specialist" would be a level to which very few officers would be required to perform at routinely. The key attributes to this particular level of expertise are:

- (a) How many times is the jobholder regarded as a "guru" by colleagues?
- (b) Who could the specialist turn to for advice?

If the answers to (a) and (b) are "all the time" and "nobody" then level 4 will most certainly apply.

1.2.3 CWA COMPETENCY PROFILES

The established performance criteria and associated competency levels for CWAs are those which are expected of a fully trained and experienced CWA(O). A number of the performance criteria call for a level 3 attainment which requires "detailed knowledge and experience" of the topic. Experience of course is something that comes with time and it is not normally possible therefore for a new CWA to achieve level 3 in the first year.

The MSAR (F) training programme will take you to a maximum level 2 competence - a "basic knowledge and experience" of the subject.

Competence 1

Search Planning

Outcomes: *Coastguard Officers are able to predict the likely movement of various types of targets drifting at sea by employing established methods, understanding the effects of individual drift factors and the causes and likely magnitudes of predictable errors required for the calculation of search areas. Coastguard Officers are able to plan searches on the shore for any target using established procedures. In both cases Coastguard Officers are able to effectively allocate suitable resources and prioritise search effort so that persons at risk could be located within their predicted survival time.*

Ref.	Performance Criteria	Level
100	Applies a knowledge of the cause and effect of wind, tide, current and other drift factors upon various drifting targets	1
101	Applies a knowledge of vector addition to construct datum positions.	1
102	Applies a knowledge of accounting for probable errors arising in the construction of datum positions to construct error circles and search areas around the datum positions.	0
103	Applies a knowledge of the theory and practice of current search planning methodology to determine the most appropriate solution using the Rapid Response method	0
104	Applies a knowledge of the theory and practice of current search planning methodology to determine the most appropriate solution from Datum Point, Datum Area or Backtrack	0
105	Applies incident information to search area determination to produce legitimate and practical search areas ready for plotting onto nautical charts	0
106	Applies a knowledge of the predicted behaviour of shore targets to determine a feasible shore search area	0
107	Applies a knowledge of shore search techniques to plan an effective search	0
108	Applies a knowledge of the capabilities and limitations of SAR units to properly resource offshore searches	0

Ref.	Performance Criteria	Level
109	Applies a knowledge of the capabilities and limitations of search and rescue units to properly resource shore searches	0
110	Applies a knowledge of the risks and gains associated with differing search patterns when resourcing search areas	1
111	Applies a knowledge of the relationship between sweep width, track spacing and coverage factor to predict the likely effectiveness of a given search	1
112	Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to assess the effectiveness of plans devised by others	0
113	Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to describe the effectiveness of existing plans to outside agencies or individuals	0
114	Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to determine the point at which an unsuccessful search should be terminated	0
115	Able to operate the SARIS search planning system	1
116	Applies a knowledge of the performance of visual and electronic detection aids, and their implications when allocating search effort	1

Competence 2

Operational Communications

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue incidents and maintain an effective operational state of readiness using the telecommunications -infrastructure within the Global Maritime Distress and Safety System. Coastguard Officers should be able to operate telecommunications equipment, and use it to transmit and receive ideas and information in the most effective manner and in compliance with established procedures.*

Ref.	Performance Criteria	Level
200	Able to deal with incident telephone traffic in a positive and professional manner	2
201	Able to deal with 999 telephone traffic in a positive and professional manner, so that the information required to make an effective response is wherever possible gleaned from the caller	3
202	Applies a knowledge of the terrestrial and mobile telephone networks when dealing with and making incident calls	2
203	Able to transmit clearly over radio speech circuits with due regard to rhythm, speed, volume and pitch	3
204	Applies a knowledge of maritime radio practice and procedures, and those employed specifically by HMCG	3
205	Applies a knowledge of Distress, Safety and Urgency procedures to receive and rebroadcast alerts and safety information	2
206	Applies a knowledge of Distress, Safety and Urgency broadcast formats to compile effective broadcasts from incident information	2
207	Able to produce effective reports i.e. SITREPS, HAZREPS, DEFREPS, MAREPS using incident information	2
208	Able to keep an effective radio log	3
209	Applies a knowledge of radio frequency allocation when receiving and transmitting routine and incident traffic	2
210	Applies a knowledge of radio frequency allocation to the devising of major incident communications plans	2
211	Applies a knowledge of radio propagation theory when assessing the performance radio communications equipment, and selecting the most appropriate remote aerial site	2
212	Able to encode and transmit paging signals over VHF radio	3

Ref.	Performance Criteria	Level
213	Applies a knowledge of VHF radio direction finding to determine and classify bearing information received from mobile stations	3
214	Able to operate the radio communications keypad of CCDS equipment	3
215	Able to operate portable VHF equipment, including boat and vehicle sets	2
216	Applies a knowledge of the ITU regulations with regard to infringements, silence periods, calling procedures and the control of communications during distress working	2
217	Able to receive and rebroadcast distress and urgency alerts via VHF and MF DSC	2
218	Applies a knowledge of MMSI protocols and can identify a ship or shore station from the appropriate database	3
219	Able to transmit and receive telex messages, and ensure that such messages are properly recorded in the signal log	3
220	Able to transmit messages by fax, and to ensure that such messages are properly recorded in the signal log	3
221	Applies a knowledge of the GMDSS carriage requirements for vessels of 300GRT when considering the most suitable broadcast and/or communications means	2
222	Applies a knowledge of the COSPAS/SARSAT system to interpret and act upon beacon alert messages	2
223	Applies a knowledge of the COSPAS/SARSAT system to determine the integrity and accuracy of potential and actual beacon alerts	2
224	Applies a knowledge of the INMARSAT system to interpret and act upon alert messages	2
225	Applies a knowledge of the NAVTEX system to encode initial distress or urgency alerts for broadcast	2
226	Able to assess the effectiveness of the District and/or Regional communications infrastructure, and make appropriate recommendations if required	2

Competence 3

Coast Rescue

Outcome: Coastguard Officers are able to plan, manage and execute the rescue of persons in difficulty in littoral areas using established procedures and equipment, together with Auxiliary Coastguards and other resources. Coastguard Officers are able to supervise the maintenance of an effective state of operational readiness.

Ref.	Performance Criteria	Level
300	Applies a knowledge of the safe storage and proper inspection of rescue equipment, including pyrotechnics	1
301	Applies a knowledge of coast rescue techniques, with regard to the needs of the casualty, the actual and potential hazards to rescuers and the casualty, and the identification of possible escape routes	0
302	Applies a knowledge of the safe operation of safety harnesses issued as coast rescue equipment	0
303	Applies a knowledge of the safe operation of head protection issued as coast rescue equipment	0
304	Applies a knowledge of the safe operation of lifejackets issued as coast rescue equipment	0
305	Applies a knowledge of the safe operation of drysuits issued as coast rescue equipment	0
306	Applies a knowledge of the safe operation of other personal safety equipment issued as coast rescue equipment	0
307	Applies a knowledge of standard rope rescue techniques whenever appropriate to assist in the rigging of approved rope rescue systems	0
308	Applies a knowledge of standard rope rescue techniques whenever appropriate to supervise the rigging of approved rope rescue systems	0
309	Applies a knowledge of shore search procedures whenever appropriate	1
310	Applies a knowledge of mud rescue procedures whenever appropriate	1
311	Able to operate pyrotechnics safely and effectively during Search and Rescue operations	0
312	Applies a knowledge of the Coastguard Boat syllabus at the class of certificate appropriate for the crew duty performed	0
313	Applies a knowledge of the Road Traffic Act in relation to the safe operation of Coastguard vehicles during emergency response and routine duties	1

Ref.	Performance Criteria	Level
314	Applies a knowledge of the Road Traffic Act as applied to the towing of trailers	0
315	Applies a knowledge of driving techniques for the appropriate terrain, conditions and vehicle type	0
316	Applies a knowledge of the Code Of Practice For The Carriage Of Personnel And Equipment	1
317	Applies a knowledge of helicopter co-operation	1
318	Applies a knowledge of casualty care during evacuation, including the administration of First Aid	1
319	Applies a knowledge of multi agency working during coastal incidents	1
320	Applies a knowledge of the role of the Incident Officer during coastal incidents	1

Competence 4

Chart and Map Work

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue incidents by applying navigational and plotting skills to Admiralty Charts and associated publications, as well as Ordnance Survey maps.*

Ref.	Performance Criteria	Level
400	Applies a knowledge of Mercator's Projection when interpreting latitude and Longitude scales, measuring distances on charts, and converting OS Grid positions to latitude/longitude and vice versa	2
401	Able to plot a position on a map or chart to a level of accuracy commensurate with the scale and the task at hand	3
402	Able to lay off distances and ranges on a map or chart to a level of accuracy commensurate with the scale and the task at hand	3
403	Able to lay off true bearings and apply scalar information to produce vectors to a level of accuracy commensurate with the scale and the task at hand	3
404	Applies a knowledge of the magnetic compass to translate compass bearings into true bearings and vice versa	3
405	Applies a knowledge of plotting skills to construct a running fix or intercept, accounting for tide if appropriate	2
406	Applies a knowledge of plotting skills to transfer search plans onto a chart of an appropriate scale	3
407	Able to transpose information from VHF D/F onto a map or chart	3
408	Applies a knowledge of the relationship between speed, distance and time	3
409	Applies a knowledge of chart and map symbology to identify dangers to navigation	2
410	Applies a knowledge of tidal theory and tidal information	2
411	Applies a knowledge of plotting to make reasonable allowances for tide and leeway on the predicted track of a vessel	2
412	Applies a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to reconstruct the most likely track of a vessel reported as overdue	1
413	Applies a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to devise a safe passage plan for a Coastguard Boat or Cutter	1
414	Able to assess the nature of the terrain by examining the contours on an OS Map	2

Ref.	Performance Criteria	Level
415	Applies a knowledge of the ephemeris to calculate the predicted times of twilight, sunrise and sunset	2
416	Applies a knowledge of the means by which charts and navigational publications are kept up to date, including making corrections and recording them	2

Competence 5.

General Maritime

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, effectively liaise with all sections of the maritime community and contribute to incident prevention by providing timely and meaningful safety information to the public, demonstrating an understanding of the marine environment as experienced by the full range of sea and coastal users.*

Ref.	Performance Criteria	Level
500	Applies a knowledge of the characteristics and construction of principle ship types to Search and Rescue operations	2
501	Applies a knowledge of offshore oil and gas industry practices and procedures to Search and Rescue operations	2
502	Applies a knowledge of the construction and characteristics of workboats, fishing vessels and pleasure craft to Search and Rescue operations	2
503	Able to provide safety information to all sea and coastal users with due regard to their particular needs and limitations	2
504	Applies a knowledge of the IALA buoyage system and other aids to navigation to Search and Rescue operations, and Coastguard Boat operations	2
505	Applies a knowledge of the International Rules For The Prevention Of Collision At Sea when dealing with reports of hazardous incidents, and for Coastguard Boat operations	2
506	Applies a knowledge of the Emergency Towing Protocol and the Secretary of States Powers of Intervention	1
507	Applies a knowledge of the Coast Protection Act in conjunction with local legislation and local practices to monitor, measure and report upon works carried out on the foreshore	1
508	Applies a knowledge of current Merchant Shipping legislation to monitor and report upon the measurement, registration and marking of registered fishing vessels under 24 metres in length	1
509	Applies a knowledge of current Merchant Shipping legislation, in conjunction with the relevant Codes of Practice, to monitor and report upon actual and potential infringements	1
510	Applies a knowledge of current agreements with other agencies when making reports of maritime activity	2
511	Applies a knowledge of current agreements with the Hydrographic office and General Lighthouse Authorities when dealing with reports of Hazards to Navigation	2

Ref.	Performance Criteria	Level
512	Applies a knowledge of current Merchant Shipping legislation to provide assistance to the Receiver of Wreck	1
513	Applies a knowledge of the provisions of the International Convention on the Safety Of Life At Sea (SOLAS) when dealing with vessels to which the provisions of the Convention apply	2
514	Applies a knowledge of agreed procedures and/or local bylaws to advise mariners and the public of activity within coastal ranges, exercise areas and recreational areas	2
515	Applies a knowledge of current marine legislation relating to the transportation by sea of hazardous materials to raise reports and monitor the progress of such shipments	1
516	Applies a knowledge of the IMO hazardous cargo classifications	1
517	Applies a knowledge of the licensing and carriage regulations for radio equipment carried by small commercial and pleasure craft	2
518	Applies a knowledge of current agreements with BT Marine when dealing with reports of fouled undersea cables	2
519	Applies a knowledge of international conventions and other instruments concerning Search and Rescue	1
520	Applies a knowledge of other regulations, recommendations and codes when dealing with vessels and other craft which are not subject to the provisions of SOLAS	1

Competence 6

Counter Pollution

Outcome: *Coastguard Officers are able to support the activities of the Counter Pollution Organisation, local government bodies and other interested parties during Counter Pollution operations employing established procedures, personnel and equipment.*

Ref.	Performance Criteria	Level
600	Applies a knowledge of c/p procedures to assess, classify and report upon actual or potential pollution incidents	2
601	Applies a knowledge of c/p procedures to support c/p reconnaissance and spraying aircraft operations	1
602	Applies a knowledge of c/p procedures and international agreements to format standard reports and notifications to external agencies	2
603	Applies a knowledge of c/p procedures to act for the Principal Counter Pollution Officer if required	1
604	Applies a knowledge of the contact and callout procedures for other agency's key staff during c/p incidents	2
605	Applies a knowledge of the contact and callout arrangements for Maritime & Coastguard Agency key staff during c/p incidents	2
606	Applies a knowledge of the National Contingency Plan	1
607	Applies a knowledge of other external contingency plans	1
608	Applies a knowledge of Explosive Ordnance Disposal procedures	1



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Competence 7

Meteorology

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, provide weather information to the public and the mariner, assess the effects of weather on the operational state of readiness and contribute to incident prevention by demonstrating an understanding of meteorology, using established procedures and information supplied by the Meteorological Office. Coastguard Officers are able to enhance the quality of this information by observing the weather and making reports using established procedures and equipment.*

Ref.	Performance Criteria	Level
700	Able to obtain weather information for mariners and coastal users from the UK weather information service	3
701	Applies a knowledge of meteorological terms to interpret weather information	3
702	Applies a knowledge of meteorology to describe the effects of air masses upon North Atlantic weather patterns	1
703	Applies a knowledge of meteorology to describe the formation of North Atlantic weather systems, and their observable effects	1
704	Able to interpret a synoptic chart	2
705	Able to encode the National Climatological Message	3
706	Able to identify the phenomena associated with the onset of bad weather	2
707	Applies a knowledge of meteorology to identify the causes of reduced visibility, and the causes by which poor visibility may improve	3
708	Applies a knowledge of meteorology to identify the causes of sea and land breezes	3
709	Applies a knowledge of the effects of meteorological phenomena upon Search and Rescue effort	2
710	Applies a knowledge of the effect of wind upon sea state, and the effect of sea state upon Search and Rescue effort	2



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Competence 8

Search and Rescue Co-ordination

Outcome: *Coastguard Officers are able to successfully co-ordinate Search and Rescue operations, maintain an effective operational state of readiness and cause all parties involved to work together by demonstrating an understanding of the national and international organisation of Search and Rescue, established procedures and the aims of the Maritime and Coastguard Agency (MCA).*

Ref.	Performance Criteria	Level
800	Applies a knowledge of current Search and Rescue policy and procedures	2
801	Applies a knowledge of emergency phase classification	2
802	Applies a knowledge of the status of search and rescue facilities used to conduct SAR operations	3
803	Applies a knowledge of the duties and responsibilities of the SMC, OSC and ACO	2
804	Able to enter, extract and analyse incident information using CMIS, CDATE, ADAS and other relevant publications as appropriate	3
805	Applies a knowledge of the UK Search and Rescue Organisation	2
806	Applies a knowledge of the intent and procedures of the various memoranda of understanding that exist between the MCA and other agencies	2
807	Applies a knowledge of the emergency contact and callout arrangements that exist between HMCG and declared rescue facilities	3
808	Applies a knowledge of the RNLI Regulations (The Green Book) in relation to Search and Rescue operations	2
809	Applies a knowledge of the command and control structure likely to be put in place when dealing with major incidents	1
810	Applies a knowledge of the function and composition of the UK SAR Committee.	2
811	Applies a knowledge of emergency and contingency plans employed by external agencies for their areas of responsibility	2
812	Applies a knowledge of the procedures for co-operating with foreign Search and Rescue agencies	2
813	Applies a knowledge of the procedures restricting the use of airspace during emergency operations	1
814	Applies a knowledge of the procedures restricting the movement of vessels during emergency operations	1



Ref.	Performance Criteria	Level
815	Applies the required standard of local knowledge to incident information when prosecuting SAR operations	3
816	Applies a knowledge of exercise planning.	2

1.3 GUIDE TO COMPLETION OF THIS WORKBOOK

1.3.1 INFORMATION FOR THE TRAINEE

The objectives of this workbook are twofold. Firstly to provide information, structure and direction to your learning during your training period and secondly to provide a comprehensive record of your training progress.

Planned training will ensure the best use of your time, so that you can gain the knowledge, practical training and experience necessary to become a competent Coastguard Watch Assistant.

There are a number of specific tasks and projects to be undertaken during the Pre-course, Part 2 and Part 4 phases of the MSAR (F) training programme. These are explained in the introductions to sections 2, 4, and 6 of this workbook respectively.

All work must be "signed off" by a competent Officer when you have demonstrated your ability to perform the task or have completed the project to their satisfaction.

You must present the Workbook to your line manager or nominated training officer for review and comment at least monthly and on completion of sections 2, 4 and 6 to get the completion certificates signed before you progress to the next part of the MSAR (F) programme. You should also present your Workbook to your District Controller (DC) every three months.

Satisfactory completion of the Workbook is regarded as confirmation that you have undertaken all the required areas of study, demonstrated competence in line with the CWA Job Description and are able to perform all the required skills to a recognised national standard.

If at the end of your training period the Workbook is incomplete or is considered unsatisfactory you may be required to undergo an extended period of training.

It is a condition of establishment that this Workbook is completed with all the tasks and projects signed off. A copy of the Workbook Completion Certificate must be sent to the Training Centre prior to you sitting the final qualifying examination.

1.3.1 INFORMATION FOR THE LINE MANAGER / SUPERVISING OFFICER

The Line Manager

Every line manager has a responsibility for staff training and development. It is important that the CWA's training is closely monitored throughout.

This Workbook should be sighted *monthly* and a record of progress maintained in Section 10. The Completion Certificates at the end of Sections 2, 4 and 6 should be signed before the CWA progresses to the next part of the MSAR (F) programme.

The Supervising Officer

The Supervising Officer can be the line manager, any Watch Manager, or other officer nominated Training Officer by the District Controller at the station on which the trainee is serving.

The Supervising Officers **must** satisfy themselves that the trainee has demonstrated complete competence in a particular task before it is endorsed as satisfactory.

DEFINITION OF SATISFACTORY

- (a) A trainee's practical performance of a task should be deemed "Considered Satisfactory" once he/she has attained a standard of proficiency that has completely satisfied the appropriate supervising officer.
- (b) When endorsing a task as "Considered Satisfactory" officers should take into account the ordinary practice of Coastguard operations rooms and safe working practices and procedures, and bear in mind that they are NOT signifying "Competence" as determined by final examinations.

Watch Officers

Watch officers have a responsibility, under the direction of the Watch Manager, for providing supportive training in assisting trainees and directing their study efforts during watch periods. This may be particularly appropriate when a Watch Officer displays expertise in a particular subject.

1.3.3 INFORMATION FOR THE DISTRICT CONTROLLER

The District Controller has the overall responsibility for ensuring that all tasks are carried out in the Workbook and that Supervisory Officers are aware of their responsibilities towards the trainee.

The immediate responsibility for the control and monitoring of the trainee's progress will normally be delegated to the trainee's line manager. However, DCs should inspect the Workbook quarterly to satisfy themselves that training is on line and the overall standard on final assessment will meet the requirements of both the District and of the Agency.

Part 10 of the Workbook provides space for DC's comments to be recorded.

1.3.4 STUDY SKILLS GUIDELINES

There are many things you can do to help yourself learn. Here are some of them:

Firstly be aware of when you study most effectively – some people are at their best first thing in the morning; others cannot get down to study until everyone else has gone to bed. If you can identify the best time for you, then see if you can get into a study routine at your best study time. Not all habits are bad!

The place you choose to study can be just as important as the time of day. If it is somewhere that you only use for study – like a spare room or a corner of the library at work – you are more likely to be able to get down to work without being distracted. Many of the tasks provided will require supportive study and the operations room is not always the best study environment!

Do not try to do too much in one sitting. Remember what they say about the maximum span of attention – about 20-30 minutes. Try to be aware of when your attention is wandering and take a breather, go for a stroll or perhaps make a drink and think about what you have just read.

Another bit of applied psychology is to reward yourself when you have completed a section to your satisfaction.

If you cannot instantly think of an answer to a question or the solution to a problem, go look for the answer. Do not think of asking others as cheating. Every other member of staff started at the beginning sometime, and they will have a great deal to offer you.

In summary, find time and space to study, and if you do not understand a section or need help or advice, do not hesitate to ask your colleagues. Take regular breaks and perhaps reward yourself every so often. Most of all try to enjoy the learning process and try to make it fun!



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SECTION 2

PRE-COURSE PREPARATION

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2.1 INTRODUCTION

Following induction, you will spend some time on watch in the operations room gaining experience and preparing for the next phase of your training – the two week MSAR (F) Part One course at the MCA Training Centre in Highcliffe, Dorset.

It is important that you do some pre-course work prior to attending the MSAR (F) Part 1 Course and this section of the Workbook is designed to guide you through this period. Ideally you should have at least six weeks on station working in the operations room to complete this Pre-Course Preparation work.

This Pre-Course Preparation phase is the base on which the Part One Course will build so it is essential that all tasks are completed in order to gain maximum benefit from the course.

The Pre-course Preparation work is divided into three main areas: -

- COMPETENCE based tasks detailed in Section 2.2
- ADAS based tasks detailed in Section 8.2
- LOCAL KNOWLEDGE based tasks detailed in Section 9.2

A high proportion of your time will be spent completing self-study, reading recommended publications and receiving supportive on-watch training as you work through these tasks. When you are able to demonstrate that you have fully grasped the principles and procedures involved and have attained the standard required your Watch Manager or nominated Supervising Officer will sign off each task.

When you have completed all the tasks summarised in Section 2.3.1 your Watch Manager will sign the Completion Certificate in Section 2.3.2 to confirm that you are ready and prepared for your Part One Course.

Remember – you are not expected to do all this on your own. The rest of your watch and other officers on your station are there to support and help you.



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2.2 PRE-COURSE TASKS

2.2.1 GENERAL

GENERAL			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Familiarise yourself with the contents of the MCA Business Plan then:-				
	1	Identify the main aims and key targets of the MCA		
	2	Identify the three directorates of the MCA		
	3	Describe the role of HM Coastguard		
Familiarise yourself with the contents of CG1 Chapter 3 then:-				
	4	Describe the structure of HMCG from Region through District to Auxiliary Coastguard level		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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2.2.2 COMPETENCE 2 – OPERATIONAL COMMUNICATIONS

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
RADIO - THEORY				
Familiarise yourself with the content of CG3 Volume 1 Part 1 Sect 1 then:-				
203	1	Demonstrate an understanding of the mnemonic RSVP and it's importance when communicating on radio		
204	2	Demonstrate an understanding of the correct use of prowords		
	3	Demonstrate a knowledge of the phonetic alphabet		
	4	Know and demonstrate the correct VHF and MF radio check procedures and the prowords used		
Familiarise yourself with the content of CG1 Part 4 then describe:-				
209	5	The purpose of all VHF channels allocated to HMCG		
	6	The purpose of all MF channels allocated to HMCG		
Familiarise yourself with the content of CG3 Volume 1 Part 1 Section 6 then describe:-				
	7	The correct procedure for monitoring VHF channel 16		
	8	The entries that should be made in the radio log		
	9	The correct procedure for monitoring MF 2182 kHz		
GMDSS				
Familiarise yourself with the content of CG3 Volume 1 Part 5 and the Admiralty List of Radio Signals Volume 5 then:-				
221	10	Demonstrate an understanding of the basic concept of the Global Maritime Distress & Safety System (GMDSS)		
RADIO – PRACTICAL – Following instruction:-				
214	11	Demonstrate the correct use of the CCDS equipment – including changing/monitoring/selecting aerial sites & frequencies, the use of the 3 volume controls, PTT and secondary handset		
214	12	Demonstrate the correct use of the MF radio console – including changing/selecting frequencies and tuning the transmitter in		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
RADIO – PRACTICAL – cont.				
204	13	State the timing and purpose of the MF silence periods		
	14	Demonstrate an understanding of HMCG's international responsibilities with regard to VHF Ch16 and MF 2182 kHz		
203	15	Under supervision broadcast at least 6 Maritime Safety Information broadcasts		
208 & 804	16	Under supervision take routine R/T traffic on working frequencies for at least 3 hours entering details into the appropriate ADAS radio logs		
	17	<u>Understudy</u> the Ch16 operator and correctly maintain the ADAS radio log for an accumulative time of at least six hours		
217	18	Under supervision send a VHF and/or MF DSC signal to a flank station		
	19	Under supervision acknowledge an incoming VHF or MF DSC call		
Familiarise yourself with the content of CG4 Chapter 11 then:-				
214	20	Under supervision carry out the communications equipment checks listed in Annex 11A		
DISTRESS, URGENCY & SAFETY COMMUNICATIONS				
Familiarise yourself with the content of CG3 Volume 1 Part 1 Section 2 then demonstrate an understanding of :-				
205	21	The distress signal, distress call, and the essential contents of the distress message		
	22	All recognised distress signals		
	23	The correct use of the prowords used for control of distress communications – Seelonce, prudonce etc.		
	24	The use of the distress call "Mayday"		
	25	The use of the urgency call "Pan Pan"		
	26	The use of the safety call "Securite"		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



COMPETENCE 2 – OPERATIONAL COMMUNICATIONS – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's initials	Date
DISTRESS, URGENCY & SAFETY COMMUNICATIONS – cont.				
	27	The use of the "Small Craft Safety Information" broadcast		
TELEPHONE – Following instruction:-				
200	28	Demonstrate the correct use of the ADEKS telephone system		
	29	Receive and deal correctly with routine telephone calls		
201 & 804	30	Monitor the receipt of 999 calls and capture the relevant details in the ADAS scrolling window		
MESSAGE HANDLING				
Familiarise yourself with the content of CG3 Volume 1 Part 1 Sect 1.3 & Part 2 Sect 1 then:-				
219	31	Describe a basic message format		
	32	List the precedences used by HMCG		
	33	Draft a test signal to a flank station		
220	34	Send a test fax using the stand alone fax machine		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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2.2.3 COMPETENCE 4 - CHARTWORK

COMPETENCE 4 – CHARTWORK			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Familiarise yourself with the content of CG3 Voi. 1 Part 4 Sections 1, 3 & 5.1 then:-				
409	35	Demonstrate a knowledge of the uses to which navigational charts are put by mariners and HMCG		
	36	Examine a marine chart of your district and use Chart 5011 to identify the chart symbols and local features		
	37	Demonstrate a knowledge of the uses to which Ordnance Survey maps are put by HMCG		
	38	Examine an Ordnance Survey map of your district and use the map legend to identify symbols and local features		
Following instruction :-				
401	39	Demonstrate the correct use of plotting instruments and determine the latitude and longitude of your station on a chart		
	40	Demonstrate the correct use of plotting instruments and determine the grid reference and latitude and longitude of your station on an OS map		
	41	Using the correct symbology plot a position on a chart by latitude and longitude and by bearing and distance		
	42	Plot a position on an OS map by grid reference, latitude and longitude and by bearing and distance		
TIDES – Familiarise yourself with the content of the "TIDES" chapter in "The Macmillan Nautical Almanac" then:-				
410	43	Identify the Standard and Secondary ports in your district		
	44	Find out where to access high and low water tidal information for Standard and Secondary ports in your district		
	45	Demonstrate an understanding of the importance of tidal information to the mariner		
SUNRISE and SUNSET				
415	46	Find out where to access daily times of sunrise & sunset at your station		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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2.2.4 COMPETENCE 7 - METEOROLOGY

COMPETENCE 7 – METEOROLOGY			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Familiarise yourself with the content of the WEATHER chapter in "The Macmillan Nautical Almanac" then:-				
701	47	Demonstrate a basic understanding of the meteorological terms used in weather forecasts		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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2.2.5 COMPETENCE 8 – SEARCH & RESCUE CO-ORDINATION

COMPETENCE 8 – SEARCH & RESCUE CO-ORDINATION			Considered Satisfactory	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Familiarise yourself with the content of CG3 Volume 3 Chapter 3 Section 2 then demonstrate an understanding of :-				
801	48	The three emergency phases and their associated "key words"		
Familiarise yourself with the content of CG1 Chapter 1 Section 1.5 then :				
802	49	Specify the difference between declared and additional facilities		
	50	List the main types of UK declared facilities		



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2.3 COMPLETION CERTIFICATION

2.3.1 TASK SUMMARY CHECK LIST

At the end of your induction and Pre-Part One Course training period on station you should have completed all the tasks summarised below.

Section No.		Completed (Tick)
2.2	Competency based Tasks 1 - 50	
8.2	ADAS Tasks 1 - 41	
9.2	Local Knowledge Tasks 1 – 6	

2.3.2 COMPLETION CERTIFICATE

<p>This is to certify that</p> <p style="margin-left: 100px;">CWA</p> <hr style="width: 50%; margin-left: 100px;"/> <p>has satisfactorily completed all the Tasks listed above and is ready and prepared for their Part One Course</p> <p>Signature: _____</p> <p>Grade: _____</p> <p>Date: _____</p>



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SECTION 3

MSAR (F) PART ONE

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3.1 COURSE INFORMATION

The MSAR (F) Part 1 course is an intensive, information-packed two-week training course at Highcliffe. During this period you will undergo formal training and instruction in a variety of operational subjects and disciplines ranging from meteorology to distress communications.

The course is designed to consolidate and build on what you have already learned during your induction and pre-course period and help to prepare you for your next few months on station prior to taking the final qualifying examination.

3.1.1 SUBJECTS

- The role and responsibilities of HMCG
- SAR Facilities
- SAR principles and procedures
- Telephone techniques and information gathering
- Coastguard communications structure
- Radio watchkeeping and logging procedures
- CG Radio procedures - theory
- CG Radio procedures - practical
- GMDSS overview
- VHF/DSC
- Distress, Urgency & Safety communications - theory
- Distress, Urgency & Safety communications - practical
- Chartwork, buoyage/lights, Rule of the Road
- Ordnance Survey map work
- ADAS operations
- Basic meteorology
- Tidal theory and tidal data extraction
- Sunrise/sunset and twilights

3.1.2 AIMS & OBJECTIVES

AIM

To provide new-entry Coastguard Watch Assistant (Operations)'s with foundation training in the skills, knowledge and attitudes required of the grade.

OBJECTIVES

By the end of the course and, with or without reference to notes or handouts, the students will:

The Role & Responsibilities of HMCG

- be able to define the responsibilities of HM Coastguard
- be able to identify the primary operational roles and the other miscellaneous duties performed by HMCG

SAR Facilities

- be able to define 'Declared' and 'Additional' facilities and describe their responsibilities to HMCG
- be able to identify all 'Declared' facilities and describe the operation, capabilities and characteristics of the following specific units:
 - MOD helicopters and fixed wing aircraft
 - CG helicopter (Sikorsky S61N)
 - RNLI lifeboats
 - Coastguard CRTs

SAR Principles & Procedures

- be able to identify different types of incident HMCG may be called upon to deal with
- be able to list sources from which incident information may be received
- appreciate the importance of initial information gathering and know the relevant questions to ask of a first informant
- have an appreciation of the agencies and/or authorities able to assist HMCG with information
- know the factors to consider when evaluating incident importance
- be able to identify each emergency phase together with their associated keywords or phrases, broadcasts and appropriate action
- be able to relate all the above to a systematic approach to SAR, ie. Awareness - Info Gathering - Evaluation / Classification - Action

Telephone Techniques & Initial Information Gathering

- be able to demonstrate the required call-answering skills
- be able to identify the essential minimum questions to ask of a first informant; (the six 'W's)
- have an appreciation of the need to develop good verbal communication and interpretation skills
- know the correct way to identify oneself when initially answering a 999 call

Coastguard Communications Structure

- be able to identify all communication methods employed by HMCG
- be able to describe HMCG's national and international communications obligations
- know the operational arrangement of all MF and VHF radio equipment (including the typical aerial arrangement at a remote site) and telephone equipment
- be aware of the method by which HMCG normally send and/or receive telex and fax traffic
- have an appreciation of the maintenance arrangement for CG communications equipment

Radio Watchkeeping & Logging

- be able to quote the identity and uses of the VHF channels used by HMCG
- be able to quote the main MF frequencies monitored and/or used by HMCG
- have knowledge of HMCG's current and future VHF and MF radio-watch operating and traffic logging requirements
- be aware of the procedure for reporting VHF infringements of the Radio Regulations

Coastguard RT Procedures - Theory & Practice

- appreciate the need for brevity in R/T communications
- know the basics of voice techniques and the importance of 'RSVP'
- appreciate the importance of good articulation and will be able to spell words and express numbers using the phonetic alphabet
- know all 'prowords' used by HMCG in R/T communications, understand their meaning and know when and how they are used
- know the R/T callsigns used within the Coastguard service
- be able to use the 'full' and 'abbreviated' call/answering procedure
- understand the general control and use of radio channels
- know radio check procedures and prowords used to describe signal strength and readability
- know the correct way to transmit figures, decimal point and punctuation by R/T
- understand 'break-in' procedure
- know the three 'codewords' used in casualty working, their meaning and usage
- know the procedures and prowords used during message transmission for:
 - a) Repeating messages or parts thereof
 - b) Correcting messages or parts thereof
 - c) Cancelling messages
 - d) Relaying messages
 - e) Receipting messages

GMDSS

- by reference to a handout, know the history, functions and sea areas relevant to GMDSS.
- be able to state correctly, from memory, the 7 component parts of the GMDSS system.
- with reference to a handout, be able to relate the 7 component parts to Coastguard radio operations.

VHF DSC

- be able to demonstrate a thorough understanding of DSC systems, hardware, software and propagation.
- be able to describe correctly from memory, on 8 out of 10 occasions, the procedures for dealing with DSC alert messages.

Distress, Urgency & Safety Radio Communications

- be able to quote the elements comprising a Distress, Urgency and Safety call and message
- know how and when to acknowledge receipt of a Distress and Urgency message
- appreciate the considerations to be taken into account when deciding upon re-broadcast action
- know the basic format and rules governing Distress and Urgency re-broadcasts
- understand the usage of Information Numbers
- know how to control Distress and Urgency communications using appropriate prowords
- know the type of broadcast to use when upgrading or downgrading an incident
- be able to identify the 3 main types of safety broadcast and understand the usage of each
- know the format and usage of a Yacht Safety Information broadcast
- be able to complete a CG21(a), to manually receive a Distress or Urgency call and to compose an appropriate re-broadcast relay

Chartwork, Buoyage/lights, Rule of the Road

- be able to discuss the basic history of Hydrography.
- be able to discuss the uses to which an marine charts can be put.
- understand chart symbology and be able to quote from memory the publication in which chart symbols are explained.
- understand the principles of Mercator projection and be able to name three other forms of chart projection.
- know the variety of methods the mariner has at his disposal to fix his vessel's position and be able to quote from memory at least four methods in detail.
- understand the concept of the nautical mile, along with the associated units; cable and fathom.
- be able to list the publications associated with chartwork and be able to name three such publications from memory.
- understand the meaning of the terms Variation, Deviation and Compass Error.
- be familiar with the IALA buoyage system.
- Know and understand Rule 10 of the regulations for preventing collisions at sea.
- have an appreciation of all, and be able to quote from memory at least four, of the internationally recognised methods of indicating distress.
- understand the meaning and use of a RACON.
- know how to plot a position by Latitude & Longitude and bearing & distance.
- know what is meant by a "DR", a "Fix" and an "EP" and the correct chart symbology for identifying each.
- know how to measure marine distances using the latitude scale.
- be able to calculate Variation & Deviation to an accuracy of at least 60%.

Ordnance Survey

- be able to describe an overview of the O/S system, scales, grids, possible errors, projection type and quote 2 types of grid references.
- be able to interpret the map legend, contours, symbols, measuring scales, latitude & longitude scales, grids etc.
- know how to plot grid references and convert to lat./long and vice versa
- know how to plot bearings and distances using parallel rules or compass in true bearing applying grid error and variation.
- be able to measure distances over sea and land using kilometres, statute miles or nautical miles.

ADAS

- Have a detailed understanding of the structure and an in-depth operator knowledge of ADAS in all modes; inputting/retrieving DSU and general incident and database information, and under direct supervision only amending the ADAS database as necessary.

Meteorology

- know what meteorological information is available and from where it is sourced.
- understand the content of, and terms used in weather information broadcasts.

Tides

- Be able to define 'tide' and have an appreciation of the causes and nature of 'Spring' and 'Neap' tides.
- Have been shown how to use the 'Silk Cut and Macmillan's Nautical Almanac' tables to calculate times and heights of High and Low Water at Standard ports.

Sunrise, Sunset & Twilights

- Be able to use the appropriate tables within the 'Nautical Almanac' to calculate the times of sunrise, sunset, morning nautical twilight and evening civil twilight, on any day of the year and for any geographical position.



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3.1.3 JOINING INSTRUCTIONS

Insert your joining instructions here when you receive them.



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3.1.4 COURSE TIMETABLE

Insert your course timetable here when you receive it.



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3.2 COURSE HANDOUTS



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3.3 PART ONE COMPLETION CERTIFICATE

<p style="text-align: center;">Course No MSAR (F) / 1</p> <p>Dates : _____</p> <p>Venue: _____</p> <p>Trainers: _____</p> <p>_____</p> <p>CWA</p> <p>_____</p> <p>has successfully completed the above Course</p> <p>Signature: _____</p> <p style="text-align: center;">ADO Training Officer</p> <p>Date: _____</p>
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SECTION 4

PART 2

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4.1 INTRODUCTION

Following the Part One Course you will return to your station and rejoin your watch in the operations room to gain more experience. During this eight-week period you should concentrate on consolidating and putting into practise the skills and procedures you learnt on the course.

It is also important that you do some preparation work prior to attending the MSAR (F) Part 3 Course and this section of the Workbook is designed to guide you through this period.

This Part 2 phase of your training is the base on which the Part Three Course will build so it is essential that all tasks are completed in order to gain maximum benefit from the course.

The Part 2 work is divided into three main areas: -

- COMPETENCE based tasks detailed in Section 4.2
- ADAS based tasks detailed in Section 8.3
- LOCAL KNOWLEDGE based tasks detailed in Section 9.3

A high proportion of your time will be spent completing self-study, reading recommended publications and receiving supportive on-watch training as you work through these tasks. When you are able to demonstrate that you have fully grasped the principles and procedures involved and have attained the standard required your Watch Manager or nominated Supervising Officer will sign off each task.

When you have completed all the tasks summarised in Section 4.3.1 your Watch Manager will sign the Completion Certificate in Section 4.3.2 to confirm that you are ready and prepared for your Part Three Course.

Remember – you are not expected to do all this on your own. The rest of your watch and other officers on your station are there to support and help you.



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4.2 PART TWO TASKS

4.2.1 COMPETENCE 2 – OPERATIONAL COMMUNICATIONS

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Task 51 should be completed as soon as possible after the Part One training Course				
Read CG 3 Volume 1				
205	51	Demonstrate by examination the ability to respond to any Radio Telephony distress, urgency or safety traffic on any Coastguard VHF/MF network		
203	52	Demonstrate a basic understanding of communications theory		
204	53	Demonstrate the ability to select and use all Radio Telephony equipment within the MRCC/SC effectively and without causing interference to other system users		
	54	Use all R/T equipment as a means of exchanging information clearly and concisely		
208	55	Accurately record all Radio and telephone information received using the correct paper of electronic medium		
204	56	Demonstrate the ability to apply radio procedures and precedence indicators as used within HM Coastguard		
201	57	Demonstrate the ability to apply information gathering techniques		
204	58	Demonstrate a safe and professional handover procedure between operators at a constant headset watch position e.g. Channel 16 desk		
	59	Demonstrate a system of user checks to ensure an effective watch is maintained having taken over watch from another member of staff at any position		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
TELEPHONE PROCEDURES				
201	60	Describe in detail the 999 telephone system and its use for emergency communications		
	61	Describe the mobile phone 999 system and its advantages and disadvantages		
	62	Demonstrate the ability to respond professionally to calls on the 999 telephone system extracting all salient information regarding any actual or potential emergency situation		
	63	Describe the circumstances which should cause you to refer to a higher grade officer		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

4.2.2 COMPETENCE 4 – CHART & MAPWORK

COMPETENCE 4 – CHART & MAPWORK			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
CHARTWORK				
400	64	Describe the types of marine charts used by HM coastguard and explain briefly how they are constructed		
409	65	Demonstrate the ability to use publication 5011 or legends to identify any minor symbol or feature		
401	66	Identify the various position formats used by HC Coastguard and the accuracy associated with each		
	67	Explain what plotting instruments are available in the operations room		
	68	Using the correct instruments, demonstrate the ability to read and plot a position by latitude and longitude to within one cable resolution on a marine chart		
403	69	Demonstrate the ability to both read and plot compass bearings and distances on any chart to a resolution within one degree or one cable		
OS MAPWORK				
401	70	Using the correct instruments, demonstrate the ability to read and plot a position by grid reference on an OS map to within 100 metres resolution		
TIDES				
410	71	Calculate the times of high and low water for two secondary ports within your district at least once per round of watches		
SUNRISE, SUNSET & CIVIL TWILIGHT				
415	72	Calculate the times of sunrise, sunset and civil twilight at least once per round of watches		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

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4.2.3 COMPETENCE 5 – GENERAL MARITIME

COMPETENCE 5 – GENERAL MARITIME			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Write a brief description of what is meant by the following nautical terms				
	73	Abaft		
	74	Abeam		
	75	Aground		
	76	Anchor aweigh		
	77	Awash		
	78	Bare poles		
	79	Bilge keel		
	80	Bitter end		
	81	Boot topping		
	82	Bow		
	83	Broached		
	84	Broadside on		
	85	Coamings		
	86	Cockpit		
	87	Davit		
	88	Deck		
	89	Derrick		
	90	Displacement		
	91	Double-bottoms		
	92	Draught		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

COMPETENCE 5 – GENERAL MARITIME – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Write a brief description of what is meant by the following nautical terms				
	93	Dragging anchor		
	94	Fairlead		
	95	Fin-keeled		
	96	Forepeak		
	97	Freeboard		
	98	Galley		
	99	Gantry		
	100	Go about		
	101	Gunwale		
	102	Hatchway		
	103	Hawse pipe		
	104	Heeling		
	105	Helm		
	106	Hold		
	107	Holding ground		
	108	Hove to		
	109	Hull		
	110	In ballast		
	111	Jury rig		
	112	Kedge anchor		
	113	Keel		

* **Note to Supervising Officers:** Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



COMPETENCE 5 – GENERAL MARITIME – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's initials	Date
Write a brief description of what is meant by the following nautical terms				
	114	Lee shore		
	115	Leeward		
	116	Leeway		
	117	List		
	118	LPG		
	119	Making a lee		
	120	Making way		
	121	Manifold		
	122	Mizzen mast		
	123	Not under command		
	124	Pitching		
	125	Planing		
	126	Pooped		
	127	Pounding		
	128	Power block		
	129	Product carrier		
	130	Pulpit		
	131	Pushpit		
	132	Rolling		
	133	Shackle (of anchor cable)		
	134	Steerage way		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

COMPETENCE 5 – GENERAL MARITIME – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Write a brief description of what is meant by the following nautical terms				
	135	Stem		
	136	Stern		
	137	Superstructure		
	138	Stern gland		
	139	Tacking		
	140	Transom		
	141	Trim		
	142	Tween deck		
	143	Under way		
	144	VLCC		
	145	Whaleback		
	146	Wheelhouse		
	147	Windlass		
	148	Windward		
	149	Yawing		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

4.2.4 COMPETENCE 8 – SEARCH & RESCUE CO-ORDINATION

COMPETENCE 8 – SEARCH & RESCUE CO-ORDINATION			Considered Satisfactory	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Familiarise yourself with the content of CG3 Volume 3 Chapter 3 Section 2 then demonstrate an understanding of :-				
802	150	Describe in detail the operational capabilities and limitations of each local declared facility		
	151	State the full geographical location of each local declared facility		
	152	Apply the correct contact procedures to initiate operational tasking of all local declared facilities		
	153	Recite all VHF/MF radio callsigns commonly used by Declared and Coastguard facilities within the District		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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4.3 COMPLETION CERTIFICATION

4.3.1 TASK SUMMARY CHECK LIST

At the end of your Part 2 training period on station you should have completed all the tasks summarised below.

