



## Australasian Hydrographic Surveyors Certification Panel (AHSCP) GUIDELINES FOR SPECIALIST CERTIFICATION IN HYDROGRAPHIC SURVEYING

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### INTRODUCTION

#### 1.0 PURPOSE

Specialist Certification in Hydrographic Surveying is the official recognition by the Surveying & Spatial Sciences Institute (SSSI) and the New Zealand Institute of Surveyors (NZIS) that a person has demonstrated to the satisfaction of the SSSI and the NZIS that he or she has the necessary knowledge and experience to competently perform hydrographic surveys and associated activities. An applicant must demonstrate that he or she meets the academic and experience criteria detailed in this document. Certification will confer eligibility for membership of the SSSI or NZIS, with notation as a Certified Professional in Hydrographic Surveying – Level 1 or 2, and inclusion on the SSSI List of Certified Professionals in Hydrographic Surveying ([www.sssi.org.au](http://www.sssi.org.au)). Certification at Level 1 is the highest attainable level of professional hydrographic certification. Successful New Zealand applicants have the option of joining either the SSSI or NZIS.

#### 2.0 SCOPE

The Australasian Hydrographic Surveyors' Certification Panel (AHSCP) is structured within the SSSI Hydrography Commission and is sponsored by, and comprising members of, the SSSI and the NZIS. The AHSCP assesses applications for Specialist Certification in Hydrographic Surveying and informs both bodies of its decisions. The AHSCP uses [the latest edition of](#) the International Hydrographic Organization (IHO) document S-5 *Standards of Competence for Hydrographic Surveyors* [Version 11.0.1 – May 2011](#) as its reference for assessment of competence. This document should be accessed and used when compiling an application for certification and can be located at the IHO website ([www.iho.int](http://www.iho.int)).

The SSSI Specialist Certification Programme is open to all persons and to obtain certification a person need not be a member of SSSI or NZIS. A person wishing to achieve certification will have to satisfy the requirements stipulated by the relevant criteria. A person who has obtained certification may use the term **Certified Professional in Hydrographic Surveying - Level 1 or 2**, while remaining current on the SSSI List of Certified Professionals in Hydrographic Surveying.

##### 2.0.1 Retention of Certification

To retain certification the individual must demonstrate a commitment to Continuing Professional Development (CPD) by meeting the requirement of yearly CPD points as detailed for SSSI or NZIS members. **CPD is required every year post initial certification.** Further details of the CPD requirements are found in the [SSSI Continuing Professional Development Policy](#) and the [NZIS Policy for Continuing Professional Development](#). These documents are available from the SSSI Head Office and NZIS National Office respectively or from the SSSI and NZIS websites ([www.sssi.org.au](http://www.sssi.org.au) or [www.surveyors.org.nz](http://www.surveyors.org.nz)).

**Non-members of SSSI or NZIS** are required to apply for certification every year providing submission of documentation as per the [AHSCP\\_09 Recertification Flowchart](#), which can be obtained from the AHSCP Secretary or from the SSSI Hydrography Commission AHSCP web page ([www.sssi.org.au/details/commission/4/cat/238/sub/379.html](http://www.sssi.org.au/details/commission/4/cat/238/sub/379.html)).

Failure of members to commit to CPD and of non-members to certify [annually](#) may result in the removal of the individual's name from the SSSI List of Certified Professionals in Hydrographic Surveying. To regain certification subsequent to being removed from the List, it will be necessary for an individual to [re-apply for certification providing the submission documentation detailed in Section 5 and 6 but limited to the period since last certification](#).

