

# Definitions for Hydrographic Chart Production

*TH Technical Report 15    Version 2*  
*National Topographic/Hydrographic Authority*

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## Introduction

This technical report amplifies the IHO definitions of terms used when issuing charts.

Certified as National Topographic/Hydrographic Authority technical report:

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## Record of Changes

Version	Date	Amendment
Version 1 TH Policy 99/13	30 November 1999	New document
Version 2 TH Technical Report 15	12 June 2003	Updated and changed to a technical report

# **DEFINITIONS FOR HYDROGRAPHIC CHART PRODUCTION**

## **1 Scope**

This technical report amplifies the IHO definitions of terms used when issuing charts. It does not supersede the need for knowledge and experience both in hydrographic charting and navigation.

## **2 Related Documents**

IHO, M-4, Regulations of the IHO for International (INT) Charts and Chart Specifications of the IHO.

LINZ, NTHA, Hydrographic and Bathymetric Information Strategy 2002-2007.

LINZ, TH Specification 116, Specifications for NZ Hydrographic Charts (CHARTspec).

LINZ, TH Technical Report 4 v2, Priority Setting Process for Hydrographic Work.

LINZ, TH Technical Report 9 v1, Hydrographic Charts – Quarterly Reprint Forecasting System.

## **3 Abbreviated Terms**

LINZ	Land Information New Zealand
NTHA	National Topographic Hydrographic Authority
NTM	Notices to Mariners
NZ	New Zealand
IHO	International Hydrographic Organisation

## 4 Introduction

Terms used when issuing charts are defined by the IHO in M-4, the Chart Specifications of the IHO. This technical report amplifies these terms from the NZ perspective.

All chart production is undertaken to fulfil NZ's national and international responsibilities in our area of charting responsibility. For a high level justification for LINZ chart production see NTHAs Hydrographic and Bathymetric Information Strategy 2002-2007. For the criteria used to determine how potential hydrographic projects, including charts, are prioritised by LINZ see the TH Technical Report 4 v2, Priority Setting Process for Hydrographic Work.

## 5 New Chart

The Chart Specifications of the IHO states:

**New Chart (NC):** The first publication of a national chart embracing an area not previously charted by that nation to the scale shown, or embracing an area different from any existing chart of that nation.

A new chart incorporates new topography, hydrography, magnetic variation and all NTM amendments. It will cancel existing charts or inset plans that cover a similar area at a similar scale.

### 5.1 *Reasons for Producing a New Chart*

The reasons for producing a new chart are:

- To produce a new or larger scale chart of an area.
- To incorporate new LINZ survey data on a chart.
- To metricate an existing chart with depths in fathoms.

### 5.2 *Considerations*

The following factors are considered when determining the limits and scale of a new chart. Note that they are interrelated and a compromise may be required if the most important criteria are to be met.

### **5.2.1** *Purpose*

Chart purpose includes:

- Route planning.
- Coastal navigation.
- Harbour approach.
- Manoeuvring within a harbour and berthing.

### **5.2.2** *Topography*

The nature, shape and complexity of the land e.g. a confined strait or an open coast.

### **5.2.3** *Cultural Features*

For example cities, towns, ports and marinas.

### **5.2.4** *Conspicuous Features*

Conspicuous natural or cultural features used by the mariner for navigation.

### **5.2.5** *Port Layout*

The layout and physical extent of a port. This includes anchorage positions and the routes taken by vessels approaching and leaving the port.

### **5.2.6** *Vessel Movements*

The amount of vessel traffic and the routes taken by vessels in the area. This includes current traffic and predicted future traffic.

### **5.2.7** *Sea Room*

Coastal charts require a minimum of 3 sea miles sea room from the land and outlying islands to give the mariner room to plot their course.

### **5.2.8** *Survey Data*

The scale, accuracy and coverage of existing and new survey data.

### **5.2.9** *Dangers*

The location and significance of dangers to navigation.

### **5.2.10** *Seabed*

The complexity of the seabed shape.

### 5.2.11 *Lights and Navigation Aids*

The location, importance and density of lights and navigation aids eg.:

- A harbour chart should include all significant navigation aids within the harbour.
- Principal lights should be included in the overlapping portion of the coastal series charts where possible.

### 5.2.12 *Territorial Sea and Exclusive Economic Zone*

The Territorial Sea and/or the Exclusive Economic Zone limits are to be charted on certain chart series. Critical base points need to be depicted on a large scale chart.

### 5.2.1 *Adjoining Charts*

Overlap with adjoining charts must ensure mariners can transfer course from one chart to another.

### 5.2.2 *Larger Scale Charts*

The coverage and scale of larger scale charts that fall within, or partially within, the new chart.

### 5.2.3 *Numbering and Name*

A chart number that fits into the NZ chart scheme and a chart name that defines the charted area and chart purpose.

## 6 **New Edition**

The Chart Specifications of the IHO states:

**New Edition and/or Large Correction (NE, LC):** A new issue of an existing chart, containing amendments essential to navigation, which may include changes additional to those in Notices to Mariners, making existing editions obsolete. The chart number normally remains unchanged.

A new edition incorporates new topography, hydrography, magnetic variation and all NTM amendments. It cancels the previous edition of the chart. A large correction updates only selected areas of a chart and is not used by NTHA.

## 6.1 *Reasons for Producing a New Edition*

The reasons for producing a new edition are:

- To convert to WGS 84 datum.
- To update for a change in vertical datum.
- To update the magnetic information (generally required when it is more than 10 years out of date).
- To incorporate new survey data that cannot be completely shown by NTM amendment or block correction.
- To update for coastline changes eg. reclamation.
- To increase the area covered eg. increase the sea room or include a marina.
- To add a new inset plan.
- To incorporate a NTM block correction.

## 7 Reprint

The Chart Specifications of the IHO states:

**Reprint:** A new print of the current edition of a chart incorporating no amendments of navigational significance other than those previously in Notice to Mariners (if any). It may also contain amendments from other sources provided they are not essential to navigation. Previous printings of the current edition always remain in force.

A reprint incorporates all NTM amendments up to a reasonable cut off date and other amendments as required that are not or navigational significance. Existing stock is sold until exhausted.

### 7.1 *Reasons for Reprinting a Chart*

Charts are reprinted to maintain stocks. Reprinting is based on a charts predicted stock out date. Charts are programmed into a quarterly reprint to ensure they will not run out of stock before the next quarterly reprint is available. For more detail see TH Technical Report 9 v1, Hydrographic Charts – Quarterly Reprint Forecasting System.

## 7.2 Considerations

Other factors considered when programming a reprint are:

- Upcoming replacement by a new chart or new edition.
- Any upcoming large and/or complex NTM amendments.
- The requirement to maintain emergency stock.
- Extra sales expected during the summer season or from an upcoming maritime event.

## 8 Block

The Chart Specifications of the IHO states:

**Chartlet/Block/Patch:** A small auxiliary chart giving new details of a particular area, to be pasted on the chart by the user. Chartlets are normally included in Notices to Mariners.

NTHA refers to these as a block correction.

### 8.1 Reasons for Producing a Block

The reasons for producing a block are to update a chart by NTMs for complex information that cannot clearly be described by text. A block enables information to be promulgated to mariners far more quickly than by the production of a new edition.

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