ZOC[1]	Position Accuracy[2]	Depth Accuracy[3]	Seafloor Coverage[4]	Typical Survey Characteristics[5]
A1	± 5 m	= 0.50 + 1%d Depth (m) / Accuracy (m) 10 / ± 0.6 30 / ± 0.8 100 / ± 1.5 1000 / ± 10.5	Full area search undertaken. All significant seafloor Features[4] detected have had depths measured.	Controlled, systematic Survey[6] high position and depth accuracy, achieved using DGPS or a minimum of three high quality lines of position (LOP) and a multibeam, channel or mechanical sweep system.
A2	± 20 m	= 1.00 + 2%d Depth (m) / Accuracy (m) 10 / ± 1.2 30 / ± 1.6 100 / ± 3.0 1000 / ± 21.0	Full area search undertaken. All significant seafloor Features[4] detected have had depths measured.	Controlled, systematic survey[6] high position and depth accuracy less than ZOC A1, and using a modern survey eachosounder[7] and a sonar or mechanical sweep system.
B	± 50 m	= 1.00 + 2%d Depth (m) / Accuracy (m) 10 / ± 1.2 30 / ± 1.6 100 / ± 3.0 1000 / ± 21.0	Full area search not achieved; uncharted features, hazardous to surface navigation, are not expected, but may exist.	Controlled, systematic survey[6] achieving similar depth but lesser position accuracies than ZOC A2, using a modern survey eachosounder[7] but no sonar or mechanical sweep system.
C	± 500 m	= 2.00 + 5%d Depth (m) / Accuracy (m) 10 / ± 2.5 30 / ± 3.5 100 / ± 7.0 1000 / ± 52.0	Full AREA SEARCH NOT ACHIEVED; depth anomalies may be expected.	Low accuracy survey or data collected on an opportunity basis such as soundings on passage.
D	Worse than ZOC C	Worse than ZOC C		Poor quality or data that cannot be assessed due to lack of information.
U	Un-assessed	Un-assessed	Un-assessed	Un-assessed

Notes:

To decide on a ZOC category, all conditions outlined in Columns 2 to 4 of the Table must be met, Explanatory note numbers quoted in the table have the following meanings:

1. The allocation of a ZOC indicates that particular data meets minimum criteria for position and depth accuracy and seafloor coverage defined in the Table. ZOC categories reflect a charting standard and not just a hydrographic survey standard. Depth and position accuracies specified for each ZOC category refer to the errors of the final depicted soundings and include not only hydrographic survey errors but also other errors introduced in the chart production process. Data may be further qualified by Object Class “Quality of Data” (M_QUAL) sub-attributes as follows:

* Positional Accuracy (POSACC) and Sounding Accuracy (SOUACC) may be used to indicate that a higher position or depth accuracy has been achieved than defined in this Table (e.g. a survey where full seafloor coverage was not achieved could not be classified higher that ZOC B; however, if the position accuracy was, for instance ± 15 metres, the sub-attribute POSACC could be used to indicate this).

* Swept areas where the clearance depth is accurately known but the actual seabed depth is not accurately known may be accorded a "higher" ZOC (i.e. A1 or A2) providing position and depth accuracies of the swept depth meets the criteria in this Table. In this instance, Depth Range Value 1 (DRVAL1) may be used to specify the swept depth. The position accuracy criteria apply to the boundaries of swept areas.

* SURSTA, SUREND and TECSOU may be used to indicate the start and end dates of the survey and the technique of sounding measurement.

2. Position accuracy criteria at 95% CI (2.45 sigma) with respect to the given datum. It is the cumulative error and includes survey, transformation and digitizing errors etc. Position accuracy need not be rigorously computed for ZOCs B, C and D but may be estimated based on type of equipment, calibration regime, historical accuracy etc.

3. Depth accuracy of depicted soundings for (e.g.) ZOC A1 = 0.50 metres + 1% d at 95% CI (2.00 sigma) where d = depth in metres at the critical depth. Depth accuracy need not be rigorously computed for ZOCs B, C and D but may be estimated based on type of equipment, calibration regime, historical accuracy etc.

4. Significant seafloor features are defined as those rising above depicted depths by more than:
Note: Mariners should have due regard to limitations of sounding equipment when assessing margins of safety to be applied.

Depth	**Significant Feature**
< 10 metres	10 to 30 metres
> 30 metres	> 0.1 x depth

> 1.0 metre	> 0.1 x depth minus 2.0 metres

5. Typical Survey Characteristics – These descriptions should be seen as indicative examples only.

6. Controlled, systematic surveys (ZOCs A1, A2 and B) – surveys comprising planned survey lines, on a geodetic datum that can be transformed to WGS 84.

7. Modern survey echosounder – a high precision single beam depth measuring equipment, generally including all survey echosounders designed post 1970.