**3.0** **DEFINITIONS**

<b>Appropriate Surveying Experience</b>	Experience need not all be sea-time but may be a combination of practical hydrographic surveying and <a href="#">related office surveying and/or spatial science activities</a> .
<b>Certified Professional in Hydrographic Surveying</b>	Any person who has been accepted as having met the Specialist Certification in Hydrographic Surveying criteria at either Level 1 or Level 2.
<b>Hydrographic Survey Platform</b>	In addition to sea-going vessels, a platform may refer to a fixed wing aircraft or helicopter undertaking remote sensing hydrographic surveys.
<b>International Board on Standards of Competence (IBSC)</b>	The International Board on the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers established jointly by the International Federation of Surveyors (FIG), the International Hydrographic Organization (IHO) and the International Cartographic Association (ICA)
<b>Modules</b>	An optional unit or recognised Category A or B hydrographic course offered by an organization listed in the IBSC List of Recognized Courses - Hydrography ( <a href="http://www.iho.int">www.iho.int</a> ).
<b>Practical Hydrographic Surveying</b>	Practical hydrographic surveying includes all activities directly related to surveying afloat, such as equipment mobilisation, calibration, data collection, processing, analysis and reporting. At least 50% of this experience must be sea-time.
<b>Reference Document</b>	<a href="#">IHO Publication S-5 Version 11.0.1 – May 2011 – FIG/IHO/ICA Standards of Competence for Hydrographic Surveyors</a> , ( <del>current edition</del> ).
<b>Sea-time</b>	Sea-time is defined as time spent surveying whilst embarked in a hydrographic survey platform. For the purposes of certification one year of sea-time is defined as 180 days. For shore-based hydrographic surveyors one day is defined as 7.5 hours.

**4.0** **LEVELS OF CERTIFICATION**

The AHSCP recognises that competence is a combination of knowledge and the ability to practically apply that knowledge gained through relevant experience. These factors are assessed against recognised international standards, detailed in IHO Publication S-5.

There are two levels of specialist certification in hydrography, which are detailed below. The applicant must provide evidence of academic qualifications and practical experience verified by their supervisor for at least the minimum aggregate time required meeting the requirements of the relevant application clause. [See Sections 5 and 6 – Essential Documentation for more details.](#)

[An applicant may also be certified under the appropriate hydrographic surveying sub-specialisms detailed in Section 3.](#)

**4.1** **LEVEL 1**

Specialist Certification in Hydrographic Surveying at Level 1 is the highest attainable level of professional hydrographic certification. At this level the Hydrographic Surveyor is assessed as competent to undertake and manage hydrographic surveying projects. Level 1 Certification confers eligibility as a Certified Professional (Level 1) of the SSSI and also confers eligibility, subject to NZIS approval, for membership of NZIS as [a Voting Member](#).

There are three pathways to Level 1 certification:

**4.1.1** **Category A Course**

Successful completion of an IBSC recognised Category A Course. These courses provide a comprehensive and broad based knowledge of the theory and practice of hydrography and allied disciplines.

**AND**

A minimum aggregate period of 2 years appropriate experience in **practical hydrographic surveying**, and a substantial amount of the **sea-time** component should be in-charge time. Under normal circumstances this experience is expected to be gained post qualification.

**4.1.2 Suitable Bachelor Degree and Category B Course**

Successful completion of an approved Bachelor Degree in Surveying or an allied discipline from a course that has suitable hydrographic **modules**. These modules can be taken as postgraduate courses. The contents of these modules shall be based upon the contents of the *FIG/IHO/ICA Standards of Competence for Hydrographic Surveyors* (Category B course is the minimum requirement).

**AND**

A minimum aggregate period of 2 years appropriate experience in **practical hydrographic surveying**, and a substantial amount of the **sea-time** component should be in-charge time. Under normal circumstances this experience is expected to be gained post qualification.

**4.1.3 Suitable Bachelor Degree and Experience**

Successful completion of an approved Bachelor Degree in Surveying or an allied discipline.

**AND**

A minimum aggregate period of 5 years of appropriate surveying experience; 2.5 years of which should be **practical hydrographic surveying** and a substantial amount of the **sea-time** component should be in-charge time. This experience shall demonstrate a competence that is not less than that stipulated in Clauses 4.1.1 and 4.1.2.