Section No.		Completed (Tick)
4.2	Competency based Tasks 51 - 153	
8.3	ADAS Tasks 42 - 48	
9.3	Local Knowledge Tasks 7 - 11	

4.3.2 COMPLETION CERTIFICATE

<p>This is to certify that</p> <p style="margin-left: 40px;">CWA</p> <hr style="width: 30%; margin-left: 40px;"/> <p style="text-align: center;">has satisfactorily completed all the Tasks listed above and is</p> <p style="text-align: center;">ready and prepared for their Part Three Course</p> <p style="margin-left: 40px;">Signature: _____</p> <p style="margin-left: 40px;">Grade: _____</p> <p style="margin-left: 40px;">Date: _____</p>



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MSAR (F) PART THREE

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5.1 COURSE INFORMATION

The MSAR (F) Part 3 course is an intensive, information-packed one-week training course at Highcliffe. During this period you will undergo formal training and instruction in a variety of operational subjects and disciplines ranging from Coast Rescue to Search Planning.

The course is designed to consolidate and build on what you have already learned during your pre-course, Part 1 and Part 2 periods of MSAR (F) and to help prepare you for your next few months on station prior to taking the final qualifying examination.

5.1.1 SUBJECTS

- Chartwork
- Search Planning
- General Maritime
- Counter Pollution
- Coastal Rescue
- SAR Co-ordination
- Communications
- Operation Room Exercise



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5.1.2 JOINING INSTRUCTIONS

Insert your joining instructions here when you receive them.

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5.1.3 COURSE TIMETABLE

Insert your course timetable here when you receive it.



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5.2 COURSE HANDOUTS

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5.3 PART THREE COMPLETION CERTIFICATE

Course No MSAR (F) / 3

Dates : _____

Venue: _____

Trainers: _____

CWA

has successfully completed the above Course

Signature: _____
 ADO Training Officer

Date: _____

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SECTION 6

MSAR (F) PART FOUR

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6.1 INTRODUCTION

Following the Part Three Course you will again return to your station and rejoin your watch in the operations room to gain yet more experience. During this seven-month period you should concentrate on consolidating what you have learnt on both the courses and try to use every opportunity available to practise the skills and procedures.

This section of the workbook is designed to guide you through this period.

The Part 4 work is divided into four main areas: -

- COMPETENCE based tasks detailed in Section 6.2
- COMPETENCE Performance Criteria detailed in Section 6.3
- ADAS based tasks detailed in Section 8.4
- LOCAL KNOWLEDGE based tasks detailed in Section 9.4

A high proportion of your time will be spent completing self-study, reading recommended publications and receiving supportive on-watch training as you work through these tasks. When you are able to demonstrate that you have fully grasped the principles and procedures involved and have attained the standard required your Watch Manager or nominated Supervising Officer will sign off each task.

When you have completed all the tasks summarised in Section 6.4.1 your Watch Manager will sign the Completion Certificate in Section 6.4.2 to confirm that you are ready and prepared for your Part Three Course.

Remember – you are not expected to do all this on your own. The rest of your watch and other officers on your station are there to support and help you. If you require any further help do not hesitate to contact the Training Centre – 01425 277621.



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6.2 PART FOUR TASKS

6.2.1 COMPETENCE 2 – OPERATIONAL COMMUNICATIONS

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
TELEPHONE PROCEDURES				
200	154	Demonstrate the ability to respond effectively to requests from the marine fraternity on the telephone for safety information or advice in a professional and positive manner		
	155	Identify the destination of all Private Wires and internal telephone lines		
	156	Demonstrate how to use the ADEKS intercom facility		
	157	Demonstrate the use of the programmed T-number facility		
	158	State the interaction between the ADEKS and CCDS when attempting to carry out both radio and telephone functions		
	159	Demonstrate the correct procedures and use of the teleconnect unit to connect a vessel with a telephone line		
RADIO				
205	160	Demonstrate the ability to take control of a Radio Network		
GMDSS				
221	161	Describe GMDSS and its key components		
	162	Describe how distress alerts may be received and the subsequent action which may be necessary		
217	163	Demonstrate an understanding of the procedures following receipt of information via DSC or Satcoms		
222	164	Demonstrate an understanding of the procedures following the receipt of information via the COSPAS/SARSAT system		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
MESSAGE FORMATS				
207	165	Demonstrate the ability to draft and transcribe messages to the format required using electronic and paper proforma		
	166	Draft and transmit a Morning Report		
	167	Draft and Transmit a SAR SITREP		
	168	Draft and Transmit a HSZREP		
CCDS				
214	169	Demonstrate the use of the CCDS intercom facility		
	170	Demonstrate how to apply an engineering test tone to any site or channel		
	171	State the significance of the yellow, green and red indicator lamps and demonstrate the lamp test procedures		
	172	State the use of the Fault alarm accept key and the danger of accepting such alarm without notifying the WM first		
VHF				
215	173	State the purpose and limitations of the emergency VHF equipment.		
	174	Demonstrate the effective use of all functions of the emergency VHF radio set		
TAPES				
	175	Demonstrate how to set up the ICR tape facility for operational use		
	176	Demonstrate how to correct the time setting on the ICR tape facility		
	177	Demonstrate the use of the ICR instant play back facility		
	178	Demonstrate the full procedure for routine cleaning and tape changing at midnight		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

6.2.2 COMPETENCE 4 - CHARTWORK

COMPETENCE 4 – CHART & MAP WORK			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
	179	Describe the most significant information contained within any chart or map		
	180	Describe the major features on any chart or map accurately and without reference to any legend or guide		
DIRECTION FINDING				
407	181	Demonstrate the set up of DF for operational use		
	182	Demonstrate how to record bearings for any site		
	183	Demonstrate the correct use of the hold and reset functions		
	184	State the information which can be provided to vessels who request assistance to fix a position		
	185	State the use of the VHF DF Disclaimer		
	186	Explain the user checks		
TIDES				
410	187	Describe the general tidal movement in UK waters including an explanation of the meaning of Spring and Neap tides		
TIDES				
410	188	Describe the general tidal movement in UK waters including an explanation of the meaning of Spring and Neap tides		
	189	Demonstrate a working knowledge of all basic terminology as used in tidal theory		
	190			

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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6.2.3 COMPETENCE 7 - METEOROLOGY

COMPETENCE 7 – METEOROLOGY			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
Read Macmillan's Nautical Almanac Chapter 7 then:				
700	191	State the sources of weather information available to the mariner		
701	192	Define the meteorological terms used in weather forecasts		
	193	State the description for each wind force on the Beaufort wind scale		
	194	Describe the causes and effects of a Sea Breeze		
704	195	Demonstrate the ability to interpret a synoptic chart and describe the wind associated with each weather system		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

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6.2.4 COMPETENCE 8 – SEARCH & RESCUE CO-ORDINATION

COMPETENCE 8 – SEARCH & RESCUE CO-ORDINATION			Considered Satisfactory	
Comp	Task No.	Task	Supervising Officer's Initials	Date
800	196	Demonstrate the ability to identify each of the CG series of manuals and their individual subject matter		
	197	Demonstrate the ability to analyse any information and to determine any potential consequences or risks involved for the watch or members of the public identifying correctly when a senior officer should be advised		
802	198	Identify all the additional local facilities that maybe available from time to time to assist in any SAR effort		
	199	Identify how the additional facilities should be contacted and tasked		
803	200	Describe the key functions of the SMC, OSC and ACO		
811	201	Demonstrate the ability to respond to/or assist in the practical activation of any local emergency contingency plan as defined within District Standing Orders		
	202	Demonstrate the ability to find any local publication referring to contingency or operational planning within the MRCC/SC paper and electronic databases and quickly provide correct support information as requested by the Watch Manager		

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6.3 COMPETENCE LEVEL ACHIEVEMENT RECORD

INTRODUCTION

The MSAR training programme from MSAR (F) through MSAR (I) to MSAR (A) is based upon the Coastguard job-specific competency framework.

The competence profiles set by the Working Group are those expected of a fully qualified and experienced Officer.

The MSAR (F) training programme will provide the necessary theoretical knowledge and skills needed of a Coastguard Watch Assistant. What it cannot give you is experience – this will only come with time.

This section of the Workbook contains a list of all the job-specific competencies. Alongside each is the *minimum* level that a trainee CWA is expected to reach by the end of the programme. You will note that the highest level requirement is level "3-" which indicates that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.

It is important that you maintain a record of your level achievement.

IMPORTANT

You must have all competencies "signed off" prior to sitting the final examinations.

Level statements for individual Performance Criteria

Level 0 No knowledge required

Level 1 Overview knowledge, an appreciation of the subject

The jobholder needs to have knowledge of the key principles but is not expected to apply the knowledge in detail.

Level 2 Basic knowledge and experience

The jobholder has to have a good grasp of the fundamentals of the areas of knowledge but needs to refer to other sources for detailed information when required to deal with other than the most straightforward situations. Supervision and guidance from more experienced colleagues is expected.

Level 3 Detailed knowledge with more experience

The jobholder needs to have built on basic knowledge and experience of a range of applications and deals with the majority of situations encountered on own initiative.

Level 4 Specialist

The jobholder needs to consistently apply a detailed knowledge and experience and is an acknowledged source of guidance and advice in the most difficult and complex areas.

Level 4, "Specialist" would be a level to which very few officers would be required to perform at routinely. The key attributes to this particular level of expertise are (a) how many times is the jobholder regarded as a "guru" by colleagues and (b) who could the specialist turn to for advice. If the answers to (a) and (b) are "all the time" and "nobody" then level 4 will most certainly apply.

6.3.1 Competence 1 Level Achievement Record

Search Planning

Outcomes: Coastguard Officers are able to predict the likely movement of various types of targets drifting at sea by employing established methods, understanding the effects of individual drift factors and the causes and likely magnitudes of predictable errors required for the calculation of search areas. Coastguard Officers are able to plan searches on the shore for any target using established procedures. In both cases Coastguard Officers are able to effectively allocate suitable resources and prioritise search effort so that persons at risk could be located within their predicted survival time.

COMPETENCE 1 – SEARCH PLANNING			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
100	Demonstrates a knowledge of the cause and effect of wind, tide, current and other drift factors upon various drifting targets.	1		
101	Demonstrates a knowledge of vector addition to construct datum positions	1		
109	Demonstrates a knowledge of the risks and gains associated with differing search patterns when resourcing search areas.	1		
110	Demonstrates a knowledge of the relationship between sweep width, track spacing and coverage factor to predict the likely effectiveness of a given search.	1		
115	Demonstrates the ability to operate the SARIS search planning system.	1		
116	Demonstrates a knowledge of the performance of visual and electronic detection aids, and their implications when allocating search effort.	1		

¹ **Note to Supervising Officers**

Competencies should be signed off as "Considered Satisfactory" when, *and only when*, the Supervising Officer is entirely satisfied that the trainee has fully reached the required level in that competence.

² **Minimum Level**

This is the *minimum* level which a CWA is expected to reach by the end of their training.

A level of "3-" means that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.



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6.3.2 Competence 2 Level Achievement Record

Operational Communications

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue incidents and maintain an effective operational state of readiness using the telecommunications infrastructure within the Global Maritime Distress and Safety System. Coastguard Officers should be able to operate telecommunications equipment, and use it to transmit and receive ideas and information in the most effective manner, and in compliance with established procedures.*

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
200	Able to deal with incident telephone traffic in a positive and professional manner.	2		
201	Able to deal with 999 telephone traffic in a positive and professional manner, so that the information required to make an effective response is wherever possible gleaned from the caller.	3-		
202	Demonstrates a knowledge of the terrestrial and mobile telephone networks when dealing with and making incident calls.	2		
203	Able to transmit clearly over radio speech circuits with due regard to rhythm, speed, volume and pitch.	3-		
204	Demonstrates a knowledge of maritime radio practice and procedures, and those employed specifically by HMCG.	3-		
205	Demonstrates a knowledge of Distress, Safety and Urgency procedures to receive and rebroadcast alerts & safety information.	2		
206	Demonstrates a knowledge of Distress, Safety and Urgency broadcast formats to compile effective broadcasts from incident information.	2		
207	Able to produce effective reports i.e. SITREPS, HAZREPS, DEFREPS, MAREPS using incident information.	2		
208	Able to keep an effective radio log.	3-		
209	Demonstrates a knowledge of radio frequency allocation when receiving and transmitting routine and incident traffic.	2		
210	Demonstrates a knowledge of radio frequency allocation to the devising of major incident communications plans.	2		



COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
211	Demonstrates a knowledge of radio propagation theory when assessing the performance radio communications equipment, and selecting the most appropriate remote aerial site.	2		
212	Demonstrates the ability to encode and transmit paging signals over VHF radio.	3-		
213	Demonstrates a knowledge of VHF radio direction finding to determine and classify bearing information received from mobile stations.	3-		
214	Demonstrates the ability to operate the radio communications keypad of CCDS equipment.	3-		
215	Demonstrates the ability to operate portable VHF equipment, including boat and vehicle sets.	2		
216	Demonstrates a knowledge of the ITU regulations with regard to infringements, silence periods, calling procedures and the control of communications during distress working.	2		
217	Demonstrates the ability to receive and rebroadcast distress and urgency alerts via VHF and MF DSC.	2		
218	Demonstrates a knowledge of MMSI protocols and can identify a ship or shore station from the appropriate database.	3-		
219	Demonstrates the ability to transmit and receive telex messages, and ensure that such messages are properly recorded in the signal log.	3-		
220	Demonstrates the ability to transmit messages by fax, and to ensure that such messages are properly recorded in the signal log.	3-		
221	Demonstrates a knowledge of the GMDSS carriage requirements for vessels of 300GRT when considering the most suitable broadcast and/or communications means.	2		
222	Demonstrates a knowledge of the COSPAS/SARSAT system to interpret and act upon beacon alert messages.	2		
223	Demonstrates a knowledge of the COSPAS/SARSAT system to determine the integrity and accuracy of potential and actual beacon alerts.	2		
224	Demonstrates a knowledge of the INMARSAT system to interpret and act upon alert messages.	2		



COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
225	Demonstrates a knowledge of the NAVTEX system to encode initial distress or urgency alerts for broadcast.	2		
226	Demonstrates the ability to assess the effectiveness of the District and/or Regional communications infrastructure, and make appropriate recommendations if required.	2		

¹ **Note to Supervising Officers**

Competencies should be signed off as "Considered Satisfactory" when, *and only when*, the Supervising Officer is entirely satisfied that the trainee has fully reached the required level in that competence.

² **Minimum Level:**

This is the *minimum* level which a CWA is expected to reach by the end of their training.

A level of "3-" means that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.



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6.3.3 Competence 3 Level Achievement Record

Coast Rescue

Outcome: Coastguard Officers are able to plan, manage and execute the rescue of persons in difficulty in littoral areas using established procedures and equipment, together with Auxiliary Coastguards and other resources. Coastguard Officers are able to supervise the maintenance of an effective state of operational readiness.

COMPETENCE 3 – COAST RESCUE				Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date	
300	Demonstrates a knowledge of the safe storage and proper inspection of rescue equipment, including pyrotechnics.	1			
309	Demonstrates a knowledge of shore search procedures whenever appropriate.	1			
310	Demonstrates a knowledge of mud rescue procedures whenever appropriate.	1			
313	Demonstrates a knowledge of the Road Traffic Act in relation to the safe operation of Coastguard vehicles during emergency response and routine duties.	1			
316	Demonstrates a knowledge of the Code Of Practice For The Carriage Of Personnel And Equipment.	1			
317	Demonstrates a knowledge of helicopter co-operation.	1			
318	Demonstrates a knowledge of casualty care during evacuation, including the administration of First Aid.	1			
319	Demonstrates a knowledge of multi agency working during coastal incidents.	1			
320	Demonstrates a knowledge of the role of the Incident Officer during coastal incidents.	1			

¹ **Note to Supervising Officers**

Competencies should be signed off as "Considered Satisfactory" when, *and only when*, the Supervising Officer is entirely satisfied that the trainee has fully reached the required level in that competence.

² **Minimum Level**

This is the *minimum* level which a CWA is expected to reach by the end of their training.

A level of "3-" means that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.



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6.3.4 Competence 4 Level Achievement Record

Chart and Map Work

Outcome: Coastguard Officers are able to successfully prosecute Search and Rescue incidents by applying navigational and plotting skills to Admiralty Charts and associated publications, as well as Ordnance Survey maps.

COMPETENCE 4 – CHART & MAPWORK				Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date	
400	Demonstrates a knowledge of Mercator's Projection when interpreting latitude and Longitude scales, measuring distances on charts, and converting OS Grid positions to latitude/longitude and vice versa.	2			
401	Demonstrates the ability to plot a position on a map or chart to a level of accuracy commensurate with the scale and the task at hand.	3-			
402	Demonstrates the ability to lay off distances and ranges on a map or chart to a level of accuracy commensurate with the scale and the task at hand.	3-			
403	Demonstrates the ability to lay off true bearings and apply scalar information to produce vectors to a level of accuracy commensurate with the scale and the task at hand.	3-			
404	Demonstrates a knowledge of the magnetic compass to translate compass bearings into true bearings and vice versa.	3-			
405	Demonstrates a knowledge of plotting skills to construct a running fix or intercept, accounting for tide if appropriate.	2			
406	Demonstrates a knowledge of plotting skills to transfer search plans onto a chart of an appropriate scale.	3-			
407	Demonstrates the ability to transpose information from VHF D/F onto a map or chart.	3-			
408	Demonstrates a knowledge of the relationship between speed, distance and time.	3-			
409	Demonstrates a knowledge of chart and map symbology to identify dangers to navigation.	2			

COMPETENCE 4 – CHART & MAPWORK			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
410	Demonstrates a knowledge of tidal theory and tidal information.	2		
411	Demonstrates a knowledge of plotting to make reasonable allowances for tide and leeway on the predicted track of a vessel.	2		
412	Demonstrates a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to reconstruct the most likely track of a vessel reported as overdue.	1		
413	Demonstrates a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to reconstruct the most likely track of a vessel reported as overdue.	1		
414	Demonstrates the ability to assess the nature of the terrain by examining the contours on an OS Map.	2		
415	Demonstrates a knowledge of the ephemeris to calculate the predicted times of twilight, sunrise and sunset.	2		
416	Demonstrates a knowledge of the means by which charts and navigational publications are kept up to date, including making corrections and recording them.	2		

¹ **Note to Supervising Officers**

Competencies should be signed off as "Considered Satisfactory" when, *and only when*, the Supervising Officer is entirely satisfied that the trainee has fully reached the required level in that competence.

² **Minimum Level**

This is the *minimum* level which a CWA is expected to reach by the end of their training.

A level of "3-" means that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.

6.3.5 Competence 5 Level Achievement Record

General Maritime

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, effectively liaise with all sections of the maritime community and contribute to incident prevention by providing timely and meaningful safety information to the public, demonstrating an understanding of the marine environment as experienced by the full range of sea and coastal users.*

COMPETENCE 5 – GENERAL MARITIME			Considered Satisfactory ²	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
500	Demonstrates a knowledge of the characteristics and construction of principle ship types to Search and Rescue operations.	2		
501	Demonstrates a knowledge of offshore oil and gas industry practices and procedures to Search and Rescue operations	2		
502	Demonstrates a knowledge of the construction and characteristics of workboats, fishing vessels and pleasure craft to Search and Rescue operations.	2		
503	Demonstrates the ability to provide safety information to all sea and coastal users with due regard to their particular needs and limitations.	2		
504	Demonstrates a knowledge of the IALA buoyage system and other aids to navigation to Search and Rescue operations, and Coastguard Boat operations.	2		
505	Demonstrates a knowledge of the International Rules For The Prevention Of Collision At Sea when dealing with reports of hazardous incidents, and for Coastguard Boat operations.	2		
506	Demonstrates a knowledge of the Emergency Towing Protocol and the Secretary of States Powers of Intervention.	1		
507	Demonstrates a knowledge of the Coast Protection Act in conjunction with local legislation and local practices to monitor, measure and report upon works carried out on the foreshore.	1		
508	Demonstrates a knowledge of current Merchant Shipping legislation to monitor and report upon the measurement, registration and marking of registered fishing vessels under 24 metres in length.	1		



COMPETENCE 5 – GENERAL MARITIME			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
509	Demonstrates a knowledge of current Merchant Shipping legislation, in conjunction with the relevant Codes of Practice, to monitor and report upon actual and potential infringements.	1		
510	Demonstrates a knowledge of current agreements with other agencies when making reports of maritime activity.	2		
511	Demonstrates a knowledge of current agreements with the Hydrographic Office and General Lighthouse Authorities when dealing with reports of Hazards to Navigation.	2		
512	Demonstrates a knowledge of current Merchant Shipping legislation to provide assistance to the Receiver of Wreck.	1		
513	Demonstrates a knowledge of the provisions of the International Convention on the Safety Of Life At Sea (SOLAS) when dealing with vessels to which the provisions of the Convention apply.	2		
514	Demonstrates a knowledge of agreed procedures and/or local byelaws to advise mariners and the public of activity within coastal ranges, exercise areas and recreational areas.	2		
515	Demonstrates a knowledge of current marine legislation relating to the transportation by sea of hazardous materials to raise reports and monitor the progress of such shipments.	1		
516	Demonstrates a knowledge of the IMO hazardous cargo classifications.	1		
517	Demonstrates a knowledge of the licensing and carriage regulations for radio equipment carried by small commercial and pleasure craft.	2		
518	Demonstrates a knowledge of current agreements with BT Marine when dealing with reports of fouled undersea cables.	2		
519	Demonstrates a knowledge of international conventions and other instruments concerning Search and Rescue.	1		
520	Demonstrates a knowledge of other regulations, recommendations and codes when dealing with vessels and other craft which are not subject to the provisions of SOLAS.	1		

6.3.6 Competence 6 Level Achievement Record

Counter Pollution

Outcome: *Coastguard Officers are able to support the activities of the Counter Pollution Organisation, local government bodies and other interested parties during Counter Pollution operations employing established procedures, personnel and equipment.*

COMPETENCE 6 – COUNTER POLLUTION			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
600	Demonstrates a knowledge of c/p procedures to assess, classify and report upon actual or potential pollution incidents.	2		
601	Demonstrates a knowledge of c/p procedures to support c/p reconnaissance and spraying aircraft operations.	1		
602	Demonstrates a knowledge of c/p procedures and international agreements to format standard reports and notifications to external agencies.	2		
603	Demonstrates a knowledge of c/p procedures to act for the Principal Counter Pollution Officer if required.	1		
604	Demonstrates a knowledge of the contact and callout procedures for other agency's key staff during c/p incidents.	2		
605	Demonstrates a knowledge of the contact and callout arrangements for Maritime & Coastguard Agency key staff during c/p incidents.	2		
606	Demonstrates a knowledge of the National Contingency Plan.	1		
607	Demonstrates a knowledge of other external contingency plans.	1		
608	Demonstrates a knowledge of Explosive Ordnance Disposal procedures.	1		

¹ **Note to Supervising Officers**

Competencies should be signed off as "Considered Satisfactory" when, *and only when*, the Supervising Officer is entirely satisfied that the trainee has fully reached the required level in that competence.

² **Minimum Level**

This is the *minimum* level which a CWA is expected to reach by the end of their training.

A level of "3-" means that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.



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6.3.7 Competence 7 Level Achievement Record

Meteorology

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, provide weather information to the public and the mariner, assess the effects of weather on the operational state of readiness and contribute to incident prevention by demonstrating an understanding of meteorology, using established procedures and information supplied by the Meteorological Office. Coastguard Officers are able to enhance the quality of this information by observing the weather and making reports using established procedures and equipment.*

COMPETENCE 7 – METEOROLOGY			Considered Satisfactory *	
Comp	Performance Criteria	Minimum Level?	Supervising Officer's Initials	Date
700	Demonstrates the ability to obtain weather information for mariners and coastal users from the UK weather information service.	3-		
701	Demonstrates a knowledge of meteorological terms to interpret weather information.	3-		
702	Demonstrates a knowledge of meteorology to describe the effects of air masses upon North Atlantic weather patterns.	1		
703	Demonstrates a knowledge of meteorology to describe the formation of North Atlantic weather systems, and their observable effects.	1		
704	Demonstrates the ability to interpret a synoptic chart.	2		
705	Demonstrates the ability to encode the National Climatological Message.	3-		
706	Demonstrates the ability to identify the phenomena associated with the onset of bad weather.	2		
707	Demonstrates a knowledge of meteorology to identify the causes of reduced visibility, and the causes by which poor visibility may improve.	3-		
708	Demonstrates a knowledge of meteorology to identify the causes of sea and land breezes.	3-		



COMPETENCE 7 – METEOROLOGY			Considered Satisfactory ³	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
709	Demonstrates a knowledge of the effects of meteorological phenomena upon Search and Rescue effort.	2		
710	Demonstrates a knowledge of the effect of wind upon sea state, and the effect of sea state upon Search and Rescue effort.	2		

¹ **Note to Supervising Officers**

Competencies should be signed off as "Considered Satisfactory" when, *and only when*, the Supervising Officer is entirely satisfied that the trainee has fully reached the required level in that competence.

² **Minimum Level**

This is the *minimum* level which a CWA is expected to reach by the end of their training.

A level of "3-" means that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.

6.3.8 Competence 8 Level Achievement Record

Search and Rescue Co-ordination

Outcome: Coastguard Officers are able to successfully co-ordinate Search and Rescue operations, maintain an effective operational state of readiness and cause all parties involved to work together by demonstrating an understanding of the national and international organisation of Search and Rescue, established procedures and the aims of the Maritime and Coastguard Agency (MCA).

COMPETENCE 8 – SAR CO-ORDINATION			Considered Satisfactory	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
800	Demonstrates a knowledge of current Search and Rescue policy and procedures.	2		
801	Demonstrates a knowledge of emergency phase classification.	2		
802	Demonstrates a knowledge of the status of search and rescue facilities used to conduct SAR operations.	3-		
803	Demonstrates a knowledge of the duties and responsibilities of the SMC, OSC and ACO.	2		
804	Demonstrates the ability to enter, extract and analyse incident information using CMIS, CDATE, ADAS and other relevant publications as appropriate.	3-		
805	Demonstrates a knowledge of the UK Search and Rescue Organisation.	2		
806	Demonstrates a knowledge of the intent and procedures of the various memoranda of understanding that exist between the MCA and other agencies.	2		
807	Demonstrates a knowledge of the emergency contact and callout arrangements that exist between HMCC and declared rescue facilities.	3-		
808	Demonstrates a knowledge of the RNLI Regulations (The Green Book) in relation to Search and Rescue operations.	2		
809	Demonstrates a knowledge of the command and control structure likely to be put in place when dealing with major incidents.	1		
810	Demonstrates a knowledge of the function and composition of the UK SAR Committee.	2		



COMPETENCE 8 – SAR CO-ORDINATION			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
811	Demonstrates a knowledge of emergency and contingency plans employed by external agencies for their areas of responsibility.	2		
812	Demonstrates a knowledge of the procedures for co-operating with foreign Search and Rescue agencies.	2		
813	Demonstrates a knowledge of the procedures restricting the use of airspace during emergency operations.	1		
814	Demonstrates a knowledge of the procedures restricting the movement of vessels during emergency operations.	1		
815	Demonstrates the required standard of local knowledge to incident information when prosecuting SAR operations.	3-		
816	Demonstrates a knowledge of exercise planning.	2		

¹ Note to Supervising Officers

Competencies should be signed off as "Considered Satisfactory" when, *and only when*, the Supervising Officer is entirely satisfied that the trainee has fully reached the required level in that competence.

² Minimum Level

This is the *minimum* level which a CWA is expected to reach by the end of their training.

A level of "3-" means that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.

6.4 COMPLETION CERTIFICATION

6.4.1 TASK SUMMARY CHECK LIST

At the end of your MSAR (F) Part Four training period on station you should have completed all the tasks summarised below.

Section No.		Completed (Tick)
6.2	Tasks 154 - 202	
6.3	All Competencies	
8.4	Tasks 49 - 91	
9.4	Tasks 12 - 18	

6.4.2 COMPLETION CERTIFICATE

<p>This is to certify that</p> <p style="margin-left: 100px;">CWA</p> <hr style="width: 30%; margin-left: 100px;"/> <p style="text-align: center; margin-top: 20px;">has satisfactorily completed all the Tasks listed above and is ready and prepared for their Part Five Course & Exams</p> <p style="margin-left: 100px; margin-top: 20px;">Signature: _____</p> <p style="margin-left: 100px; margin-top: 10px;">Grade: _____</p> <p style="margin-left: 100px; margin-top: 10px;">Date: _____</p>
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SECTION 7

MSAR (F) PART FIVE

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SECTION 8

ADAS

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8.1 Introduction	8-1
8.1.1 About ADAS	8-1
8.1.2 ADAS and MSAR (F)	8-1
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8.2 Pre-Part One Course Tasks	8-3
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8.4 Part Four Tasks	8-9



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8.1 INTRODUCTION

8.1.1 ABOUT ADAS

ADAS, which stands for Action Data System, was developed and produced by FORTEK COMPUTERS LTD of Gosport and introduced into HMCG Operations Rooms during the period 1990-94. A new system, ADAS 2000, was developed to cope with the millennium and was introduced mid 1999.

ADAS is the main Coastguard operational programme and is available on all the Ops Room PCs. It is used mainly for: -

- Storing and retrieving reference and operational data and information
- Maintaining and retrieving data from operational logs
- Maintaining resource information and displays
- Maintaining real-time dynamic incident records

ADAS consists of a number of interactive and stand-alone 'modules', with levels of access determined by individual password privileges. The system is driven by *mnemonic* input. The mnemonics can be typed in manually or triggered by use of the special function key (SFK) or the PC mouse.

8.1.2 ADAS and MSAR (F)

At the end of the MSAR (F) training programme you must be able to demonstrate: -

- A detailed understanding of the ADAS structure
- An in depth knowledge of ADAS in all modes
- Input and retrieval of DSU and general incident information
- Input to, retrieval from and amending of the ADAS database as necessary
- The ability to accurately enter information at a minimum speed of 20 words per minute for a sustained period of three minutes

This part of the Workbook and your experience in the Ops Room will help you become competent on ADAS. The tasks and projects are divided into three sections.

Section 8.1 will help you become familiar with some of the mnemonics and the general operation of the system including the scrolling window, message handling, radio logs and databases. It is important that this section is completed before your Part One Course.

Section 8.2 encourages you to practise the incident working and broadcast formats introduced during the Part One Course and should be completed in your MSAR (F) Part Two phase.

Section 8.3 tasks introduce you to some of the more advanced operations of ADAS and should be tackled during Part Four of your training.



8.1.3 ADAS GUIDE

The ADAS STEP-BY-STEP GUIDE should be available in your Ops room. It is an excellent user-friendly reference and will help you work through many of the following tasks

8.2 PRE-PART ONE COURSE TASKS

ADAS			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
STARTING - Demonstrate the ability to:-				
804	1	Boot up an ADAS session from front-end PC screen		
	2	Log On and Off Watch		
	3	Log In and Out of terminals		
	4	Enter messages and text into the scrolling window		
	5	Close down an ADAS session		
MESSAGE HANDLING – Demonstrate an understanding of:-				
804	6	The function of the message catalogue		
Demonstrate the ability to:-				
804	7	Access the current day's catalogue		
	8	Access a previous days catalogue		
	9	Scroll through the catalogue (page by page; line by line)		
	10	Review messages via catalogue & RM {message no.}		
	11	How to scroll-review messages		
	12	Print a message		
219 & 220	13	Receive a telex and a fax message into ADAS		
	14	Receive a 'Formal Message' into ADAS using the correct signal format		
	15	Use of the mnemonic "AMR"		
	16	Transfer (Zonk) a received telex message into a GI page		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



ADAS – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
MESSAGE HANDLING – cont. – Demonstrate an understanding of:-				
219 & 220	17	Create and send a new telex message to multiple addressees		
	18	Create and send a new fax message to multiple addressees		
	19	Use of the mnemonic "UMP"		
	20	Use of the mnemonic "CFS"		
	21	Transfer a received telex message (or formal message) to other addressees		
RADIO LOGS – Demonstrate the ability to:-				
219 & 220	22	Access the current day's radio, working and Ch0 logs		
	23	Explain the layout and information contained in the logs		
	24	Scroll through the logs		
	25	Access a previous day's logs		
	26	Enter information into to the logs		
	27	Search the logs for a vessels name		
GI MODULE – Demonstrate the ability to:-				
804	28	Access a GI page via the GI Index		
	29	Change the GI Index from numerical to alphabetical display		
	30	Print a GI page		
SAR RESOURCE FILES – Demonstrate an understanding of:-				
804	31	How to access an individual SAR resource file by {Resource Update} and with the mouse		

* Note to Supervising Officers: Tasks should be signed off when, **and only when**, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



ADAS – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
SAR RESOURCE FILES – cont. – Demonstrate an understanding of:-				
804	32	The information contained in the file		
	33	How to scroll through the resource file narrative		
INCIDENT WORKING – Demonstrate an understanding of:-				
804	34	Information displayed in the 'full' and 'brief' incident catalogue screens		
	35	How to access the current day's catalogue		
	36	How to access a previous days catalogue		
	37	How to scroll through catalogues		
	38	How to review individual incidents via the catalogues and by direct access i.e. R!{incident number}		
	39	The general layout and information contained in incident screens		
	40	How to create and initially access a non-specific (I) incident		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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8.3 PART TWO TASKS

ADAS			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
INCIDENT WORKING – In training mode:-				
804	42	Know and practise the preferred method for creating a 'General incident' (I)		
	43	Know and practise the preferred method of creating a 'Pan Pan' incident (P)		
	44	Know and practise the preferred method of creating a 'Mayday' incident (M)		
	45	Know and practise the creation of a 'Small Craft Safety Information' broadcast		
	46	Know and practise the creation of a local navigation warning ('Securite') broadcast		
	47	Know and practise the creation of all broadcasts associated with Pan Pan incidents		
	48	Know and practise the creation of all broadcasts associated with Mayday incidents		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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8.4 PART FOUR TASKS

ADAS			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
THE GI INDEX – Demonstrate an understanding of:-				
804	49	The composition and structure of the GI i.e. chapters, sections, sub-sections, pages.		
	50	The difference between 'fixed' and 'free' pages		
	51	The commonly used station mnemonics and how to access GI using them		
	52	How and when to edit and delete 'free' page text		
Demonstrate the ability to:-				
804	53	Create a personal GI free-text page using the File Management Services (FMS)		
	54	Attribute ('Remember') a mnemonic to your GI page		
	55	Remove the mnemonic and delete your GI page		
THE OPERATIONS ROOM LOG – Demonstrate an understanding of:-				
804	56	The purpose, layout and information stored in the Ops log		
	57	The types of 'system' message written to the log e.g. on/off watch		
Demonstrate the ability to:-				
804	58	Access the currents and previous days log		
	59	Scroll through the day's log page by page and line by line		
	60	Create the Operations log		
	61	Enter weather information into the Ops log		
DATABASES – Demonstrate the ability to:-				
804	62	Access Location and Kiosk Search modules		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



ADAS – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
DATABASES – cont. – Demonstrate the ability to:-				
804	63	Access the CG66 and FVR databases		
	64	Under supervision create a fictitious or update an existing CG66 record		
	65	Search the CG66 database for Name, Owner, and Parameters		
	66	Search the FVR database for Name, Owner, Skipper, Agent and Parameters		
	67	Access the RIG database if applicable to your station		
SAR RESOURCES – Demonstrate the ability to:-				
804	68	Access and scroll through the District State Screen (DSS) and understand the information contained in it		
	69	Access and scroll through the resource-specific summary information screens (LBS, IRTS etc.) and full information screens (LBF, IRTF etc.)		
	70	Access a specific resource's summary information (i.e. LBS/Resource ID) and a specific resources full information (i.e. LBF /Resource ID)		
	71	Maintain and update SAR resource unit information using {Resource update}		
	72	Set and delete the 'Time-out' facility for a SAR resource		
804	73	Under supervision create a fictitious Sector		
	74	Add a Sector Officer, an IRT and a BURT		
	75	Add an AWL, an ILB and an aircraft		
	76	Delete your Sector and SAR resources		
212	77	Activate a single Motorola pager using the 'PAGE' command		
	78	Activate a group of Motorola pager using the 'PAGE' command		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.

ADAS – cont.			Considered Satisfactory *	
Comp	Task No.	Task	Supervising Officer's Initials	Date
INCIDENT WORKING – Demonstrate the ability to:-				
804	79	Enter messages into an incident narrative both directly and from the scrolling window.		
	80	Assign a resource to an incident		
	81	Use the {Key Message} key correctly to automatically assign messages to/from resources		
	82	Understand the information 'reviews' and printouts available during an incident		
207	83	Create and send a SAR SITREP using incident information		
	84	Create a POLREP		
	85	Create a HAZREP		
	86	Create a DEFREP, MAREP, POSREP, and CALDOVREP where applicable to your station		
GENERAL – Demonstrate a knowledge and/or understanding of:-				
804	87	The care and storage of back-up / archive tapes		
	88	The back-up and archive requirements and procedures		
	89	The hardware associated with the ADAS system and the inter-relationship between each part		
	90	All the components of the 'SYS' management function		
TYPING SKILLS				
	91	Demonstrate the ability to receive information by radio, telephone or any other source and to type that information into ADAS accurately and at a minimum speed of 20 words per minute for a sustained period of three minutes		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required.



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SECTION 9

LOCAL KNOWLEDGE

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9.1 INTRODUCTION

In order to meet your responsibilities on station it is necessary that you acquire a sound local knowledge of your District including: -

- A thorough knowledge of the coast and sea geography including buoyage, known danger spots, tidal conditions, and both published and local names of prominent positions and landmarks.
- A detailed knowledge of all Declared Facilities and their flank stations in neighbouring Districts, along with their capabilities and telephone / pager call-out arrangements.
- A general knowledge of regular Additional Facilities along with their capabilities and contact arrangements.
- A general knowledge of regular coastal and maritime activities and their accident potential.
- A detailed understanding of the radio communication infrastructure including communication black spots.

At the end of MSAR (F) you must be able to: -

- Describe in detail the extent of the local District operational area and identify any specific danger areas. Identify any area with a higher than usual risk to person or craft.
- Using an Ordnance Survey map, pinpoint the location and describe the capability of all declared SAR resources.
- Using an Ordnance Survey map, pinpoint the location and then describe the capability of all additional SAR resources.
- Orally describe the main marine/coastal activities that occur throughout the District and describe possible solution to the more common SAR problems.
- Demonstrate the ability to relate the adverse effects of weather and tides on any leisure activity within the local area, and describe any times or situations that may increase the inherent risks.
- Using an Ordnance Survey map, pinpoint the location of all aerial sites and provide an indication of areas of generally good or potentially unreliable communications.
- Describe potential communication alternatives available to the MRCC/SC in the event of unreliable communications during SAR operations.

Your Local Knowledge will be tested by examination at your station towards the end of MSAR (F) Part 4. Information about the Local Knowledge Exam is in Section 9.5.

This part of the Workbook and your experience in the Operations Room will help you to build up your local knowledge and prepare for the exam. The tasks and projects are divided between three sections.

Section 9.1 is designed to help you become familiar with the names of your colleagues in the district and the layout of equipment in your operations room. This should be completed before your Part One Course.

Section 9.3 will help you identify the SAR resources and aerial sites in your District and the publications available to you in the Operations Room. It should be completed during the MSAR (F) Part two.

Section 9.4 looks at your District and the SAR resources in it in more detail. This section and the Local Knowledge Exam must be successfully completed before you can sit your qualifying exam or become established.

9.2 PRE-PART ONE COURSE TASKS

LOCAL KNOWLEDGE		Considered Satisfactory*	
Task No.	Task	Supervising Officer's Initials	Date
1	Complete the Station and District information in Section 9.2.1 of this Workbook		
2	Read and demonstrate an understanding of CG3 Volume 3 Chapter 2 Sections 1 & 2 (Operational Responsibilities)		
3	Read and demonstrate an understanding of CG3 Volume 3 Chapter 1 Section 1 (Operations Room – General)		
4	Draw a plan of your operations room in Section 9.2.2 showing the layout of the desks and the location of all equipment e.g. WM desk, DSC, fax, and paging unit		
5	Draw a plan of your station in Section 9.2.3 showing the positions and types of fire appliances, fire "break glass" points and emergency exits		
6	Know how to adjust workplace furniture and equipment to suit your own requirements		

* **Note to Supervising Officers:** Tasks should be signed off when, *and only when*, the Supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required of the grade.



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9.2.1 STATION, DISTRICT & SECTOR INFORMATION

STATION DETAILS	
STATION:	_____
Address :	_____

Office Tel:	_____
Office Fax :	_____
Ordnance Survey Grid Reference: _____	
Latitude and Longitude :	_____

Operational Boundaries :	_____

District Management	
DC :	_____
	Tel: _____
DDC :	_____
	Tel: _____
OM :	_____
	Tel: _____
CWA(A) :	_____
	Tel: _____
Operations Room	
Incoming Telephones:	_____
Ex-directory:	_____
Fax:	_____
Telex:	_____



Watches

Watch Identity : _____

Ops Manager (Dover) : _____

Watch Manager (WM) : _____

Deputy WM : _____

Watch Officers : _____

CWA (O)s : _____

Watch Identity : _____

Ops Manager (Dover) : _____

Watch Manager (WM) : _____

Deputy WM : _____

Watch Officers : _____

CWA (O)s : _____



Watches (cont.)

Watch Identity : _____

Ops Manager (Dover) : _____

Watch Manager (WM) : _____

Deputy WM : _____

Watch Officers : _____

CWA (O)s : _____

Watch Identity : _____

Ops Manager (Dover) : _____

Watch Manager (WM) : _____

Deputy WM : _____

Watch Officers : _____

CWA (O)s : _____



Sector Organisation (cont.)¹

SECTOR NAME	
Sector Manager	
Telephone	
Fax	
Pager	
Sector Base Address	
OS Grid Reference	
Operational Boundaries	

Coastal Response Teams		
Team Name	Station Officer	IRT or BURT

¹ Photocopy more pages as required



Sector Organisation (cont.)¹

SECTOR NAME	
Sector Manager	
Telephone	
Fax	
Pager	
Sector Base Address	
OS Grid Reference	
Operational Boundaries	

Coastal Response Teams		
Team Name	Station Officer	IRT or BURT

¹ Photocopy more pages as required

**Sector Organisation (cont.)¹**

SECTOR NAME	
Sector Manager	
Telephone	
Fax	
Pager	
Sector Base Address	
OS Grid Reference	
Operational Boundaries	

Coastal Response Teams		
Team Name	Station Officer	IRT or BURT

¹ Photocopy more pages as required



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9.2.2 OPERATIONS ROOM PLAN – Showing Desk and Equipment Layout





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9.2.3 STATION PLAN – Showing Fire Appliances and Emergency Exits

This is a large, empty rectangular box with a thin black border, occupying the central portion of the page. It is intended for the student to draw a station plan, showing the locations of fire appliances and emergency exits within a building or area.



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9.3 PART TWO TASKS & PROJECTS

LOCAL KNOWLEDGE		Considered Satisfactory*	
Task No.	Task	Supervising Officer's Initials	Date
7	Demonstrate a knowledge of the operational and administrative structure of your Region and district and be able to identify key personnel by name		
8	Read CG3 Vol. 3 Chapter 1 Section 3 (Publications) then locate and identify the contents of all MCA and HMCG operational publications held in the operations room		
9	Locate and identify the contents of the publications listed in CG3 Vol. 3 Chapter 1 Section 3 Annex A held in the operations room		
10	Complete the District SAR resources information in Section 9.3.1		
11	Using an Ordnance survey map, pinpoint the location of all aerial sites		

* **Note to Supervising Officers:** Tasks should be signed off when, *and only when*, the Supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required of the grade.