**4.2 LEVEL 2**

Level 2 Certification recognises a practical comprehension of hydrographic surveying and confers eligibility as a Certified Professional (Level 2) of the SSSI and also confers eligibility, subject to NZIS approval, for membership of NZIS as [an Associate Member](#).

There are three pathways to certification at Level 2:

**4.2.1 Category B Course**

Successful completion of an IBSC recognised Category B Course. These courses provide a practical comprehension of the principles of hydrographic surveying for the carrying out of various hydrographic surveying tasks.

**AND**

A minimum aggregate period of 2 years appropriate experience in **practical hydrographic surveying**. Under normal circumstances this experience is expected to be gained post qualification.

**4.2.2 Other Qualification**

Successful completion of an approved Diploma or Certificate in a discipline of Surveying, or an allied discipline (e.g. Engineering Surveying Certificate), or an approved qualification equivalent to a Diploma or Certificate in Surveying or a discipline allied to surveying.

**AND**

A minimum aggregate period of 5 years of appropriate surveying experience; 2.5 years of which should be **practical hydrographic surveying** and which demonstrates an expertise that is not less than that stipulated in Clause 4.2.1.

**4.2.3 Suitable Bachelor Degree and Experience**

Successful completion of an approved Bachelor Degree in Surveying or an allied discipline.

**AND**

A minimum aggregate period of 2.5 years of appropriate experience in **practical hydrographic surveying**. Under normal circumstances this experience is expected to be gained post qualification.

**4.3 [Sub-Specialism Certification](#)**

Sub-specialism certification is a sub-set of Specialist Level 1 Certification and recognises that an individual has expertise in a specific field of hydrographic surveying. An applicant must demonstrate to the satisfaction of the AHSCP that they have:

- Two year's relevant experience in a particular sub-specialism demonstrated by completion of the "Logbook of Practical Hydrographic Surveying Experience, Assessment of Competencies" against the specific S-5 Optional Units detailed in Section 3. Components presented in the original application for Level 1 which relate to this requirement may be identified to the Panel as evidence.
- Two projects demonstrating their fieldwork, reports and other evidence of competence in the sub-specialism applied for. Components presented in the original application for Level 1 which relate to this requirement may be identified to the Panel as evidence.

Certification in any sub-specialism of hydrographic surveying may be applied for at the initial application stage or at any time post-certification. Certification in multiple sub-specialisms is possible.

The following specialism areas are based on the optional units previously listed in S-5, Version 11.0.1 – May 2011. Although these have been removed from the current S-5 version, the AHSCP considers that, as an applicant's experience often relates to specific areas of hydrography, additional certification in the applicant's sub-specialism more clearly defines her/his area of expertise. **Appendix F** to the Guidelines provides a summary of subject matter that feeds into each sub-specialism:

#### **4.3.1 Hydrography in support of Coastal Management**

Incorporates previous S-5 Optional Units *Nautical Charting, Military Hydrography, Remote Sensing and Hydrography to support Port Management and Coastal Engineering*

#### **4.3.2 Hydrography in support of Inland Waters Management**

Incorporates previous S-5 Optional Units *Inland Waters Hydrography and Remote Sensing*

#### **4.3.3 Hydrography in support of Offshore Infrastructure Development**

Incorporates previous S-5 Optional Units *Offshore Seismic Surveys, Offshore Construction Hydrography and Remote Sensing*

#### **4.3.4 Hydrography in support of Safe Navigation**

Incorporates previous S-5 Optional Units *Nautical Charting, Military Hydrography and Remote Sensing*.

### **5.0 PROCEDURE FOR SUBMISSION**

- a. The AHSCP meets 3 to 4 times per year to review applications for certification and notifies the SSSI or the NZIS of its decision. The deadline for the submission of applications is one month prior to each meeting of the AHSCP. Details of AHSCP meeting dates can be obtained from the AHSCP Secretary or from the SSSI Hydrography Commission AHSCP web page: (<http://www.sssi.org.au/details/commission/4/cat/238/sub/379.html> ).
- b. The application must contain sufficient information to enable the AHSCP to assess an applicant's education and experience to determine eligibility for certification in accordance with the relevant clause of Section 4.
- c. Failure to provide documentation in accordance with **Section 5.1** may result in the application being rejected.