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9.3.1 DISTRICT SAR RESOURCES

RNLI LIFEBOATS	
LB STATION NAME	
Honorary Secretary	
Pager Number	
AWL Name	
Class of Boat	
Side Number	
Service Speed	
Survivor Capacity (Max.)	
ILB Name	
Class of Boat	
Side Number	
Service Speed	
Survivor Capacity (Max.)	
Operational Comments	

LB STATION NAME	
Honorary Secretary	
Pager Number	
AWL Name	
Class of Boat	
Side Number	
Service Speed	
Survivor Capacity (Max.)	
ILB Name	
Class of Boat	
Side Number	
Service Speed	
Survivor Capacity (Max.)	
Operational Comments	

RNLI LIFEBOATS(cont.)¹
--

LB STATION NAME	
Honorary Secretary	
Pager Number	
AWL Name	
Class of Boat	
Side Number	
Service Speed	
Survivor Capacity (Max.)	
ILB Name	
Class of Boat	
Side Number	
Service Speed	
Survivor Capacity (Max.)	
Operational Comments	

LB STATION NAME	
Honorary Secretary	
Pager Number	
AWL Name	
Class of Boat	
Side Number	
Service Speed	
Survivor Capacity (Max.)	
ILB Name	
Class of Boat	
Side Number	
Service Speed	
Survivor Capacity (Max.)	
Operational Comments	

¹ Photocopy more pages as required



INSHORE RESCUE ORGANISATIONS¹

ORGANISATION NAME	
Launching contact	
Contact Number	
Name	
Type of Boat	
Radio Callsign	
Service Speed	
Survivor Capacity (Max.)	
Operational Comments	

ORGANISATION NAME	
Launching contact	
Contact Number	
Name	
Type of Boat	
Radio Callsign	
Service Speed	
Survivor Capacity (Max.)	
Operational Comments	

ORGANISATION NAME	
Launching contact	
Contact Number	
Name	
Type of Boat	
Radio Callsign	
Service Speed	
Survivor Capacity (Max.)	
Operational Comments	

¹ Photocopy more pages as required



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AIRCRAFT¹

UNIT NAME	
Base	
Operational Area	
Contact number	
Aircraft type	
Rescue Callsign	
Range	
Service Speed	
Endurance	
Survivor Capacity (Max.)	
Operational Comments	

UNIT NAME	
Base	
Operational Area	
Contact number	
Aircraft type	
Rescue Callsign	
Range	
Service Speed	
Endurance	
Survivor Capacity (Max.)	
Operational Comments	

¹ Photocopy more pages as required



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9.4 PART FOUR TASKS & PROJECTS

LOCAL KNOWLEDGE		Considered Satisfactory*	
Task No.	Task	Supervising Officer's Initials	Date
12	Describe in detail the extent of the local District operational area and identify any specific danger areas.		
13	Describe the main marine/coastal activities that occur throughout the District and possible solutions to the more common SAR problems		
14	Using an OS map, pinpoint the location of all declared SAR resources to within 2 cables resolution and identify any local hazards to their operations		
15	Using an OS map pinpoint the location of all additional SAR resources to within 2 cables resolution and identify the general area of operations for that facility together with any operational limitations that must be considered		
16	Explain the adverse affects of weather and tides on any leisure activity within the local area and identify times or situations that may further increase risks		
17	Using an OS map pinpoint the location of all aerial sites and provide an indication of areas of generally good or potentially unreliable communications.		
18	Describe the potential communications alternatives available to the MRCC/SC in the event of unreliable communications during SAR operations, or during a full MRCC/SC communications outage		

* Note to Supervising Officers: Tasks should be signed off when, *and only when*, the Supervising Officer is satisfied that the trainee has fully grasped the principles and procedures involved and/or has demonstrated that they have attained the standard required of the grade.



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9.5 LOCAL KNOWLEDGE EXAM INFORMATION

All CWAs have to be tested in Local Knowledge. The examination will be taken at your station towards the end of your MSAR (F) Part Four training. It is usually an oral exam but sometimes includes a written element.

9.5.1 GUIDELINES FOR THE LOCAL KNOWLEDGE TEST

These guidelines are laid down in CC3 Volume III Chapter 2 Section 10.



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9.6 LOCAL KNOWLEDGE EXAM CERTIFICATE

* Please send a copy of this page to the MCA Training Centre when completed



This is to certify that

has successfully completed their
LOCAL KNOWLEDGE EXAMINATION

at

Signed _____

Grade _____

Dated _____



SECTION 10

REVIEW & INSPECTION RECORDS

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10.2 District Controllers 3-monthly Review	10-5
10.3 Workbook Completion Certificate	10-7



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10.1 LINE MANAGERS MONTHLY REVIEW

Line Managers should review the Workbook and comment on the trainee's progress monthly.

MONTH 1	
Signature: _____	Date: _____

MONTH 2	
Signature: _____	Date: _____



MONTH 3	
Signature: _____	Date: _____

MONTH 4	
Signature: _____	Date: _____

MONTH 5	
Signature: _____	Date: _____



MONTH 6	
Signature: _____	Date: _____

MONTH 7	
Signature: _____	Date: _____

MONTH 8	
Signature: _____	Date: _____



MONTH 9	
Signature: _____	Date: _____

MONTH 10	
Signature: _____	Date: _____

MONTH 11	
Signature: _____	Date: _____



10.2 DISTRICT CONTROLLERS 3-MONTHLY REVIEW

District Controllers should review the Workbook and comment on the trainee's progress at least every three months.

1 st REVIEW	
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
Signature: _____	Date: _____

2 nd REVIEW	
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
Signature: _____	Date: _____

10.3 WORKBOOK COMPLETION CERTIFICATE

- Please send a copy of this page to the MCA Training Centre when completed



This is to certify that

has satisfactorily completed their
MSAR (F) WORKBOOK

at

Signed _____

District Controller _____ District

Dated _____

附錄三 英國訓練中心中階課程

1

2

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4

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SECTION 1

INTRODUCTION



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SECTION 1 INTRODUCTION

1.1 ABOUT MSAR(I)

1.1.1 THE MSAR TRAINING PROGRAMME

A co-ordinated three-tier programme has been developed by the Training Centre to support the training of operational Coastguard staff from new entry through to Watch or Sector Manager.

It is known as the Maritime Search and Rescue (MSAR) programme and is in three levels;

MSAR(F) - Foundation	(to qualified CWA level)
MSAR(I) - Intermediate	(to qualified Watch Officer level)
MSAR(A) - Advanced	(to Watch/Sector manager level and beyond)

1.1.2 MSAR(I)

The MSAR(I) training programme is designed to develop operational Coastguard Officers from CWA to Watch Officer level. It is based on the identified job-specific competence profile for Watch Officer which, in most cases, means a development and enhancement of competencies up to level 3.

The level statements and Watch Officer competency profile can be found in Sections 1.2.2 and 1.2.3 respectively.

The MSAR(I) programme is in five separate parts:

- Part 1: A two-week course at the Training Centre
- Part 2: 8-16 weeks workplace experience supported by a workbook
- Part 3: A two-week course at the Training Centre
- Part 4: 16-24 weeks workplace experience supported by a workbook
- Part 5: A two-week course at the Training Centre - revision and examinations

MSAR(I) Parts 1 and 3

Parts 1 and 3 are two-week structured learning courses, held at the MCA Training Centre in Highcliffe. These courses will provide you with instruction and a more in-depth knowledge of the skills, knowledge and attitudes required of a Watch Officer.

Details of the course contents can be found in Sections 2.1 and 2.2.

MSAR(I) Parts 2 and 4

These are periods of on-station continuation training and development, supported by the tasks, exercises and projects contained in Section 3 of this Workbook to reinforce the learning achieved in Parts 1 and 3.

MSAR(I) Part 5

Part 5 is a two-week course at the MCA Training Centre in Highcliffe and consists of a four day revision period, followed by qualifying examinations.

Full details of this part can be found in Section 2.3.

1.2 JOB DESCRIPTION & COMPETENCY PROFILES

1.2.1 WATCH OFFICER JOB DESCRIPTION

Main Purpose of Job

To respond to all calls and requests for information and assistance within the defined SAR region using relevant resources and the supervision of CWAs under the direction of the Watch Manager.

Key Responsibilities

- To understand thoroughly and operate Coastguard communications equipment including radio, satcoms, DSC, VHF/DF, telephone, telex, e:mail, paging and facsimile and to supervise the on watch training of CWAs in this equipment.
- To assist in maintaining the integrity of distress frequencies Channel 16 VHF and 2182 kHz MF.
- To answer and respond positively to Distress, Urgency and Safety traffic on VHF, MF, DSC, SATCOMS and 999 calls and by any other means including EPIRB alerts.
- Understand mobile telephone systems including the arrangements for receiving 999 information on such systems.
- To fully understand and operate within the GMDSS.
- To understand and operate within the SAR procedures and communication practices of neighbouring and other world-wide states.
- To understand and operate within the communication procedures and contingency arrangements of other United Kingdom authorities who may be involved in SAR.
- To contribute to the decision making process in all SAR incidents occurring within the MRCC/SC area of responsibility. This should include the selection, alerting and briefing of SAR units and search area determination, area coverage, survivor recovery, delivery and reception.
- To sustain a high degree of local knowledge of the coast and sea area within the MRCC/SC area of responsibility including the availability and capability of all SAR declared and additional units.
- To understand and operate within the responsibilities of the counter-pollution branch, providing advice and support to the same when required.

1.2.2 LEVEL STATEMENTS FOR INDIVIDUAL PERFORMANCE CRITERIA

Level 0 No knowledge required

Level 1 Overview knowledge, an appreciation of the subject

The jobholder needs to have knowledge of the key principles but is not expected to apply the knowledge in detail.

Level 2 Basic knowledge and experience

The jobholder has to have a good grasp of the fundamentals of the areas of knowledge but needs to refer to other sources for detailed information when required to deal with other than the most straightforward situations. Supervision and guidance from more experienced colleagues is expected.

Level 3 Detailed knowledge with more experience

The jobholder needs to have built on basic knowledge and experience of a range of applications and deals with the majority of situations encountered on own initiative

Level 4 Specialist

The jobholder needs to consistently apply a detailed knowledge and experience and is an acknowledged source of guidance and advice in the most difficult and complex areas.

Note

Level 4, "Specialist" would be a level to which very few officers would be required to perform at routinely. The key attributes to this particular level of expertise are:

- (a) How many times is the jobholder regarded as a "guru" by colleagues?
- (b) Who could the specialist turn to for advice?

If the answers to (a) and (b) are "all the time" and "nobody" then level 4 will most certainly apply.

1.2.3 WATCH OFFICER COMPETENCY PROFILES

The established performance criteria and associated competency levels for Watch Officers are those which are expected of a fully trained and experienced WO. Many of the performance criteria call for a level 3 attainment which requires a "detailed knowledge and experience" of the topic. Experience of course is something that comes with time and it is not normally possible to achieve level 3 in the first year.

The MSAR (F) training programme will take Officers to a maximum level of "3-" which means that the jobholder has a theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on their own initiative.

Competence 1

Search Planning

Outcomes: *Coastguard Officers are able to predict the likely movement of various types of targets drifting at sea by employing established methods, understanding the effects of individual drift factors and the causes and likely magnitudes of predictable errors required for the calculation of search areas. Coastguard Officers are able to plan searches on the shore for any target using established procedures. In both cases Coastguard Officers are able to effectively allocate suitable resources and prioritise search effort so that persons at risk could be located within their predicted survival time.*

Ref.	Performance Criteria	Level
100	Applies a knowledge of the cause and effect of wind, tide, current and other drift factors upon various drifting targets	3
101	Applies a knowledge of vector addition to construct datum positions.	3
102	Applies a knowledge of accounting for probable errors arising in the construction of datum positions to construct error circles and search areas around the datum positions.	3
103	Applies a knowledge of the theory and practice of current search planning methodology to determine the most appropriate solution using the Rapid Response method	3
104	Applies a knowledge of the theory and practice of current search planning methodology to determine the most appropriate solution from Datum Point, Datum Area or Backtrack	3
105	Applies incident information to search area determination to produce legitimate and practical search areas ready for plotting onto nautical charts	3
106	Applies a knowledge of the predicted behaviour of shore targets to determine a feasible shore search area	2

Ref.	Performance Criteria	Level
107	Applies a knowledge of shore search techniques to plan an effective search	2
108	Applies a knowledge of the capabilities and limitations of SAR units to properly resource offshore searches	3
109	Applies a knowledge of the capabilities and limitations of search and rescue units to properly resource shore searches	2
110	Applies a knowledge of the risks and gains associated with differing search patterns when resourcing search areas	3
111	Applies a knowledge of the relationship between sweep width, track spacing and coverage factor to predict the likely effectiveness of a given search	3
112	Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to assess the effectiveness of plans devised by others	2
113	Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to describe the effectiveness of existing plans to outside agencies or individuals	2
114	Applies a knowledge of the theory and practice of current search planning methodology, together with incident information, to determine the point at which an unsuccessful search should be terminated	2
115	Able to operate the SARIS search planning system	3
116	Applies a knowledge of the performance of visual and electronic detection aids, and their implications when allocating search effort	3

Competence 2

Operational Communications

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue incidents and maintain an effective operational state of readiness using the telecommunications infrastructure within the Global Maritime Distress and Safety System. Coastguard Officers should be able to operate telecommunications equipment, and use it to transmit and receive ideas and information in the most effective manner and in compliance with established procedures.*

Ref.	Performance Criteria	Level
200	Able to deal with incident telephone traffic in a positive and professional manner	3
201	Able to deal with 999 telephone traffic in a positive and professional manner, so that the information required to make an effective response is wherever possible gleaned from the caller	3
202	Applies a knowledge of the terrestrial and mobile telephone networks when dealing with and making incident calls	3
103	Able to transmit clearly over radio speech circuits with due regard to rhythm, speed, volume and pitch	3
204	Applies a knowledge of maritime radio practice and procedures, and those employed specifically by HMCG	3
205	Applies a knowledge of Distress, Safety and Urgency procedures to receive and rebroadcast alerts and safety information	3
206	Applies a knowledge of Distress, Safety and Urgency broadcast formats to compile effective broadcasts from incident information	3
207	Able to produce effective reports i.e. SITREPS, HAZREPS, DEFREPS, MAREPS using incident information	3
208	Able to keep an effective radio log	3
209	Applies a knowledge of radio frequency allocation when receiving and transmitting routine and incident traffic	3
210	Applies a knowledge of radio frequency allocation to the devising of major incident communications plans	3
211	Applies a knowledge of radio propagation theory when assessing the performance radio communications equipment, and selecting the most appropriate remote aerial site	3
212	Able to encode and transmit paging signals over VHF radio	3

Ref.	Performance Criteria	Level
213	Applies a knowledge of VHF radio direction finding to determine and classify bearing information received from mobile stations	3
214	Able to operate the radio communications keypad of CCDS equipment	3
215	Able to operate portable VHF equipment, including boat and vehicle sets	2
216	Applies a knowledge of the ITU regulations with regard to infringements, silence periods, calling procedures and the control of communications during distress working	3
217	Able to receive and rebroadcast distress and urgency alerts via VHF and MF DSC	3
218	Applies a knowledge of MMSI protocols and can identify a ship or shore station from the appropriate database	3
219	Able to transmit and receive telex messages, and ensure that such messages are properly recorded in the signal log	3
220	Able to transmit messages by fax, and to ensure that such messages are properly recorded in the signal log	3
221	Applies a knowledge of the GMDSS carriage requirements for vessels of 300GRT when considering the most suitable broadcast and/or communications means	3
222	Applies a knowledge of the COSPAS/SARSAT system to interpret and act upon beacon alert messages	3
223	Applies a knowledge of the COSPAS/SARSAT system to determine the integrity and accuracy of potential and actual beacon alerts	3
224	Applies a knowledge of the INMARSAT system to interpret and act upon alert messages	3
225	Applies a knowledge of the NAVTEX system to encode initial distress or urgency alerts for broadcast	3
226	Able to assess the effectiveness of the District and/or Regional communications infrastructure, and make appropriate recommendations if required	3

Competence 3

Coast Rescue

Outcome: Coastguard Officers are able to plan, manage and execute the rescue of persons in difficulty in littoral areas using established procedures and equipment, together with Auxiliary Coastguards and other resources. Coastguard Officers are able to supervise the maintenance of an effective state of operational readiness.

Ref.	Performance Criteria	Level
300	Applies a knowledge of the safe storage and proper inspection of rescue equipment, including pyrotechnics	2
301	Applies a knowledge of coast rescue techniques, with regard to the needs of the casualty, the actual and potential hazards to rescuers and the casualty, and the identification of possible escape routes	1
302	Applies a knowledge of the safe operation of safety harnesses issued as coast rescue equipment	1
303	Applies a knowledge of the safe operation of head protection issued as coast rescue equipment	1
304	Applies a knowledge of the safe operation of lifejackets issued as coast rescue equipment	1
305	Applies a knowledge of the safe operation of drysuits issued as coast rescue equipment	1
306	Applies a knowledge of the safe operation of other personal safety equipment issued as coast rescue equipment	1
307	Applies a knowledge of standard rope rescue techniques whenever appropriate to assist in the rigging of approved rope rescue systems	1
308	Applies a knowledge of standard rope rescue techniques whenever appropriate to supervise the rigging of approved rope rescue systems	1
309	Applies a knowledge of shore search procedures whenever appropriate	1
310	Applies a knowledge of mud rescue procedures whenever appropriate	1
311	Able to operate pyrotechnics safely and effectively during Search and Rescue operations	2
312	Applies a knowledge of the Coastguard Boat syllabus at the class of certificate appropriate for the crew duty performed	1
313	Applies a knowledge of the Road Traffic Act in relation to the safe operation of Coastguard vehicles during emergency response and routine duties	1

Ref.	Performance Criteria	Level
314	Applies a knowledge of the Road Traffic Act as applied to the towing of trailers	1
315	Applies a knowledge of driving techniques for the appropriate terrain, conditions and vehicle type	1
316	Applies a knowledge of the Code Of Practice For The Carriage Of Personnel And Equipment	1
317	Applies a knowledge of helicopter co-operation	2
317	Applies a knowledge of casualty care during evacuation, including the administration of First Aid	2
319	Applies a knowledge of multi agency working during coastal incidents	1
320	Applies a knowledge of the role of the Incident Officer during coastal incidents	2

Competence 4

Chart and Map Work

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue incidents by applying navigational and plotting skills to Admiralty Charts and associated publications, as well as Ordnance Survey maps.*

Ref.	Performance Criteria	Level
400	Applies a knowledge of Mercator's Projection when interpreting latitude and Longitude scales, measuring distances on charts, and converting OS Grid positions to latitude/longitude and vice versa	3
401	Able to plot a position on a map or chart to a level of accuracy commensurate with the scale and the task at hand	3
402	Able to lay off distances and ranges on a map or chart to a level of accuracy commensurate with the scale and the task at hand	3
403	Able to lay off true bearings and apply scalar information to produce vectors to a level of accuracy commensurate with the scale and the task at hand	3
404	Applies a knowledge of the magnetic compass to translate compass bearings into true bearings and vice versa	3
405	Applies a knowledge of plotting skills to construct a running fix or intercept, accounting for tide if appropriate	3
406	Applies a knowledge of plotting skills to transfer search plans onto a chart of an appropriate scale	3
407	Able to transpose information from VHF D/F onto a map or chart	3
408	Applies a knowledge of the relationship between speed, distance and time	3
409	Applies a knowledge of chart and map symbology to identify dangers to navigation	3
410	Applies a knowledge of tidal theory and tidal information	3
411	Applies a knowledge of plotting to make reasonable allowances for tide and leeway on the predicted track of a vessel	3
412	Applies a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to reconstruct the most likely track of a vessel reported as overdue	3
413	Applies a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to devise a safe passage plan for a Coastguard Boat or Cutter	2

Ref.	Performance Criteria	Level
414	Able to assess the nature of the terrain by examining the contours on an OS Map	3
415	Applies a knowledge of the ephemeris to calculate the predicted times of twilight, sunrise and sunset	3
416	Applies a knowledge of the means by which charts and navigational publications are kept up to date, including making corrections and recording them	3

Competence 5

General Maritime

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, effectively liaise with all sections of the maritime community and contribute to incident prevention by providing timely and meaningful safety information to the public, demonstrating an understanding of the marine environment as experienced by the full range of sea and coastal users.*

Ref.	Performance Criteria	Level
500	Applies a knowledge of the characteristics and construction of principle ship types to Search and Rescue operations	3
501	Applies a knowledge of offshore oil and gas industry practices and procedures to Search and Rescue operations	2
502	Applies a knowledge of the construction and characteristics of workboats, fishing vessels and pleasure craft to Search and Rescue operations	2
503	Able to provide safety information to all sea and coastal users with due regard to their particular needs and limitations	3
504	Applies a knowledge of the IALA buoyage system and other aids to navigation to Search and Rescue operations, and Coastguard Boat operations	3
505	Applies a knowledge of the International Rules For The Prevention Of Collision At Sea when dealing with reports of hazardous incidents, and for Coastguard Boat operations	3
506	Applies a knowledge of the Emergency Towing Protocol and the Secretary of States Powers of Intervention	2
507	Applies a knowledge of the Coast Protection Act in conjunction with local legislation and local practices to monitor, measure and report upon works carried out on the foreshore	1
508	Applies a knowledge of current Merchant Shipping legislation to monitor and report upon the measurement, registration and marking of registered fishing vessels under 24 metres in length	1
509	Applies a knowledge of current Merchant Shipping legislation, in conjunction with the relevant Codes of Practice, to monitor and report upon actual and potential infringements	2
510	Applies a knowledge of current agreements with other agencies when making reports of maritime activity	2
512	Applies a knowledge of current Merchant Shipping legislation to provide assistance to the Receiver of Wreck	3

Ref.	Performance Criteria	Level
513	Applies a knowledge of the provisions of the International Convention on the Safety Of Life At Sea (SOLAS) when dealing with vessels to which the provisions of the Convention apply	3
514	Applies a knowledge of agreed procedures and/or local bylaws to advise mariners and the public of activity within coastal ranges, exercise areas and recreational areas	3
515	Applies a knowledge of current marine legislation relating to the transportation by sea of hazardous materials to raise reports and monitor the progress of such shipments	3
516	Applies a knowledge of the IMO hazardous cargo classifications	3
517	Applies a knowledge of the licensing and carriage regulations for radio equipment carried by small commercial and pleasure craft	2
518	Applies a knowledge of current agreements with BT Marine when dealing with reports of fouled undersea cables	3
519	Applies a knowledge of international conventions and other instruments concerning Search and Rescue	2
520	Applies a knowledge of other regulations, recommendations and codes when dealing with vessels and other craft which are not subject to the provisions of SOLAS	2

Competence 6

Counter Pollution

Outcome: *Coastguard Officers are able to support the activities of the Counter Pollution Organisation, local government bodies and other interested parties during Counter Pollution operations employing established procedures, personnel and equipment.*

Ref.	Performance Criteria	Level
600	Applies a knowledge of c/p procedures to assess, classify and report upon actual or potential pollution incidents	3
601	Applies a knowledge of c/p procedures to support c/p reconnaissance and spraying aircraft operations	3
602	Applies a knowledge of c/p procedures and international agreements to format standard reports and notifications to external agencies	3
603	Applies a knowledge of c/p procedures to act for the Principal Counter Pollution Officer if required	1
604	Applies a knowledge of the contact and callout procedures for other agency's key staff during c/p incidents	3
605	Applies a knowledge of the contact and callout arrangements for Maritime & Coastguard Agency key staff during c/p incidents	3
606	Applies a knowledge of the National Contingency Plan	2
607	Applies a knowledge of other external contingency plans	2
608	Applies a knowledge of Explosive Ordnance Disposal procedures	3

Competence 7

Meteorology

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, provide weather information to the public and the mariner, assess the effects of weather on the operational state of readiness and contribute to incident prevention by demonstrating an understanding of meteorology, using established procedures and information supplied by the Meteorological Office. Coastguard Officers are able to enhance the quality of this information by observing the weather and making reports using established procedures and equipment.*

Ref.	Performance Criteria	Level
700	Able to obtain weather information for mariners and coastal users from the UK weather information service	3
701	Applies a knowledge of meteorological terms to interpret weather information	3
702	Applies a knowledge of meteorology to describe the effects of air masses upon North Atlantic weather patterns	2
703	Applies a knowledge of meteorology to describe the formation of North Atlantic weather systems, and their observable effects	2
704	Able to interpret a synoptic chart	2
705	Able to encode the National Climatological Message	3
706	Able to identify the phenomena associated with the onset of bad weather	3
707	Applies a knowledge of meteorology to identify the causes of reduced visibility, and the causes by which poor visibility may improve	3
708	Applies a knowledge of meteorology to identify the causes of sea and land breezes	3
709	Applies a knowledge of the effects of meteorological phenomena upon Search and Rescue effort	3
710	Applies a knowledge of the effect of wind upon sea state, and the effect of sea state upon Search and Rescue effort	3

Competence 8

Search and Rescue Co-ordination

Outcome: *Coastguard Officers are able to successfully co-ordinate Search and Rescue operations, maintain an effective operational state of readiness and cause all parties involved to work together by demonstrating an understanding of the national and international organisation of Search and Rescue, established procedures and the aims of the Maritime and Coastguard Agency (MCA).*

Ref.	Performance Criteria	Level
800	Applies a knowledge of current Search and Rescue policy and procedures	3
801	Applies a knowledge of emergency phase classification	3
802	Applies a knowledge of the status of search and rescue facilities used to conduct SAR operations	3
803	Applies a knowledge of the duties and responsibilities of the SMC, OSC and ACO	3
804	Able to enter, extract and analyse incident information using CMIS, CDATA, ADAS and other relevant publications as appropriate	3
805	Applies a knowledge of the UK Search and Rescue Organisation	3
806	Applies a knowledge of the intent and procedures of the various memoranda of understanding that exist between the MCA and other agencies	3
807	Applies a knowledge of the emergency contact and callout arrangements that exist between HMCG and declared rescue facilities	3
808	Applies a knowledge of the RNLI Regulations (The Green Book) in relation to Search and Rescue operations	3
809	Applies a knowledge of the command and control structure likely to be put in place when dealing with major incidents	3
810	Applies a knowledge of the function and composition of the UK SAR Committee.	2
811	Applies a knowledge of emergency and contingency plans employed by external agencies for their areas of responsibility	2
812	Applies a knowledge of the procedures for co-operating with foreign Search and Rescue agencies	2
813	Applies a knowledge of the procedures restricting the use of airspace during emergency operations	2
814	Applies a knowledge of the procedures restricting the movement of vessels during emergency operations	2

Ref.	Performance Criteria	Level
815	Applies the required standard of local knowledge to incident information when prosecuting SAR operations	3
816	Applies a knowledge of exercise planning.	2

1.3 GUIDE TO COMPLETION OF THIS WORKBOOK

1.3.1 INFORMATION FOR THE TRAINEE

The objectives of this workbook are twofold. Firstly to provide information, structure and direction to your learning during your training period and secondly to provide a comprehensive record of your training progress.

Planned training will ensure the best use of your time, so that you can gain the knowledge, practical training and experience necessary to become a competent Watch Officer.

Tasks, Exercises and Projects

There are a number of specific tasks, exercises and projects to be undertaken during the Part 2 and Part 4 phases of the programme. These are contained in section 3 of this Workbook.

All work must be checked and "signed off" by a competent Officer when satisfactorily completed.

Competence Level Achievement Record

Section 4 of this Workbook is the "Competence Level Achievement Record". As well as the individual tasks, exercises and projects, you must also get the job-specific competencies "signed off". These should be signed off when, and only when, you have demonstrated that you have reached the required level in the particular competence. You will notice that the maximum competence level required for this Workbook is "3-". This indicates that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience necessary to deal with situations encountered on their own initiative.

Review and Inspection Record

You must present the Workbook to your line manager or nominated training officer for review and comment at least monthly and to your District Controller (DC) every three months.

Satisfactory completion of the Workbook is regarded as confirmation that you have undertaken all the required areas of study, demonstrated competence in line with the Watch Officer Job Description and are able to perform all the required skills to a recognised national standard.

If at the end of your training period the Workbook is incomplete or is considered unsatisfactory you may be required to undergo an extended period of training.

It is a condition of qualification that this Workbook is completed with all the tasks, exercises, projects and competencies signed off. A copy of the Workbook Completion Certificate must be sent to the Training Centre prior to you sitting the final qualifying examinations.

1.3.1 INFORMATION FOR THE LINE MANAGER / SUPERVISING OFFICER

The Line Manager

Every line manager has a responsibility for staff training and development. It is important that the Watch Officer's training is closely monitored throughout.

This Workbook should be sighted *monthly* and a record of progress maintained in Section 6.1.

The Supervising Officer

Tasks, exercises and projects must be signed off by a suitable "Supervising Officer" who can be the line manager, Watch Manager, Sector Manager or any qualified officer within whose area of responsibility or expertise the task or exercise falls.

The Supervising Officers **must** satisfy themselves that the trainee has demonstrated complete competence in a particular element before it is endorsed as "satisfactory".

Definition Of Satisfactory

- (a) A trainee's practical performance of a task should be deemed "Considered Satisfactory" once he/she has attained a standard of proficiency that has completely satisfied the appropriate supervising officer.
- (b) When endorsing a task as "Considered Satisfactory" officers should take into account the ordinary practice of Coastguard operations rooms and safe working practices and procedures, and bear in mind that they are NOT signifying "Competence" as determined by final examinations.

Watch Officers

Watch officers have a responsibility, under the direction of the Watch Manager, for providing supportive training in assisting trainees and directing their study efforts during watch periods. This may be particularly appropriate when a Watch Officer displays expertise in a particular subject.

1.3.3 INFORMATION FOR THE DISTRICT CONTROLLER

The District Controller has the overall responsibility for ensuring that all tasks are carried out in the Workbook and that Supervisory Officers are aware of their responsibilities towards the trainee.

The immediate responsibility for the control and monitoring of the trainee's progress will normally be delegated to the trainee's line manager. However, DCs should inspect the Workbook quarterly to satisfy themselves that the training is on line and the overall standard on final assessment will meet the requirements of both the District and of the Agency.

Part 6.2 of the Workbook provides space for DC's comments to be recorded.

1.3.4 STUDY SKILLS GUIDELINES

There are many things you can do to help yourself learn. Here are some of them:

Firstly be aware of when you study most effectively – some people are at their best first thing in the morning; others cannot get down to study until everyone else has gone to bed. If you can identify the best time for you, then see if you can get into a study routine at your best study time. Not all habits are bad!

The place you choose to study can be just as important as the time of day. If it is somewhere that you only use for study – like a spare room or a corner of the library at work – you are more likely to be able to get down to work without being distracted. Many of the tasks provided will require supportive study and the operations room is not always the best study environment!

Do not try to do too much in one sitting. Remember what they say about the maximum span of attention – about 20 to 30 minutes. Try to be aware of when your attention is wandering and take a breather, go for a stroll or perhaps make a drink and think about what you have just read.

Another bit of applied psychology is to reward yourself when you have completed a section to your satisfaction.

If you cannot instantly think of an answer to a question or the solution to a problem, go look for the answer. Do not think of asking others as cheating. Every other member of staff started at the beginning sometime, and they will have a great deal to offer you.

In summary, find time and space to study, and if you do not understand a section or need help or advice, do not hesitate to ask your colleagues. Take regular breaks and perhaps reward yourself every so often. Most of all try to enjoy the learning process and try to make it fun!



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SECTION 2

MSAR(I) PARTS 1, 3 & 5

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SECTION 2 MSAR(I) PARTS 1, 3 and 5

2.1 PART 1 COURSE

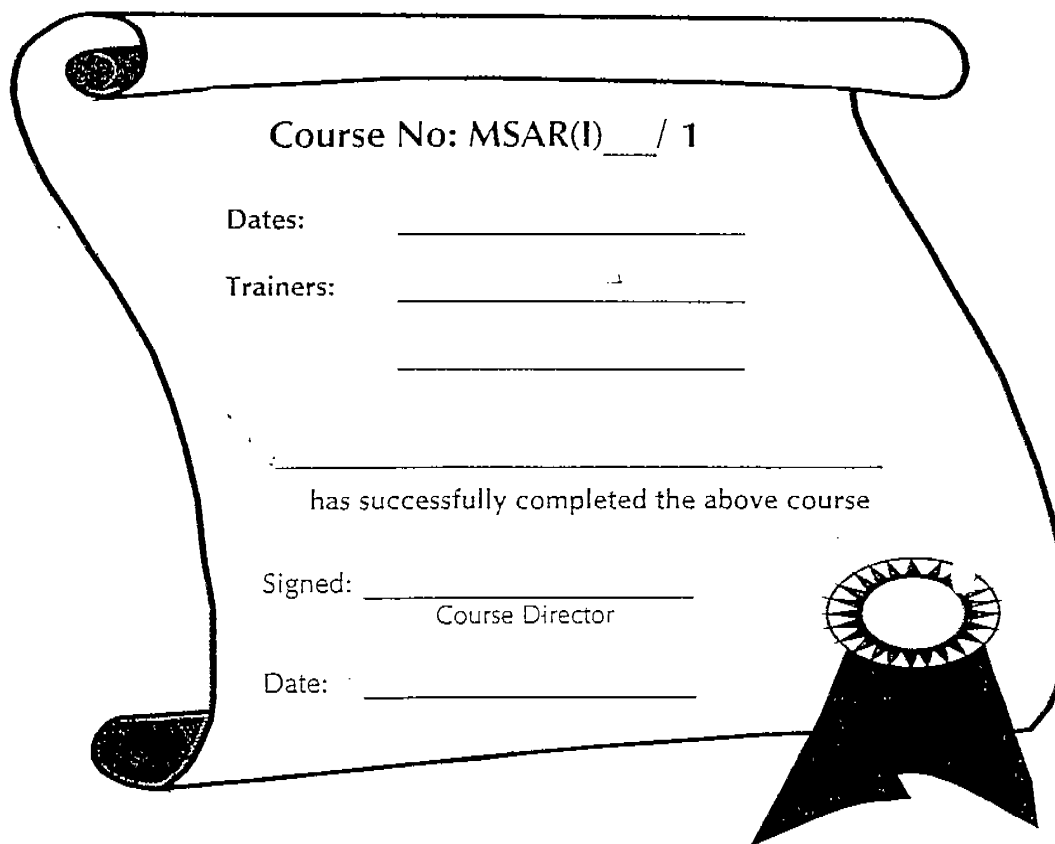
The MSAR(I) Part 1 course is an intensive two-week training course at Highcliffe. During this period you will undergo formal training in a variety of operational subjects.

The course is designed to consolidate and build on what you have already learned and practised as a CWA and comprises the following subject modules:

- SAR Co-ordination
- Chartwork
- Mapwork
- Search Planning

More detailed information is contained in the joining instructions sent to you 6–8 weeks before the course. Insert these as the next page of this Workbook.

2.1.1 COURSE COMPLETION CERTIFICATE



Course No: MSAR(I)___ / 1

Dates: _____

Trainers: _____

has successfully completed the above course

Signed: _____
Course Director

Date: _____

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MSAR(I) PART 1 JOINING INSTRUCTIONS

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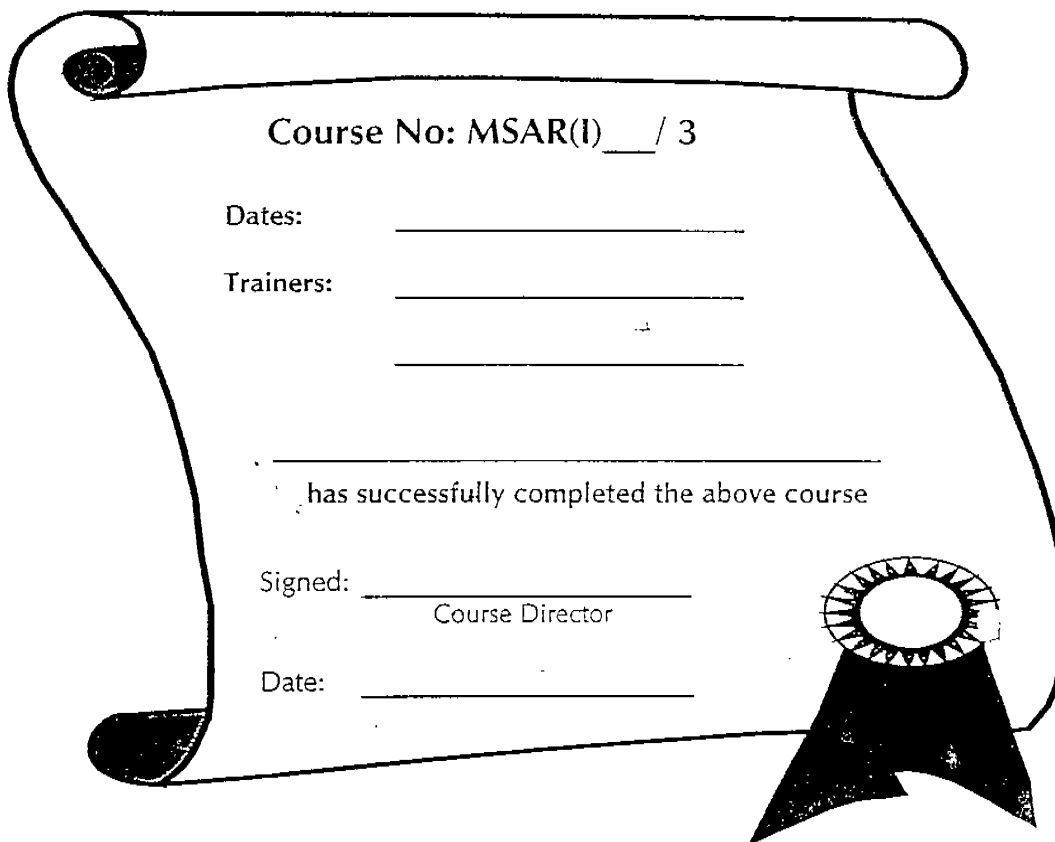
2.2 PART 3 COURSE

This is the second two-week course at the Training centre. The subjects covered on this course are:

- Meteorology
- SAR Co-ordination
- General Maritime
- Counter Pollution
- Coastal Rescue
- Tides
- Ephemeris
- Search Planning

Again, more detailed information is contained in the joining instructions and the course programme can be inserted as the next page.

2.2.1 COURSE COMPLETION CERTIFICATE



Course No: MSAR(I)___ / 3

Dates: _____

Trainers: _____

_____ has successfully completed the above course

Signed: _____
Course Director

Date: _____

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MSAR(I) PART 3 JOINING INSTRUCTIONS

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2.3 PART 5 COURSE & EXAMINATIONS

2.3.1 PART 5 COURSE

Part 5 course is the final examination module and consists of:

- a) 4 days revision
- b) 5-6 days Examination block.

You must bring this Workbook with you. You will be required to hand it to the Course Director at the beginning of the five-day examination block.

The Revision Period

Subject areas will be covered as per the timetable which will be sent with your joining instructions. However, the guiding principle is flexibility, commensurate with student needs and you will be invited as a group to 'tweek' the programme if you so wish. Staff will also be available for individual study if this is required.

As with Parts 1 and 3, more detailed information is contained in the joining instructions and the course programme can be inserted as the next page.

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MSAR(I) PART 5 JOINING INSTRUCTIONS

Remove this page and insert your joining instructions here when you receive them.

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2.3.2 THE EXAMINATIONS

The course timetable shows the examination schedule and, although at first glance this appears a heavy workload, there are in fact a number of 'free revision' periods throughout the practical examinations.

Written papers

There are seven written papers to complete. The table below shows the subjects, the time allowed for each and the minimum percentage required per question (where applicable) and the overall percentage required.

Subject	Time	Minimum % per question	Minimum % overall
Search Planning	3 hours	50%	70%
Chartwork	3 hours	50%	70%
Mapwork	1 hour	50%	70%
SAR Co-ordination	3 hours	N/A	60%
Coast Rescue	1 hour	N/A	60%
Meteorology	1 hour	N/A	60%
General Maritime & Counter Pollution	1 hour	N/A	60%

Oral Examination - Interview Board

The final examination is an individual oral interview or Proficiency Board lasting approximately 30 minutes.

You will be allocated an interview time for assessment by the Proficiency Board.

Prior to the interviews the Board will have reviewed your written examination results and this Workbook. The Board questions will cover the entire proficiency syllabus.

On completion of the interviews, you will be advised of the overall result and (if appropriate) specific examination performance.

You will be formally advised by Personnel of your examination result and any follow-up action which the Board may have considered necessary.

Uniform is to be worn for the Board interview.

Board Composition

The Proficiency Board will normally comprise:

- a) Deputy Training Manager (DTM) - Board Chairman;
- b) Assistant District Officer 1 (either a DDC or OM);
- c) Watch Manager.

Local Knowledge Examinations

All Watch Managers, Sector Managers and established Watch Officers and CWAs are required to hold a local knowledge certificate. The local knowledge examination is set on station and must be and re-taken at least every 2 years.

Direct entry Watch Officers must pass a local knowledge examination prior to establishment. Officers transferring to a new station (including on promotion) must take and pass an examination for their new district within 3 months of arrival. Officers promoted on station must hold a current local knowledge certificate at the time of attending MSAR(I) Part 5.

2.3.3 EXAMINATION TECHNIQUE

Whilst students at the Training Centre often have a good knowledge and understanding of their subjects, they sometimes fail all or part of an examination due to lack of technique.

The prime reasons for failure are as follows:

- a. Insufficient preparation.
- b. Failure to read questions properly.
- c. Lack of depth to answers.
- d. Poor expression and explanation.
- e. Failure to comply with instructions.
- f. Poor apportionment of time.

Preparation

Success in examinations is not normally achieved by a flurry of last minute activity and 'burning the midnight oil'. Efforts of this sort are more likely to be detrimental to overall performance, especially where several different subjects are to be encountered.

Hard work makes for success and to this end you should aim to start your study early and plan a flexible timetable with certain long and short-term goals in mind. A proper balance of work and rest is important, and finishing a particular task on a point of interest or success tends to whet the appetite and makes resumption of study easier.

An 'active revision' regime of reading and note taking should be developed, as little learning is achieved by idle reading.

The practice of copying illustrations rather than just looking at them will help in remembering such items as cliff rescue equipment layout.

Learning is much easier if the appreciation and understanding of the principles involved in a subject are linked to personal knowledge and experience. Your involvement in routine and casualty working in the Operations Room will provide such experience, together with the assistance that will be available to you on request from your line manager and/or colleagues.

Sitting The Examination

Try to relax prior to entering the examination room. Make sure you have the necessary books and equipment you need to tackle the examination paper. Arrive early and allow yourself sufficient time to settle down and arrange your work space, materials and equipment.

Assess the paper carefully. Take note of any special instructions given, particularly regarding the allocation of marks. Read all the questions through and be certain you understand what is being asked. If in doubt, consult the invigilator.

Apportionment of time is essential. If you attempt less than the number of questions required, you put yourself at considerable disadvantage. Plan your time carefully and allow for a final read through of your answers. Should you get bogged down in a question it is probably best to leave it until you have completed the others. Over-running on a question by, say, 10 minutes, will gain very few marks compared with using that time on another question.

Correct interpretation of the question is essential. Make sure you answer the question asked, and not the one you would have liked to have been asked. If you have to make assumptions in order to solve a problem, state clearly what assumptions are being made and why.

Answers should be presented clearly and neatly. They should be well spaced, legible and clearly identifiable with the appropriate question. Any errors should be neatly indicated with a single line cancellation.

Descriptive answers comprising an introduction, main body and conclusion, indicate logical development and are most easily read. The standard of English and general presentation is taken into account in addition to technical content, so think before you write and, if necessary, list the points to be covered on rough paper and then arrange in logical sequence.

Any calculations made should show all the working of your problem and the logic and formulae that you have used. Your presentation should flow in a logical and orderly manner. Check that the magnitude of your answer is consistent with the data used in the calculation. Ensure that all appropriate symbols have been incorporated throughout the answer and display the solution clearly.

Sketches and diagrams are a useful way of presenting information more clearly. A question may specify a diagram only, or ask for one to enhance a written answer. A diagram should never be offered as a substitute for a written answer. The diagram or sketch should be drawn neatly, of reasonable size and clearly marked using standard symbology where appropriate.

When nearing the end of the time allotted, any uncompleted questions should be given an outline answer covering the main points or method of solution, as this may well gain some useful marks.

Endeavour to have a final read through of your answers. Under pressure of an exam, the mind often works faster than the pen, with the result that words may be omitted or become confused and what seems sensible to the writer is unintelligible to the examiner. Amendments should be made as necessary before handing in the paper.

Points to Ponder

If things didn't go according to plan it is probable there never was a plan.

Do not be influenced by other persons leaving the examination early. They may be a genius, but it is more likely that they were unable to answer the questions or have not answered to the required depth.

Always measure yourself against yourself, not others!

Do not let your performance in any one paper affect any other. You may have done better than you thought!

SECTION 3

TASKS, EXERCISES & PROJECTS

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SECTION 3 TASKS, EXERCISES & PROJECTS

INTRODUCTION

This section contains a number of tasks, exercises and projects for you to complete during Part 2 and Part 4 of the MSAR(I) programme.

The section comprises nine sub-sections. Sections 3.1 to 3.8 contains the job-specific competence work and 3.9 gives some information on report, letter and minute writing.

At the end of each competency sub-section (3.1 to 3.8) is an "Exercise Completion Record" which must be maintained as and when work is completed. Work should be signed of as "Considered Satisfactory" when, *and only when*, you have completed it and the Supervising Officer is entirely satisfied that you have fully grasped the principles &/or procedures involved.

There is no set order in which to complete the work but you should endeavour to spread the load evenly over the months. Don't leave it all to the last minute!

Exercises involving chart or map work once completed satisfactorily can be deleted, although you might like to take a tracing of your work for future reference.

It is essential that you complete all the work in this section prior to attending Part 5, the examinations. An incomplete workbook could adversely affect your appointment to Watch Officer.

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SECTION 3.1 SEARCH PLANNING EXERCISES

INTRODUCTION

This section contains several rapid response exercises, a basic datum point exercise, several effort allocation exercises and some tidal and ephemeris questions.

These questions are not exhaustive. You are *strongly* recommended to practice other rapid response calculations, with the associated effort allocation, frequently in order to ensure you achieve a good level of knowledge and skills in readiness for your final examinations.

A marking schedule, with answers to the questions where appropriate, will be sent to your DTO.

3.1.1 RAPID RESPONSE EXERCISES

Exercise 1

Use the tidal information supplied with these questions

CHART 5054

The F/V Sally Anne called up the Coastguard at 101200 UTC MAR stating her position was Latitude 53 45 N Longitude 000 40 E. She had suffered engine failure and required assistance.

All communications were then lost at this stage.