#### **5.1 Applicants are to comply with the following:**

- a. The required documentation is to be provided in digital format (scanned at a minimum resolution of 300 dpi for archive compliance) and submitted in accordance with instructions on the application form.
- b. Applicants **must** complete the **application form** attached as **Appendix A**.

- c. Application fees as detailed on the reverse of the application form must be paid at the time of application. An applicant who is not a member of SSSI or NZIS is required to apply every year with the applicable application fee. Members of the SSSI or NZIS are required to comply with yearly CPD as per the relevant Institute's policy.
- d. Applicants must submit a **Logbook of Practical Hydrographic Surveying Experience (Logbook)** detailing their work experience in the format prescribed (**Appendix B**). This logbook must contain sufficient detail for the AHSCP to assess their hydrographic surveying experience and competencies relevant to their application and is cross referenced to the subject content and level of learning required by the S-5 Syllabus.
- e. A minimum of two references are required. These should be from the applicant's most recent supervisors, or clients who are familiar with the applicant's technical work experience. Applicants must provide a copy of their Logbook to their referees for comment and verification. Referees must complete the **Referee's Report (Appendix C)** and return it directly to the AHSCP Secretariat.
- f. Individuals must submit details of their educational qualifications in support of their application as detailed in Section 6 below. **Courses that are not related to hydrographic survey knowledge enhancement are not required.** Such courses include: HUET, First Aid, Work Health Safety, survival etc.
- g. Applicants must ensure that they have completed **Appendix E - Checklist of Documentation Submitted** and include it with their submission. When submitting your documentation please follow the file naming convention listed in Appendix E – Checklist of Documentation Submitted, eg:
- 01 Applicant name\_Checklist
  - 02 Applicant name\_Cover Letter
  - 03 Applicant name\_CV
  - 04 Applicant name\_AHSCP Application Form
  - 05 Applicant name\_Certificate xxx; etc.
- h. **Level 1** applicants are required to submit two **of their own** recent hydrographic survey reports and plans for different survey projects. These may be sanitised of client details but all hydrographic relevant metadata and conclusions are to remain. It is important that a Level 1 applicant clearly articulates their in-charge capabilities relating to practical survey conduct and management.
- i. Plans are considered to be, **but not limited to** fairsheets / faircharts / drawings / plans / end product charts **and should be submitted in pdf format at a minimum resolution of 300 dpi with all text being legible.**
  - ii. There is no requirement to supply information which is repetitive in nature and has already been presented within each project portfolio eg. If you supply a copy of an oceanographic observation form for one day's observations, the Panel does not require a further series of forms showing similar information for the entire survey period.
  - iii. **The Panel does not have access to commercial software required to open proprietary project or data files. Only word, excel, image or PDF files are accepted for assessments. The preferred format is PDF for ease of universal access. As the Secretariat cannot evaluate which of your files are critical to your application, submit only files required in the described format which provide sufficient information to fulfil your certification requirements.**
- i. The application and associated documentation is to be submitted to:
- AHSCP Secretary**  
Australian Hydrographic Office  
Locked Bag 8801  
Wollongong NSW 2500  
AUSTRALIA  
Tel: +61 (0) 2 4223 6672  
Fax: +61 (0) 2 4223 6599  
Email: [ahscp@hydro.gov.au](mailto:ahscp@hydro.gov.au)
- j. Following review of the application by the AHSCP, the applicant may be required to submit additional supporting evidence. Such evidence would typically include, but is not restricted to,

personal statements, copies of survey documentation, letters of reference, affidavits, academic transcripts and copies of professional licensing/registration. Level 1 applicant's may also be contacted by a [member of the AHSCP](#) in order to discuss the provided portfolio.

## 6.0 EVIDENCE OF EDUCATIONAL QUALIFICATIONS

The following educational information (where applicable) should be included with an application:

- a. The applicant's educational qualifications in surveying or hydrographic surveying obtained from a University, College of Tertiary and Further Education (TAFE), Polytechnic or similar tertiary institution. High school qualifications are not required.
  - i. Include all short courses in subjects directly related to surveying or hydrographic surveying.
  - ii. State the qualification type, tertiary institution and dates of study.
  - iii. For courses other than surveying or hydrographic surveying, include details of relevant surveying subjects completed in the course.
  - iv. Transcripts of subjects from the institution or a copy of the completion certificate of the course [which describes the subject matter enabling linkage to subjects within the IHO S5 Syllabus is to be provided](#). If available, the transcript should contain grades achieved.
- b. Certified true copies of all certificates including academic transcripts should be supplied to enable the AHSCP to assess the applicant against the relevant Category A or Category B syllabus requirements detailed in IHO Publication S-5.
- c. If a course was not completed, supply details of units or subjects completed and those not completed.
- d. If appropriate, give details of completed hydrographic surveying tasks in the course, including any field training.

## 6.1 LOGBOOK OF PRACTICAL HYDROGRAPHIC SURVEYING EXPERIENCE

The Logbook's purpose is to provide the AHSCP with sufficient information to determine the applicant's achievement of the specified hydrographic experience criteria detailed in Section 4 of these Guidelines and achievement of the requisite degree of hydrographic surveying competence for the level of certification sought.

The Logbook should contain comprehensive descriptions of specific hydrographic surveying tasks or projects undertaken including the following information:

- a. Task or project description and their aims.
- b. The applicant's personal responsibilities on these projects.
- c. Equipment used by applicant on these projects.
- d. A brief description of the work undertaken, together with competencies gained or exercised ([see Section 6.2](#)), in order that the AHSCP can determine the practical requirements of the work undertaken. It is recognised that an applicant's practical experience may vary greatly between projects and clients and the AHSCP considers that, for Specialist Certification in Hydrographic Surveying, applicants must have enough practical experience to prove their competency.
- e. Independent authentication of an applicant's involvement in these projects. The AHSCP considers authentication by signature on the application Logbook by the applicant's immediate supervisor to be the preferred option. An acceptable alternative is verification of the Logbook details by covering letter from an appropriate referee.
- f. Evidence of having taken charge of and being responsible for hydrographic surveys and related activities.

Every Logbook entry must be verified by the applicant's supervisor. This may include the applicant's offshore manager/party chief, senior surveyor, commanding officer, project manager or client. In some sectors of the profession, particularly the industrial offshore surveying sector, it is appreciated that there are difficulties associated with verification post project. However, without verification the application will not succeed. **Appendix B** contains a proforma Logbook and two examples.

## 6.2 ASSESSMENT OF COMPETENCIES

In order to assist with the assessment of the requisite degree of hydrographic surveying competence, applicants are asked to detail the competencies exercised on each project against those listed as **Essential Subjects & Optional Units in IHO Publication S-5**. The subject titles are detailed at **Appendix D**. The designated S-5 reference numbering for each competency either gained or exercised on a particular project should be noted in the Logbook column provided. The applicant should download S-5 from the [SSSI Hydrography Commission certification webpage](#) and only indicate completion of the competence if they are of the opinion that they have satisfied the S-5 requirement.

### 6.3 **ASSESSMENT OF SEA-TIME**

Sea-time is a critical component of the certification process and, for the purposes of assessment, **the definition of sea-time in Section 3 will apply**. The AHSCP recognizes that in some disciplines of the profession sea-time may only constitute part of a day's work with the remainder of the day taken up with field work preparation, calculations or the processing of data from a survey. All, are valid hydrographic surveying tasks that are undertaken onshore **and contribute to a sea-time day**.