Use the following data :

Wind 180 degrees by 25 knots throughout

Tide 045 degrees by 2.8 knots throughout

Target drift data $0.04*U$, no divergence

Initial position error $X = 4.0$ miles

Drift error factor = 0.3

- a) Calculate a search area for a datum time of 101315 UTC MAR
- b) Plot all the vectors, symbols etc. directly on the chart. Include co-ordinates, probable error radius, resultant drift vector, TWC, datum etc.
- c) State the total search area calculated.
- d) Show all workings using the appropriate SAR forms (CG 301)

Exercise 2

CHART 5054

The time now is 271600 UTC OCT. The local MRSC has received a 999 call from a member of the public stating that they had been watching a person in a small dinghy for some 30 minutes or so. The dinghy occupant was waving for assistance. The craft was dismantled. The first informant estimates he last saw the dinghy some 10 minutes ago.

Position of casualty estimated to be 5 miles SE of Flamborough Head at the last sighting.

There is a strong NW'ly wind blowing at 26 knots.

Use tidal diamond D displayed on the chart

Use the following specific data :

Target drift data $(0.07 \times U) + 0.04$, no divergence

Initial position error $X = 3.0$ miles

Drift error factor = 0.3

- a) Calculate a search area for a datum time of 271750 UTC OCT
- b) Plot all the vectors, symbols etc. directly on the chart. Include co-ordinates, probable error radius, resultant drift vector, TWC, datum etc.
- c) State the total search area calculated.
- d) Show all workings using the appropriate SAR forms (CG 301, TVW)

Exercise 3

CHART 5054

A member of the public has called up the MRSC on his mobile phone reporting two children being swept out to sea in a small children's plastic dinghy in a strong offshore wind. He is with the parents who are obviously very concerned.

The call was received at 311500 UTC AUG. On further questioning the first informant states that he last saw the children in the dinghy at 311415 UTC AUG. They then drifted outside of the visual range. He ran back to the car to make the emergency call. the position is estimated as being two miles to the north of Blakeney Harbour Entrance Buoy (can buoy).

The present wind speed is estimated as SW'yly 30 knots. There is a thick haze, visibility estimated at no more than 1.5 miles.

- a) Calculate a search area for a datum time of 311600 UTC AUG
- b) Clearly state your reasoning why you have selected any data to complete the calculation, for example a specific value for Fix Error.
- c) Plot all the vectors, symbols etc. directly on the chart. Include co-ordinates, probable error radius, resultant drift vector, TWC, datum etc.
- d) State the total search area calculated.
- e) Show all workings using the appropriate SAR forms (CG 301, TVW)
- f) Discuss the urgency of this incident.



3.1.2 EFFORT ALLOCATION EXERCISES

Exercise 4

Calculate the corrected sweep width for the following:

- Target: 8-man liferaft, Vis: 15 NM, Wind: 21 kts, SRU: Helo 500 ft at 100 kts.
- Target: 10m yacht, Vis: 3 NM, Wind: 25 kts, SRU: Nimrod 1500 ft at 200 kts.
- Target: PIW, Vis: 1 NM, Wind: 10 kts, SRU: Lifeboat.
- Target: 14 ft cabin cruiser, Vis: 3 NM, Wind: 30 kts, SRU: Cross Channel Ferry.
- Target, 2-person inflatable dinghy, Vis: 5 miles, Wind: 12 kts, SRU: Helo at 500 ft, speed 85 kts, crew very fatigued.

Exercise 5

Fill in the blanks:

A	Wc	2.15	S	3.0	POD	_____	C	_____
B	Wc	1.35	S	1.0	POD	_____	C	_____
C	Wc	1.0	S	_____	POD	_____	C	0.4
D	Wc	8.5	S	_____	POD	_____	C	1.2
E	Wc	12.0	S	10.0	POD	_____	C	_____
F	Wc	5.5	S	_____	POD	_____	C	0.9

Exercise 6

- A Nimrod is directed to conduct a search for a 14ft boat to achieve a coverage factor of 1. Forecast weather is ceiling 2000ft, overcast, visibility 15 miles, wind Westerly 28 kts.

You expect the Nimrod to search at 1500 ft at a speed of 210 kts. What track spacing do you require?

- The Nimrod arrives on scene and reports actual weather is ceiling 1500 ft, broken cloud, visibility 10 miles, wind NW, 20 kts. With fuel available the search is conducted at 1000 ft, 190 kts and 1 mile track spacing.

What is the resultant Coverage factor (C) and POD?

3.1.3 TIDAL and EPHEMERIS CALCULATIONS

Using the tidal and astro information extracts provided, answer the following:

Exercise 8

It is early afternoon on Sunday 7th July and you receive a call from the yacht "Bottomed Out" reporting that they have taken the ground off the entrance to the River Witham, Boston. The yacht is a bilge-keeler with a draft of 1.5 metres and a plot of the position given indicates they are sitting in a position with a charted drying height of 3.3 metres.

What is the earliest time (local) that the yacht will re-float?

Exercise 9

You are on watch in the early hours of 4th September and the motor cruiser "SILLY BILLY" reports on passage to Tabs Head (Welland River), with an ETA of 0745. They intend to anchor off for a week until midday on the 11th, in a position with a charted depth of 4.5 metres.

How much anchor warp will they need to deploy if they require to lay the equivalent of *exactly* four-times the maximum depth of water?

Exercise 10

What will be the height of tide at sunrise on 1st April at Immingham?

Exercise 11

A second search is being planned for a missing diver and the SMC has chosen a search datum time of first light, 5th August. The search area will be around 30 nm north of the Wells fairway buoy.

What is the search datum time?

Exercise 12

Using the Astro tables of the current Macmillan's Nautical Almanac and the latitude and longitude of your station, *calculate* the *exact* times of:

- i) Nautical twilight
 - ii) Sunrise
 - iii) Sunset
 - iv) Civil twilight
- on
- a) Your birthday
 - b) The Queen's official birthday



ENGLAND - IMMINGHAM

LAT 53°38'N LONG 0°11'W

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

TIME ZONE (UT)
For Summer Time add ONE
hour in non-shaded areas

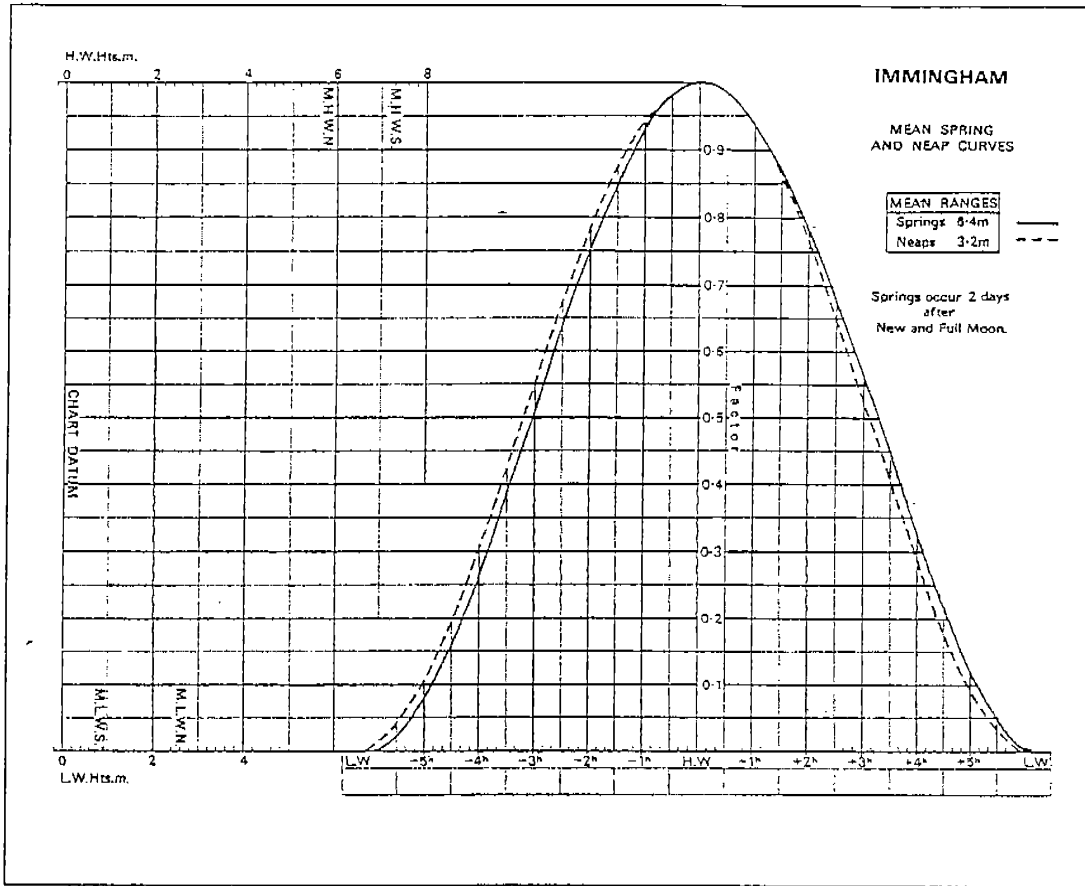
JANUARY		FEBRUARY		MARCH		APRIL	
Time	m	Time	m	Time	m	Time	m
1 0208	6.1	16 0043	6.1	1 0318	5.8	16 0315	6.3
0836	2.3	0731	2.2	0823	2.5	0921	2.0
M 1447	6.0	TU 1349	6.0	F 1530	6.1	SA 1524	6.5
2106	2.5	2000	2.4	2204	2.2	2158	1.4
2 0310	6.2	17 0213	6.2	2 0410	6.1	17 0417	6.7
0933	2.2	0847	2.0	1015	2.2	1020	1.5
TU 1541	6.3	W 1500	6.4	SA 1818	6.4	SU 1620	7.0
2203	2.2	2117	2.0	2248	1.8	2254	0.9
3 0406	6.3	18 0327	6.8	3 0451	6.4	18 0507	7.1
1022	2.0	0952	1.7	1058	1.9	1111	1.1
W 1628	6.5	TH 1558	6.8	SU 1656	6.7	M 1708	7.3
2251	1.6	2223	1.5	2329	1.4	2343	0.5
4 0432	6.5	19 0429	6.9	4 0526	6.7	19 0551	7.3
1105	1.9	1059	1.3	1137	1.7	1168	0.8
TH 1709	6.7	F 1650	7.2	M 1732	7.0	TU 1752	7.5
2334	1.6	2221	1.0	1810	0.7		
5 0533	6.7	20 0524	7.2	5 0606	1.2	20 0628	0.4
1145	1.7	1142	1.1	0659	0.6	0630	7.4
F 1745	6.9	SA 1738	7.5	M 1236	1.5	W 1243	0.7
				1832	7.1	1834	7.6
6 0614	1.4	21 0014	0.8	6 0645	1.1	21 0110	0.4
0610	6.7	0614	7.5	0633	6.9	0709	7.4
SA 1221	1.7	SU 1232	0.9	W 1246	1.4	TH 1324	0.7
1818	7.0	1824	7.7	1840	7.2	1915	7.6
7 0651	1.4	22 0104	0.4	7 0719	1.1	22 0148	0.5
0645	6.8	0703	7.5	0708	7.0	0743	7.2
SU 1254	1.6	M 1318	0.8	TH 1316	1.3	F 1401	0.8
1852	7.1	1909	7.8	1912	7.2	1963	7.4
8 0728	1.4	23 0151	0.3	8 0738	7.0	23 0816	7.0
0720	6.8	0803	6.9	F 1348	1.2	SA 1435	1.1
M 1324	1.9	TU 1403	0.9	1945	7.3	2030	7.1
1925	7.1	1954	7.9				
9 0754	1.4	24 0236	0.4	9 0759	7.0	24 0847	6.7
0754	6.7	0835	7.3	SA 1422	1.2	SU 1507	1.4
TU 1353	1.7	W 1445	1.1	2020	7.2	2105	6.7
1858	7.0	2038	7.8				
10 0820	1.5	25 0318	0.7	10 0845	6.9	25 0918	6.4
0827	6.7	0920	7.0	SU 1469	1.4	M 1541	1.7
W 1423	1.7	TH 1523	1.4	2059	7.0	2142	6.2
2026	6.9	2122	7.2				
11 0859	1.6	26 0358	1.1	11 0925	6.7	26 0955	6.0
0900	6.5	1005	6.6	M 1540	1.8	TU 1623	2.2
TH 1457	1.8	F 1804	1.7	2144	6.7	2230	5.8
2100	6.8	2208	6.8				
12 0932	1.7	27 0438	1.6	12 0941	1.8	27 0445	2.5
0937	6.4	1053	6.2	1012	6.3	1048	5.7
F 1535	1.9	SA 1846	2.1	TU 1631	1.9	W 1720	2.5
2140	6.7	2300	6.3	2241	6.3	2351	5.4
13 0413	1.8	28 0522	2.1	13 0510	2.2	28 0548	2.9
1020	6.2	1150	5.9	1113	6.0	1224	5.4
SA 1621	2.2	SU 1736	2.5	W 1743	2.2	TH 1832	2.7
2228	6.4			2358	5.9		
14 0505	2.0	29 0608	5.9	14 0634	2.5	29 0703	3.0
1113	6.0	0615	2.5	F 1754	2.9	F 1349	5.6
SU 1717	2.4	M 1259	5.7	TH 1431	5.7	TH 1918	2.3
2227	6.2	1840	2.8	2107	2.6	1958	2.6
15 0611	2.2	30 0128	5.7	15 0154	5.9	30 0244	5.6
1222	5.9	0729	2.7	0607	2.4	0830	2.8
M 1833	2.5	TU 1406	5.7	F 1416	6.1	SA 1452	5.9
		2020	2.8	2049	2.0	2121	2.2
		31 0241	5.8			31 0338	6.0
		0856	2.6			0936	2.4
		W 1507	6.0			SU 1541	6.3
		2139	2.5			2211	1.8

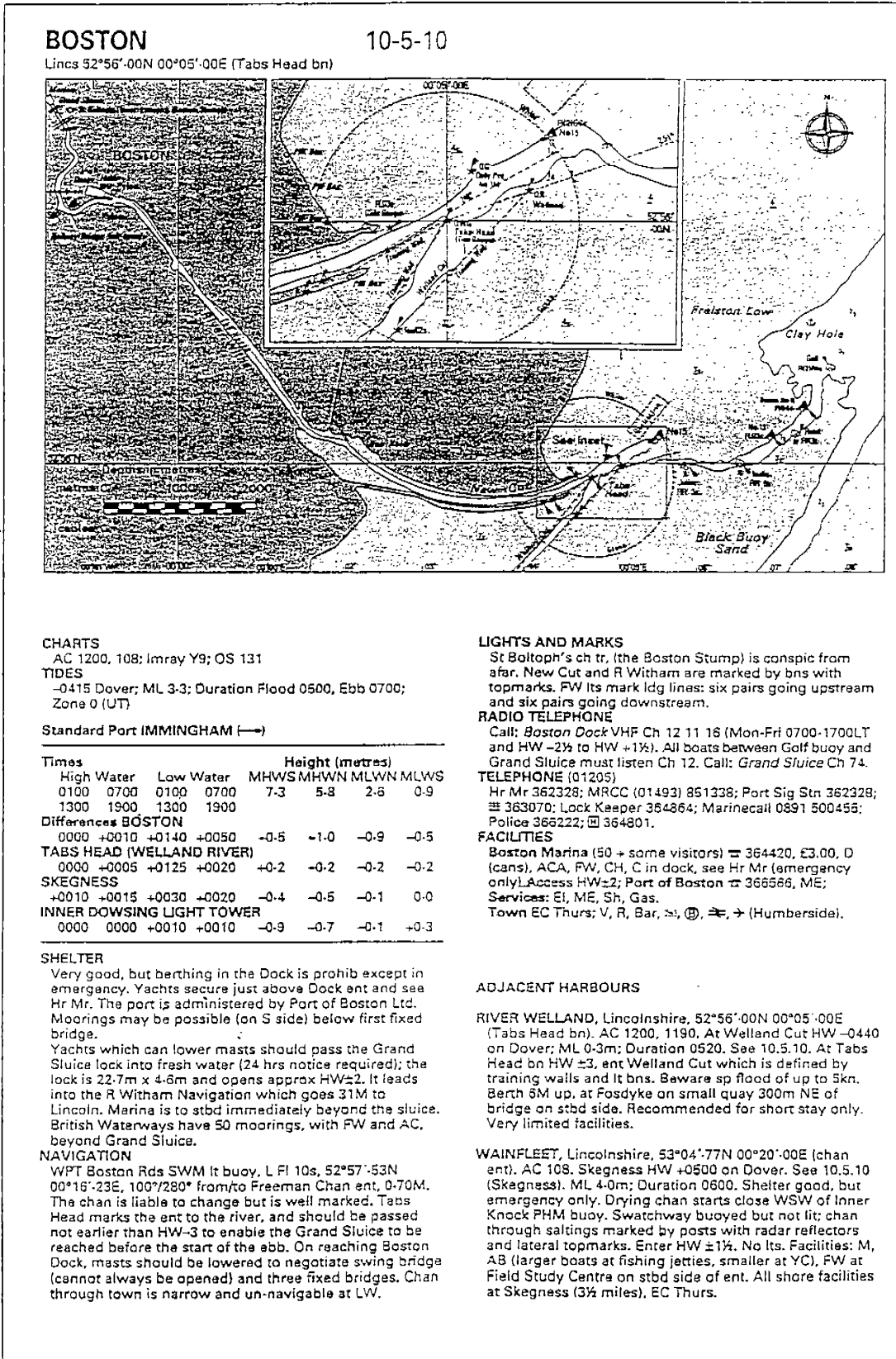
Chart Datum: 3.80 metres below Ordnance Datum (Newlyn)



ENGLAND - IMMINGHAM											
LAT 53°38'N LONG 0°11'W											
TIMES AND HEIGHTS OF HIGH AND LOW WATERS											
SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		SEPTEMBER		OCTOBER	
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
1	0209 0.7	16	0138 1.4	1	0223 1.0	16	0150 1.3	1	0308 1.7	16	0308 1.4
SU	1437 0.6	M	1407 1.3	TU	1443 1.2	W	1413 1.4	F	1513 2.1	SA	1523 1.8
2033	7.2	1955	7.0	2036	6.9	2004	7.1	2112	6.4	2119	6.8
2	0249 1.0	17	0208 1.4	2	0258 1.4	17	0228 1.4	2	0345 2.0	17	0359 1.6
0844	7.4	0907	7.1	0859	6.9	0827	7.0	0959	6.0	1007	6.5
M	1515 1.0	TU	1424 1.4	W	1514 1.7	TH	1449 1.6	SA	1551 2.5	SU	1617 2.1
2112	6.9	2027	6.9	2110	6.6	2044	6.9	2157	6.0	2216	6.6
3	0326 1.4	18	0242 1.5	3	0332 1.8	18	0310 1.6	3	0435 2.4	18	0501 1.8
0923	7.0	0843	7.0	0941	6.4	0914	6.7	1100	5.7	1119	6.2
TU	1551 1.5	W	1505 1.6	TH	1547 2.1	F	1531 1.9	SU	1643 2.9	M	1723 2.4
2152	6.5	2104	6.7	2148	6.2	2130	6.6	2308	5.7	2329	6.3
4	0354 1.8	19	0321 1.7	4	0413 2.2	19	0401 1.9	4	0540 2.6	19	0614 2.0
1015	6.5	0925	6.7	1034	5.9	1010	6.3	1221	5.5	1245	6.1
W	1628 2.0	TH	1545 1.9	F	1628 2.3	SA	1625 2.3	M	1755 3.1	TU	1844 2.5
2239	6.1	2149	6.4	2244	5.8	2228	6.3	2348	5.7	2348	6.3
5	0447 2.3	20	0409 2.0	5	0506 2.6	20	0508 2.2	5	0634 2.7	20	0653 2.3
1114	6.0	1018	6.3	1151	5.5	1125	6.0	1308	5.6	1357	6.3
TH	1713 2.5	F	1624 2.3	SA	1728 3.0	SU	1741 2.6	TU	1918 3.0	W	2000 2.3
2346	5.9	2245	6.1	2348	5.1	2348	6.1	2348	5.1	2348	6.1
6	0543 2.7	21	0514 2.3	6	0614 2.9	21	0631 2.2	6	0748 3.3	21	0805 2.5
1234	5.6	1130	6.0	0617	2.8	1309	6.0	0808	2.4	0842	1.7
F	1916 2.9	SA	1757 2.6	SU	1916 2.9	M	1913 2.6	W	1436 5.9	TH	1458 6.5
7	0105 5.7	22	0004 5.9	7	0135 5.7	22	0123 5.2	7	0244 6.2	22	0306 6.7
0700	2.8	0643	2.4	0737	2.7	0758	2.9	0909	2.1	0939	1.4
SA	1352 5.6	SU	1319 5.9	M	1425 5.7	TU	1426 6.3	TH	1525 6.3	F	1552 6.8
1957	3.0	1935	2.6	2026	2.9	2030	2.3	2127	2.4	2129	2.2
8	0214 5.8	23	0143 6.1	8	0238 6.0	23	0231 6.5	8	0331 6.5	23	0400 7.0
0359	2.6	0315	2.2	0914	3.3	0909	1.6	0959	1.8	1030	1.3
SU	1458 5.8	M	1445 6.3	TU	1521 6.1	W	1523 6.7	F	1607 6.6	SA	1639 7.0
2116	2.7	2052	2.2	2109	2.5	2132	1.6	2214	2.0	2252	1.3
9	0313 5.2	24	0258 5.6	9	0328 5.4	24	0332 5.9	9	0412 6.0	24	0449 7.2
0923	2.2	0929	1.6	1000	1.9	1008	1.2	1043	1.5	1117	1.2
M	1554 6.2	TU	1549 6.7	W	1606 6.4	TH	1620 7.0	SA	1644 6.9	SU	1720 7.1
2205	2.3	2154	1.7	2214	2.1	2225	1.4	2258	1.7	2309	1.1
10	0402 6.5	25	0355 7.0	10	0410 6.8	25	0422 7.3	10	0452 7.1	25	0525 7.2
1027	1.8	1028	1.1	1042	1.6	1056	0.9	1125	1.3	1200	1.1
TU	1636 6.5	W	1641 7.1	TH	1643 6.7	F	1704 7.3	SU	1720 7.1	M	1759 7.2
2249	1.9	2247	1.2	2254	1.8	2314	1.1	2326	1.4	2330	1.0
11	0442 6.6	26	0444 7.4	11	0448 7.0	26	0509 7.5	11	0531 7.2	26	0622 1.0
1117	1.5	1119	0.7	1122	1.3	1142	0.7	1203	1.2	1240	1.2
W	1714 6.7	TH	1727 7.4	F	1717 6.9	SA	1745 7.4	M	1756 7.2	TU	1840 7.2
2328	1.7	2335	0.9	2332	1.5	2350	0.9	2358	1.1	2358	1.1
12	0513 7.1	27	0530 7.7	12	0524 7.2	27	0533 7.6	12	0615 1.3	27	0102 1.1
1156	1.3	1206	0.5	1200	0.7	1225	0.7	0610	7.3	0658	7.1
TH	1748 6.9	F	1809 7.5	SA	1751 7.1	SU	1823 7.4	TU	1241 1.1	W	1315 1.4
13	0604 1.5	28	0621 0.7	13	0607 1.4	28	0642 0.8	13	0655 1.1	28	0129 1.2
0554	7.2	0613	7.8	0559	7.3	0635	7.5	0650	7.4	0737	7.0
F	1234 1.2	SA	1250 0.4	SU	1237 1.2	M	1305 0.9	W	1318 1.2	TH	1347 1.5
1670	7.0	1848	7.6	1824	7.2	1859	7.3	1900	7.3	1941	7.0
14	0638 1.4	29	0105 0.6	14	0641 1.3	29	0122 0.9	14	0136 1.1	29	0212 1.4
0529	7.2	0556	7.3	0635	7.3	0716	7.4	0732	7.3	0813	6.7
SA	1309 1.2	SU	1331 0.5	M	1309 1.2	TU	1341 1.1	TH	1350 1.3	F	1416 1.7
1853	7.0	1725	7.4	1856	7.2	1933	7.2	1947	7.3	2013	6.8
15	0109 1.4	30	0145 0.8	15	0115 1.3	30	0159 1.1	15	0219 1.2	30	0248 1.6
0702	7.2	0720	7.5	0710	7.3	0758	7.1	0818	7.1	0850	6.5
SU	1340 1.2	M	1409 0.8	TU	1340 1.2	W	1413 1.4	F	1437 1.5	SA	1447 2.0
1924	7.0	2002	7.2	1929	7.2	2005	7.0	2030	7.1	2047	6.8
31	0222 1.4	31	0338 1.8	31	0222 1.4	31	0338 1.8	31	0222 1.4	31	0338 1.8
0834	6.3	0910	6.2	0834	6.3	0910	6.2	0834	6.3	0910	6.2
TH	1442 1.7	TU	1529 2.2	TH	1442 1.7	TU	1529 2.2	TH	1442 1.7	TU	1529 2.2
2037	6.7	2135	6.4	2037	6.7	2135	6.4	2037	6.7	2135	6.4

Chart Datum: 3-90 metres below Ordnance Datum (Newlyn)

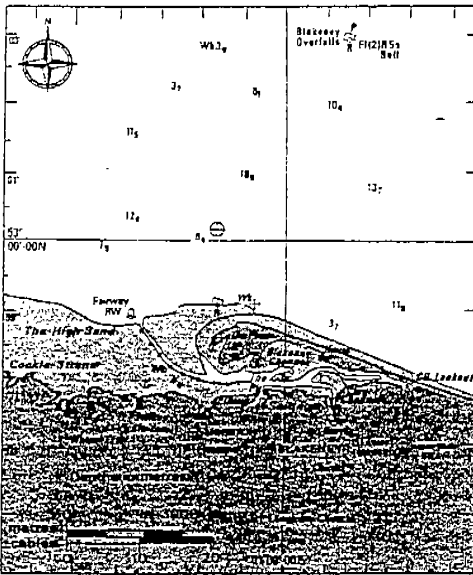




BLAKENEY

Norfolk 52°59' 10N 00°58' 35E

10-5-7



4 Ring Hr Mr

CHARTS

AC 108, 1190; Imray C28; Stanfords 19; OS 133

TIDES

-0445 Dover; ML Cromer 2-8; Duration 0530; Zone 0 (UT)

Standard Port IMMINGHAM (→)

Times	High Water	Low Water	Height (metres)					
	0100	0700	0100	0700	7-3	5-8	2-6	0-9
	1300	1900	1300	1900				

Differences BLAKENEY

+0115 +0055 No data -3-9 -3-8 No data

BLAKENEY BAR

+0035 +0025 +0030 +0040 -1-6 -1-3 No data

CROMER

+0050 +0030 +0050 +0130 -2-1 -1-7 -0-5 -0-1

SHELTER

Very good, but hbr inaccessible with fresh on-shore winds when conditions in the ent deteriorate very quickly, especially on the ebb. Entry, sp HW ±2½, nps HW ±1. Moorings in The Pit or at Stiffkey Sluices. Speed limit 8kn.

NAVIGATION

WPT 53°00' 00N 00°58' 20E, approx 0.45/225° 1M from/to Fairway RW buoy (52°59' 17N 00°56' 38E, April-Oct) at ent to chan. Large dangerous wk, approx 1.5M E of ent, is marked by unlit R PHM buoy. The bar is shallow and shifts often. The chan is marked by 15 unlit G SHM buoys. Beware mussel lays, drying, off Blakeney Spit.

LIGHTS AND MARKS

Y ldg bns on dunes at Blakeney Pt are erected only when the chan ent moves adjacent to the Pt. Conspic marks are: Blakeney and Langham churches; a chy on the house on Blakeney Pt neck; TV mast (R Its) approx 2M S of ent.

RADIO TELEPHONE

None.

TELEPHONE (01263)

Hr Mr 740362; MRCC (01493) 851338; ☎ (01473) 219481; Marinecall 0891 500455; Dr 740314; Pilot 740362.

FACILITIES

Quay AB (Free), Slip, M, D, FW, EI, C (15 ton), CH; Services: Pilot (☎ 740362), AB, BY, M, P & D (cans), FW, ME, EI, Sh, SM, Gas, Gaz, AC, Village EC Wed; V, R, Bar, ☎, ☎, ☎ (Sherringham), ☎ (Norwich).

WELLS-NEXT-THE-SEA

Norfolk 52°59' 30N 00°49' 75E (ent shifts)

10-5-8

CHARTS

AC 108, 1190; Imray C28, Y9; OS 132

TIDES

-0445 Dover; ML 1-2 Duration 0540; Zone 0 (UT)

Standard Port IMMINGHAM (→)

Times	High Water	Low Water	Height (metres)					
	0100	0700	0100	0700	7-3	5-8	2-6	0-9
	1300	1900	1300	1900				

Differences WELLS-NEXT-THE-SEA

+0035 +0045 +0340 +0310 -3-8 -3-8 Not below CD

WELLS BAR

+0020 +0020 +0020 +0020 -1-3 -1-0 No data

BURNHAM OVERY STAITHE

+0045 +0055 No data -5-0 -4-9 No data

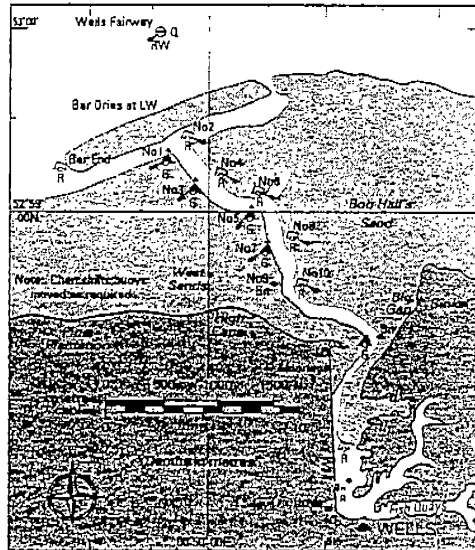
Note: LW time differences at Wells are for the end of a LW stand which lasts about 4 hrs at sp and about 5 hrs at nps.

SHELTER

Good, except in strong N winds when swell renders entry impossible for small craft. Max draft 3m at sp. Access from HW -1½ to HW +1, but recommended on the flood.

NAVIGATION

WPT Fairway SWM buoy, 52°59' 32N 00°49' 51E, 020°/200° from/to chan ent, 0-7M. The bar and ent vary in depth and position; buoys are altered to suit. Keep to port side of chan from No 12 to quay. Best to follow FV or take a pilot.



LIGHTS AND MARKS

Fairway buoy SWM, Q. Chan is marked by SHM buoys, four of which are Fl 3s, and two Fl G 3s; and by six Fl R 3s PHM buoys; plus unlit buoys. Temp buoys may be laid when chan changes. A white LB ho with R roof is conspic at hbr ent. A pine plantation is visible close W of ent.

RADIO TELEPHONE

Wells Hbr Radio VHF Ch 12 16 (when vessel due, HW-2).

TELEPHONE (01328 Fakenham)

Hr Mr 711744; Pilot 710550; MRCC (01493) 851338; ☎ (473) 219481; Marinecall 0891 500455; Police 710212; ☎ 710218.

FACILITIES

Main Quay M (see Hr Mr), AB (E9), FW, ME, EI, Sh, C (5 ton mobile), CH, V, R, Bar; E Quay Slip, M, L; Wells SC ☎ 711320, Slip, Bar; Services: M, ME, EI, ☎, Sh, CH, ACA. Town EC Thurs; P & D (bawser on quay; up to 500 galls), Gas, V, R, Bar, ☎, ☎, ☎ (bus to Norwich/King's Lynn), ☎ (Norwich).



TIDAL PREDICTION FORM

Date: _____

	TIME		HEIGHT		
	HW	LW	HW	LW	
STANDARD PORT	1	2	3	4	
* DIFFERENCES	5	6	7	8	
SECONDARY PORT	9	10	11	12	
DURATION (Time fm HW - LW)	13	9 - 10 or 10 - 9	STD Port RANGE		3 - 4
			SEC Port RANGE		11 - 12

START - Height for a given time

9
17 - 16



19 x 15 (or 14)

12

20 + 21

Time Required	16	17 + 18
Time of HW	17	9 SP or NP ?
Interval	18	
Factor	19	20 / 15 (or 14)
Rise above LW	20	22 - 21
Height of LW	21	12
Height of Tide	22	

START - Time for a given height



* INTERPOLATION workings

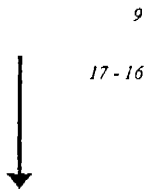


TIDAL PREDICTION FORM

Date: _____

	TIME		HEIGHT		
	HW	LW	HW	LW	
STANDARD PORT	1	2	3	4	
* DIFFERENCES	5	6	7	8	
SECONDARY PORT	9	10	11	12	
DURATION (Time fm HW - LW)	13	9 - 10 or 10 - 9	STD Port RANGE		14
			SEC Port RANGE		15

START - Height for a given time



Time Required	16	17 + 18
Time of HW	17	9
Interval	18	

SP or NP ?

Factor	19	20 / 15 (or 14)
--------	----	-----------------

19 x 15 (or 14)

12

20 + 21

Rise above LW	20	22 - 21
Height of LW	21	12
Height of Tide	22	

START - Time for a given height

* INTERPOLATION workings



TIDAL PREDICTION FORM

Date: _____

	TIME		HEIGHT		
	HW	LW	HW	LW	
STANDARD PORT	1	2	3	4	
* DIFFERENCES	5	6	7	8	
SECONDARY PORT	9	10	11	12	
DURATION (Time fm HW - LW)	13	9 - 10 or 10 - 9	STD Port RANGE		3 - 4
			SEC Port RANGE		11 - 12
			14		
			15		

START - Height for a given time

9

17 - 16



19 x 15 (or 14)

12

20 + 21

Time Required	16	17 + 18
Time of HW	17	9 SP or NP ?
Interval	18	
Factor	19	20 / 15 (or 14)
Rise above LW	20	22 - 21
Height of LW	21	12
Height of Tide	22	START - Time for a given height



* INTERPOLATION workings



TIDAL PREDICTION FORM

Date: _____

	TIME		HEIGHT		
	HW	LW	HW	LW	
STANDARD PORT	1	2	3	4	
* DIFFERENCES	5	6	7	8	
SECONDARY PORT	9	10	11	12	
DURATION (Time fm HW - LW)	13	9 - 10 or 10 - 9	STD Port RANGE		14
			SEC Port RANGE		15

3 - 4

11 - 12

START - Height for a given time



Time Required	16	17 + 18
Time of HW	17	9
Interval	18	

SP or NP ?

Factor	19	20 / 15 (or 14)
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19 x 15 (or 14)

Rise above LW	20	22 - 21
Height of LW	21	12
Height of Tide	22	



START - Time for a given height

* INTERPOLATION workings



5.3.11 1996 — Sunrise, Sunset and Twilights															
Date	Naut Twi	v	Sun-rise	v	Sun-set	Civil Twi	v	Date	Naut Twi	v	Sun-rise	v	Sun-set	Civil Twi	v
	h m		h m		h m	h m			h m		h m		h m	h m	
Jan 1	06 39	+ 39	07 59	-63-	16 08	16 48	-51	Jul 2	02 08	-115	03 56	-67-	20 12	20 56	-84
4	06 39	39	07 58	62	16 11	16 49	50	5	02 11	113	03 53	66	20 11	20 54	82
7	06 39	38	07 58	61	16 15	16 53	49	8	02 15	110	04 01	65	20 09	20 52	81
10	06 38	37	07 56	59	16 19	16 56	48	11	02 20	107	04 03	64	20 07	20 50	79
13	06 37	35	07 55	58	16 23	17 00	48	14	02 25	104	04 07	62	20 04	20 47	77
16	06 35	+ 34	07 52	+58-	16 27	17 04	-45	17	02 30	-101	04 10	-60+	20 02	20 43	-75
19	06 33	32	07 50	54	16 32	17 08	43	20	02 36	97	04 14	58	19 58	20 39	72
22	06 31	30	07 47	52	16 36	17 13	41	23	02 42	94	04 17	56	19 55	20 35	70
25	06 28	29	07 44	50	16 41	17 17	39	26	02 48	90	04 21	54	19 51	20 31	67
28	06 25	27	07 40	47	16 46	17 22	37	29	02 54	86	04 25	52	19 47	20 26	64
31	06 22	+ 25	07 36	-45-	16 51	17 26	-34	Aug 1	03 00	- 82	04 29	-50+	19 42	20 21	+62
Feb 3	06 18	22	07 32	42	16 56	17 31	32	4	03 06	78	04 34	47	19 37	20 15	59
6	06 14	20	07 27	40	17 02	17 36	30	7	03 12	74	04 38	45	19 32	20 10	56
9	06 10	18	07 22	37	17 07	17 41	27	10	03 18	71	04 42	42	19 27	20 04	53
12	06 06	15	07 17	34	17 12	17 46	25	13	03 24	67	04 47	39	19 22	19 58	50
15	06 01	+ 13	07 12	+31-	17 17	17 51	-22	16	03 30	- 83	04 51	-37+	19 16	19 52	+47
18	05 56	10	07 06	29	17 22	17 55	19	19	03 36	59	04 56	34	19 10	19 45	44
21	05 50	7	07 01	26	17 27	18 00	17	22	03 42	55	05 00	31	19 04	19 39	41
24	05 45	5	06 55	23	17 32	18 05	14	25	03 48	52	05 05	28	18 58	19 33	38
27	05 39	+ 2	06 49	20	17 38	18 10	11	28	03 53	48	05 09	25	18 52	19 26	35
Mar 1	05 33	- 1	06 43	+17-	17 43	18 15	- 8	31	03 59	- 45	05 14	-23+	18 46	19 19	-32
4	05 27	4	06 37	14	17 47	18 20	5	Sep 3	04 04	41	05 18	20	18 39	19 13	28
7	05 21	7	06 30	11	17 52	18 25	- 3	6	04 09	38	05 23	17	18 33	19 06	25
10	05 14	10	06 24	8	17 57	18 29	0	9	04 14	34	05 27	14	18 26	18 59	22
13	05 08	13	06 18	6	18 02	18 34	+ 3	12	04 20	31	05 32	11	18 20	18 52	20
16	05 01	- 16	06 11	- 3-	18 07	18 39	+ 6	15	04 25	- 28	05 36	- 9+	18 13	18 46	+17
19	04 55	19	06 05	0	18 12	18 44	9	18	04 30	25	05 41	6	18 07	18 39	14
22	04 48	22	05 58	- 3+	18 16	18 49	12	21	04 34	22	05 45	- 3+	18 00	18 32	11
25	04 41	25	05 52	6	18 21	18 54	15	24	04 39	18	05 50	0	17 53	18 25	8
28	04 34	28	05 45	9	18 26	18 59	18	27	04 44	15	05 54	+ 3-	17 47	18 19	5
31	04 27	- 32	05 39	-12+	18 31	19 03	+21	30	04 49	- 12	05 59	+ 6-	17 40	18 12	- 2
Apr 3	04 19	35	05 32	15	18 35	19 08	24	Oct 3	04 54	9	06 03	9	17 34	18 06	- 1
6	04 12	38	05 25	18	18 40	19 13	27	6	04 58	6	06 08	12	17 27	17 59	4
9	04 05	42	05 19	21	18 45	19 18	30	9	05 03	- 4	06 13	14	17 21	17 53	7
12	03 58	45	05 13	23	18 49	19 23	33	12	05 07	- 1	06 17	17	17 15	17 47	9
15	03 51	- 49	05 07	-26+	18 54	19 28	+37	15	05 12	+ 2	06 22	+20-	17 08	17 41	-12
18	03 43	53	05 01	29	18 59	19 34	40	18	05 17	5	06 27	23	17 02	17 35	15
21	03 36	56	04 55	32	19 04	19 39	43	21	05 21	7	06 32	26	16 57	17 30	18
24	03 29	60	04 49	35	19 08	19 44	46	24	05 26	10	06 37	29	16 51	17 24	20
27	03 22	64	04 43	37	19 13	19 49	49	27	05 30	13	06 42	31	16 45	17 19	23
30	03 15	- 68	04 38	-40+	19 18	19 54	+52	30	05 35	+ 15	06 47	-34-	16 40	17 14	-25
May 3	03 08	71	04 33	43	19 22	19 59	55	Nov 2	06 39	18	06 52	37	16 35	17 09	28
6	03 01	75	04 28	46	19 27	20 04	58	5	06 44	20	06 57	40	16 30	17 04	30
9	02 55	79	04 23	48	19 31	20 09	61	8	06 48	22	07 02	42	16 25	17 00	33
12	02 48	83	04 18	50	19 35	20 14	64	11	06 52	24	07 07	45	16 21	16 56	35
15	02 42	- 87	04 14	-53+	19 40	20 19	+67	14	06 57	+ 26	07 11	+47-	16 17	16 52	-37
18	02 36	91	04 10	55	19 44	20 24	69	17	06 01	28	07 16	49	16 13	16 49	39
21	02 30	95	04 06	57	19 48	20 29	72	20	06 05	30	07 21	52	16 10	16 46	41
24	02 25	98	04 03	59	19 52	20 33	74	23	06 09	32	07 26	54	16 07	16 43	43
27	02 20	102	04 00	61	19 55	20 37	77	26	06 13	34	07 30	56	16 04	16 41	45
30	02 15	-105	03 57	-63+	19 59	20 41	+79	29	06 16	+ 35	07 34	+58-	16 02	16 39	-46
Jun 3	02 11	108	03 55	64	20 02	20 45	80	Dec 2	06 20	36	07 38	59	16 00	16 38	-48
6	02 08	111	03 53	65	20 04	20 48	82	5	06 23	38	07 42	61	15 59	16 37	-49
9	02 05	113	03 52	67	20 07	20 51	83	8	06 26	38	07 45	62	15 58	16 36	-50
11	02 02	115	03 51	67	20 09	20 53	85	11	06 29	39	07 49	63	15 58	16 36	-51
14	02 01	-117	03 50	-68+	20 11	20 55	-85	14	06 31	- 40	07 51	-64-	15 58	16 37	-52
17	02 00	118	03 50	69	20 12	20 56	86	17	06 34	40	07 54	64	15 59	16 37	-52
20	02 00	118	03 50	69	20 13	20 57	86	20	06 35	40	07 56	64	16 00	16 36	-52
23	02 01	118	03 51	69	20 13	20 58	86	23	06 37	40	07 57	64	16 02	16 40	-52
26	02 02	118	03 52	68	20 13	20 58	85	26	06 38	40	07 58	64	16 04	16 42	-52
29	02 05	-116	03 54	-68+	20 13	20 57	+85	29	06 39	+ 40	07 59	+63-	16 06	16 44	-51
Jul 2	02 08	-115	03 56	-67+	20 12	20 56	+84	Jan 1	06 39	+ 39	07 59	+63-	16 09	16 47	-51



5.3.11 continued											1996 — Sunrise, Sunset and Twilights											
Corrections to Sunrise and Sunset											Corrections to Nautical Twilight											
N.Lat	30°	35°	40°	45°	50°	52°	54°	56°	58°	60°	N.Lat	30°	35°	40°	45°	50°	52°	54°	56°	58°	60°	
v	m	m	m	m	m	m	m	m	m	m	v	m	m	m	m	m	m	m	m	m	m	m
0	0	0	0	0	0	0	0	0	0	0	+40	-40	-31	-22	-12	0	+5	+11	+17	+24	+31	
2	-2	-2	-1	-1	0	0	+1	+1	+2	+2	30	30	23	16	9	0	4	8	12	17	22	
4	4	3	2	1	0	+1	1	2	3	4	20	20	15	10	5	0	2	5	7	10	13	
6	6	5	4	2	0	1	2	3	4	6	+10	-10	-7	-5	-2	0	+1	+2	+3	+3	+4	
8	8	6	5	3	0	1	2	4	6	7	0	0	+1	+1	+1	0	-1	-1	-2	-3	-4	
10	-10	-8	-6	-3	0	+1	+3	+5	+7	+9	-10	+10	+9	+7	+4	0	-2	-4	-7	-10	-13	
12	12	10	7	4	0	2	4	6	8	11	20	20	17	13	7	0	3	7	12	17	23	
14	14	11	8	4	0	2	4	7	10	13	30	30	25	18	10	0	5	11	17	24	33	
16	16	13	9	5	0	2	5	8	11	15	40	40	33	24	14	0	7	14	23	33	44	
18	18	14	10	6	0	3	6	9	12	16	50	50	41	30	17	0	-8	18	29	42	57	
20	-20	-16	-12	-6	0	+3	+6	+10	+14	+18	-60	+60	+49	+37	-21	0	-10	-22	-36	-52	-73	
22	22	18	13	7	0	3	7	11	15	20	70	70	58	43	24	0	12	27	44	65	96	
24	24	19	14	8	0	4	7	12	16	22	80	80	66	49	28	0	15	32	54	83	-136	
26	26	21	15	8	0	4	8	13	18	24	90	90	75	56	32	0	17	39	67	-116	TAN	
28	28	22	16	9	0	4	9	14	19	26	100	100	83	63	37	0	20	47	-88	TAN	TAN	
30	-30	-24	-17	-10	0	+4	+9	+15	+21	+28	-110	+110	+92	+70	+42	0	-24	-59	TAN	TAN	TAN	
32	32	26	19	10	0	5	10	18	22	30	-120	+120	+101	+78	+47	0	-29	-81	TAN	TAN	TAN	
34	34	27	20	11	0	5	11	17	24	32												
36	36	29	21	11	0	5	11	18	25	34												
38	38	31	22	12	0	6	12	19	27	36												
40	-40	-32	-23	-13	0	+6	+13	+20	+28	+38												
42	42	34	24	13	0	6	13	21	30	40												
44	44	35	26	14	0	7	14	22	31	42												
46	46	37	27	15	0	7	15	23	33	44												
48	48	39	28	15	0	7	15	24	35	47												
50	-50	-40	-29	-16	0	+8	+16	+25	+36	+49	-10	+10	+8	+5	+3	0	-1	-2	-4	-5	-7	
52	52	42	30	17	0	8	17	27	38	51												
54	54	44	32	17	0	8	17	28	40	54												
56	56	45	33	18	0	9	18	29	42	56												
58	58	47	34	19	0	9	19	30	43	59												
60	-60	-49	-35	-19	0	+9	+20	+32	+45	+62												
62	62	50	36	20	0	10	20	33	47	64												
64	64	52	38	21	0	10	21	34	49	67												
66	66	53	39	22	0	10	22	36	51	70												
68	68	55	40	22	0	11	23	37	54	74												
70	-70	-57	-41	-23	0	+11	+24	+38	+56	+77												
If v is negative reverse the sign of the correction											+86	-86	-71	-52	-30	0	+15	+33	+56	+86	+137	

The times on the opposite page are the local mean times (LMT) of morning nautical twilight, sunrise, sunset and evening civil twilight for latitude N 50°, together with their variations v. The variations are the differences in minutes of time between the time of the phenomenon for latitudes N 50° and N 30°. The sign on the left-hand side of v (between sunrise and sunset) applies to sunrise, and the sign on the right-hand side applies to sunset. The LMT of the phenomenon for latitudes between N 30° and N 60° is found by applying the corrections in the tables above to the tabulated times as follows:

Sunrise and sunset To determine the LMT of sunrise or sunset, take out the tabulated time and v corresponding to the required date. Using v and latitude as arguments in the table of "Corrections to Sunrise and Sunset", extract the correction. This table is for positive v. If v is minus, reverse the sign of the correction. Apply the correction to the tabulated time.

Nautical twilight To determine the LMT of morning nautical twilight, follow the same method as for sunrise and sunset, but use the table of "Corrections to Nautical Twilight". This table includes both positive and negative values of v. The entry TAN stands for Twilight All Night, because the Sun does not reach an altitude of -12°.

Civil twilight To determine the LMT of evening civil twilight follow the same method as for nautical twilight, but use the table of "Corrections to Civil Twilight". This table includes both positive and negative values of v.

Convert LMT to UT by adding the longitude in time if west, or subtracting if east.

Examples on the use of these tables are given in 5.4.3.

3.1.4 COMPLETION RECORD

SEARCH PLANNING		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	Sally Anne		
Supervising Officer's Comments			
2	Dismasted Dinghy		
Supervising Officer's Comments			
3	Toy Dinghy		
Supervising Officer's Comments			
4	Effort Allocation – Corrected Sweep Width		
Supervising Officer's Comments			
5	Effort Allocation – Track Spacing, POD & Coverage		
Supervising Officer's Comments			
6	Effort Allocation - SRUs		
Supervising Officer's Comments			



SEARCH PLANNING (contd.)		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
7	Datum Point Search Area		
Supervising Officer's Comments			
8	Tides – "Bottomed Out"		
Supervising Officer's Comments			
9	Tides – "Silly Billy"		
Supervising Officer's Comments			
10	Tide at Sunrise		
Supervising Officer's Comments			
11	First Light		
Supervising Officer's Comments			
12	Ephemeris - Various		
Supervising Officer's Comments			

¹ Note to Supervising Officers

Exercises should be signed of as "Considered Satisfactory" when, *and only when*, the trainee has completed them fully and the Supervising Officer is entirely satisfied that they have fully grasped the principles &/or procedures involved.

SECTION 3.2 OPERATIONAL COMMUNICATIONS

3.2.1 GMDSS COMMUNICATIONS

Task 1 Training CD Rom

Study and satisfactorily complete the exercises on the GMDSS training CD Rom.

Task 2 Communications Account

Write an account of any communications that you have dealt with which involved the receiving or sending of messages via COSPAS/SARSAT, INMARSAT, DSC or NAVTEX.

3.2.2 COMPLETION RECORD

OPERATIONAL COMMUNICATIONS		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	Training CD Rom		
Supervising Officer's Comments			
2	Communications Account		
Supervising Officer's Comments			

¹ **Note to Supervising Officers**

Tasks should be signed of as "Considered Satisfactory" when, *and only when*, the trainee has completed the task fully and the Supervising Officer is entirely satisfied that they have fully grasped the principles &/or procedures involved in the task.

SECTION 3.3 COAST RESCUE

INTRODUCTION

District Information And Local Knowledge

It is mandatory that all operational Coastguards pass a 'Local Knowledge' examination, either within the first year of joining the service or with 3 months of transferring to a new station.

Direct-entry Watch Officers will be examined in local knowledge on station by the RI and DC, towards the end of the training programme. The certificate at the end of Section 5 should be completed and the duplicate forwarded to the Training Centre.

Officers promoted off station will be required to sit a local knowledge examination for their new district within 3 months of joining the new station. Again, the certificate at the end of Section 5 should be completed and the duplicate forwarded to the Training Centre.

Officers promoted on station already holding the certificate will not be required to re-take the exam. In this case, a copy of the current certificate should be sent to the Training Centre prior to sitting the final exams.

Tasks

The tasks contained in this section, which include a number of familiarisation and liaison visits, patrols, exercises etc. are an important part of the MSAR(I) programme and are to be undertaken by all. Reports compiled on previous familiarisation or liaison visits may be used if they are appropriate and meet the task requirements.

Reports can be printed, typed or hand written neatly and should contain maps, photographs and illustrations where appropriate.

All correspondence for this section, whether letters to outside organisations and authorities or internal minutes, should be included in the task book.

You will find guidance notes included at the end of this section which should help you with your report writing and letter & minute writing.

Sector Working

A sector within your District will be nominated by your DC/DTO as your 'study sector'

You will be required to spend a minimum of two days and one evening in the company of the Sector Manager, to gain first hand experience of the 'geography' and the 'operational considerations' of the sector and of the work involved in running it.

Whilst undertaking the familiarisation patrol with the Sector Manager, you should endeavour to include local liaison visits, to meet with people who have an important role within the sector, such as Station Officers (ex-Aux I/Cs) and Hon Secs of lifeboats.

The visit(s) should also be scheduled to enable you to take part in a training exercise.

MRV Patrol

Regular and systematic patrols of the coast are carried out by Sector Managers and Auxiliary Coastguards. The primary objectives of these patrols are:

- i. Incident prevention by observation and education.
- ii. To maintain a high level of local knowledge of the coastline.
- iii. To help improve and update the information held at the MRCC/SC.
- iv. To maintain liaison contacts

HM Coastguard operate a number of different types of MRV, depending on local requirement and Watch Officers at the MRCC/SCs must be aware of what units are available within the District. Their capabilities, response times when tasked, and equipment carried should also be known.

Selected sectors may also operate a Coastguard Patrol Boat (CPB) in order to extend the land-based patrol to inshore and estuarial waters. Although most are not declared for specific rescue purposes, CPBs may undertake the role of a search or rescue unit if circumstances require. It is therefore equally important that MRCC/SC Watch Officers are aware of the capabilities and limitations of these craft.

It is a requirement of this section that you undertake a 2-3 hour MRV patrol of a 'guard', preferably within your 'study sector'. Those of you having a CPB within your District should endeavour to carry out a CPB patrol in addition to the MRV patrol. To gain maximum benefit, these patrols should be made separately from the sector visit.

Liaison Visits

Training liaison visits are an important part of your familiarisation.

Coastguard Officers are required to have comprehensive knowledge of the capabilities and limitations of all SAR units that may be employed within their District.

3.3.1 DISTRICT KNOWLEDGE

TASK 1 REPORT ONE

Produce a report describing the 'Geography' and 'Operational Considerations' of your District. The report should comprise approximately 1500 words, excluding appendixes, and contain the following information:

Geography

- Topography of the coastal area and adjacent inshore waters
- centres of population and local industry
- Prevailing weather, currents and tides
- Anchorages, refuges, ports and harbours, rivers and islands
- navigational aids, lights, buoys, hazards and dangers
- District Sector organisation

Operational Considerations

- Location and types of declared SAR units, including CG facilities
- Marine activity
- Recreational areas (ashore and afloat)
- Casualty / incident 'black spots'
- Contingency plans
- Special considerations and liaison responsibilities
- SAR unit / operational support available from flank Districts

3.3.2 SECTOR WORKING and LIAISON VISITS

TASK 2 SECTOR VISIT

Carry out a two-day familiarisation visit of your nominated 'study sector'. Your visit should include a local knowledge patrol and participation in an Auxiliary Company training exercise.

TASK 3 MRV PATROL

Undertake a 2-3 hour MRV patrol within your District.

TASK 4 REPORT TWO

Write a report of *no more than* 1500 words describing the operational and administrative working practices of the Sector Manager.

TASK 5 RNLI LIAISON VISITS

In consultation with your DTO and appropriate SM, arrange liaison visits to both an RNLI ALB *and* a separate (if possible) ILB station. All correspondence (minutes and letters etc.) should be included in the Taskbook

TASK 6 OTHER LIAISON VISITS

Again in consultation with your DTO and appropriate SM, arrange liaison visits to *at least four* other organisations within your District, such as:

- a) SAR Helicopter or Nimrod flight *
- b) Military Rescue Co-ordination Centre (ARCC) *
- c) Fire or Police Headquarters
- d) Civil Air Traffic Control Centre (ATCC)
- e) Harbour authority, maritime pilot station or HM Customs & Excise base
- f) County Emergency Pollution Headquarters
- g) Local authority beach Lifeguard
- h) Local marina, yacht club or sailing club
- i) Trinity House depot or lighthouse

* One of your visits should, if possible, be to either an ARCC or a SAR helicopter flight.

TASK 7 COAST RESCUE EQUIPMENT FAMILIARISATION

Demonstrate to the satisfaction of your 'adopted' SM, the purpose & correct use of *all* the coast rescue equipment held within the sector.

3.3.3 COMPLETION RECORD


COASTAL SEARCH		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	Report One		
Supervising Officer's Comments			
2	Sector Visit		
Supervising Officer's Comments			
3	MRV Patrol		
Supervising Officer's Comments			
4	Report Two		
Supervising Officer's Comments			
5	RNLI Liaison Visit		
Supervising Officer's Comments			
6	Other Liaison Visits		
Supervising Officer's Comments			
7	Coast Rescue Equipment Familiarisation		
Supervising Officer's Comments			

¹ Note to Supervising Officers

Tasks should be signed as "Considered Satisfactory" when, *and only when*, the trainee has completed the task fully and the Supervising Officer is entirely satisfied that they have fully grasped the principles &/or procedures involved in the task.

LOCAL KNOWLEDGE CERTIFICATE


Please complete both certificates and send the duplicate copy to the Training Centre




Maritime and Coastguard Agency

This is to certify that Coastguard Officer _____
passed the 'Local Knowledge' examination of _____
District.

Signed _____
Grade _____
Dated _____






Maritime and Coastguard Agency

DUPLICATE

This is to certify that Coastguard Officer _____
passed the 'Local Knowledge' examination of _____
District.

Signed _____
Grade _____
Dated _____



SECTION 3.4 CHART & MAP WORK

INTRODUCTION

The operational plot plays an important part in most SAR incidents and the ability to work on a chart or map, rapidly and with accuracy, is a skill required of every Coastguard officer.

To avoid confusion during an incident, it is essential that the incident plot presents a clear and self-explanatory view of the situation and that it is not cluttered with irrelevant workings and construction lines.

The correct symbology should always be used, together with times and identities clearly allocated. A cross or circle on a chart/map means nothing to anyone, and you will forget its purpose after a while. It must be identified and given a time, in clear readable print.

It is important to remember that the plot is not only for the benefit of the plotter, it must also be easily appreciated by a relief and by the WM/SMC/DDO.

Sound chart and map work is simply a matter of regular practice and acquiring good habits. Every time a chart or map is used, these basic principles should be observed. Only by imposing this self-discipline will your plotting be of good use to the SMC during that critical period of casualty working.

The following exercises are to be attempted, using the training charts and maps held on station.

Once completed, exercises should be presented to your Watch Manager or your nominated watch Training Officer for assessment and comment.

The WM/TO must sight not only the written solutions to the problems but also the chart or map itself, and comment on the accuracy, visual quality and readability of the plot.

Once completed satisfactorily, the exercise should be signed off and comments entered as appropriate. The chart or map workings can be cleaned off after each exercise. Tracings can be made if desired for future reference.

Ordnance Survey

Using Grid Reference

A grid reference will recur at 100 km intervals. For a unique grid reference you must include the grid letters (see fig 2) e.g. SZ 263928 or the more commonly used sheet numbers, e.g. sheet 195 263928. The sheet number is appreciated by helicopter crews as it helps them to select the correct sheet by the marking of the spine of the fold of the OS Map.

Finding Distance

Finding distance in a straight line is easy. Just measure the distance between two points, either with a pair of dividers, ruler, or even the straight edge of a piece of paper, and measure the distance along a curved line (a road), then there are several methods. Using a piece of string, arrange it so that it follows the bends in the road between the 2 places of interest. Remove the string, straighten it out and measure it against the scale.

Another method is to take the edge of a piece of paper, place a corner on a start point and the edge along the first bit of road. Mark the paper at the point where the road deviates away from the straight edge. Rotate the paper until it again follows the curve of the road and again mark the point where the road deviates away from the paper's edge. Carry on like this until you have measured the required distance.

Latitude and Longitude

The O/S is mainly used to give grid reference positions, however, on occasions, it may be necessary to identify a position on the map as a latitude and longitude position.

To obtain a latitude and longitude refer to the information in the margins given in black type, the degrees and minutes at the corner, and the minutes along the margins at 5 minute intervals. The individual minutes are shown in a light blue line in the border. With this information it is possible to obtain a position in latitude and longitude in the same way as on a chart.

It is from the latitude scale you measure the distance in nautical miles.

All of the other information that you will require is in the right hand margin in the legend. Learn the symbols for the features that you will use. These include, phone boxes, the nature of the foreshore, heights and contour lines, footpaths etc.

3.4.1 CHARTWORK EXERCISES

Exercise 1 Principles

- a) Explain the principles involved in the construction of:
 - i) An overtaking intercept plot
 - ii) A head-on intercept plot
 - iii) A beam-on intercept plot
- b) Describe the principles involved in the working of a running fix.
- c) Explain the principles involved in plotting a search area by working a running fix using classified DF bearings.
- d) Describe in detail the information given on Admiralty charts with regard to all charted heights and depths. Your answer should make reference to units used, points of measurement and symbology.
- e) Describe what is meant by compass Variation and Deviation. Where would information on these be found?
- f) Explain what is meant by a "transit bearing" and when a mariner would make use of them.
- g) What are "Leading Lights" and when would a mariner make use of them?
- h) Refer to chart 5055 and give a *full* description of Dungeness light.
(50° 54'.8N 000° 58'.7E)

Exercise 2 Intercept

Chart 5055

MV "Rolling Wave" is on passage to Boulogne when her master calls Dover Coastguard to report an injured crewman on board. Radio medical advice is that the crewman should be hospitalise at the first available opportunity.

The "Rolling Wave" is in position 50 48.0N 001 01.8E at 0900 UTC on a course of 100° T speed 6 knots.

Hastings lifeboat can proceed from position 50 51.0N 000 36.0E at 0920 UTC speed 18 knots.

Boulogne lifeboat can proceed from position 50 44.6N 001 34.4E also at 0920 UTC speed 12 knots.

a). What are the intercept times, positions and True courses for both lifeboats?

At 0936 UTC the master of the "Rolling Wave" reports the crewman's condition has deteriorated dramatically.

The warship Battle-axe in position 50 28.0N 001 04.3E has a medical team on board and offers to respond immediately at 30 knots.

b) What is Battle-axe's intercept time, position and course assuming "Rolling Wave" maintains her course and speed?

Exercise 3 Intercept

Chart 5061

Use variation $2^{\circ}W$

At 1624UTC, the yacht "Bluebottle", in position $51^{\circ} 12.1'N$ $001^{\circ}27.8'E$, steering $180^{\circ}M$ at 4 knots, calls Dover Coastguard to report that the skipper has been injured and is unable to work the vessel. The autohelm is engaged and the only other person on board, a 9 year old boy is using the VHF to request assistance.

At 1648 UTC Ramsgate Lifeboat leaves position $51^{\circ}19.4'N$ $001^{\circ} 27.4'E$ at 18 knots.

- a) What is the intercept course, position and time for this lifeboat?
- b) If the "Bluebottle" had altered course by 180° at 1624, (assuming no loss of speed) what would have been the intercept time and position for Ramsgate Lifeboat?

At 1630UTC the motor cruiser "Lucky Lady" departs Deal Pier end at 12 knots to place a crewman on board the "Bluebottle".

- c) What is the intercept course, position and time?

Exercise 4 VHF/DF Running Fix

Chart 5055

Use Variation 3°W

At 0912 UTC the motor cruiser Manx Lass called Dover Coastguard for a weather forecast. He reported steering 055°M at 8 knots.

The VHF DF bearing from the Fairlight aerial (50° 52'.15N 000° 38'.8E) was noted as 201°T.

At 1018 UTC the Manx Lass called again to report thick fog and requested assistance fixing position. The VHF D/F bearing from Fairlight was noted at this time to be 134°T.

- a) Assuming the tide was setting 248°T at 1.8 knots, what position would you plot for the Manx Lass at 1018?
- b) Give the text of the message you would pass to the Manx Lass.

At 1033 the Manx Lass notifies Dover she is altering course to 088°M speed 6 knots.

- c) Assuming the tidal set from 1018 to 1100 is 067°T 1.2 knots, what D/F bearing would you expect from the Dungeness aerial (50° 54'.7N 000° 58'.0E) at 1100?

Exercise 5 VHF/DF Running Fix

Chart 5061

Use variation 2°W

At 0718UTC the tug "Dolphin" calls for a weather forecast.

He gives his position as off North Foreland and the VHF D/F bearing from North Foreland ($51^{\circ} 22.5\text{N } 001^{\circ} 26.85\text{E}$) is 058°T Class B.

The master gives his speed as 7 knots, course 145°M .

The tide is setting 355°T 1.1 knots.

At 0800 UTC the Tug calls again to report an engine cooling problem and that he is altering course at that time to 202°M and reducing speed to 3 knots.
The DF bearing from N Foreland is noted as 100°T Class B.

a) What position would you fix for the "Dolphin" at 0800 UTC?

At 1050UTC a transmission is received from the "Dolphin" reporting explosion and fire on board. The DF bearing is recorded as 043°T Class B from Langdon Battery at ($51^{\circ}07'.92\text{N } 001^{\circ} 20'.67\text{E}$).

The tide from 0800 to 1100 was setting 345°T at 0.6 knots.

b) Plot the search area and give the corner co-ordinates.

c) What is the area of the smallest rectangle which would encompass this area?

Exercise 6 **Passage Plan**

Chart 5055

The coastal tanker MELITA is due to depart Calais on the evening tide. She will drop off the pilot at the pilot station at 2130 UTC, before making for the south west approaches, passing the "Greenwich" light buoy abeam to port by 4 NM.

The MELITA is a coastal tanker with a maximum draft of 5.2 metres, equipped with radar and gyro compass.

She has a maximum manoeuvring speed of 8 knots and economical passage speed of 14 knots.

- a) Plot her probable passage from the pilot station and, ignoring tidal effects, show &/or note:
- The courses to make good on each leg
 - The length of each leg
 - The alter-course ETAs and positions and how they would be identified (e.g. Bearing/distance)
 - Her ETA abeam the "Greenwich" buoy
- b) Identify the possible dangers that could be encountered during this passage.
- c) Explain your choice of route.

Exercise 7 **Passage Plan**

Chart 5055

Use variation for the year in question

It is 1730 UTC on Tuesday 29 June 1999 and you are tasked by your Watch Manager to plot the probable passage of the overdue motor cruiser "PLATYPUS", known to have departed this morning at 0800 UTC from Newhaven bound for Folkestone.

There is no record of the vessel having passed a TR to you but the following information has been obtained from the CG66 details and from speaking to the named contact:

- PLATYPUS is an 8 metre "Hardy", equipped with a good magnetic compass and a radar.
- The skipper is known to favour steering compass courses on exact 5° headings (i.e. 015° , 130° , 165° etc.), to maintain a distance off the charted LW line of at least $\frac{1}{2}$ NM and to alter course when abeam or alongside navigational marks.
- The compass deviation, on headings between NE and SE, is known to be 2° W.
- The boat's maximum speed (through the water) is 12 kts, with a cruising speed of 9 kts.

The wind over the passage period was southerly 3 to 4, slight sea and swell and good visibility (at least 8 NM).

- a) Plot the probable passage of the PLATYPUS and show or note down:
- i) The true courses to make good on each leg
 - ii) The length of each leg
 - iii) The alter-course positions and how they would be identified (e.g. Bearing/distance)
 - iv) The total passage distance
- b) If the HW Dover was at 1100 UTC and it was approaching springs, making approximate allowances for the tidal rate only, what would be:
- i) The ETA at each alter course position
 - ii) The final ETA Folkestone
 - iii) How does this 'tidal' ETA compare with the 'DR' ETA ?

3.4.2 ORDNANCE SURVEY EXERCISES

Use OS Sheet 196 – Solent and The Isle of Wight

Exercise 1 **Know Your Map**

1. What feature is in position 542838?
2. What feature is in position 636856?
3. What is in position 366974?
4. What is the approximate height of the feature identified in 3.?
5. Above what are OS heights measured?
6. What is the latitude and longitude of “Spitbank Fort” (just off Portsmouth)?
7. What is the grid bearing of this fort from Appley IRB station (605924)?
8. What is the grid ref. of FAREHAM railway station?
9. What is the nature of the ground at 536944?
10. If you walked west along the bridleway from Shorwell (454829) for $\frac{3}{4}$ mile, would you be walking along a valley or a ridge?

Exercise 2 **The Walk**

You plan to walk west along the course of the old ROMAN ROAD from grid 658083 to grid 623095. Describe the walk in terms of the terrain, features you would encounter and your general surroundings within $\frac{1}{4}$ mile radius.

Exercise 3 **Red Hand Flare (Part 1)**

It is Saturday morning and Ventnor mobile are on patrol on the east side of the Isle of Wight. At 1040 UTC they call in to report a small vessel in difficulties off Shanklin. The vessel is showing a red hand flare and the occupants can be seen waving their arms. The mobile gives it's position as Sheet 196 586813 and from this position the casualty vessel is bearing 103° by compass. The distance off is unknown, but estimated to be in the region of 2-3 NM.

Bembridge lifeboat is out on exercise and, having copied all Ventnor mobile's communications, reports that they are in position 50° 42.0'N 001° 02.5'W and can see a small vessel on a compass bearing of 206°, showing a red hand flare.

The lifeboat is tasked at 1045 to proceed at full speed, which they do.

Plot the position of the casualty.

- a) What is the latitude and longitude and grid ref. of the casualty?
- b) What is the distance from the lifeboat to the casualty?
- c) What compass course will they need to make good?
- d) If the lifeboat proceeds immediately at a speed of 25 Kts, what will be their ETA at the casualty position?
- e) What general factors can affect the sighting and/or identification of an offshore casualty by a shore unit?

Exercise 4 **Red Hand Flare (Part 2)**

Shortly after arrival at the casualty, the lifeboat reports that there are three persons on board the vessel (a 17 foot angling boat) and that their engine has failed. They further report that in the process of anchoring, one of the persons suffered a bad fall and is unconscious. They request immediate helicopter evacuation.

The Lee-on-Solent Coastguard helicopter is also on exercise and has been listening in. They call at 1100 and report their position as just off Cowes at grid 490975 and proceeding, speed 100 Kts.

- a) What compass course will the helicopter need to make good?
- b) What will be their ETA?

It takes 20 minutes for the helicopter to place the casualty into a stretcher and winch him into the aircraft. For operational reasons it is decided to transfer the casualty to the RN hospital, Haslar. The HLS grid is: 621989.

- c) What compass course should the helicopter make good?
- d) What is their ETA at the hospital?

Exercise 5 Red Hand Flare (Part 3)

After the helicopter evacuation, Bembridge lifeboat report that they are taking the vessel and the remaining two crew into Bembridge and request the CG mobile meet them at the lifeboat station.

- a) What distance will the mobile have to travel?
- b) What will be their ETA in minutes, if they average 25 MPH?

Exercise 6 Coastal Search (Part 1)

A CRT has been tasked to search the coastal strip and shoreline from Sandown pier (grid 598840) to Culver Down (grid 856639) for a missing child. It is high water and the intention is to search along the coastal path and also the foreshore, where possible. There are two teams of two men available and a CG MRV.

- a) Describe the search and the coastal features the teams will encounter.
- b) What difficulties or dangers may the teams face?
- c) How long would you estimate it would take to complete the search?

Exercise 7 Coastal Search (Part 2)

- a) If the only aerial available to MRSC Solent was that at their station (Lee-on-the-Solent), how might this affect direct communications with the search teams?
- b) What could be done to improve the situation?

3.4.3 COMPLETION RECORD

CHARTWORK		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	Chartwork Principles		
Supervising Officer's Comments			
2	Intercept – "Rolling Wave"		
Supervising Officer's Comments			
3	Intercept – "Bluebottle"		
Supervising Officer's Comments			
4	VHF/DF Running Fix – "Manx Lass"		
Supervising Officer's Comments			
5	VHF/DF Running Fix – "Dolphin"		
Supervising Officer's Comments			
6	Passage Plan – "Melita"		
Supervising Officer's Comments			
7	Passage Plan – "Platypus"		
Supervising Officer's Comments			

COMPLETION RECORD (contd.)

MAPWORK		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	Know Your Map		
Supervising Officer's Comments			
2	The Walk		
Supervising Officer's Comments			
3	Red Hand Flare (Part 1)		
Supervising Officer's Comments			
4	Red Hand Flare (Part 2)		
Supervising Officer's Comments			
5	Red Hand Flare (Part 3)		
Supervising Officer's Comments			
6	Coastal Search (Part 1)		
Supervising Officer's Comments			
7	Coastal Search (Part 2)		
Supervising Officer's Comments			

¹ **Note to Supervising Officers**

Tasks should be signed of as "Considered Satisfactory" when, *and only when*, the trainee has completed the task fully and the Supervising Officer is entirely satisfied that they have fully grasped the principles &/or procedures involved in the question.

SECTION 3.5 GENERAL MARITIME

INTRODUCTION

It is important that Coastguard Officers have an appreciation of different types of vessel, from the humblest dinghy to the largest tanker. The following task is designed to enhance your knowledge and you should therefore endeavour to visit craft with which you are not familiar.

3.5.1 VESSEL FAMILIARISATION

Task 1

Arrange a visit to *at least two* of the following types of vessel:

- Large, offshore yacht or motor cruiser (not a day boat)
- Pilot vessel
- Registered fishing vessel (over 12 metres)
- Rig supply vessel
- Container vessel
- General cargo vessel
- Tanker / product carrier
- Passenger / car ferry
- Cruise liner
- Any specialised vessel (cable-layer, survey ship, etc.)

Write a short report on the vessels you visit and include details of:

- ⇒ Name and callsign
- ⇒ Type of vessel
- ⇒ Size (length, breadth, draft and tonnages)
- ⇒ Type of cargo (if applicable)
- ⇒ Operating areas
- ⇒ Number of persons normally carried
- ⇒ Navigational aid fitted
- ⇒ GMDSS equipment fitted/carried
- ⇒ Normal crew's SAR knowledge/capability
- ⇒ Life saving equipment carried
- ⇒ Fire-fighting equipment carried

3.5.2 MARINE TERMINOLOGY

Seafarers have, over many years, built up a vocabulary of their very own, mainly as references to things nautical that have no equivalent ashore. In a SAR situation these terms can be used quite freely and, if we are to communicate effectively, it is important that we understand the meaning of at least the more commonly used ones.

Exercise 1

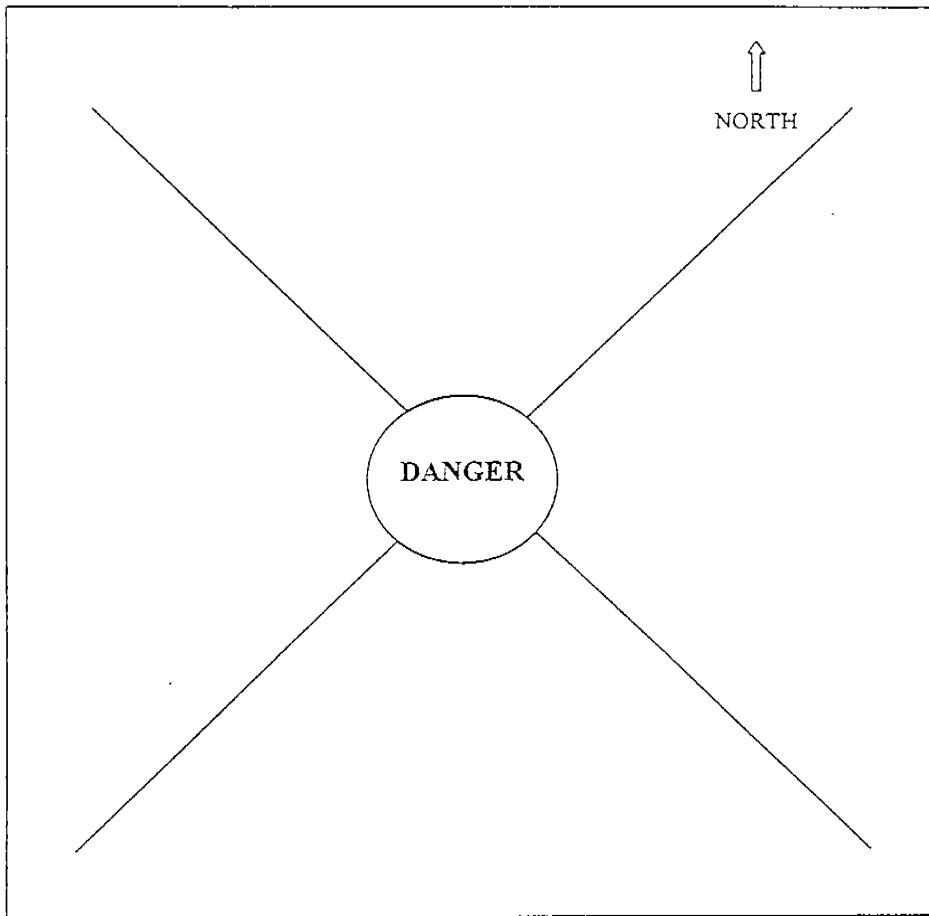
Write a brief description of what is meant by the following nautical terms:

- | | | |
|---------------------|-----------------------|-------------------------------|
| 1. Aft | 27. Galley | 53. Pitching |
| 2. Abeam | 28. Gantry | 54. Planing |
| 3. Aground | 29. Go about | 55. Pooped |
| 4. Anchor aweigh | 30. Gunwale | 56. Pounding |
| 5. Astern | 31. Hatchway | 57. Power block |
| 6. Awash | 32. Hawse pipe | 58. Product carrier |
| 7. Bare poles | 33. Heeling | 59. Pulpit |
| 8. Bilge-keeled | 34. Helm | 60. Pushpit |
| 9. Bitter end | 35. Hold | 61. Rolling |
| 10. Boot topping | 36. Holding ground | 62. Shackle (of anchor cable) |
| 11. Bow | 37. Hove to | 63. Steerage way |
| 12. Broached | 38. Hull | 64. Stem |
| 13. Broadside on | 39. In ballast | 65. Stern |
| 14. Coamings | 40. Jury rig | 66. Superstructure |
| 15. Cockpit | 41. Kedge anchor | 67. Stern gland |
| 16. Davit | 42. Keel | 68. Tacking |
| 17. Deck | 43. Lee shore | 69. Transom |
| 18. Derrick | 44. Leeward | 70. Trim |
| 19. Displacement | 45. Leeway | 71. Tween deck |
| 20. Double-bottoms | 46. List | 72. Under way |
| 21. Draught | 47. LPG | 73. VLCC |
| 22. Dragging anchor | 48. Making a lee | 74. Whaleback |
| 23. Fairlead | 49. Making way | 75. Wheelhouse |
| 24. Fin-keeled | 50. Manifold | 76. Windlass |
| 25. Forepeak | 51. Mizzen mast | 77. Windward |
| 26. Freeboard | 52. Not under command | 78. Yawing |

3.5.3 BUOYAGE

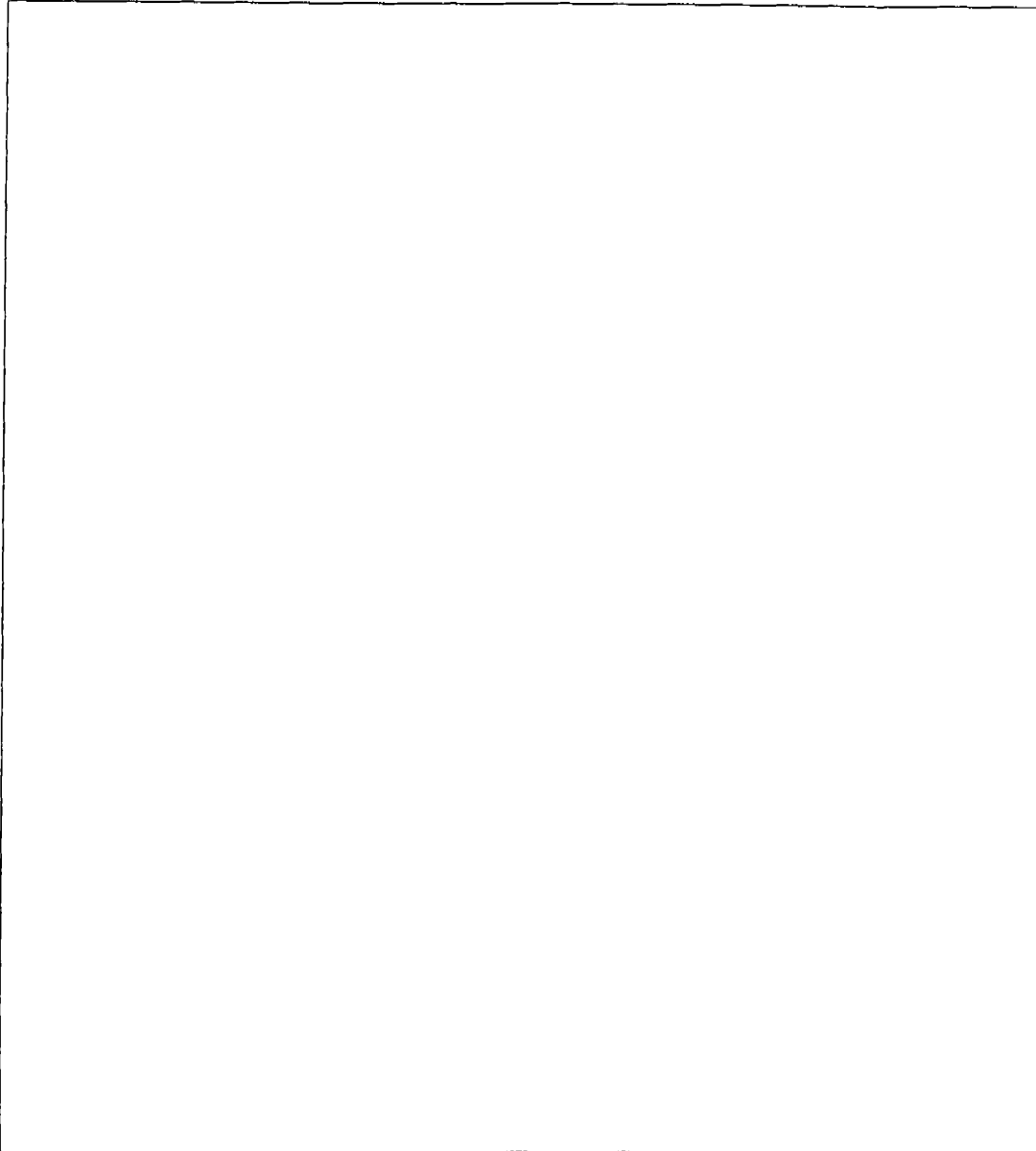
Exercise 2 Cardinal Buoys

Sketch the four cardinal buoys that would be used to mark a navigational hazard below. You should use colour and identify the light characteristics of each.



Exercise 3 Other Buoys & Marks

- a) Make sketches of all other navigational buoys and marks that the mariner may come across at sea. In each case, identify the light characteristics and purpose(s) of the buoy/mark.



- b) Explain the differences between Flashing, Occulting and isophase lights.

3.5.4 RULE OF THE ROAD

Exercise 4 Lights and Shapes

a) Draw diagrams (preferably in colour) to illustrate the navigational and/or special lights and the daytime shapes (if any) that would be displayed by the craft listed below.

1. A 5 metre sailing vessel under sail only
2. An 8 metre sailing vessel under sail and power
3. A 21 metre sailing vessel under sail only
4. A 7 metre dive boat with divers in the water
5. A 49 metre power-driven vessel under way and making way
6. A 60 metre power-driven vessel under way but not making way
7. A 52 metre power-driven vessel at anchor
8. A container vessel stopped in the water, not under command
9. A 32 metre motor cruiser aground
10. A vessel engaged in trawling
11. A vessel engaged in trolling
12. A 12 metre pilot vessel on duty
13. A laden VLCC in a narrow channel
14. A vessel carrying dangerous cargo
15. A 25 metre tug, towing a 40 metre barge, length of tow 150 metres
16. A 55 metre vessel under way and making way, engaged in laying undersea cable

Exercise 5 Traffic Separation Schemes

Write an explanation of how vessels should conduct themselves when joining, transiting and crossing a traffic separation scheme.

Exercise 6 Risk of Collision

Explain, with the aid of diagrams, how a vessel (without using radar) can determine if risk of collision exists between themselves and an approaching/crossing vessel.

Exercise 7 Collision Avoidance

Explain, with the aid of diagrams, how the following vessels should conduct themselves according to the rules, once risk of collision has been deemed to exist:

1. A power driven vessel with another on it's port side, crossing
2. A sailing vessel on a starboard tack with another sailing vessel on a port tack, crossing
3. Two power-driven vessels meeting head on
4. A sailing vessel with a trawler (gear down) on it's port side, crossing
5. A motor vessel overtaking another

3.5.5 COMPLETION RECORD

GENERAL MARITIME		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	Marine Terminology		
Supervising Officer's Comments			
2	Cardinal Buoys		
Supervising Officer's Comments			
3	Other Buoys & Marks		
Supervising Officer's Comments			
4	Lights & Shapes		
Supervising Officer's Comments			
5	Traffic Separation Schemes		
Supervising Officer's Comments			
6	Risk of Collision		
Supervising Officer's Comments			
7	Collision Avoidance		
Supervising Officer's Comments			

¹ **Note to Supervising Officers**

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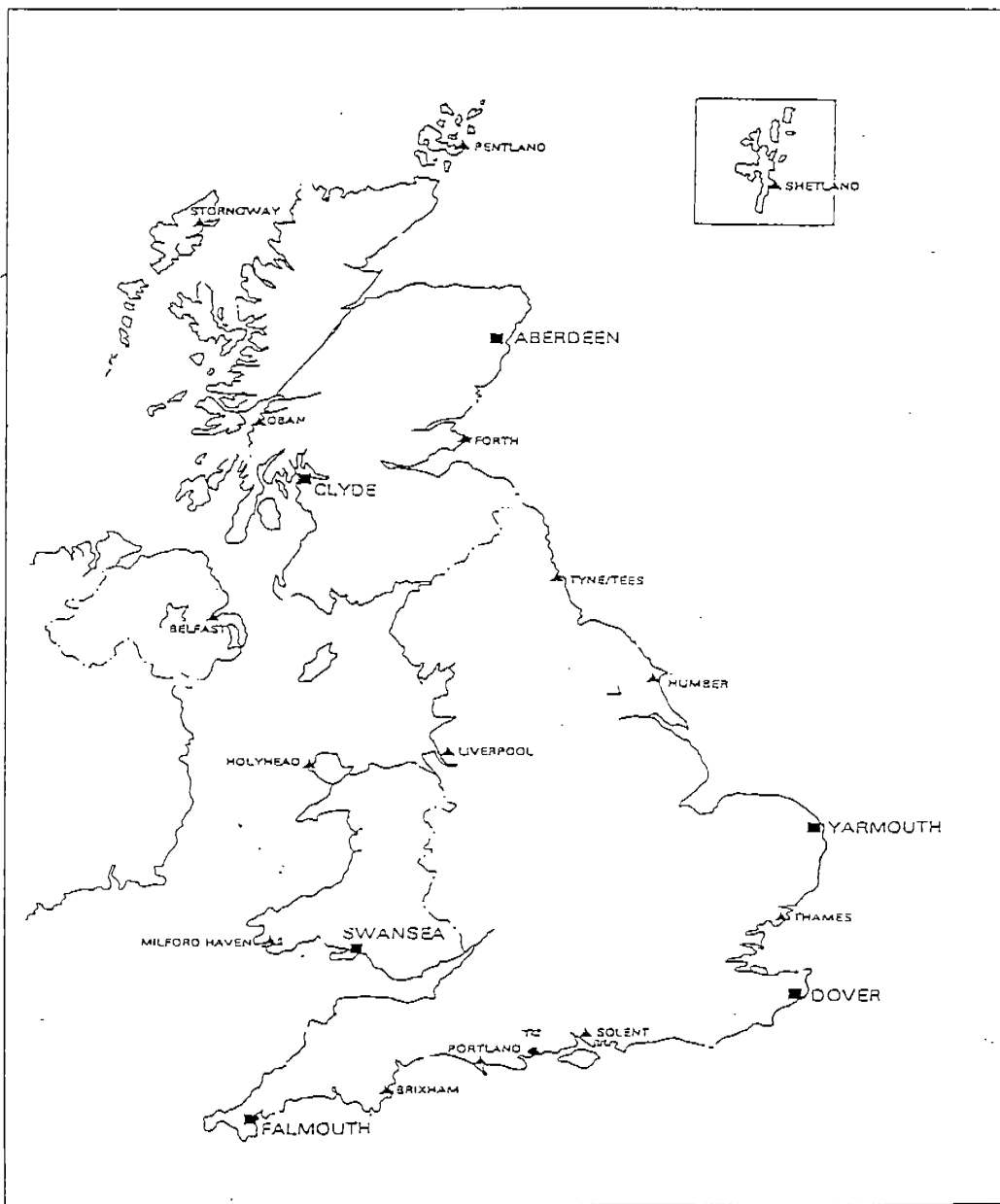
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SECTION 3.6 COUNTER POLLUTION

3.6.1 EXERCISES

Exercise 1

Show on the map of the UK below, the locations of the Counter-Pollution Offices and equipment:



Exercise 2 Command Structure

Draw a flow diagram to illustrate the operational command structure that would exist during a major SAR, salvage and counter-pollution incident, assuming the WM retains the responsibility of SMC.

Exercise 3 Incident Account

Write a detailed account of any counter-pollution or ordnance disposal incident that your station has dealt with and preferably one in which you were involved.

Exercise 4 OAN 59

Read and demonstrate a full understanding of OAN 59 "Counter Pollution and Salvage Procedures Minor, Medium or Major Incidents at Sea Category A, B or C Incidents Onshore"

3.6.2 COMPLETION RECORD

COUNTER POLLUTION		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	UK Map		
Supervising Officer's Comments			
2	Command Structure		
Supervising Officer's Comments			
3	Incident Account		
Supervising Officer's Comments			
4	OAN 59		
Supervising Officer's Comments			

¹ Note to Supervising Officers

Tasks should be signed of as "Considered Satisfactory" when, *and only when*, the trainee has completed the exercise fully and the Supervising Officer is entirely satisfied that they have fully grasped the principles &/or procedures involved.

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SECTION 3.7 METEOROLOGY

INTRODUCTION

Every day of your working life as a Coastguard someone somewhere will want to know some information about the weather. It may be direct observations for the Operations Log, receiving and giving out shipping or local area forecasts, receiving weather maps, contacting appropriate sources for wind and weather history when search plans are being calculated, and, in some cases, taking observations for the Met Office.

You will be using Met. information when weighing up factors in determining the likelihood of a casualty risk situation occurring; planning ahead at the early stages of a search; thinking about when trying to predict a casualty's likely actions or how it might be affecting a survivor.

So, although you may be inclined to believe that an in depth knowledge of the subject is not required it is important that you have a basic understanding of meteorology to assist you in carrying out your job effectively. It is not enough to be able to read out a forecast or weather information without having some idea as to what is actually happening.

You are not required to have the depth of knowledge of meteorology that a professional forecaster has, but you must know enough of the subject to be able to:

- a. Interpret a weather map.
- b. Understand a weather forecast and what principles a forecaster has used.
- c. Observe and understand the actual weather being experienced in your area to see whether it is behaving as predicted or whether there are danger signs indicating a change to that which is predicted.

Meteorology is not an exact science (which is one of the reasons that it is interesting) and forecasters are not magicians who are able to get everything 100% right. There are difficulties in forecasting weather for our latitudes and to get it consistently right for every area is more hopeful than practical; the forecast will not always be the same as the weather that you experience. Neither will the forecast tell you the time at which a change will occur at different spots, it will only generalise; nor can it always be accurate near the border of a forecast area.