### 6.4 **WORK EXAMPLES**

- a. Level 1 applicants are required to submit additional information in accordance with [Section 5.1.h](#). **The applicant is to ensure that they have appropriate permission to provide documentation and data to the AHSCP.**
- b. Level 2 applicants should be prepared to forward samples of fieldwork, reports and other evidence of competence if the AHSCP considers it necessary.

### 6.5 **REFERENCES**

A minimum of two references are required. These should be from the applicant's most recent supervisors, or clients who are familiar with the applicant's technical work experience. All referees must be supplied with the Referee's Report (**Appendix C**) **signed by the applicant**. The **Referee** should complete and return the form **directly** to the AHSCP Secretary **at least one month prior to the closing date for the next sitting of the AHSCP (refer to Section 5.0 Procedure for Submission)**. **The application for certification will not proceed until at least two references have been received by the Secretary.**

### 6.6 **OTHER RELEVANT INFORMATION**

An applicant may supply any other information that will contribute to providing evidence of meeting the requirements of [Section 4](#) or of obtaining the competencies in IHO Publication S-5 to enable the AHSCP to assess their suitability for Specialist Certification in Hydrographic Surveying.

### 7.0 **PROCEDURE FOR RECOGNITION**

AHSCP members individually review material submitted and discuss their findings at regular meetings. Individuals may find it advantageous to discuss their presentations with one of the AHSCP members before submission. An AHSCP member will not assess an application from an individual who is a former/current employee, or from an individual for whom the AHSCP member is acting as a referee. In these cases the AHSCP member will stand aside from the assessment activity.

- a. Applicants should be prepared to allow an inspection of documents completed by them (e.g. reports, charts etc.) by AHSCP members.
- b. If an applicant is judged as meeting the required level, the AHSCP will advise the SSSI or the NZIS, detailing the level achieved and recommend the issue of a certificate (and membership as applicable).
- c. The certificate issued will remain current providing that for members of the SSSI or NZIS, CPD requirements are met and conversely certification by non-members via application for certification through the AHSCP is maintained. Retention on the List of Certified Professionals in Hydrographic Surveying will be conditional upon meeting those requirements and the applicant's certification certificate will **state that their name will appear on this list for as long as certification is retained**.

**8.0 APPEAL**

If an applicant has been denied certification, they may appeal to the Chair of the AHSCP to have his or her application reconsidered.

**9.0 POST NOMINALS (NOTATION)**

A person who has achieved Certification at Level 1 will be entitled to use the post nominal **Certified Professional Hydrographic Surveyor Level 1 (CPHS1)** after his or her name. A person who has achieved certification at Level 2 will be entitled to use the post nominal **Certified Professional Hydrographic Surveyor Level 2 (CPHS2)** after his or her name. *The continued use of this post nominal is subject to an ongoing commitment to CPD in order to retain certification.*

A person who has achieved Certification and joins either the SSSI or NZIS will be entitled to use the post-nominal after their respective organization membership eg. **FSSSI (CPHS1), MNZIS (CPHS1), MSSSI (CPHS2)** or **ANZIS (CPHS2)**.

*Letter preceding the Institute abbreviation: Member = M, Associate = A, Fellow = F*

**10.0 CODE OF ETHICS**

For applicants that are non-members of the SSSI or NZIS, the AHSCP will consider applications against the intent of the *SSSI Code of Ethics* ([www.sssi.org.au](http://www.sssi.org.au)).

Members of SSSI and NZIS are bound by their respective Code of Ethics - The NZIS Code of Ethics is contained in *NZIS Council Policy – A19 to 24 Conduct of Members* ([www.surveyors.org.nz](http://www.surveyors.org.nz)).

**11.0 RESPONSIBILITIES**

Responsibilities of Certified Professionals in Hydrographic Surveying who subsequently join the SSSI are in accordance with the *Surveying and Spatial Sciences Institute Constitution* and for those who join the NZIS are in accordance the *Rules of the New Zealand Institute of Surveyors Incorporated*.

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