Met. Office forecasters are highly trained and skilled in their field. Coastguard Officers are not trained forecasters, no matter how skilled they may become with experience, and must be careful.

NEVER PUT ANY PERSONAL INTERPRETATION UPON THE WEATHER BEING GIVEN OR BROADCAST.

The latter point particularly applies to weather Actuals, for which the **TIME** and **SOURCE** of the observation should be stated, without any opinion as to the forecast weather resulting from that observation. If a forecast is requested, the most recent and appropriate Met Office forecast must be quoted.

WEATHER is the condition of the atmosphere at any given moment; **CLIMATE** is the mean condition of the atmosphere over a period of about 30 years and **METEOROLOGY** is the science of the atmosphere, embracing both weather and climate.

3.7.1 METEOROLOGY EXERCISES

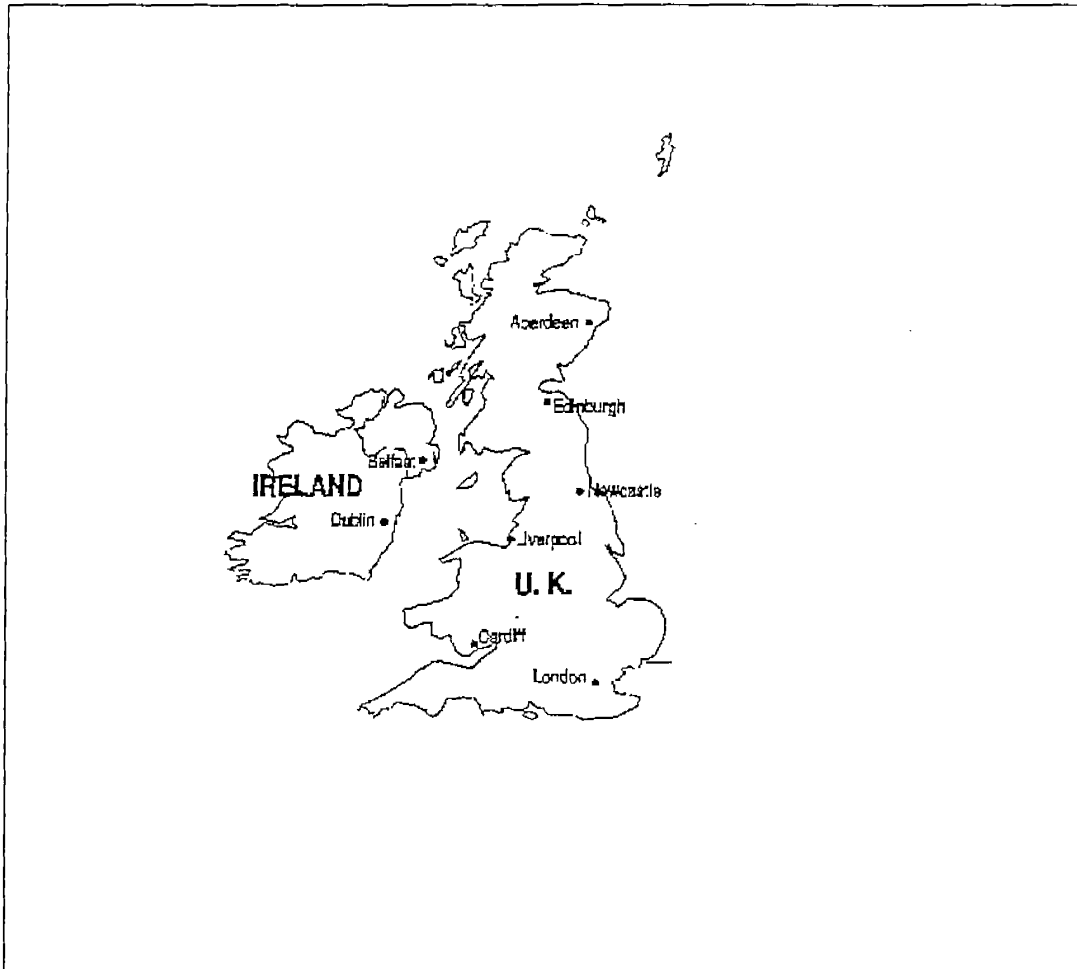
Exercise 1 Terms and Expressions

Explain what is meant by the following meteorological terms or expressions. Give examples where appropriate.

1. Air mass
2. Anemometer
3. Anticyclone
4. Bar
5. Barograph
6. Barometer
7. Beaufort wind scale
8. Buys Ballot's law
9. Col
10. Cold front
11. Cumuliform cloud
12. Cyclone
13. Depression
14. Dew point
15. Fog
16. Frontal depression
17. Frontal zone
18. Gale warning - imminent
19. Gale warning - later
20. Gale warning - soon
21. Gust
22. Haze
23. High cloud
24. Humidity
25. Isobar
26. Low cloud
27. Medium cloud
28. Mist
29. Occlusion
30. Pressure gradient
31. Ridge
32. Saturated air
33. Squall
34. Stratiform cloud
35. Swell
36. Synoptic weather chart
37. Trough
38. Visibility
39. Visibility good
40. Visibility moderate
41. Visibility poor
42. Warm front
43. Warm sector
44. Weather system speed - slowly, steadily, rather quickly, rapidly, very rapidly.
45. Wind waves

Exercise 2 UK Air Masses

On the map below, identify the air masses that surround the UK.



3.7.1 METEOROLOGY EXERCISES

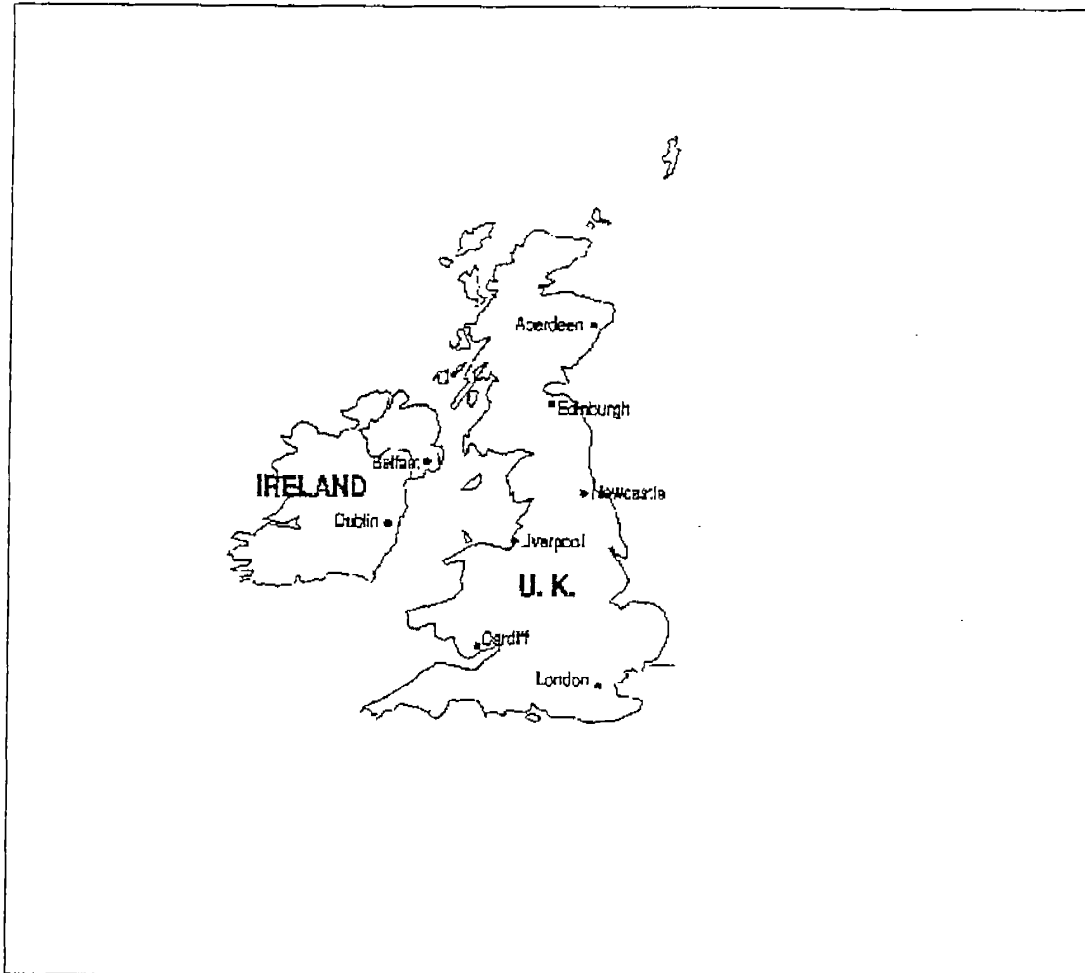
Exercise 1 Terms and Expressions

Explain what is meant by the following meteorological terms or expressions. Give examples where appropriate.

1. Air mass
2. Anemometer
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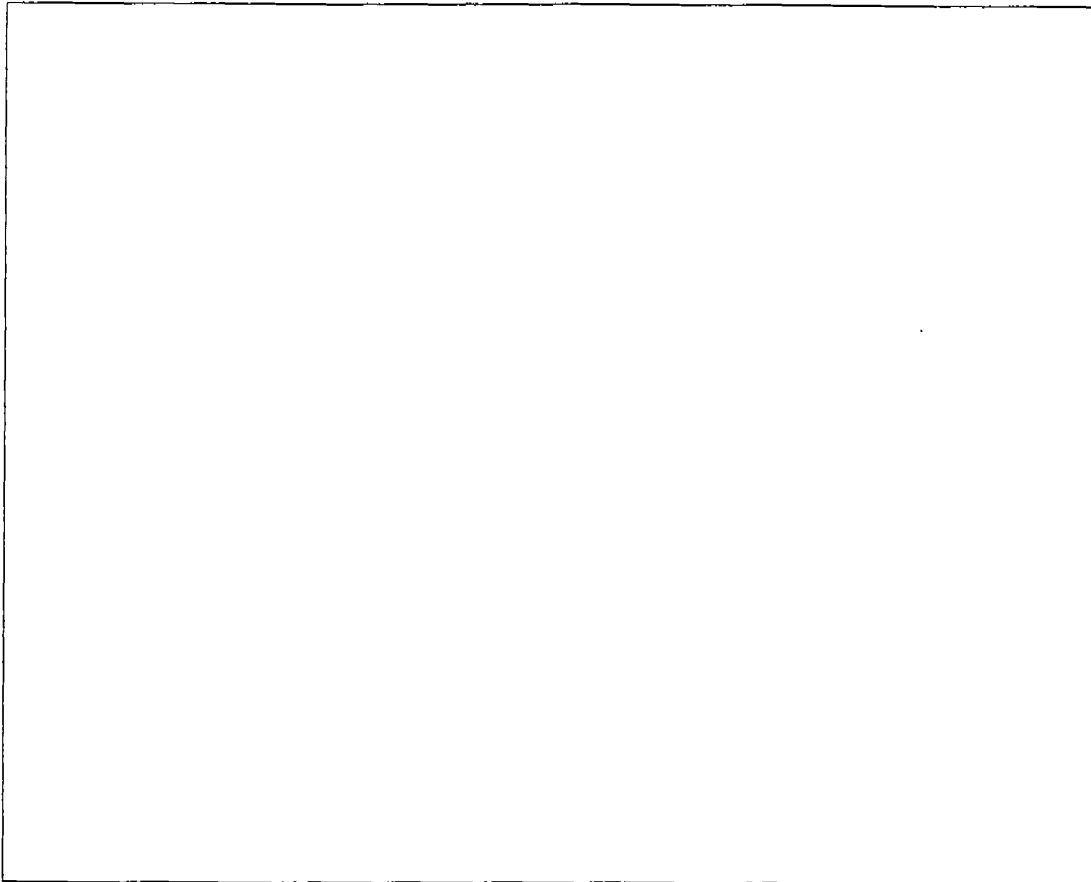
Exercise 2 UK Air Masses

On the map below, identify the air masses that surround the UK.



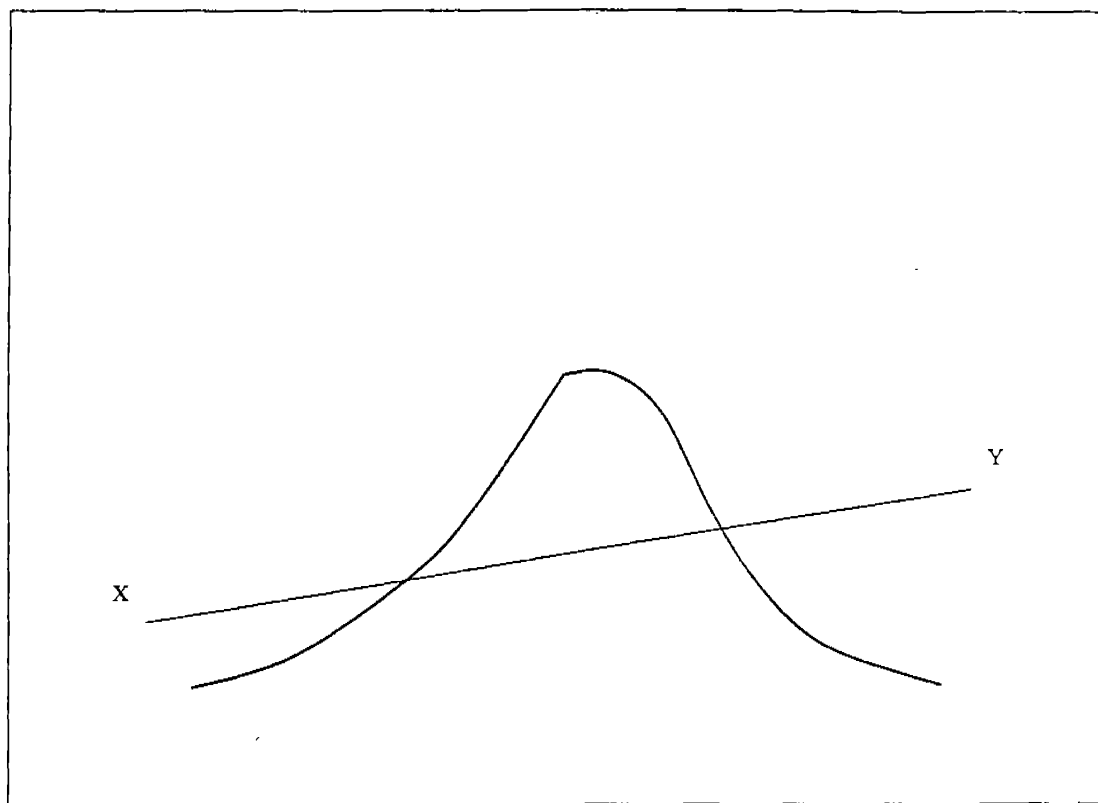
Exercise 3 High Pressure - Wind circulation

Draw a diagram to show the direction of the wind circulating around an area of High pressure.



Exercise 4 Frontal Depression - Plan

Complete the plan view of a typical frontal depression below. You should draw in the isobars and identify the centre of the low pressure, both fronts and the wind circulation.



Exercise 5 Frontal Depression – Cross Section

Draw a cross section through "X-Y" on the plan in Exercise 4, identifying typical distances, the fronts, the cold and warm air, direction of movement and the cloud and weather associated with the system.

Exercise 6 Land and Sea Breezes

Explain, with the aid of diagrams, the phenomena of land and sea breezes, their effects and their significance in terms of SAR.

3.7.2 COMPLETION RECORD

METEOROLOGY		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	Terms and Expressions		
Supervising Officer's Comments			
2	UK Air Masses		
Supervising Officer's Comments			
3	High Pressure Wind Circulation		
Supervising Officer's Comments			
4	Frontal Depression - Plan		
Supervising Officer's Comments			
5	Frontal Depression – Cross Section		
Supervising Officer's Comments			
6	Land and Sea Breezes		
Supervising Officer's Comments			

¹ **Note to Supervising Officers**

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SECTION 3.8 SAR CO-ORDINATION

3.8.1 EXERCISES

Exercise 1 Incident Account

Write a full account of any SAR incident in which you were involved where one or more emergency phases were clearly identified or identifiable.

You should start off with an analysis of the initial call information and then explain how the incident developed and concluded. Include in your account reference to the emergency phases that you were in at any time, what decisions were made and why, what resources were tasked and why, what broadcasts were made and by what means, any search plans etc. and the final outcome(s).

Exercise 2 Major Incident Command & Control Structure

Draw a flow diagram to illustrate the command and control structure likely to be put in place when dealing with a major SAR incident.

3.8.2 COMPLETION RECORD

SAR CO-ORDINATION		Considered Satisfactory ¹	
No.	Title	Supervising Officer's Initials	Date
1	Incident Account		
Supervising Officer's Comments			
2	Major Incident Command & Control Structure		
Supervising Officer's Comments			

¹ **Note to Supervising Officers**

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SECTION 3.9 REPORT, LETTER and MINUTE WRITING

3.9.1 REPORT WRITING

Throughout your service in HM Coastguard you will be required to write reports. The skill is not easy to acquire, and a key objective is to encourage a systematic approach to report compilation and layout.

3.9.1.1 PLANNING

Before you begin to work on a report it is important to make sure you have a clear understanding of what is required. You should first decide how long the report will be, are illustrations or maps required, what research will you need to undergo and how will you go about it? Are opinions required or will a factual report suffice, and do you need to determine any findings or conclusions?

These are your terms of reference.

Preparation and planning the structure of your report is the most important stage of all. It is easy to fall into the trap of starting to write too soon. Abundant material and illustrations can all be wasted unless they are marshalled into an effective structure.

There are four stages to planning a report:

- a) gathering the material
- b) selection
- c) grouping
- d) ordering.

It is a mistake to leave out any one of them. Remind yourself of the objective of the report in one sentence and then set to work on your plan.

Gathering the material

This may be the longest stage of all. It may entail travel, meetings, investigations, the study of files and publications, and attendance at exercises. When your research is complete, assemble your material in note form. At this stage you should have more material than you will eventually need, now you must select.

Selection

Reread your terms of reference and satisfy yourself that you understand your objective. Then return to your material and set aside anything that is outside your terms of reference. Be certain to include all relevant facts and any opinions you may have drawn, as these are important.

Grouping

You now have the material out of which you intend to build your report, but it is not arranged in any sort of order. If you think about your objective you will probably find that some items naturally belong together and that common sense will indicate how they should be grouped. In this way the skeleton of your report should begin to take shape. These topic groups will be the sections or chapter headings of your report and should between them span the subject as you intend to cover it. You might even find it helpful to write the different topics on separate pieces of paper and play around with them until the best grouping emerges. Finally, check your headings to see that they are precise and do not overlap.

Ordering

Having grouped your material under the main subject headings you must arrange them in the right order. There should be a logical progression from subject to subject, and under each subject heading, from point to point. The order might be chronological, but more often the writer must identify the important subjects whenever they arise and relate them to each other in a way which may be quite independent of the actual sequence of events. Therefore do not be subject to the tyranny of chronology. Work your material into shape so that the finished product declares its message by its outline as well as its detail.

3.9.1.2 WRITING

A writer needs a good vocabulary and a knowledge of English grammar and punctuation. He must also be able to select the right word to express his meaning, build clear unambiguous sentences and punctuate them so that their meaning is unmistakable. If he is not lucky enough to start with the ability to write clearly he must try to acquire it.

Choice of words

Plain words are best. Prefer the familiar word to the far fetched, the short word to the long. Above all, use the right word rather than the wrong one. It is no service to the reader to say 'refute' when we mean 'repudiate' and 'disinterested' when we mean 'uninterested'. Refer to a dictionary if you are not sure you have the right word. Avoid saying the same thing twice over, as in, 'adequate enough' or 'connect together'. Good writing is spare; every word pulls its own weight and needs no support to do its job.

Sentence construction

The length of a sentence will depend on the amount you have to say, but an average of 20 words is likely to be about right. Sentence length should, of course, vary. A series of sentences all about 20 words long would be as monotonous as one composed entirely of short sentences or of long rambling ones. Contrast gives point to what you write.

One idea in a sentence, if clearly expressed, is easy to grasp. Two or three makes the task more difficult. An involved structure with several subordinate clauses and qualifying phrases is likely to obscure your meaning for all but the most absorbed and intelligent reader. So keep it simple if you can.

From time to time we all find ourselves struggling with an involved piece of writing, amending time and again, unable to express on paper the idea we wish to convey. This is the time to stop, sit back, and ask yourself; 'What am I trying to say?' and then write down whatever comes into your head. The result is likely to be much more direct and explicit. You may find the difficult point was not worth making anyway.

Paragraph construction

A paragraph is a unit of thought, not of length. The presentation of the page can attract or repel the reader. Paragraphs of varying and reasonable lengths, well set out, numbered and identified by headings where necessary, stand a better chance of being read than whole pages of undivided and shapeless information.

Style

Do not worry about style. What matters is making yourself understood. If you have something to say and can express it clearly and concisely the style will look after itself. If you have nothing to say, no amount of elegant variation and vivid imagery will conceal the fact that you are wasting your own and the reader's time.

Reading well written books and newspapers will help our use of English and our appreciation of the job when it is well done. Good writing does not come easily to the majority. Brevity and clarity are only achieved by careful thought and hard work; it is easier to write a long document than a short one and we need practice before we can find the tautness and economy which will be the most efficient vehicle for what we want to say.

3.9.1.3 CONSTRUCTION

You should present your report in the most effective way. Some or all of the following elements will be necessary.

Title

This should be short and convey what the report is about as neatly as possible. If it is too short it may mislead. If it is too long it may weary the reader before he even reaches the text.

Origin

Ideally any report should have the name of its author on the title page.

Table of contents

A short report does not need a list of contents but anything over four or five pages should have one for easy reference. It consists of the headings and sub headings used in the report, phrased and numbered exactly as they are in the text and with the corresponding page numbers.

Abstract

A lengthy report should have a single paragraph summary placed after the title page. This gives the nature and content of the report and any conclusions or recommendations made. It will help readers to decide whether they need to read the whole report and should therefore be concise and factual.

Introduction

Every report should have an introduction. It explains why the report has been written, what are the terms of reference and what is going to be covered. Beware of the temptation to enter into the main stream of your argument here, you should only give the background and set the scene.

Main content

This forms the substance of your report and contains the material you have researched. Clarity and the convenience of your reader should be your guide. In a technical report you may find it necessary to form an appendix for the details, keeping to plain language in the main text. Unwieldy statistical detail should not be allowed to interrupt the flow of your narrative.

Conclusions

It is possible that your report will reach some conclusions and that these will be of interest to your reader. They must follow on logically from what has gone before; this is not the place to introduce new material.

Recommendations

If recommendations are appropriate, they should be clearly set out after your conclusions. Be careful not to confuse recommendations with conclusions and ensure that the recommendations derive logically from your conclusions.

Glossary

Consider whether your readers will need a glossary of terms and, if so, give it to them.

Appendices

This is the place for technical material which might otherwise interrupt the course of your main argument or discussion. It should also include any material that substantiates what you want to say.

Illustrations

Pictures, diagrams and maps should appear as soon as possible after the first reference to the subject in the text and should be clearly captioned.

3.9.1.4 LAYOUT

First impressions are very important. The layout of your report and the look of it on the page may make the difference between your report being read or not. Your layout should be consistent throughout with regard to indenting, positioning of headings and use of capitals.

It is common Civil Service practice to number all paragraphs consecutively. Subdivision of paragraphs to distinguish items listed should be identified by lower case letters (a, b, c). Further subdivision should be identified by lower case Roman numerals (i, ii, iii etc).

3.9.1.5 REVISION

To ensure consistency of style and thought from beginning to end, you should endeavour to write the whole report in one sitting. This is dependent on having spent enough time in preparation and planning. If there is more than can be done in one day, the revision stage will be extremely important. Check for slips, spelling mistakes and typing errors. Check also for consistency, logic and fitness for the purpose of the report.

If time allows, lay your work aside for a day or two before making this final revision. Try reading your report aloud. This will show up any ungainly constructions or repetitions. If you have difficulty reading your work smoothly, so will other people.

In this final check ask yourself whether you have included enough information and evidence; whether your train of thought holds together; whether your conclusions follow logically from what has gone before. Have you kept within your terms of reference? If you have written the report in several stages, you should make sure there is no duplication, overlap or inconsistency.

The process of revision should not be skimped.

3.9.2 LETTER AND MINUTE WRITING

3.9.2.1 LETTERS

Few things create a more unfavourable impression than untidy, miss-spelt, badly phrased or late correspondence. As a Coastguard you are required to give a reply to all correspondence letters received within 2 weeks. If circumstances dictate otherwise, send an acknowledgement stating when a reply might be expected.

Format

Points to note are:

- a) Every outgoing letter bears the recipient's correct title and form of address.
- b) The writer's name, telephone number and postal address, including postcode, is included.
- c) Official Departmental headed notepaper (and envelopes) are used in the absence of a word processed template. File references are always stated.
- d) With typed or word-processed letters, the convention of a manuscript salutation and signature to personally known addressees is used, otherwise these are typed.
- e) Information copies are sent to other officers who need to know.
- f) When addressing the envelope always put in full: details of grade, rank or title, full initials and surname. Make sure they are accurate and the surname is properly spelt.

3.9.2.2 MINUTES

A minute is the normal method of written communication within the Department and is not to be used for external correspondence. Minutes should normally be typed or written in ink on official minute sheets. A minute need not be in the narrative form usually used for letters. Headings and sub-headings may be used, together with sub-paragraphing and other devices likely to enable the reader to assimilate the subject matter more easily. *Clarity and brevity are most important.*

Format

Points to note are:

- a) The sender's name, location and telephone number should appear under the signature.

- b) The name of the person to whom the minute is addressed and his/her division or branch should be at the top left hand corner.
- c) References of sender and recipient should appear top right, together with the date of the minute.
- d) Information copies are listed below the date.

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SECTION 4

COMPETENCE ACHIEVEMENT RECORDS

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SECTION 4 COMPETENCE LEVEL ACHIEVEMENT RECORD

INTRODUCTION

The MSAR training programme from MSAR(F) through to MSAR(A) is based upon the Coastguard job-specific competency framework.

The competence profiles set by the Working Group are those expected of a fully qualified and experienced Officer.

The MSAR(I) training programme will provide the necessary theoretical knowledge and skills needed of a Watch Officer. What it cannot give you is experience – this will only come with time.

This section of the Workbook contains a list of all the job-specific competencies. Alongside each is the *minimum* level that a trainee Watch Officer is expected to reach by the end of the programme. You will note that the highest level requirement is level "3-" which indicates that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.

It is important that you maintain a record of your level achievement.

IMPORTANT

You must have all competencies "signed off" prior to sitting the final examinations.

Level statements for individual Performance Criteria

Level 0 **No knowledge required**

Level 1 **Overview knowledge, an appreciation of the subject**

The jobholder needs to have knowledge of the key principles but is not expected to apply the knowledge in detail.

Level 2 **Basic knowledge and experience**

The jobholder has to have a good grasp of the fundamentals of the areas of knowledge but needs to refer to other sources for detailed information when required to deal with other than the most straightforward situations. Supervision and guidance from more experienced colleagues is expected.

Level 3 **Detailed knowledge with more experience**

The jobholder needs to have built on basic knowledge and experience of a range of applications and deals with the majority of situations encountered on own initiative.

Level 4 **Specialist**

The jobholder needs to consistently apply a detailed knowledge and experience and is an acknowledged source of guidance and advice in the most difficult and complex areas.

Level 4, "Specialist" would be a level to which very few officers would be required to perform at routinely. The key attributes to this particular level of expertise are (a) how many times is the jobholder regarded as a "guru" by colleagues and (b) who could the specialist turn to for advice. If the answers to (a) and (b) are "all the time" and "nobody" then level 4 will most certainly apply.

4.1 Competence 1 Level Achievement Record

Search Planning

Outcomes: *Coastguard Officers are able to predict the likely movement of various types of targets drifting at sea by employing established methods, understanding the effects of individual drift factors and the causes and likely magnitudes of predictable errors required for the calculation of search areas. Coastguard Officers are able to plan searches on the shore for any target using established procedures. In both cases Coastguard Officers are able to effectively allocate suitable resources and prioritise search effort so that persons at risk could be located within their predicted survival time.*

COMPETENCE 1 – SEARCH PLANNING			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
100	Demonstrates a knowledge of the cause and effect of wind, tide, current and other drift factors upon various drifting targets.	3-		
101	Demonstrates a knowledge of vector addition to construct datum positions	3-		
102	Demonstrates a knowledge of accounting for probable errors arising in the construction of datum positions to construct error circles and search areas around the datum positions.	3-		
103	Demonstrates a knowledge of the theory and practice of current search planning methodology to determine the most appropriate solution using the Rapid Response method.	3-		
104	Demonstrates a knowledge of the theory and practice of current search planning methodology to determine the most appropriate solution from Datum Point, Datum Area or Backtrack.	3-		
105	Demonstrates the ability to apply incident information to search area determination to produce legitimate and practical search areas ready for plotting onto nautical charts.	3-		
106	Demonstrates a knowledge of the predicted behaviour of shore targets to determine a feasible shore search area.	2		
107	Demonstrates a knowledge of shore search techniques to plan an effective search.	2		
108	Demonstrates a knowledge of the capabilities and limitations of search and rescue units to properly resource offshore searches.	3-		
109	Demonstrates a knowledge of the capabilities and limitations of search and rescue units to properly resource shore searches.	2		
110	Demonstrates a knowledge of the risks and gains associated with differing search patterns when resourcing search areas.	3-		

COMPETENCE 1 – SEARCH PLANNING			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
111	Demonstrates a knowledge of the relationship between sweep width, track spacing and coverage factor to predict the likely effectiveness of a given search.	3-		
112	Demonstrates a knowledge of the theory and practice of current search planning methodology, together with incident information, to assess the effectiveness of plans devised by others.	2		
113	Demonstrates a knowledge of the theory and practice of current search planning methodology, together with incident information, to describe the effectiveness of existing plans to outside agencies or individuals.	2		
114	Demonstrates a knowledge of the theory and practice of current search planning methodology, together with incident information, to determine the point at which an unsuccessful search should be terminated.	2		
115	Demonstrates the ability to operate the SARIS search planning system.	3-		
116	Demonstrates a knowledge of the performance of visual and electronic detection aids, and their implications when allocating search effort.	3-		

¹ Note to Supervising Officers

Competencies should be signed off as "Considered Satisfactory" when, *and only when*, the Supervising Officer is entirely satisfied that the trainee has fully reached the required level in that competence.

² Minimum Level

This is the *minimum* level which a Watch Officer is expected to reach by the end of their training.

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4.2 Competence 2 Level Achievement Record

Operational Communications

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue incidents and maintain an effective operational state of readiness using the telecommunications infrastructure within the Global Maritime Distress and Safety System. Coastguard Officers should be able to operate telecommunications equipment, and use it to transmit and receive ideas and information in the most effective manner, and in compliance with established procedures.*

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
200	Able to deal with incident telephone traffic in a positive and professional manner.	3-		
201	Able to deal with 999 telephone traffic in a positive and professional manner, so that the information required to make an effective response is wherever possible gleaned from the caller.	3-		
202	Demonstrates a knowledge of the terrestrial and mobile telephone networks when dealing with and making incident calls.	3-		
203	Able to transmit clearly over radio speech circuits with due regard to rhythm, speed, volume and pitch.	3-		
204	Demonstrates a knowledge of maritime radio practice and procedures, and those employed specifically by HMCG.	3-		
205	Demonstrates a knowledge of Distress, Safety and Urgency procedures to receive and rebroadcast alerts & safety information.	3-		
206	Demonstrates a knowledge of Distress, Safety and Urgency broadcast formats to compile effective broadcasts from incident information.	3-		
207	Able to produce effective reports i.e. SITREPS, HAZREPS, DEFREPS, MAREPS using incident information.	3-		
208	Able to keep an effective radio log.	3-		
209	Demonstrates a knowledge of radio frequency allocation when receiving and transmitting routine and incident traffic.	3-		
210	Demonstrates a knowledge of radio frequency allocation to the devising of major incident communications plans.	3-		

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
211	Demonstrates a knowledge of radio propagation theory when assessing the performance radio communications equipment, and selecting the most appropriate remote aerial site.	3-		
212	Demonstrates the ability to encode and transmit paging signals over VHF radio.	3-		
213	Demonstrates a knowledge of VHF radio direction finding to determine and classify bearing information received from mobile stations.	3-		
214	Demonstrates the ability to operate the radio communications keypad of CCDS equipment.	3-		
215	Demonstrates the ability to operate portable VHF equipment, including boat and vehicle sets.	2		
216	Demonstrates a knowledge of the ITU regulations with regard to infringements, silence periods, calling procedures and the control of communications during distress working.	3-		
217	Demonstrates the ability to receive and rebroadcast distress and urgency alerts via VHF and MF DSC.	3-		
218	Demonstrates a knowledge of MMSI protocols and can identify a ship or shore station from the appropriate database.	3-		
219	Demonstrates the ability to transmit and receive telex messages, and ensure that such messages are properly recorded in the signal log.	3-		
220	Demonstrates the ability to transmit messages by fax, and to ensure that such messages are properly recorded in the signal log.	3-		
221	Demonstrates a knowledge of the GMDSS carriage requirements for vessels of 300GRT when considering the most suitable broadcast and/or communications means.	3-		
222	Demonstrates a knowledge of the COSPAS/SARSAT system to interpret and act upon beacon alert messages.	3-		
223	Demonstrates a knowledge of the COSPAS/SARSAT system to determine the integrity and accuracy of potential and actual beacon alerts.	3-		
224	Demonstrates a knowledge of the INMARSAT system to interpret and act upon alert messages.	3-		

COMPETENCE 2 – OPERATIONAL COMMUNICATIONS			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
225	Demonstrates a knowledge of the NAVTEX system to encode initial distress or urgency alerts for broadcast.	3-		
226	Demonstrates the ability to assess the effectiveness of the District and/or Regional communications infrastructure, and make appropriate recommendations if required.	3-		

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4.3 Competence 3 Level Achievement Record

Coast Rescue

Outcome: *Coastguard Officers are able to plan, manage and execute the rescue of persons in difficulty in littoral areas using established procedures and equipment, together with Auxiliary Coastguards and other resources. Coastguard Officers are able to supervise the maintenance of an effective state of operational readiness.*

COMPETENCE 3 – COAST RESCUE			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
300	Demonstrates a knowledge of the safe storage and proper inspection of rescue equipment, including pyrotechnics.	2		
301	Demonstrates a knowledge of coast rescue techniques, with regard to the needs of the casualty, the actual and potential hazards to rescuers and the casualty, and the identification of possible escape routes.	1		
302	Demonstrates a knowledge of the safe operation of safety harnesses issued as coast rescue equipment.	1		
303	Demonstrates a knowledge of the safe operation of head protection issued as coast rescue equipment.	1		
304	Demonstrates a knowledge of the safe operation of lifejackets issued as coast rescue equipment.	1		
305	Demonstrates a knowledge of the safe operation of drysuits issued as coast rescue equipment.	1		
306	Demonstrates a knowledge of the safe operation of other personal safety equipment issued as coast rescue equipment.	1		
307	Demonstrates a knowledge of standard rope rescue techniques whenever appropriate to assist in the rigging of approved rope rescue systems.	1		
308	Demonstrates a knowledge of standard rope rescue techniques whenever appropriate to supervise the rigging of approved rope rescue systems.	1		
309	Demonstrates a knowledge of shore search procedures whenever appropriate.	1		
310	Demonstrates a knowledge of mud rescue procedures whenever appropriate.	1		
311	Demonstrates the ability to operate pyrotechnics safely and effectively during Search and Rescue operations.	2		
312	Demonstrates a knowledge of the Coastguard Boat syllabus at the class of certificate appropriate for the crew duty performed.	1		

COMPETENCE 3 – COAST RESCUE			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
313	Demonstrates a knowledge of the Road Traffic Act in relation to the safe operation of Coastguard vehicles during emergency response and routine duties.	1		
314	Demonstrates a knowledge of the Road Traffic Act as applied to the towing of trailers.	1		
315	Demonstrates a knowledge of driving techniques for the appropriate terrain, conditions and vehicle type.	1		
316	Demonstrates a knowledge of the Code Of Practice For The Carriage Of Personnel And Equipment.	1		
317	Demonstrates a knowledge of helicopter co-operation.	2		
318	Demonstrates a knowledge of casualty care during evacuation, including the administration of First Aid.	2		
319	Demonstrates a knowledge of multi agency working during coastal incidents.	1		
320	Demonstrates a knowledge of the role of the Incident Officer during coastal incidents.	2		

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4.4 Competence 4 Level Achievement Record

Chart and Map Work

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue incidents by applying navigational and plotting skills to Admiralty Charts and associated publications, as well as Ordnance Survey maps.*

COMPETENCE 4 – CHART & MAPWORK			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
400	Demonstrates a knowledge of Mercator's Projection when interpreting latitude and Longitude scales, measuring distances on charts, and converting OS Grid positions to latitude/longitude and vice versa.	3-		
401	Demonstrates the ability to plot a position on a map or chart to a level of accuracy commensurate with the scale and the task at hand.	3-		
402	Demonstrates the ability to lay off distances and ranges on a map or chart to a level of accuracy commensurate with the scale and the task at hand.	3-		
403	Demonstrates the ability to lay off true bearings and apply scalar information to produce vectors to a level of accuracy commensurate with the scale and the task at hand.	3-		
404	Demonstrates a knowledge of the magnetic compass to translate compass bearings into true bearings and vice versa.	3-		
405	Demonstrates a knowledge of plotting skills to construct a running fix or intercept, accounting for tide if appropriate.	3-		
406	Demonstrates a knowledge of plotting skills to transfer search plans onto a chart of an appropriate scale.	3-		
407	Demonstrates the ability to transpose information from VHF D/F onto a map or chart.	3-		
408	Demonstrates a knowledge of the relationship between speed, distance and time.	3-		
409	Demonstrates a knowledge of chart and map symbology to identify dangers to navigation.	3-		
410	Demonstrates a knowledge of tidal theory and tidal information.	3-		

COMPETENCE 4 – CHART & MAPWORK			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
411	Demonstrates a knowledge of plotting to make reasonable allowances for tide and leeway on the predicted track of a vessel.	3-		
412	Demonstrates a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to reconstruct the most likely track of a vessel reported as overdue.	3-		
413	Demonstrates a knowledge of navigation, the ordinary practice of seamen and marine guidance and legislation to reconstruct the most likely track of a vessel reported as overdue.	3-		
414	Demonstrates the ability to assess the nature of the terrain by examining the contours on an OS Map.	3-		
415	Demonstrates a knowledge of the ephemeris to calculate the predicted times of twilight, sunrise and sunset.	3-		
416	Demonstrates a knowledge of the means by which charts and navigational publications are kept up to date, including making corrections and recording them.	3-		

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4.5 Competence 5 Level Achievement Record

General Maritime

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, effectively liaise with all sections of the maritime community and contribute to incident prevention by providing timely and meaningful safety information to the public, demonstrating an understanding of the marine environment as experienced by the full range of sea and coastal users.*

COMPETENCE 5 – GENERAL MARITIME			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
500	Demonstrates a knowledge of the characteristics and construction of principle ship types to Search and Rescue operations.	3		
501	Demonstrates a knowledge of offshore oil and gas industry practices and procedures to Search and Rescue operations	2		
502	Demonstrates a knowledge of the construction and characteristics of workboats, fishing vessels and pleasure craft to Search and Rescue operations.	2		
503	Demonstrates the ability to provide safety information to all sea and coastal users with due regard to their particular needs and limitations.	3		
504	Demonstrates a knowledge of the IALA buoyage system and other aids to navigation to Search and Rescue operations, and Coastguard Boat operations.	3		
505	Demonstrates a knowledge of the International Rules For The Prevention Of Collision At Sea when dealing with reports of hazardous incidents, and for Coastguard Boat operations.	3		
506	Demonstrates a knowledge of the Emergency Towing Protocol and the Secretary of States Powers of Intervention.	2		
507	Demonstrates a knowledge of the Coast Protection Act in conjunction with local legislation and local practices to monitor, measure and report upon works carried out on the foreshore.	1		
508	Demonstrates a knowledge of current Merchant Shipping legislation to monitor and report upon the measurement, registration and marking of registered fishing vessels under 24 metres in length.	1		
509	Demonstrates a knowledge of current Merchant Shipping legislation, in conjunction with the relevant Codes of Practice, to monitor and report upon actual and potential infringements.	2		
510	Demonstrates a knowledge of current agreements with other agencies when making reports of maritime activity.	2		

COMPETENCE 5 – GENERAL MARITIME			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
511	Demonstrates a knowledge of current agreements with the Hydrographic Office and General Lighthouse Authorities when dealing with reports of Hazards to Navigation.	3		
512	Demonstrates a knowledge of current Merchant Shipping legislation to provide assistance to the Receiver of Wreck.	2		
513	Demonstrates a knowledge of the provisions of the International Convention on the Safety Of Life At Sea (SOLAS) when dealing with vessels to which the provisions of the Convention apply.	3		
514	Demonstrates a knowledge of agreed procedures and/or local byelaws to advise mariners and the public of activity within coastal ranges, exercise areas and recreational areas.	3		
515	Demonstrates a knowledge of current marine legislation relating to the transportation by sea of hazardous materials to raise reports and monitor the progress of such shipments.	3		
516	Demonstrates a knowledge of the IMO hazardous cargo classifications.	3		
517	Demonstrates a knowledge of the licensing and carriage regulations for radio equipment carried by small commercial and pleasure craft.	2		
518	Demonstrates a knowledge of current agreements with BT Marine when dealing with reports of fouled undersea cables.	3		
519	Demonstrates a knowledge of international conventions and other instruments concerning Search and Rescue.	2		
520	Demonstrates a knowledge of other regulations, recommendations and codes when dealing with vessels and other craft which are not subject to the provisions of SOLAS.	2		

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4.6 Competence 6 Level Achievement Record

Counter Pollution

Outcome: *Coastguard Officers are able to support the activities of the Counter Pollution Organisation, local government bodies and other interested parties during Counter Pollution operations employing established procedures, personnel and equipment.*

COMPETENCE 6 – COUNTER POLLUTION			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
600	Demonstrates a knowledge of c/p procedures to assess, classify and report upon actual or potential pollution incidents.	3-		
601	Demonstrates a knowledge of c/p procedures to support c/p reconnaissance and spraying aircraft operations.	3-		
602	Demonstrates a knowledge of c/p procedures and international agreements to format standard reports and notifications to external agencies.	3-		
603	Demonstrates a knowledge of c/p procedures to act for the Principal Counter Pollution Officer if required.	1		
604	Demonstrates a knowledge of the contact and callout procedures for other agency's key staff during c/p incidents.	3-		
605	Demonstrates a knowledge of the contact and callout arrangements for Maritime & Coastguard Agency key staff during c/p incidents.	3-		
606	Demonstrates a knowledge of the National Contingency Plan.	2		
607	Demonstrates a knowledge of other external contingency plans.	2		
608	Demonstrates a knowledge of Explosive Ordnance Disposal procedures.	3-		

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4.7 Competence 7 Level Achievement Record

Meteorology

Outcome: *Coastguard Officers are able to successfully prosecute Search and Rescue operations, provide weather information to the public and the mariner, assess the effects of weather on the operational state of readiness and contribute to incident prevention by demonstrating an understanding of meteorology, using established procedures and information supplied by the Meteorological Office. Coastguard Officers are able to enhance the quality of this information by observing the weather and making reports using established procedures and equipment.*

COMPETENCE 7 – METEOROLOGY			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
700	Demonstrates the ability to obtain weather information for mariners and coastal users from the UK weather information service.	3-		
701	Demonstrates a knowledge of meteorological terms to interpret weather information.	3-		
702	Demonstrates a knowledge of meteorology to describe the effects of air masses upon North Atlantic weather patterns.	2		
703	Demonstrates a knowledge of meteorology to describe the formation of North Atlantic weather systems, and their observable effects.	2		
704	Demonstrates the ability to interpret a synoptic chart.	2		
705	Demonstrates the ability to encode the National Climatological Message.	3-		
706	Demonstrates the ability to identify the phenomena associated with the onset of bad weather.	3-		
707	Demonstrates a knowledge of meteorology to identify the causes of reduced visibility, and the causes by which poor visibility may improve.	3-		
708	Demonstrates a knowledge of meteorology to identify the causes of sea and land breezes.	3-		

COMPETENCE 7 – METEOROLOGY			Considered Satisfactory ³	
Comp	Performance Criteria	Minimum Level ⁴	Supervising Officer's Initials	Date
709	Demonstrates a knowledge of the effects of meteorological phenomena upon Search and Rescue effort.	3-		
710	Demonstrates a knowledge of the effect of wind upon sea state, and the effect of sea state upon Search and Rescue effort.	3-		

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4.8 Competence 8 Level Achievement Record

Search and Rescue Co-ordination

Outcome: *Coastguard Officers are able to successfully co-ordinate Search and Rescue operations, maintain an effective operational state of readiness and cause all parties involved to work together by demonstrating an understanding of the national and international organisation of Search and Rescue, established procedures and the aims of the Maritime and Coastguard Agency (MCA).*

COMPETENCE 8 – SAR CO-ORDINATION			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
800	Demonstrates a knowledge of current Search and Rescue policy and procedures.	3-		
801	Demonstrates a knowledge of emergency phase classification.	3-		
802	Demonstrates a knowledge of the status of search and rescue facilities used to conduct SAR operations.	3-		
803	Demonstrates a knowledge of the duties and responsibilities of the SMC, OSC and ACO.	3-		
804	Demonstrates the ability to enter, extract and analyse incident information using CMIS, CDATE, ADAS and other relevant publications as appropriate.	3-		
805	Demonstrates a knowledge of the UK Search and Rescue Organisation.	3-		
806	Demonstrates a knowledge of the intent and procedures of the various memoranda of understanding that exist between the MCA and other agencies.	3-		
807	Demonstrates a knowledge of the emergency contact and callout arrangements that exist between HMCG and declared rescue facilities.	3-		
808	Demonstrates a knowledge of the RNLI Regulations (The Green Book) in relation to Search and Rescue operations.	3-		
809	Demonstrates a knowledge of the command and control structure likely to be put in place when dealing with major incidents.	3-		
810	Demonstrates a knowledge of the function and composition of the UK SAR Committee.	2		
811	Demonstrates a knowledge of emergency and contingency plans employed by external agencies for their areas of responsibility.	2		
812	Demonstrates a knowledge of the procedures for co-operating with foreign Search and Rescue agencies.	2		

COMPETENCE 8 – SAR CO-ORDINATION			Considered Satisfactory ¹	
Comp	Performance Criteria	Minimum Level ²	Supervising Officer's Initials	Date
813	Demonstrates a knowledge of the procedures restricting the use of airspace during emergency operations.	2		
814	Demonstrates a knowledge of the procedures restricting the movement of vessels during emergency operations.	2		
815	Demonstrates the required standard of local knowledge to incident information when prosecuting SAR operations.	3-		
816	Demonstrates a knowledge of exercise planning.	2		

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² **Minimum Level**

This is the *minimum* level which a Watch Officer is expected to reach by the end of their training.

A level of "3-" means that the jobholder has the theoretical knowledge of the subject to level 3, but may be lacking the operational experience to necessarily deal with situations encountered on own initiative.

SECTION 5

REVIEW & INSPECTION RECORDS

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SECTION 5 REVIEW & INSPECTION RECORDS

INTRODUCTION

The Line Manager

Every line manager has a responsibility for staff training and development. It is important therefore that the trainee Watch Officer is closely monitored throughout.

Satisfactory completion of each and every task, exercise or project must be endorsed by a competent Officer and the Line Manager kept up to date with progress.

It is important that the Line Manager is involved with the training throughout and they should review and comment on the trainee's progress on a monthly basis.

Section 5.1 of the Workbook provides space for the LM's comments to be recorded.

The District Controller

The District Controller has the overall responsibility for ensuring that all work is carried out and that line managers and supervising Officers are aware of their responsibilities towards the trainee.

The immediate responsibility for the control and monitoring of the trainee's progress will normally be delegated to the trainee's line manager. However, DCs should inspect the Workbook quarterly to satisfy themselves that the training is on line and the overall standard on final assessment will meet the requirements of both the District and the Agency.

Section 5.2 of the Workbook provides space for DC's comments to be recorded.

Workbook Completion Certificate

When the Workbook has been finished, the certificate in Section 5.3 should be completed by the DC and a copy sent to the Training Centre.

It is important that the Training Centre receive this confirmation of Workbook completion prior to the trainee attending the Part 5 examination course.

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5.1 LINE MANAGER'S MONTHLY REVIEW

Line Managers should review the Workbook and comment on the trainee's progress monthly.

MONTH 1	
Signature: _____	Date: _____

MONTH 2	
Signature: _____	Date: _____



MONTH 3	
Signature: _____	Date: _____

MONTH 4	
Signature: _____	Date: _____

MONTH 5	
Signature: _____	Date: _____



MONTH 6	
Signature: _____	Date: _____

MONTH 7	
Signature: _____	Date: _____

MONTH 8	
Signature: _____	Date: _____



MONTH 9	
Signature: _____	Date: _____

MONTH 10	
Signature: _____	Date: _____

MONTH 11	
Signature: _____	Date: _____

5.3 WORKBOOK COMPLETION CERTIFICATE

- Please send a copy of this page to the MCA Training Centre when completed



This is to certify that

has satisfactorily completed the
MSAR(I) WORKBOOK

at

Signed _____

District Controller _____ District

Dated _____

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附錄四 德國救生艇協會簡介、救助艦艇專業訓練及語言訓練課程



Deutsche Gesellschaft zur Rettung Schiffbrüchiger
German Sea-Rescue Service

THE GERMAN MARITIME SAR-SERVICE

MARITIME SEARCH AND RESCUE IN GERMANY

In 1979 the **Hamburg International Conference on Maritime Search and Rescue** of the **International Maritime Consultative Organisation (IMCO)**, today's **IMO**, had drafted the final version of the International Convention on Maritime Search and Rescue which was adopted by the assembly of the organization the same year. The Federal Republic of Germany ratified the convention in 1982. The convention came into force in 1985.

Under the SAR-Convention signatories shall

- * ensure necessary arrangements are made for the provision of adequate SAR services for persons in distress at sea around their coasts (Annex, chapter 2.1.1),
- * establish SAR regions by agreement among parties concerned (Annex, chapter 2.1.4),
- * co-ordinate their SAR organizations and, whenever necessary, co-ordinate SAR operations with those of neighbouring states (Annex, chapter 3.1.1),
- * unless otherwise agreed between the states concerned, a party should authorize ... immediate entry into or over its territorial sea or territory of rescue units of other parties solely for the purpose of searching for the position of maritime casualties and rescuing the survivors of such casualties (Annex, chapter 3.1.3),
- * enter into SAR agreements with neighbouring states regarding the pooling of facilities, establishment of common procedures, conduct of joint training and exercise, regular checks of interstate communication channels, liaison visits of RCC personnel, and the exchange of SAR information (Annex, chapter 3.1.8).

In Germany, at the time of ratification in 1982 the **Deutsche Gesellschaft zur Rettung Schiffbrüchiger (DGzRS, German Sea Rescue Service)** had historically developed to be the only body to deal with maritime search and rescue. The institution had been founded as early as 1865. The founders comprised of 120 delegates of numerous smaller local rescue societies who met in the city of Kiel to form one uniform rescue organization/service for the German coasts in the North Sea and in the Baltic Sea.

.../2

The scope of the **German Sea Rescue Service**, as laid down by the founders of it and still valid today is

to implement, to promote and to maintain an efficient maritime SAR service in the coastal waters and on the high seas; to further the ideal of selfless commitment to saving human lives at sea and thereby promoting the international solidarity by human action.

The Federal Minister of Transport in March 1982 officially entrusted the **German Sea Rescue Service** with the performance, on his behalf, of maritime search and rescue in accordance with regulation 15 of chapter V of the 1974 **International Convention for the Safety of Human Life at Sea** and the 1979 **International Convention on Maritime Search and Rescue**, both parties being aware that the **GSR**S would continue to act as a private, independent and voluntary institution (i.e. without any governmental support), but especially with regard to the organisation, conduct and planning of SAR service would be subjected to the appropriate regulations of the **SAR Convention**.

The national Ministries of Transport and Defense had as early as 1979 agreed on SAR co-operation.

In October 1990, after reunification of Germany, the **GSR**S was recharged with its pre-1939 responsibilities for maritime search and rescue in the SAR region of the former German Democratic Republic. Through tremendous efforts and considerable investments the Institution, after only an elapse of three years, has achieved, again without any governmental aid, the same extraordinary high technical standard in that portion of the German SAR region as had been common in the western portion of the region for decades.

The **Maritime Rescue Co-ordination Center (MRCC)** in Bremen is the backbone of the Institution. It is from there that SAR missions are initiated, coordinated and finally almost always successfully terminated. SAR missions are carried out on the basis of the national SAR operation plan of the Institution.

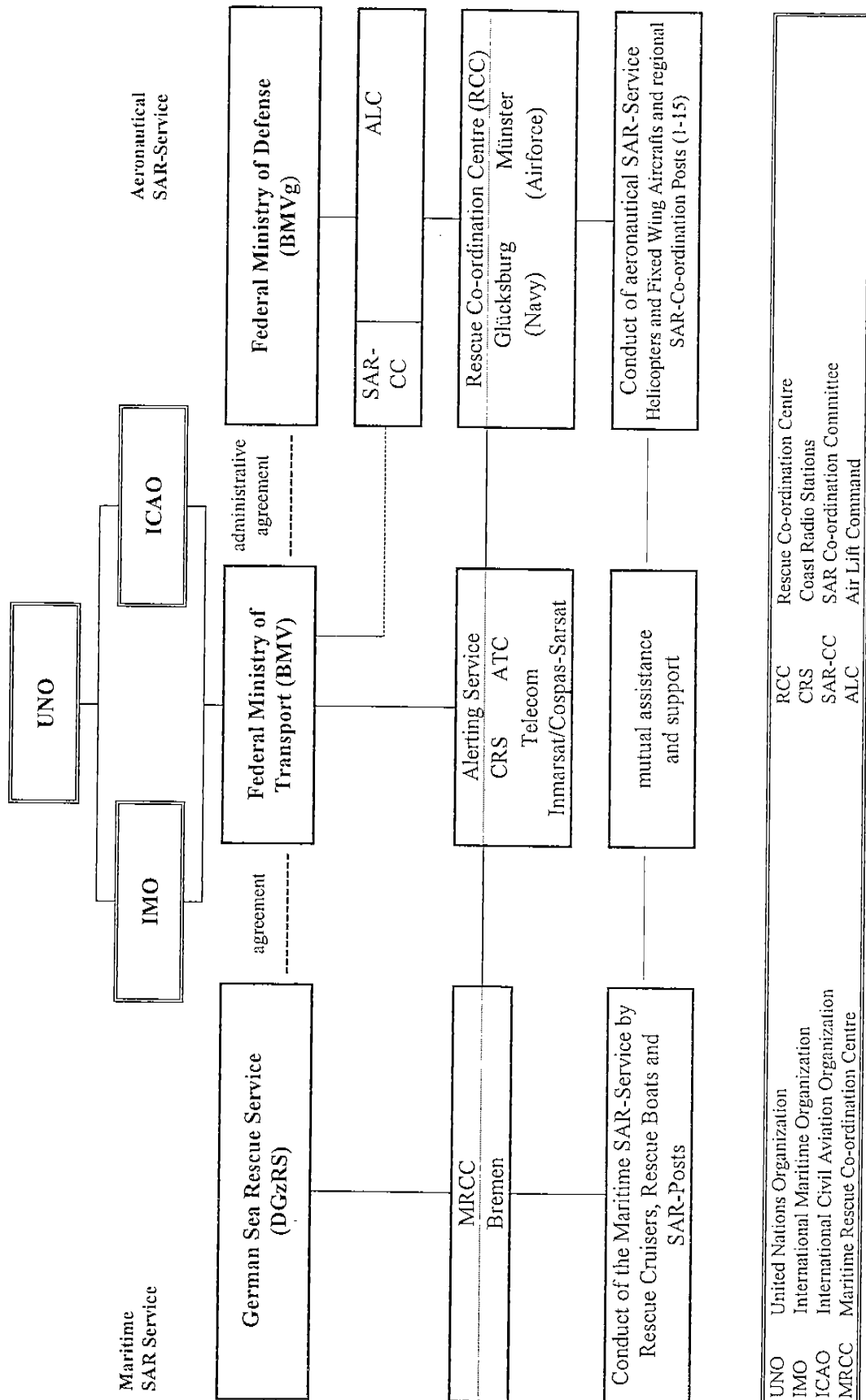
The communications system behind those missions is the modernmost one can think of. It consists of HF radio and VHF radio, both with public and private frequencies, three different telephone systems, DATEX-P, telex machines and telefax. A direct INMARSAT alert line gives access to the German land earth station at Raisting, twentyfour hours a day. Search and rescue missions are computer aided.

2/...

All MRCC controllers hold the foreign going masters license., i.e. the highest grade of the German merchant navy. They all regularly participate in not only special SAR training on rescue units of the Institution but also in SAR training courses of both the UK and US Coast Guard, and thus maintain a very high standard of special education. There is a frequent exchange of controllers with MRCCs of the SAR services of neighbouring countries.

* * *

THE ORGANIZATION OF THE GERMAN SAR-SERVICE



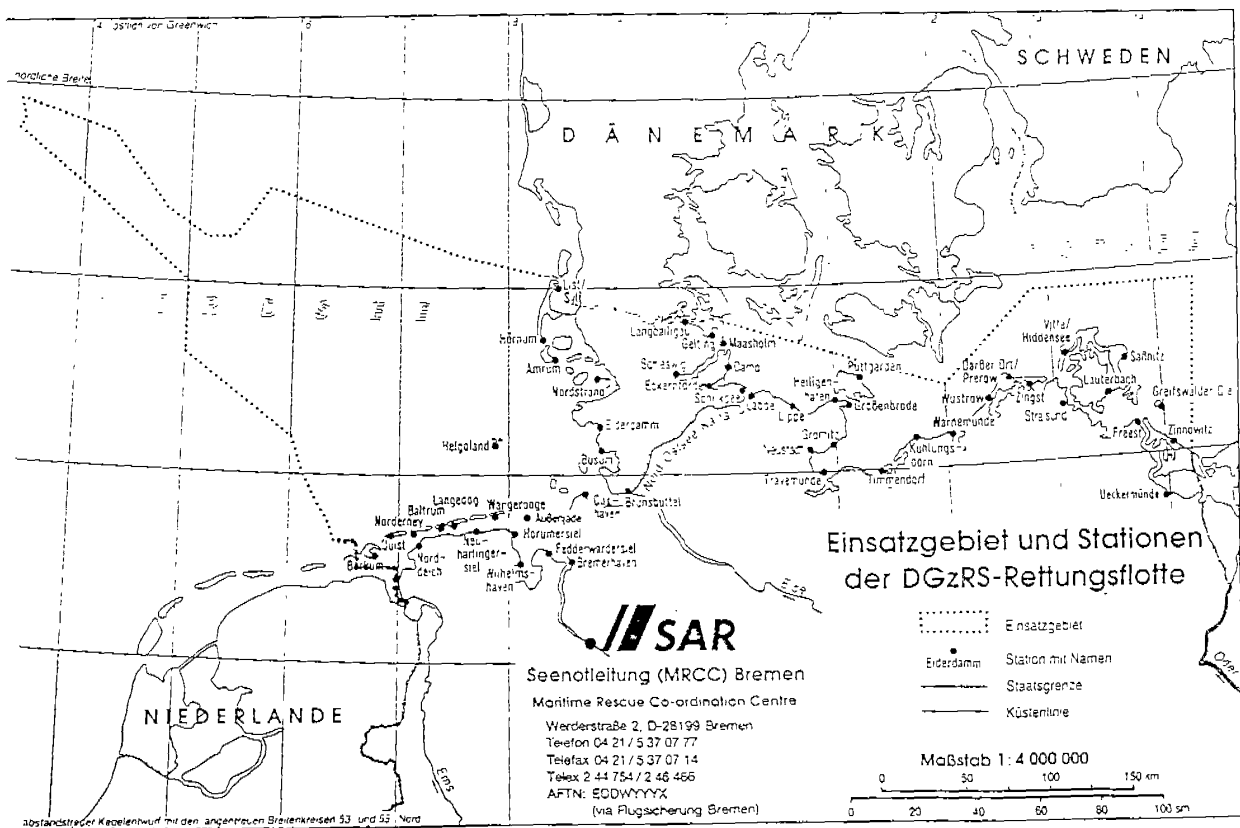
- | | | | |
|------|---|--------|-----------------------------|
| UNO | United Nations Organization | RCC | Rescue Co-ordination Centre |
| IMO | International Maritime Organization | CRS | Coast Radio Stations |
| ICAO | International Civil Aviation Organization | SAR-CC | SAR Co-ordination Committee |
| MRCC | Maritime Rescue Co-ordination Centre | ALC | Air Lift Command |

The Maritime SAR-Region (SRR) of Germany

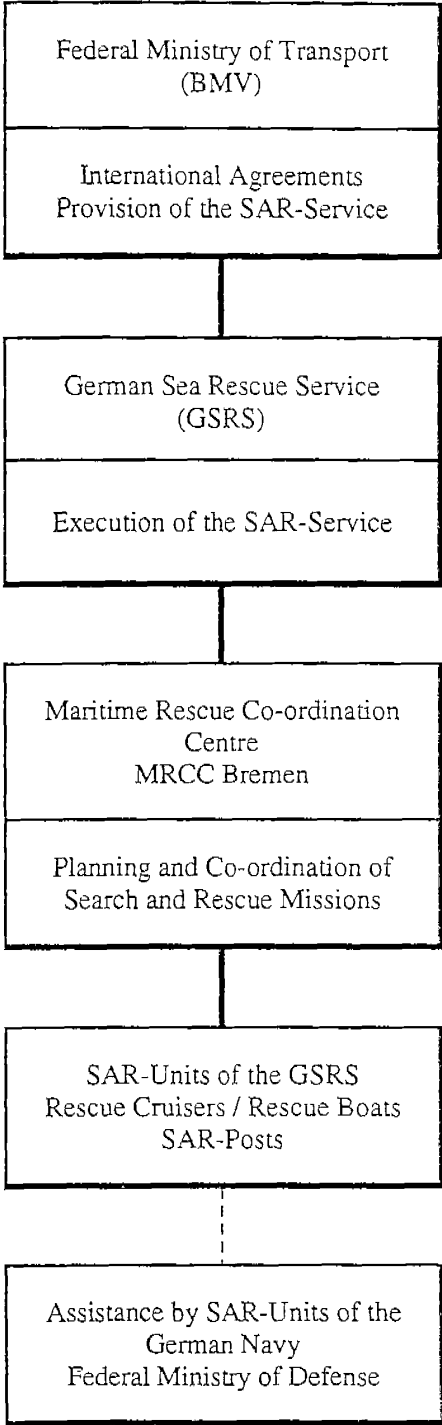
In April 1979 the "International Conference on Maritime Search and Rescue" was held in Hamburg. The Assembly of the International Maritime Organisation (IMO) adopted the "Convention on Maritime Search and Rescue" and elaborated the "IMO Search and Rescue Manual (IMOSAR)". This manual contains guidelines about how to provide and maintain SAR-services in a most efficient way in the interest of international shipping and safety. In 1982 the Federal Republic of Germany ratified the IMOSAR-Convention and it came into force on June 22, 1985.

In March 1982 an agreement between the Ministry of Transport and the German Sea Rescue Service was signed. According to this agreement the execution and co-ordination of maritime search and rescue (within the SAR-region of the Federal Republic of Germany) was handed over to the GSRS. It was also stated that the status of the GSRS will remain unchanged, i.e. a private, independent institution of public utility.

In accordance with IMOSAR the SAR-Region (SRR) of the Federal Republic of Germany is the continental shelf for the North Sea and the Flight Information Regions (FIR) Bremen and Berlin for the Baltic Sea.



The German Maritime Search and Rescue Service



**GOVERNMENTAL AND OPERATIONAL
SAR AGREEMENTS
BETWEEN GERMANY AND IST NEIGHBOURS
IN ACCORDANCE WITH THE 1979 SAR CONVENTION**

GOVERNMENTAL AGREEMENTS BETWEEN RESPECTIVE STATES			OPERATIONAL AGREEMENTS BETWEEN RESPECTIVE RCCs	
Country	Character	Date	Date	Charakter
<u>DENMARK</u>	maritime SAR	05-06-92	25-05-93 03-03-94	maritime SAR aviational SAR
Agreement by exchange of letters on a ministerial level				
<u>United Kingdom</u>	maritime and aviational SAR	27-04-94	13-10-94	maritime SAR
MoU on co-operation on a ministerial level				
<u>Netherlands</u>	maritime SAR	19-08-94	07-02-97	maritime SAR
MoU on co-operation on a ministerial level				
<u>Sweden</u>	maritime and aviational SAR	27-03-95	25-07-95	maritime and aviational SAR
Agreement on a governmental level				
<u>Poland</u>	- under consideration -		05-03-92 26-04-93	aviational SAR maritime SAR

The German Maritime Search and Rescue (SAR) Service

1. The German Sea Rescue Service (GSRS - DEUTSCHE GESELLSCHAFT ZUR RETTUNG SCHIFFBRÜCHIGER) is accomplishing the national maritime SAR service.
(by agreement with the Department of Transport - March 11, 1982)
2. MRCC Bremen, an integral branch of the GSRS, is responsible for planning and co-ordination of maritime search and rescue activities within the German SAR region (SRR).
(by agreement with the Department of Transport - March 11, 1982)
3. The maritime SAR service of the GSRS is complemented by the military SAR service. In return the GSRS is supporting the military SAR service in the event of aircraft distress.
RCC Glücksburg (German Navy) is the responsible SAR coordination centre in case of aeronautical distress at sea.
(by agreement between the Departments of Transport and Defence - April 1979)
4. The GSRS is nominated as "Regional SAR Coordination Post No. 8" for aeronautical SAR.
(by order of the Department of Transport - March 1953)
5. The GSRS is a member of the 'Katastrophenstab' North Sea and Baltic Sea (Maritime Disaster Management) in case of major shipping accidents.
(by agreement with the Department of Transport - March 11, 1982)
6. The GSRS was appointed by the German Chancellor Ludwig Erhardt to act in accordance with the Geneva Convention if required - March 18, 1964.
7. Within its technical limits and provided that there is no actual SAR case, the GSRS declares participation in the coastal maritime fire-fighting system.
(by agreement with the Department of Transport - May 12, 1978)
8. MRCC Bremen is acting as the national NAVTEX co-ordinator for SAR relevant messages.
(by order of the Department of Transport - December 12, 1991)
9. As part of the GMDSS, MRCC Bremen is the responsible rescue co-ordination centre for distress alerts transmitted via the INMARSAT satellites Atlantic Ocean Region East and Indian Ocean Region, received by Land Earth Station (LES) Raisting, Germany. There is a direct link between LES Raisting and MRCC Bremen.
10. Holding the national database, MRCC Bremen is the declared SAR point of contact (SPOC) for German MMSI and EPIRB code numbers.
11. MRCC Bremen is taking part in the Emergency Response Service (ERS) of the classification society Germanischer Lloyd, as required by MARPOL and the Oil Pollution Act (OPA 1990) - July 01, 1994.
12. Admission as SafetyNet (EGC) provider for SAR messages is in preparation.

The coast radio stations, operated by German TELEKOM, are monitoring the emergency frequencies, pass on possible alerts to MRCC Bremen and carry out emergency broadcasts.

Following SOLAS requirements, all navy craft, vessels of the different authorities as well as the national and international shipping are rendering valuable support to the GSRS, helping to fulfill the obligations.

**Agreement between the Federal Ministry of Transport (BMV)
and the German Sea Rescue Service (DGzRS) on the
enforcement of the Maritime Search and Rescue Service**

With reference to obligations of the Federal Republic of Germany to provide a search and rescue service, required in cases of maritime distress - Section 1, No. 7 of the law on governmental responsibilities of the Federal Republic for maritime affairs, as published in the notification of the amended version of the law on June 30, 1977 (BGBL. I. p.1314) - the Federal Ministry of Transport and the German Sea Rescue Service have concluded the following agreement:

Section 1

(1) The Federal Ministry of Transport (Bundesministerium für Verkehr - BMV) entrusts the German Sea Rescue Service (DGzRS) with the execution of the search and rescue service, in order to assist persons in distress at sea - in accordance with Chapter V, Regulation 15, of the Annex to the International Convention for the Safety of Life at Sea (SOLAS 1974) - in the areas of the North Sea and the Baltic Sea as designated by the BMV.

(2) Both parties understand that the GSRS shall continue to carry out the search and rescue service independently and voluntarily as a private institution of public utility, using its own fund.

(3) The GSRS accepts the regulations of the International Convention on Maritime Search and Rescue (1979) as compulsory, particularly the rules regarding organization, operation and planning.

Section 2

(1) For the conduct of the search and rescue service the GSRS operates the Maritime Rescue Co-ordination Centre (MRCC) Bremen. The execution of search and rescue activities will be carried out according to a SAR Operation Plan to be set up by the GSRS.

(2) In case of maritime distress the GSRS will co-ordinate search and rescue operations. Duties and responsibilities assigned to maritime authorities will remain unaffected.

Section 3

For exceptionally serious accidents, oil pollution and disasters, a Central Reporting Office (Zentraler Meldekopf - ZMK) has been established at the Cuxhaven Waterway and Shipping Board. The headquarters for the co-ordinating team in case of maritime disasters in the North Sea (at the Cuxhaven Waterway and Shipping Board) and in the Baltic Sea (at the Lübeck Waterway and Shipping Board) have been set up. The GSRS is a member of both coordinating staff. In case of an oil spill the GSRS shall be alerted by the ZMK if human life is endangered.

Section 4

The FMT and the GSRS shall meet if required, usually once a year, to exchange and evaluate experiences, which serve to improve the search and rescue service for the purposes of this agreement. The FMT shall be the national body for the overall co-ordination as defined by Chapter 2, No.2.2.2. of the Annex to the International Convention on Maritime Search and Rescue (1979).

Hamburg, March 11, 1982

History of the German Sea Rescue Service

In 1865 the GSRS was founded by 120 delegates from small local rescue societies who met at Kiel/Germany. A uniform and overall rescue service for the German Baltic and North Sea coastline was created.

The ideas of the founders are still valid today:

to implement, promote and maintain search and rescue facilities for the coastal waters and at sea;

the ideal of selfless commitment to save human lives, promoting international understanding by humane action.

At the beginning of the 20th century there were appr. 100 rescue stations along the German coast operated by far more than 1000 voluntary men. They were equipped with rowboats, sailing-boats, rocket line-throwing devices and breeches buoys.

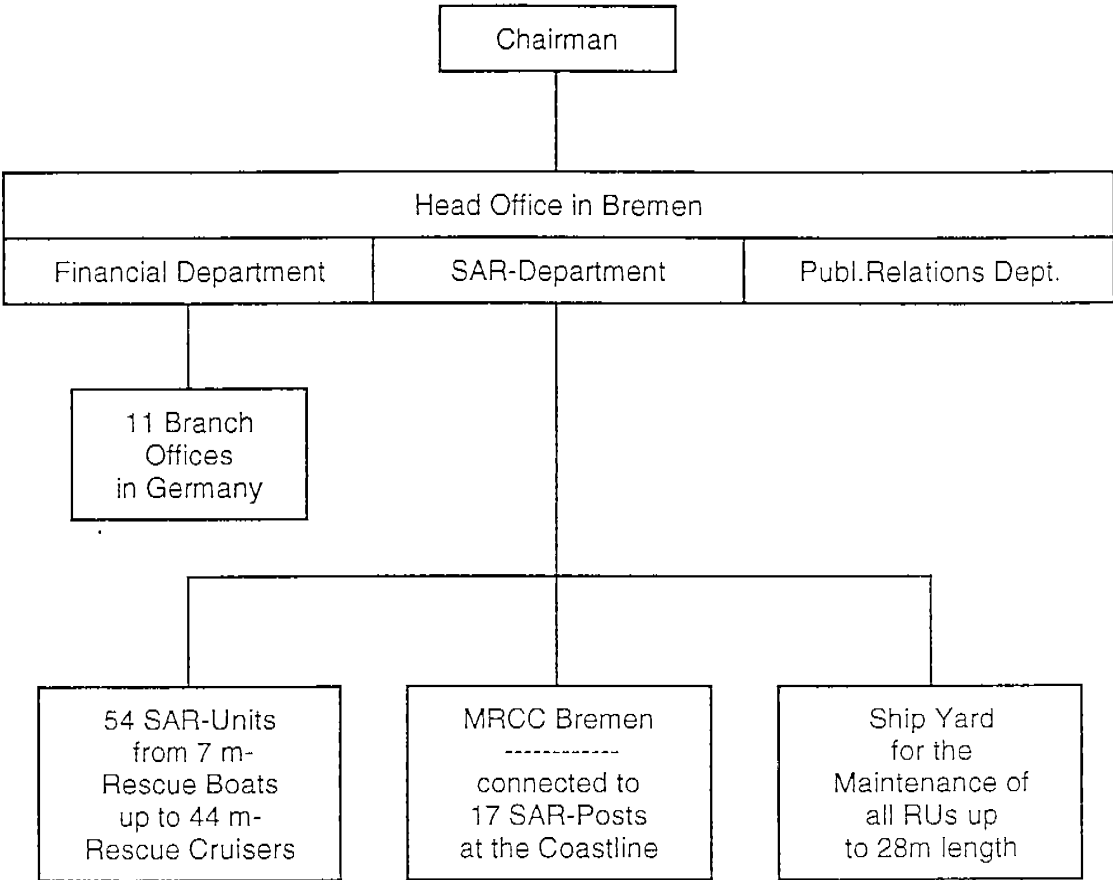
These days the same service is provided much more efficiently by 54 modern search and rescue units on a high technical standard, operated by half the number of people.

The duties of our rescue service today are:

1. to rescue persons from distress at sea;
2. to search for missing persons and vessels;
3. to transport sick and injured persons, rendering first aid;
4. to assist ships and aircraft in case of distress at sea;
5. to prevent impending accidents and emergencies at sea
6. to co-ordinate search and rescue missions.

The GSRS is a private institution which is supported and operated only by private donations without any financial aid from the government.

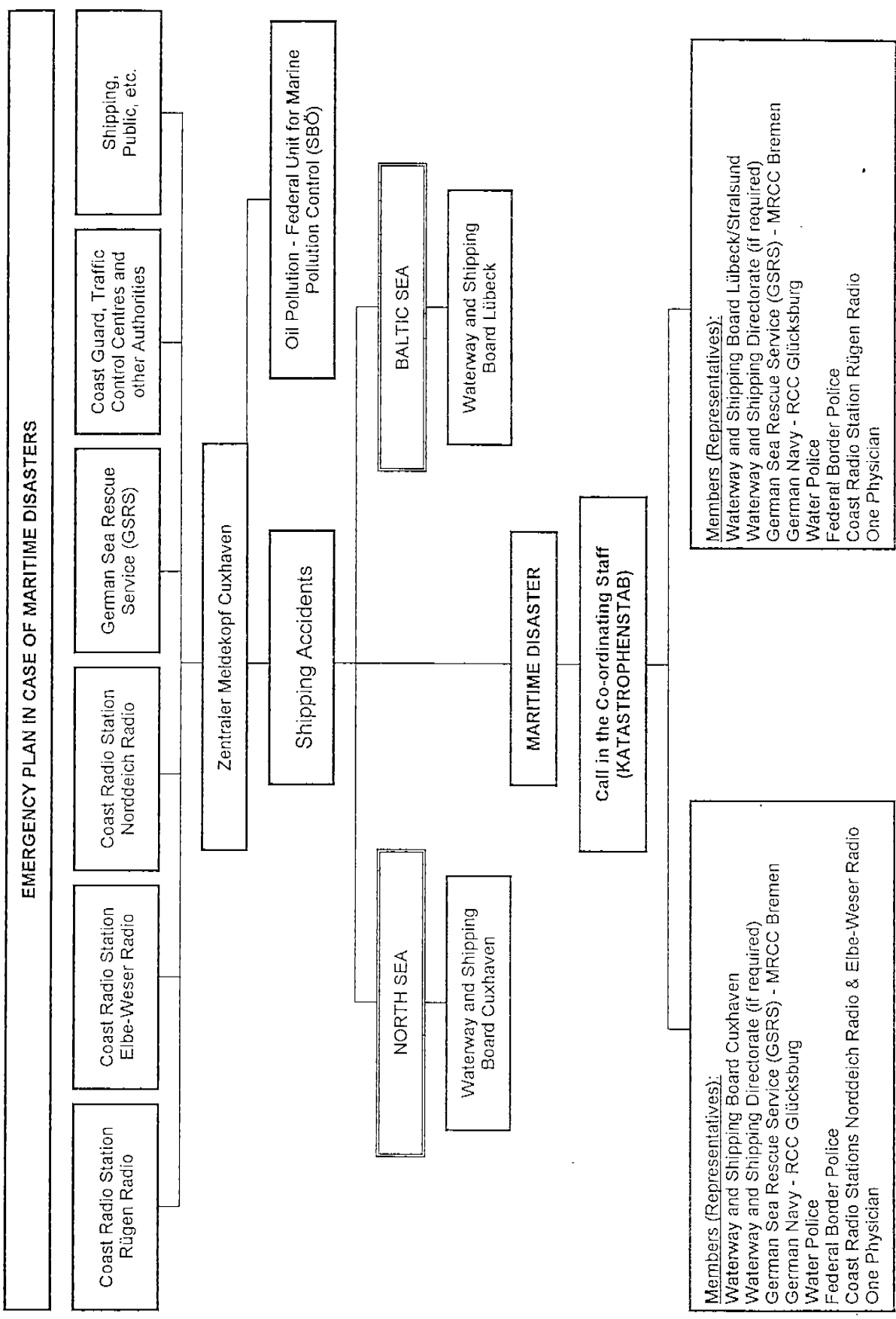
Organization of the German Sea Rescue Service



SAR = Search and Rescue
 MRCC = Maritime Rescue Co-ordination Centre
 RU = Rescue Unit

Number of Employees in the SAR-Service:

Head Office	:	10	
Crewmembers	:	170	19 rescue cruisers
		600 volunteers	35 rescue boats
MRCC	:	13	
Ship Yard	:	13	



Seenotleitung (MRCC) Bremen

(MRCC = Maritime Rescue Co-ordination Centre)

The Maritime Rescue Co-ordination Centre Bremen is part of the SAR- department in the head office.

In cases of maritime distress within the German SAR-region, MRCC Bremen is responsible for planning, co-ordination, control and documentation until the operation is completed. All SAR-units are in constant VHF contact to MRCC Bremen using the GSRs's own SAR-communication system (SARCOM). The MRCC is also connected to 17 SAR-posts along the German coast.

In cases of aeronautical distress RCC Glücksburg, which is part of the German Navy, is the responsible and co-ordinating agency. The rescue centres are connected by a direct and independant telephone line and both SAR-services agreed on mutual support.

All maritime search and rescue activities are carried out in accordance with a SAR-operation plan issued by the GSRs. This plan contains all information about the maritime SAR-service in the German SAR-region.

There is a good and close co-operation between MRCC Bremen and the RCCs of other countries. A regular of staff exchange with the RCCs in neighbouring countries is common practice.

All controllers of MRCC Bremen are in possession of the German merchant marine master's licence (highest grade). They all participate frequently in SAR-courses held by the U.K. Coastguard Agency (HMCG), U.S. Coastguard and in special training aboard our rescue cruisers.

The equipment of MRCC Bremen includes:

- SARCOM (VHF relay communication system, exclusively for the GSRs)
- VHF incl. both private and public frequencies
- MF/HF transceivers working on private and public frequencies
- Three different telephone systems with 10 public lines
- An independent and direct telephone link to RCC Glücksburg
- Direct connection to LES Raisting (INMARSAT Land Earth Station) for the reception of INMARSAT-E alerts (via dataline), INMARSAT Standard-A (via telephone) and Standard-C alerts (via telex)
- Dataline to the German Hydrographic Office for actual drift calculation
- National EPIRB database
- Computer-aided SAR- planning and record keeping
- 12-track tape machine for the documentation of all calls
- NAVTEX receiver
- Two telex machines
- One telecopier

Tasks and Responsibilities of the German Sea Rescue Service and MRCC Bremen

TASK	ASSIGNED BY	FOUNDED ON
Coordination of maritime SAR cases	Federal Ministry of Transport	1. Agreement FMT / GSRS 2. IMOSAR 3. SOLAS convention
Support of RCC Glücksburg in case of aircraft distress at sea	Federal Ministry of Transport	Administrative agreement FMT / FMD
Regional SAR Coordination Post in case of aeronautical distress	Federal Ministry of Transport Federal Ministry of Defence	1. ICAO convention 2. Order of FMT
Medical support and evacuation	Federal Ministry of Transport	1. SOLAS convention 2. International Labour Organization
Investigation on request for foreign RCCs / MRCCs	Foreign SAR services	1. IMOSAR 2. Governmental SAR agreements 3. Operational SAR agreements
National NAVTEX coordinator for SAR messages	Federal Ministry of Transport	1. IMO / GMDSS requirements 2. Agreement FMT / Minister of Transport of the Netherlands
SAR Point of Contact (SPOC) National EPIRB database	Federal Ministry of Transport	IMO requirements
Associated RCC for LES Raisting	Federal Ministry of Transport	IMO / GMDSS requirements
Membership of the GSRS in the Katastrophenstab North Sea and Baltic Sea (Maritime disaster)	Federal Ministry of Transport	Agreement FMT / GSRS
Emergency Response Service (ERS)	Germanischer Lloyd (Classification Society)	1. IMO / MARPOL recommendation 2. Oil Pollution Act (OPA) 1990
Management of GSRS owned SAR units	GSRS SAR department	Administration, statistics, documentation and accountancy
SafetyNet Provider Broadcast of SAR messages (EGC) via INMARSAT	Federal Ministry of Transport	IMO / GMDSS requirements
In preparation:		
(implementation 01.01.1999) permanent radio watch Ch. 16/70 conducting of urgency/safety/distress traffic concerning SAR-matters	Federal Ministry of Transport	Agreement FMT / GSRS

SAR-Units of the German Sea Rescue Service

The fleet of the GSRS consists of 55 SAR-units:
20 rescue cruisers with daughter boats and 35 rescue boats.

Four of the rescue boats are kept on trailers to be prepared for mobile operation either at the seaside or in the shallow inshore waters of the eastern parts of Germany.

22 rescue units are stationed in the North Sea, 33 in the Baltic. There is a total of 51 rescue stations of which three, located at the Western Baltic Sea, are provided with two units in order to handle the high number of boats and yachts in these areas, especially during the summer season.

Each rescue cruiser is manned with a full-time paid crew and is ready for immediate action 24 hours a day. The rescue boats, which are seaworthy, self-righting and self-bailing, are operated by volunteers.

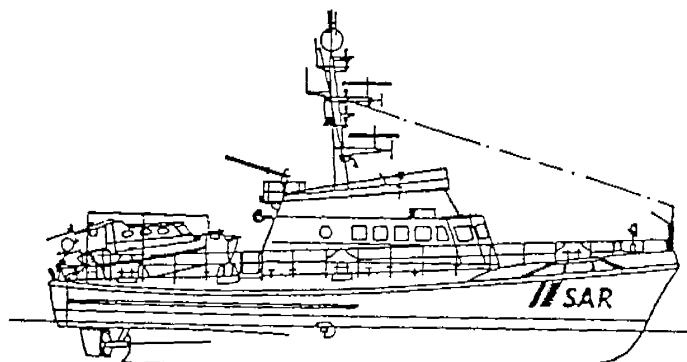
All rescue units are fitted with equipment on high technical standard, e.g. all rescue cruisers are equipped with a powerful fire-fighting gear. The versatile possibilities of communication and direction-finding make these units especially suitable for assistance in cases of ship and aircraft disasters at sea.

All crewmembers of the rescue cruisers are frequently trained in medical aid, ship safety, OSC-tasks (on scene commander) etc.. They regularly attend training courses offered by different hospitals to become familiar with the treatment of injured and sick persons and the handling of the medical equipment aboard. This equipment includes a telemetric device which is able to transmit a patient's ECG to the Cuxhaven hospital serving as reliable basic information for the doctor.

As an example the following page shows the figures and technical data of rescue cruiser "NIS RANDERS", stationed at Maasholm/Baltic Sea, and of one of the 8,5m-class rescue boats, "OTTO BEHR", stationed at Wilhelmshaven/North Sea.

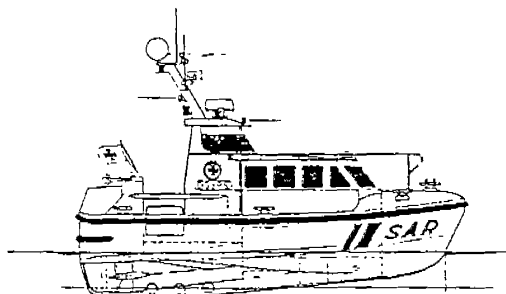
23M-CLASS RESCUE CRUISER „NIS RANDERS“

	RESCUE CRUISER	DAUGHTERBOAT
LENGTH	23,30 m	7,07 m
BREADTH	5,50 m	2,62 m
DRAUGHT	1,40 m	0,80 m
DISPLACEMENT	66 t	3,50 t
ENGINE POWER	2 x 715 kW	121 kW
SPEED	20 kn	20 kn
PROPELLER	2	1
ENDURANCE	1500 nm at 10 kn	













8,5M-CLASS RESCUE BOAT „OTTO BEHR“

	RESCUE BOAT
LENGTH	8,52 m = 27.9 ft
BREADTH	3,12 m = 10.2 ft
DRAUGHT	0,93 m = 3.1 ft
DISPLACEMENT	5,0 t
ENGINE POWER	162 kW
SPEED	1
PROPELLER	150 nm at 17 kn
ENDURANCE	



SAR - UNITS OF THE GERMAN SEA RESCUE SERVICE

 <p>JOHN T. ESDERGER WILHELM KAISEN</p> <p>Länge 44,20 m, Breite 8,05 m, Tiefgang 2,75 m, drei Propeller 1350 - 4500 - 1350 = 7200 PS, Funk, Echolot, Radar, Funkpeiler, GPS, Decca, Homing, Selbststeueranlage, Feuerlösch- und Fremdlanzanlage, Hubschraubenantrieb, Hospital, Verdrängung 185 t Geschwindigkeit 28 Knoten Tachterboot Länge 8,80 m, Breite 2,70 m, Tiefgang 0,90 m, 150 PS Geschwindigkeit 13 Knoten</p>	 <p>PAUL DENKER</p> <p>Länge 16,80 m, Breite 3,80 m, Tiefgang 1,35 m, ein Propeller 665 PS, Funk, Echolot, Radar, Feuerlösch- und Fremdlanzanlage, Verdrängung 28 t Geschwindigkeit 15 Knoten Tachterboot (Schlauch) 1800, 10 Knoten</p>
 <p>BERLIN HERMANN HELMS ALFRIED KRUPP VORMANN STEFFENS ARKONA BREMEN</p> <p>Länge 27,5 m, Breite 6,50 m, Tiefgang 1,65 m, drei Propeller 781 - 1637 - 781 = 4491 PS, Funk, Echolot, Radar, Funkpeiler, GPS, Decca, Homing, Selbststeueranlage, Videosplitter, 2200 W, Verdrängung 100 t Geschwindigkeit 24 Knoten Tachterboot Länge 7,50 m, Breite 2,50 m, Tiefgang 0,75 m, 165 PS Geschwindigkeit 17 Knoten</p>	 <p>WILHELM HÜBOTTER CARL A. WUPPESAHN WALTHER MÜLLER HORNUM ARTHUR MENGE</p> <p>Länge 9,00 m, Breite 2,70 m, Tiefgang 0,90 m, ein Propeller, Motorleistung 150 PS, UKW-Seelink, Radar, Echolot, GPS, Fremdlanzpumpe, Bergungssplorte, Verdrängung 5 t Geschwindigkeit 13 Knoten</p>
 <p>EISWITTE FRITZ BEHRENS MINDEN VORMANN LEISS NIS RANDERS VORM. JANTZEN HANNES GLOGNER</p> <p>Länge 23,30 m, Breite 5,64 m/5,50 m, Tiefgang 1,70 m, zwei Propeller, je 1038/972 PS = 2076/1944 PS, Funk, Echolot, Radar, Decca, Funkpeiler, GPS, Homing, Selbststeueranlage, Fremdlanzanlage, Hospital, Feuerlöschanlage 60 V/66 l Geschwindigkeit 20 Knoten Tachterboot Länge 7,00 m, Tiefgang 0,60 m, 165 PS Geschwindigkeit 17 Knoten/20 Knoten</p>	 <p>ASMUS BREMER MARIE LOISE RENDT FRANZ STAPFELDT GUNTHER SCHÖPS GERHARD TEN DOORNKAAT KARL VAN WEL DOORNBUSCH CASSEN KNIGGE OTTO BEHR HELLMUT MANTHEY HERMANN ONKEN JENS FUERSCHIPP PUTBUS JUST CREMPE</p> <p>Länge 8,52/8,28 m, Breite 3,10 m, Tiefgang 0,90/0,88 m, ein Propeller, Motorleistung 220/180 PS, UKW-Seelink, Decca Navigator, Radar, Echolot, GPS, Fremdlanzpumpe, Bergungssplorte, Verdrängung 5,0/4,5 t Geschwindigkeit 18 Knoten</p>
 <p>OTTO SCHÜLKE HANS LÜKEN H. J. KRATTSCHKE G. KUCHENBECKER</p> <p>Länge 18,90 m, Breite 4,30 m, Tiefgang 1,40 m, ein Propeller 830 PS, Funk, Echolot, Radar, Funkpeiler, GPS, Decca, Kreisstrahlgerät, Selbststeuer-, Feuerlösch- und Fremdlanzanlage, Verdrängung 35 t Geschwindigkeit 18 Knoten Tachterboot Länge 5,50 m, Tiefgang 0,50 m, 54 PS Geschwindigkeit 8 Knoten</p>	 <p>TAMINA SWANTJE MÖVENHÖRT MAX CARSTENSEN ELTJE KAATJE NORDDIECH SUDPERD</p> <p>Länge 7,90 m, Breite 2,34 m, Tiefgang 0,60 m, ein Propeller, Motorleistung 54 PS, UKW Seelink, Echolot, GPS, Bergungssplorte, Verdrängung 2 t Geschwindigkeit 10 Knoten</p>
 <p>ZANDER HIECHT BARSCH BUTT</p> <p>Länge 7,00 m, Breite 2,50 m, Tiefgang 0,50 m, Motorleistung 220 PS auf pp-Jet, Decca Navigator, Radar, Echolot, GPS, Fremdlanzpumpe, Verdrängung 3,1 t Geschwindigkeit 20 Knoten Mobile Station, Transport auf Spezialrader hinter Urmogul U 2150 L</p>	 <p>SIEGFRIED BOYSEN EDUARD NEBELTHAU</p> <p>Länge 12,20 m, Breite 3,00 m, Tiefgang 1,00 m, ein Propeller 240 PS, UKW-Sprechfunk, Echolot, Radar, Verdrängung 10 t Geschwindigkeit 15 Knoten</p>

THE NEW RESCUE CRUISER UNDER GAS PROTECTION

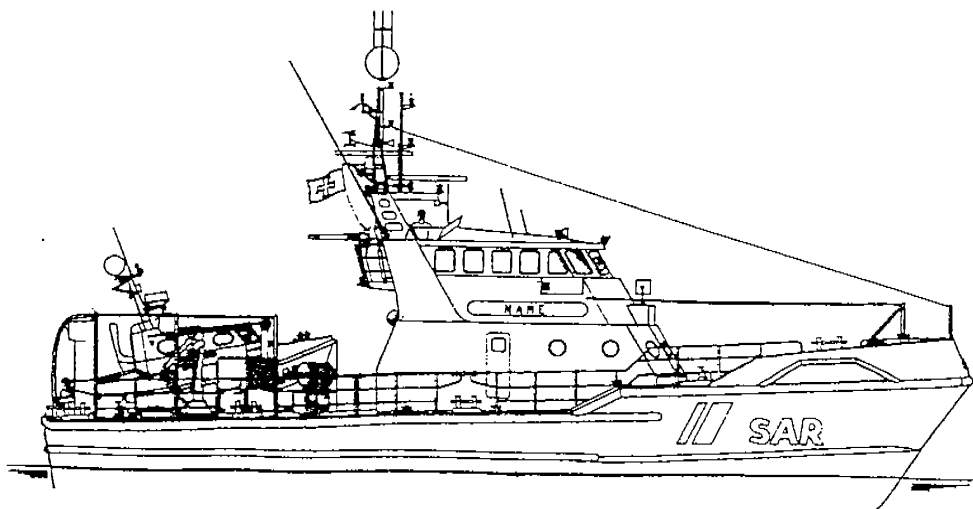
In the past several ship accidents involving dangerous atmospheres occurred in German waters. Crews, especially those of SAR units, came into imminent danger. Toxic agents, explosives, explosive mixtures and other dangerous chemicals were set free after accidents at sea, on rivers or in harbours. These dangerous atmospheres threatened crews and under certain circumstances also people ashore.

With the increasing transportation of dangerous goods the work of the SAR crews has become more difficult. Having a fair look into this matter we have to recognize that an engagement of SAR units under dangerous atmospheric conditions is impossible. An unsolvable problem ?!

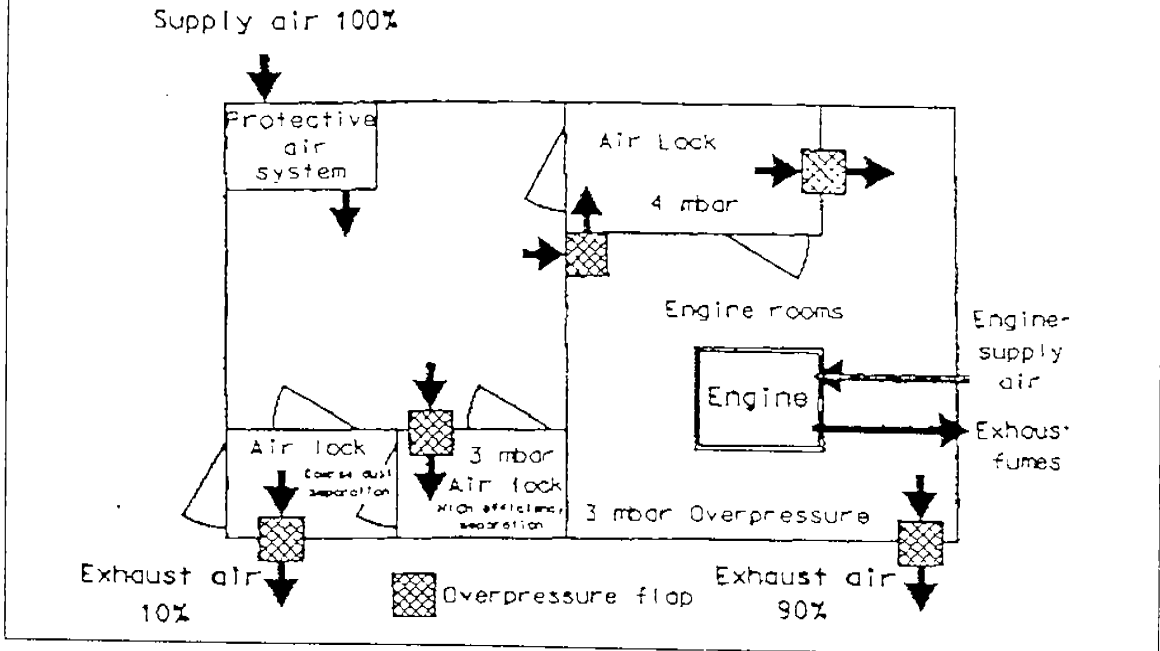
We think that everyone is of the same opinion that the SAR crew is only able to rescue human lives out of a safe position. For this reason the safety of the crew has highest priority.

Therefore the **German Sea Rescue Service** has decided to build four rescue cruisers with a length of 23m and equipped with full gas protection. Delivery of the first unit will take place in summer 1996. Experience in this field was gained by the waterway administration who built and put into service the first ships fully gas-protected. Up to now the experience with these ships is extremely positive.

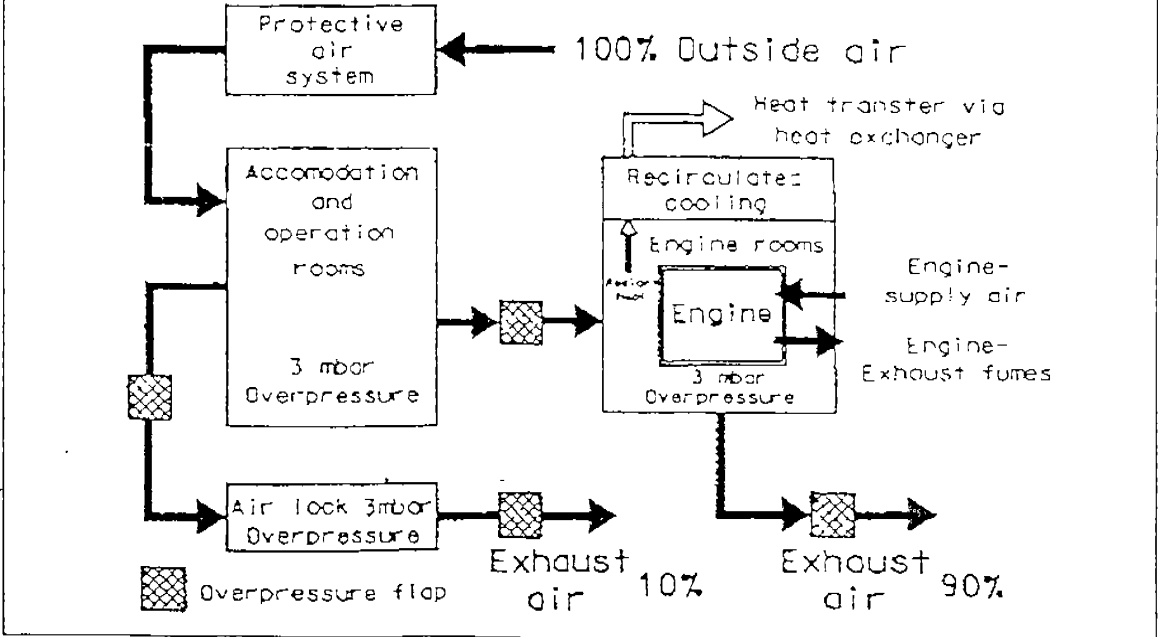
The bridge, crew quarters and the engine room of the new rescue cruisers are planned to be under full protection - called the **citadel principle**. Certainly, under gas-protected conditions, the engines have a reduced output.



Citadel principle



Principle, Protective Air Station



**CO-OPERATION
GERMAN SEA RESCUE SERVICE - GERMAN NAVY**

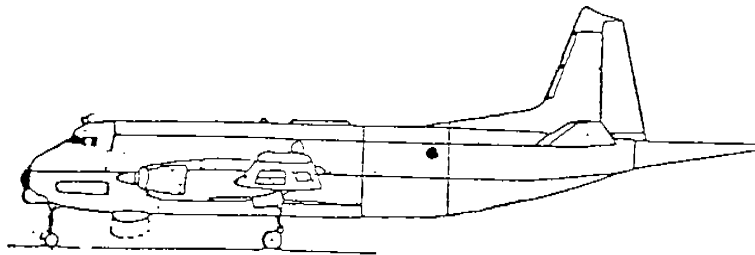
In the German SAR regions in the North Sea and in the Baltic Sea the rescue units of the **German Sea Rescue Service** are in continuous readiness.

In case of distress there is a close co-operation with the military SAR-Service of the German Navy (RCC Gluecksburg).

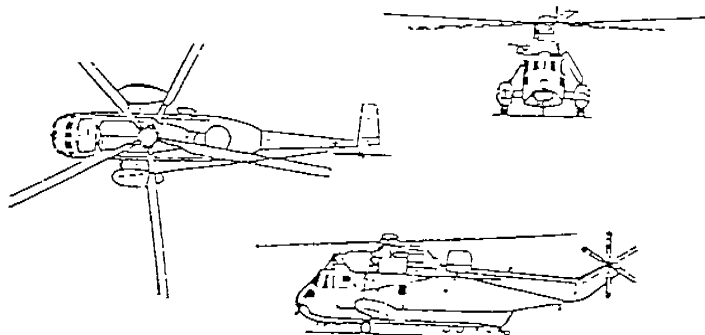
As a main support for SAR missions the German Navy keeps in readiness the helicopter SEA KING MK41 and the aeroplane BREGUET ATLANTIC BR1150.

On request of MRCC Bremen the helicopters and/or the aeroplane can be airborne within a short time to assist in a SAR mission.

BREGUET ATLANTIC BR1150



SEA KING MK41



Exercise BRIGHT EYE / Exercise CO-OPERATIVE BALTIC EYE

All North European nations have agreed to adhere to overall policies, procedures and minimum standards in search and rescue (SAR). To assist the nations and their military, governmental and civil SAR-services within NATO's Northwestern Region and neighbouring nations to comply with the SAR training and collaboration requirements, NATO has agreed to support an annual exercise to test and exercise procedures and facilities necessary for the command, control and co-ordination of SAR resources. This is a medium scale SAR exercise known as **Exercise BRIGHT EYE**.

In addition to the Exercise BRIGHT EYE it is agreed to schedule an annual exercise under coverage of **Partnership for Peace (PfP)** to test and exercise procedures and facilities necessary for the command, control and co-ordination of SAR resources, in order to assist the Baltic nations to comply with international SAR training and collaboration requirements. This is a medium scale SAR exercise known as **Exercise COOPERATIVE BALTIC-EYE**.

The aim of Exercise BRIGHT EYE is to test and exercise procedures and facilities necessary for the command, control and co-ordination of SAR resources; and to exercise those resources. The objectives are:

- to exercise SAR collaboration procedures between neighbouring countries,
- to test means of communication between neighbouring RCCs / MRCCs,
- to test procedures and communications between SAR assets, RCCs / MRCCs and other participating agencies,
- to exercise and refine procedures for inter-regional and cross-boundary collaboration and co-ordination,
- to evaluate and practise emergency liaison procedures between Off-Shore Operators and participating nations,
- to determine search areas, plan searches and conduct searches,
- to exercise rescue operations,
- to improve SAR between participating nations by making recommendations to the appropriate national authorities.

Exercise BRIGHT EYE will be carried out as 3 separate exercises within 3 distinct areas:

BRIGHT EYE NORTH - North Atlantic, Norwegian Sea, Greenland Sea
BRIGHT EYE MIDDLE - North Atlantic, Norwegian Sea, North Sea, Skagerrak
BRIGHT EYE South - North Sea, Channel, Kattegat, Baltic Sea

Participating nations are Belgium, Denmark, Germany, Iceland, Netherlands, Norway, Sweden and the United Kingdom.

The aim of Exercise COOPERATIVE BALTIC-EYE is to develop search and rescue in SAR regions of participating nations further. The objectives are:

- further development of procedures for command, control and co-ordination of SAR resources,
- to refine and test procedures and means of communication between SAR assets, RCCs / MRCCs and other participating agencies, including offshore operators. The focus will be inter-regional and cross-boundary collaboration and co-ordination,
- to conduct SAR operations according to NATO and ICAO/IMO regulations,
- through planning and debriefing improve SAR between nations and between RCCs / MRCCs by making recommendations to the appropriate national / international authorities.

Participating nations are Denmark, Estonia, Germany, Latvia, Lithuania, Poland, Russia and Sweden.

CAESAR

Co-ordinating And Educating Search And Rescue

CAESAR includes

the technical renewal of the MRCC Bremen:

3 (with the possible extension up to 5) working places
(MRCC tradeboards) for duty watch officers

integrated management of all communication systems from each
working place

telephone exchange:

- emergency lines (public system)
- authorities line (internal governmental net)
- direct connection with RCC Gluecksburg (military net)

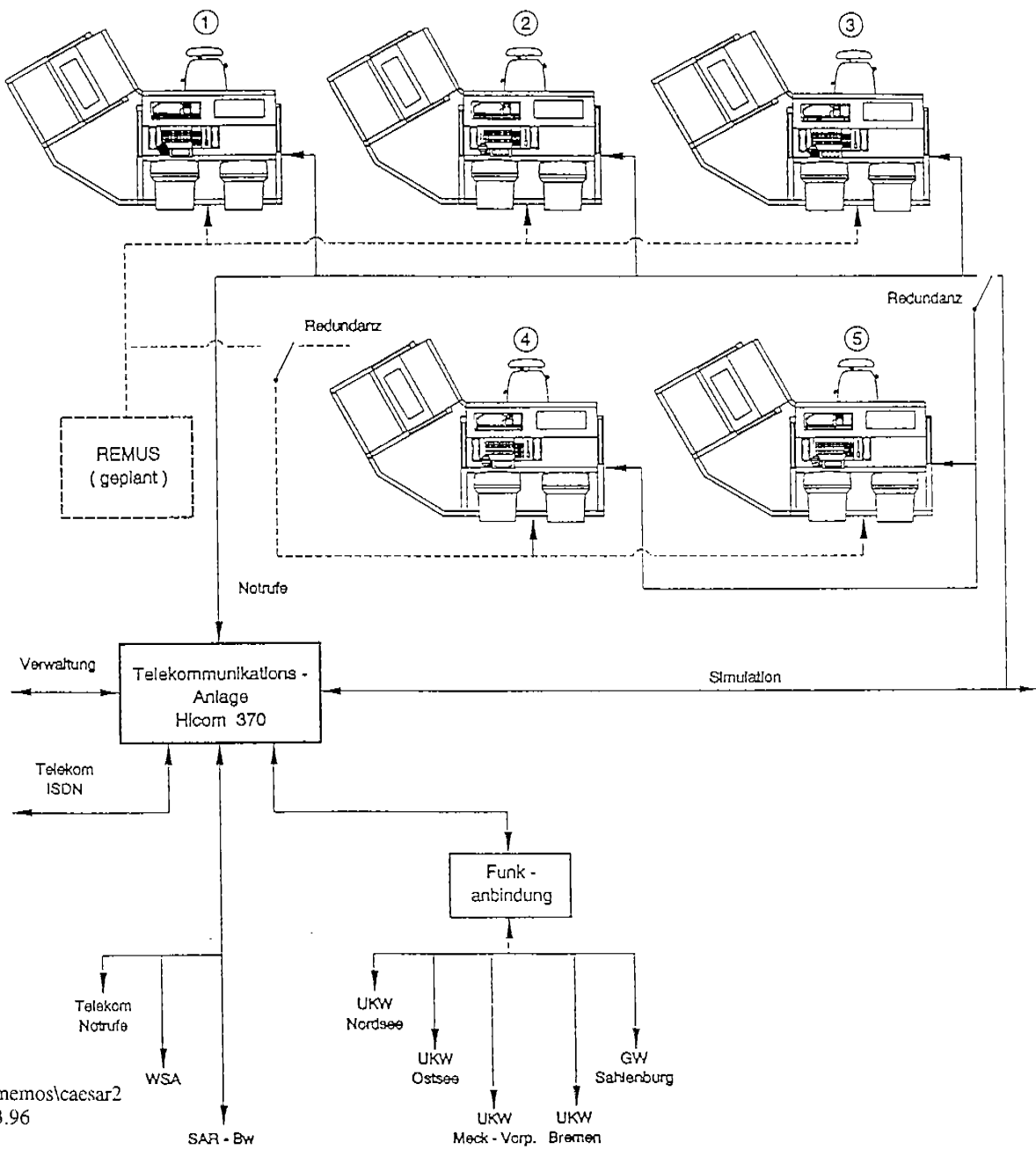
radiotelephony network:

- VHF relay system North Sea
- VHF relay system Baltic Sea
- VHF relay system Mecklenburg-Vorpommern
- VHF Bremen
- MF Sahlenburg

capability for the extension of the prospective **REMUS** system
(**RE**chnergestütztes **M**aritimes **U**nfallmanagement **S**ystem
= computer aided maritime accident management system)

CAESAR

RENEWAL OF SEENOTLEITUNG (MRCC) BREMEN



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CAESAR

Co-ordinating **A**nd **E**ducating **S**earch **A**nd **R**escue

CAESAR includes

the equipment of the SAR school

EQUIPMENT:

Nautics simulator including

- 5 ships control platforms
- 2 MRCC working places (trade boards)
- 1 instructor / briefing station
- simulation of REMUS system (planned)
- 10 language training stations

OBJECTIVES:

Training of MRCC watch officers

Tactical SAR training for crews of rescue cruisers and rescue boats operated by the German Sea Rescue Service

Nautical basic training

Continuing education in SEA SPEAK according to IMO regulations

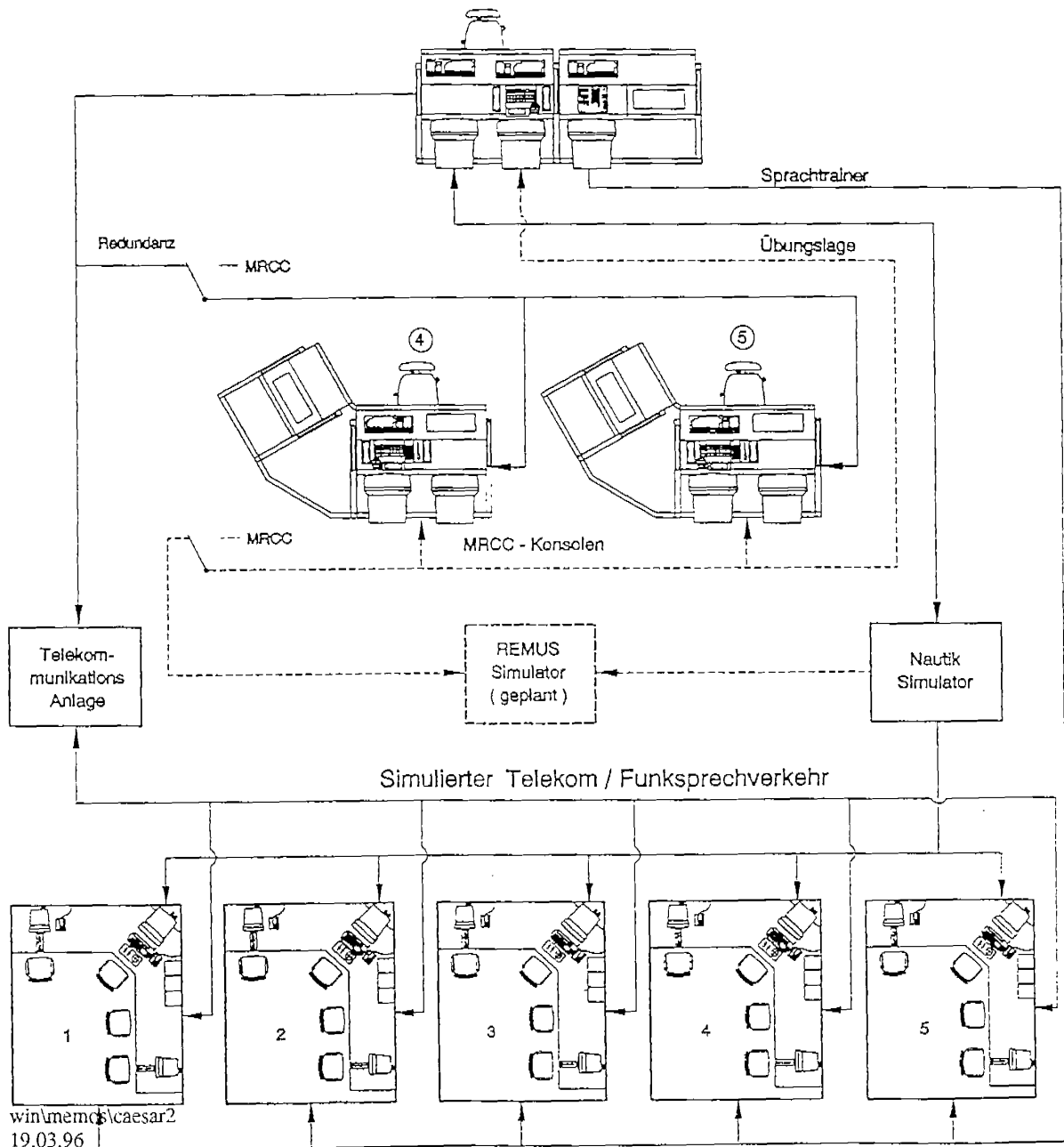
communication training

Radiotelephony operator training courses

CAESAR

SAR EDUCATION

Instruktor
SAR - Schule



德國救助艦專業人員訓練課程

安全訓練課程(SfS-Neustadt Holstein 實施)(訓期 14 天)		授課時數
1.消防滅火訓練	二氧化碳、電力、水及泡沫滅火器等理論及實作課程並包括在廢棄船舶或訓練船上之訓練	19 小時
2.自我防護訓練	單(雙)向氧氣裝置及防火裝之使用及實作訓練	12 小時
3.損害管制訓練	在廢棄船舶或訓練船上之理論及實作課程訓練	13 小時
4.ABC-防護訓練	核生化武器防護訓練	5 小時
5.船舶報告系統或護航訓練	海上密碼解讀、戰術航行、信號及無線通信訓練	4 小時
6.海上求生訓練	救生艇、救生衣、信號彈、拋繩器及吊掛等裝備介紹運用之訓練	11 小時

危險物品特別課程訓練(油氣單位實施)(訓期 2 天)		授課時數
1.危險物品介紹	依聯合國對運輸所列規範及建議等如 IMDG-法與 GGV-參攷文件	2 小時
2.火險分類訓練	包括固體、液態及油氣等火險分類訓練	1 小時
3.消防滅火訓練	岸上及船上消防滅火裝備之介紹包括水、二氧化碳、水龍、核生化動力等泡沫及滅火器之訓練	4 小時
4.火警預防	火警預防之意義	1 小時
5.自我防護	單(雙)筒氧氣裝置、救生包、油氣探測器訓練與油氣火警防護及救助等實作訓練	7 小時

急診部門現場急救訓練 (在不同或選擇的醫院實施)(訓期 10 天)		授課時數
1.分析研判	使用德國搜救系統對照表分析研判血壓、脈搏、瞳孔反應、體溫及血氣紀錄，GSRs 明細等	所有課程均係機會教育方式實施
2.心電圖監測	瞭解記錄裝置及電擊器材之設定與連接	
3.治療	掌握病患病情及治療	
4.靜脈注射	靜脈注射及其複雜狀況下之處置與正確分析	
5.感染病	瞭解感染藥劑及病患安置	
6.點滴注射	學習點滴注射之準備及設定	
7.人工呼吸氧氣裝置	熟悉對冷靜或躁動病患呼吸氧管及口罩固定之技巧	
8.氣管插管操作	瞭解對麻醉病患常規氣管插管之步驟及插管內視鏡之操作	
9.教學台	教學台之設置	

全球海上遇險及安全系統 (GMDSS)程訓練並通過考試獲頒一般操作員(GOC)之證照(Bremen 高級航海學校實施)(訓期一週)		授課時數
1.	船舶無線電服務基本常識及船舶無線電操作原理	
2.	衛生通信基本常識	
3.	數位選擇呼叫(DSC)	
4.	無線電傳系統	
5.	全球衛星通信系統(IMMARSAT)	
6.	全球海上遇險及安全系統下之全球衛星通信系統	
7.	航行警告電傳(NAVTEX)	
8.	應急指位無線電示標(EPIRB)	
9.	電達詢答機(SART)	
10.	全球海上遇險及安全系統之遇險、緊急及安全通信	
11.	搜索與救助	
12.	船舶無線電英語專用術語	
13.	海上正確通信之一般常識	

ARPA 訓練 (Bremen 高級航海學校實施)(訓期一週)		授課時數
雷達模擬	國際海上避接規則	
	搜救狀況下 ARPA 之工作	
	搜救狀況下雷達航行	

醫術訓練 (Hamburg/Rissen 傘兵醫護學校實施)(訓期 5 天)		授課時數
1.復甦基本概論	HLW(心肺復甦)訓練	2 小時
2.復甦法相關延伸措施	呼吸系統、消防心律不整、插管原理及血液循環理論等	16 小時
3.器官及醫藥有關資訊	點滴及醫務	4 小時
4.基因碼訓練	高低溫冷藏技術	4 小時
5.範例	各種傷害、含婦科及內、外科急診範例及復健規劃等之實習課程	8 小時

由 MRCC 人員指導之搜救模擬訓練(Bremen GSRS 所屬搜救學校實施)(訓期 1 天)		授課時數
1.搜救策劃	依實際狀況策劃基本與進級之搜救計劃與協調作業及現場指揮之理論研究	2 小時
2.心電圖監測	標準海上航行通信通話術語，搜救有關資源或單位之無線電頻率配佈	1 小時
3.治療	不同船舶之模擬演練與含搜救策劃、通信在內之職務歷練及任務歸詢等	5 小時

笛塞爾引擎維修訓練 (MTL(Friederichshafen)andMWM(Manutreim)(訓期一週)		授課時數
1.	正常工作狀況及操作數據	課餘時間
2.	依教學手冊內原理研習維修及疑難解答	
3.	實習	

德國救助艇兼職（義工）人員訓練課程配當

GSRS 第一階段搜救訓練課程 (Neustadt/Holstein 實施)(訓期一週)		授課時數
1.消防滅火	適度二氧化碳、電力、水及泡沫滅火器等及不同型態火災之基本實作課程	6 小時
2.損害控制	廢棄船舶或訓練船上之基本實作訓練及防撞墊之操作	5 小時
3.救助	救生筏、救生背心及直昇機吊掛裝置之結構與操作，煙幕彈及拋繩器具之操作等	9 小時
4.搜救醫藥服務	第一線緊急醫療支援及救生艇甲板實作訓練	13 小時
5.航海技術	救生船舶如拖船、快艇及船舶調度等之實作訓練	5 小時
6.期末搜救實習	結合各種搜救單位與遇險船舶之演習及所有訓練內容之應用	5 小時

GSRS 第二階段搜救訓練課程(Neustadt/Holstein 實施)(訓期一週)		授課時數
1.航海學	包括海圖製作、浮標與燈光、搜救技術(MRCC/OSC)、雷達及衛星導航及夜間訓練等	10 小時
2.航海技術	搜救單位掌控之實作、基本繩結操作、搜救船舶錨泊停靠、固定、海象、深海及結冰情況下之船舶調度	12 小時
3.通信技術	各種不同方法或正確 VHF 頻率與岸電台電之通信、搜救服務單位、船對空及搜救單位間之醫療通信、搜救任務進行期間與現場指揮之通信等	6 小時
4.工程學	搜救單位工具裝備及操作技術如拖吊、機械工具、電瓶、離合器、變速箱及傳動軸等	6 小時
5.物理定律	有關物理定律與規範，國際海上避碰法、海上航路規則，碰撞、毀損及海洋污染之搜救	8 小時
6.期末搜救演習	結合各種搜救單位與遇險船舶之演習及所有訓練內容之應用	5 小時

引擎維修訓練(訓期一天)		輔導訓練
1.	整備、起動及停車	視需要
2.	溫車	
3.	工作情況及操作數據	
4.	一航維修： - 更換機油與油濾 - 氣門調整 - 排檔桿及方向盤 - 傳動皮帶之更換與拉緊 - 冷卻水之處理	
5.	疑難解答	
6.	汽油、機油、潤滑油等油料	
7.	電路	

民間船員及輪機團體年度大會(Bremen GSRS 總部舉行)會期 4 天)		授課時數
1.內部業務	引言、狀況報告、GSRS 政策說明、未來業務推展及目前業務概況	視議程需要
2.訓練工作進度	議程通告之一般性議題包括訓練、救難單位及裝備之掌控與維修	
3.統計	結論及下次議程預告	

由 MRCC 人員指導之搜救模擬訓練(Bremen GSRS 所屬搜救學校實施)(訓期 1 天)		授課時數
1.搜救策劃	依實際狀況策劃基本與進級之搜救計劃與協調作業及現場指揮之理論研究	2 小時
2.搜救通信	標準海上航行通信術語，搜救有關資源或單位之無線電頻率配佈	1 小時
3.搜救模擬訓練	不同船舶之模擬演練與含搜救策劃、通在內職務歷練及任務歸詢等	5 小時

國際海事組織(IMO)標準英語課程及使用模擬器訓練(Bremen GSRs 所屬搜救學校實施)與語文研究所(訓期三天)		授課時數
1.第一天	授課內容及練習	
單元 -1	數字、位置、方位、時間、信文標示及複製 NAVTEX 協議之列印	
單元 -2	船艙進水、海上拖曳支援及搜救任務作業協調等通信詞彙	
單元 -3	語文研究所：單元 1/2 之習作練習	
單元 -4	海事專用術語	
單元 -5	單元 2 內容語音使用模擬器通信訓練	
2.第二天		
單元 -6	船岸間要求醫療支援通信詞彙	
單元 -7	語文研究所：單元 6 之習作練習	
單元 -8	單元 6 內容語音使用模擬器通信訓練	
單元 -9	火警、爆炸、棄船、遇險或求救信息、搜救作業結束及錨泊等通信詞彙	
單元 -10	語文研究所：單元 9 之習作練習	
單元 -11	單元 9 內容語音使用模擬器通信訓練	
單元 -12	習作：無線電干擾通信情況下之聽力及理解力練習	
3.第三天		
單元 -13	第一、二天課程練習	
單元 -14	基本通信術語擱淺、觸礁及碰撞、傾斜與翻覆等通信詞彙	
單元 -15	語文研究所：單元 9 之習作練習	
單元 -16	使用模擬器進行通信訓練複雜搜救任務中之通信訓	
單元 -17	任務歸詢	

救難艇專業人員

對象	課程類別	實施地點	施訓天數
救難艇專業人員	安全訓練課程	SfS-Neustadt Holstein	14 天
	危險物品特別課程 訓練	油氣單位	2 天
	急診部門現場急救 訓練	在不同或選擇的醫院	10 天
	全球海上遇險及安 全系統	Bremen 高級航海學 校	一週
	ARPA 訓練	Bremen 高級航海學 校	一週
	醫術訓練	傘兵醫護學校	5 天
	由 MRCC 人員指導 之搜救模擬訓練	Bremen GSRS 所屬搜 救學校	1 天
	笛塞爾引擎維修訓 練	MTL(Friederichshafen)andMWM(Manutrei m)	一週
救難艇兼職（義 工）人員訓練	GSRS 第一階段搜 救訓練課程	GSRS 所屬搜救學校 Neustadt/Holstein	一週
	GSRS 第二階段搜 救訓練課程	GSRS 所屬搜救學校 Neustadt/Holstein	一週
	引擎維修訓練	-	一天
	民間船員及輪機團 體年度大會	Bremen GSRS 總部舉 行	4 天

**Technical facilities and capabilities at the GSRS-HQ in Bremen and
at the SAR-school in Neustadt
to create and carry out SAR-courses
GSRS HQ in Bremen:**

CAESAR (Co-ordinating And Educating Search And Rescue) pursue following objectives:

- Training of MRCC watch officers
- Tactical SAR training for crews of rescue cruisers and rescue boats.
- Nautical basic training
- Continuing education in SEA SPEAK according IMO regulations
- Communication training
- Radiotelephony operator training.

and is equipped with:

- 5 ships control platforms
- 2 MRCC working places (trade boards)
- 1 instructor / briefing station
- 10 language training stations.

In connection with the seminar-room in the upper floor we can develop seminars which deal with:

- International foundations
- SAR-basics, Datum, figure out a search area
- Search- procedure
- Tasks of MRCC, SMC, OSC
- SAR-communication
- Planning and conducting SAR-operations
- in theory an practical training under simulated conditions.

SAR-School in Neustadt/ Holst.

The SAR-School has it's home at the marine base for ship safety service in Neustadt/Holst., where we can use their technical facilities like the divers-training pool with wave generator , the fire-fighting-hall and a laid-up frigate used for fire-fighting and damage control manoeuvre. Alongside the port of the marine base we use one 12m and one 17m retired lifeboats and two yachts for manoeuvring, basic- and technical-navigation training's in the Baltic Sea. We have the opportunity to take board and lodging for the participants on the marine base. The training for our volunteer lifeboat crews took already place in the manner like the GSRS-standard I, II and III courses.

training records for voluntary staff performing duties on board of GSRS's rescue boats were personnel from other lifeboat services have the opportunity to attend

1-week SAR course (GSRS-standard D) at Neustadt / Holstein		Total duration 5 days
1. fire fighting	basic practical measures with CO2, powder, water and foam extinguishers, different types of fire (classes)	6 hours
2. damage control	basic practical actions in a torso and on board of a training ship incl. handling of a collision mat	5 hours
3. rescue	construction and handling of life rafts and life jackets, H/C-winchings, handling of pyrotechnical visual distress signals, line throwing apparatus (PLT)	9 hours
4. medical SAR service	first aid, practical training on board of rescue boats	13 hours
5. seamanship	practical training on board of rescue boats as towing, MOB, manoeuvring etc.	5 hours
6. final SAR – exercise	exercise with various SAR-units and vessels in distress, application of the contents of the training course	5 hours

1-week course on SEAMANSHIP (GSRs-standard II) at Neustadt / Holstein		Total duration 5 days
1. navigation	basic navigation as working in sea charts, buoyage and lighting, SAR-techniques (MRCC and OSC), Radar- and GPS navigation, night training	10 hours
2. seamanship	handling of SAR-units in practice, knots and basic work with ropes and lines, anchoring, manoeuvring with SAR-units, stability, meteorology, manoeuvring in heavy seas and ice conditions	12 hours
3. communication	different ways and correct communication on VHF with coastal radio stations, SAR-services, ship-ship, ship-air and MEDICO, communication between SAR-units during SAR-incidents, communication as „OSC“	6 hours
4. engineering	engineering facilities and technical handling of SAR-units (drawings, engineering, battery, clutch, gearbox, shaft etc.)	6 hours
5. legal matters	several matters concerning law and order, international regulations for preventing collisions at sea, rules of the road at sea, SAR, rules of collision, damages and pollution	8 hours
6. final SAR-exercise	exercise with various SAR-units and vessels in distress, application of the contents of the training course	5 hours

1-week course on SEAMENSHIP (GSRs-standard III) at Neustadt / Holstein		Total duration 5 days
	Immersion of the contents of courses GSRs-standard I and II	

3 days course on IMO-Standard-English at GSRS own SAR-school by means of simulator (CAESAR) and language laboratory in Bremen		Total duration 3 days
1. day	contents and exercises	duration (h of 45')
Module 1	Numbers, Positions, Bearings, Times, Messages Marker, Repetitions Understanding of NAVTEX printouts	2
Module 2	Communication phrases for Flooding, tug assistance, co-ordinating SAR-operations	2
Module 3	language laboratory; exercise module 1 and 2	1
Module 4	words of marine technology	1
Module 5	communication training in the simulator with the emphasis on Module 2	2
2. day		
Module 6	Communication phrases for Person-over-board requesting medical assistance MEDEVAC	1
Module 7	language laboratory; exercise module 6	1

Module 8	communication training in the simulator with the emphasis on module 6	2
Module 9	Communication phrases for fire, explosion, abandoning vessel, distress/urgency messages finishing SAR-operations anchoring and berthing	1
Module 10	language laboratory; exercise of module 9	1
Module 11	communication training in the simulator with the emphasis on module 9	2
Module 12	Exercise: listening and understanding of interfered radio communication	1
3. day	contents and exercises	duration (h of 45')
Module 13	Repetition of day 1 & 2	1
Module 14	Communication phrases for grounding, collision, list, danger of capsizing	2
Module 15	language laboratory; exercise of module 14	2
Module 16	communication training in the simulator communication during complexly SAR-operations	3
Module 16	Debriefing	1

TRAINING STATUS REPORT
GERMANY

training records for full time staff performing duties on board of GSRS's
rescue cruisers

14-days SAFETY TRAINING course at Sfs-Neustadt / Holstein		duration
1. fire-fighting	theoretical and practical training with CO ₂ , powder, water and foam extinguishers incl. training on board of a hulk and a training ship	19 hours
2. self-protection	theoretical and practical training on single and twin cylinder fresh air breathing apparatus in combination with fire protecting clothes	10 hours
3. damage control	theoretical and practical training on board of a hulk and a training ship	13 hours
4. ABC-protection	self protection against atomic,- bacterial- and chemical weapon systems	5 hours
5. ship reporting systems, sailing in convoys	code in ciphers, tactics, signal and radio communication at sea	4 hours
6. survival at sea	construction and handling of liferafts, life – jackets, pyrotechnical visual distress signals, line throwing apparatus and heli – winching	11 hours

2-days special course on DANGEROUS GOODS for crews on gas protected units		duration
1. dangerous goods	UN-list and regulations, recommendations on transports, IMDG-Code, GGV-See	2 hours
2. classification of fires	classification of fires by types (solids, liquids, gases)	1 hour
3. fire fighting	equipment on board and ashore, water, CO ₂ , halon, ABC-powder, foam and portable fire extinguishers	4 hours
4. fire prevention	different means of preventing fires	1 hour
5. self protection	training on single and twin cylinder fresh air breathing apparatus, escape pack, gas detector, practical training on gas protected rescue cruiser	7 hours

10-days „on scene“ FIRST AID training at various, selected hospitals		duration
1. analysis	blood pressure, pulse, pupil reaction, temperature, oxymetric pulse, GSRS – checklist	all lessons as occasionally required
2. ecc-monitoring	knowledge of apparatus, setting of electrodes	
3. treatment	handling and treatment of patients	
4. venereal specials	peripheral venereal access, measures under complicated circumstances, correct analysis	
5. injections	preparation and setting of injections	
6. infusions	preparation and setting of infusions	
7. respiration devices	application of tubus and mask on calmed and/or uncalmed patients	
8. intubation	routine procedure of intubation of patient under anesthesia, application of intubation under guidance	
9. lecturing-desk	setting of lecturing-desks	

1-week GMDSS training with GOC (General Operators Certificate) - examination at Nautical Highschool Bremen		duration
1.	basic knowledge of the marine radio service and also basic handling of a marine radio station	daily lessons from 0900-1600
2.	as mentioned under 1. but via satellite	
3.	digital selective calling (DSC)	
4.	radio-telex-systems	
5.	INMARSAT – systems	
6.	INMARSAT in GMDSS	
7.	NAVTEX	
8.	emergency position indicating radio beacon (EPIRP)	
9.	search and rescue transponder (SART)	
10.	distress,- urgency- and safety communication in GMDSS	
11.	search and rescue (SAR)	
12.	seaspeak – basic english vocabular in marine radio services	
13.	general knowledge of correct communication	

1-week ARPA TRAINING course at Nautical Highschool, Bremen		duration
radar-simulation	international regulations for preventing collisions at sea	daily lessons 0900-1600
	working with ARPA under SAR-conditions	
	radar navigation under SAR-conditions	

5-days MEDICAL TRAINING course at paramedic school Hamburg / Rissen		duration
1. basics of reanimation	HLW (reanimation of heart and lung)	2 hours
2. extended measures of reanimation	theory of breathing, defibrillation, intubation, theory of circulation	16 hours
3. informations about apparatus and medicament	infusions and medics	4 hours
4. megacode training	run of algorithmus	4 hours
5. examples	different injuries, gynecological emergencies, traumatic emergencies, internal emergencies, management of reanimation in practice	8 hours

1 day SAR TRAINING course at GSRS own SAR-school by means of simulator (CAESAR) in Bremen under guidance of MRCC-personnel		duration
1.SAR-tactics	basic and advanced means of actual SAR-tactics (planning, co-ordination), OSC-training (theory)	2 hours
2.SAR-communication	standard marine navigational vocabulary, seaspeak, frequency distribution of SAR-relevant resources/units	1 hour
3.SAR-simulation	simulation exercises with different ship types and change over of tasks involving SAR tactics and communication, debriefing	5 hours

1-week training course DIESEL ENGINE MAINTENANCE at MTU (Friederichshafen) and MWM (Mannheim)		duration
1.	working conditions and operational data	daily lessons 0800-1700
2.	maintenance and trouble shooting according to instruction booklets in theory	
3.	practical exercises	

**training records for voluntary staff performing duties on board of GSRS's
rescue boats**

1-week SAR course (GSRS-standard I) at Neustadt / Holstein		duration
1. fire fighting	basic practical measures with CO ₂ , powder, water and foam extinguishers, different types of fire (classes)	6 hours
2. damage control	basic practical actions in a torso and on board of a training ship incl. handling of a collision mat	5 hours
3. rescue	construction and handling of life rafts and life jackets, heli-winch, handling of pyrotechnical visual distress signals, line throwing apparatus (PLT)	9 hours
4. medical SAR service	first aid, practical training on board of rescue boats	13 hours
5. seamanship	practical training on board of rescue boats as towing, MOB, maneuvering etc.	5 hours
6. final SAR – exercise	exercise with various SAR-units and vessels in distress, application of the contents of the training course	5 hours

1-week course on SEAMENSHIP (GSRS-standard II) at Neustadt / Holstein		duration
1. navigation	basic navigation as working in sea charts, buoyage and lighting, SAR-technics (MRCC and OSC), Radar- and GPS navigation, night training	10 hours
2. seamanship	handling of SAR-units in practice, knots and basic work with ropes and lines, anchoring, maneuvering with SAR-units, stability, meteorology, maneuvering in heavy seas and ice conditions	12 hours
3. communication	different ways and correct communication on VHF with coastal radio stations, SAR-services, ship-ship, ship-air and MEDICO, communication between SAR-units during SAR-incidents, communication as „OSC“	6 hours

4. engineering	engineering facilities and technical handling of SAR-units (drawings, engineering, battery, clutch, gearbox, shaft etc.)	6 hours
5. legal matters	several matters concerning law and order, international regulations for preventing collisions at sea, rules of the road at sea, SAR, rules of collision, damages and pollution	8 hours
6. final SAR-exercise	exercise with various SAR-units and vessels in distress, application of the contents of the training course	5 hours

1-day training course on ENGINE MAINTENANCE		duration
1.	preparing,- starting and stopping of engine,	as required
2.	pre-heating	
3.	working conditions and operational data	
4.	general maintenance: - change of oil and filters - valve adjustment - levers and controls - vee-belts, changing and tensioning - cooling water treatment	
5.	trouble shooting	
6.	POL – petrol, oil and lubricants	
7.	electrics	

ANNUAL MEETING of voluntary coxwains / machinists at GSRs headquarters in Bremen during 4 days		duration
1. internal affairs	Introduction, status report, GSRs policies, future activities, current affairs	as required by agenda
2. training on the job	general topics as announced in agenda concerning training, handling and maintenance of rescue unit and equipment	
3. summary	results, preview of agenda of next meeting	

1-day SAR Training course at GSRS own SAR-school by means of simulator (CAESAR) in Bremen under guidance of MRCC-personnel		duration
1.SAR-tactics	basic and advanced means of actual SAR-tactics (planning, co-ordination, operation), OSC-training (theory)	2 hours
2.SAR-communication	standard marine navigational vocabulary, seaspeak, frequency distribution of SAR-relevant resources/units	1 hour
3.SAR-simulation	simulation exercises with different ship types and change over of tasks involving SAR tactics and communication, debriefing	5 hours