

# **RECREATIONAL CRAFT** **DIRECTIVE**

## **BOAT BUILDERS GUIDE**

**April 2006**

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**NOTE 1:** This Guide does not contain all the information required to enable a boat to be built to the Directive.

**NOTE 2:** This updated version incorporates the ‘interpretation’ of the 2003 - Guide to the RCD from the European Commission.

**January 2004**

## **1 GENERAL DESCRIPTION**

The Recreational Craft Directive has been in force since June 1996, and became mandatory on **16th June 1998**. The emissions amendment came into force on 1<sup>st</sup> January 2005. The Directive requires that most new recreational craft and some second-hand craft brought into Europe, which are sold or placed on the market in any country in the European Community, comply with a number of Essential Requirements. A few types of boat are exempt, and these are listed below. The amended Directive also applies to personal watercraft, inboard and outboard propulsion engines and a limited number of components.

The benefit of the RCD is the promotion of a single specification for new boats in the European Community. Before the days of the RCD, a company wishing to export boats to several different countries in the European Community had to build boats to several different sets of rules. With one set of requirements, there is no barrier to trade within the European Community.

Almost all of the requirements of the RCD are to do with safety and environmental protection – topics that are increasingly subjected to legislation in any walk of life.

## **2 EXCLUSIONS FROM THE RECREATIONAL CRAFT DIRECTIVE**

The following are excluded from the scope of the RCD:

- a) craft intended solely for racing, including rowing racing boats, labelled as such by the manufacturer.
- b) canoes, kayaks, gondolas & pedalos.
- c) sailing surfboards.
- d) surfboards including powered surfboards.
- e) original, and individual replicas of, historical craft designed before 1950, built predominantly with original materials.
- f) experimental craft provided they are not subsequently placed on the Community market.
- g) craft or engines built for own use, provided they are not subsequently placed on the Community market during a period of 5 years, from completion.
- h) craft intended for commercial purposes (apart from boats used for hire, charter or recreational boating training).
- i) submersibles.
- j) air cushion vehicles.
- k) hydrofoils.
- l) steam powered craft, fuelled by coal, coke, wood, oil or gas.
- m) original and individual replicas of historical propulsion engines, which are based on a pre-1950 design and fitted in craft referred to in e) or g).

While some boatbuilders may try to use the above list in an attempt to avoid the RCD for their own craft, it may not be in their interests to do so. It is, perhaps, significant that some of the UK's larger dinghy building companies, who might have tried to argue that their boats were "intended solely for racing", have actually chosen to comply with the RCD to ensure freedom of trade in Europe.

### **3 RESPONSIBILITY**

Responsibility for ensuring that a boat complies with the Directive lies with the company or person first putting the product on the European Market or first time of use. This responsibility includes signing and holding the legal paperwork. This would normally be the boatbuilder or authorised representative (in the case of boats built within the European Community) or the principal importer (in the case of boats built outside the European Community). For craft where neither the manufacturer nor his authorised representative established within the Community fulfils the responsibilities for the product's conformity, such responsibilities can be assumed by any natural or legal person established within the Community who places the product on the market or puts it into service.

### **4 SCOPE**

The scope of the Directive covers the design and construction of all recreational craft between 2.5m and 24m in length, partly completed boats, personal watercraft and certain components, subject to exclusions above.

Exhaust emissions apply to all propulsion engines, both inboard and outboard, installed or intended for installation in recreational craft or personal watercraft and engines that are subject to "major engine modification".

Noise emissions apply to all inboard powered craft and stern drive without integral exhaust powered craft, personal watercraft, outboard engines and stern drive engines with integral exhaust. Craft with inboard engines or stern drive engines without integral exhaust, which are subject to major craft conversion and subsequently placed on the market within five years following conversion, are also covered.

## **5 DESIGN CATEGORIES**

**Craft are one assigned to one or occasionally two design categories as follows:**

<b><u>Category</u></b>	<b><u>Significant wave height</u></b>	<b><u>Wind forces</u></b>
<b>A - OCEAN</b>	exceeding 4m	exceeding 8
<b>B - OFFSHORE</b>	up to & including 4m	up to & including 8
<b>C - INSHORE</b>	up to & including 2m	up to & including 6
<b>D - SHELTERED WATERS</b>	up to & including 0.3m	up to & including 4

*(Significant wave height means the average height of the highest 1/3rd of the waves over a given period; waves of double this height may occasionally be experienced.)*

- A.** OCEAN: Designed for extended voyages where conditions may exceed wind force 8 (Beaufort scale) and significant wave heights of 4m and above but excluding abnormal conditions. Vessels are largely self-sufficient.
- B.** OFFSHORE: Designed for offshore voyages where conditions up to and including, wind force 8 and significant wave heights up to and including 4m may be experienced.
- C.** INSHORE: Designed for voyages in coastal waters, large bays, estuaries, lakes and rivers where conditions up to and including wind force 6 and significant wave heights up to and including 2m may be experienced.
- D.** SHELTERED WATERS: Designed for voyages on sheltered coastal waters, small bays, small lakes, rivers and canals when conditions up to and including wind force 4 and significant wave heights up to and including 0.3m may be experienced, with occasional waves of 0.5m maximum height, for example from passing vessels.

Craft in each category must be designed and constructed to withstand these parameters in respect of stability, buoyancy, and other essential requirements listed in Annex 1 (of the Directive) and to have good handling characteristics.

It is up to the “Responsible Person” to decide which Design Category is appropriate for the craft in question. Some of the Essential Requirements specify different criteria for different Design Categories, but many of them don’t. An over cautious decision may leave the boatbuilder down grading the product against the competition, while an optimistic rating may result in the craft being challenged by a market surveillance body, such as in the UK Trading Standards Officers.

## 6 CONFORMITY ASSESSMENT

The minimum assessment procedures applicable to a particular craft depend on a) the Design Category and b) the length of the craft, as shown in the table below.

<u>Design Category</u>	<u>Design &amp; Construction</u>	<u>Modular Choice</u>	<u>Method for Compliance</u>
A, B and C	For boats 2.5m to 12m hull length.	Aa or B+C or B+D, or B+E or B+F or G or H	Boat built using Standards* + Tests for Stability and Buoyancy with Notified Body involvement. Or full Notified Body involvement.
A, B and C	For boats 12m to 24m hull length.	B+C or B+D or B+E or B+F or G or H	Boat built using Standards* with full Notified Body involvement
C	For boats 2.5m to 12m hull length using harmonised standards for stability and buoyancy.	A or Aa or B+C or B+D or B+E or B+F or G or H	Boat built using standards* + the Harmonised Standard for Stability and Buoyancy. Or full Notified Body involvement.
D	For boats 2.5m to 24m hull length	A or Aa or B+C or B+D or B+E or B+F or G or H	Boat built using standards* or full Notified Body involvement.
C or D	<b>Personal Water craft</b>	A or Aa or B+C or B+D or B+E or B+F or G or H	Boat built using standards* or full Notified Body involvement
	<b>Engine Exhaust Emissions</b> Outboard, IB & SD ( Including PWC Engines)	B+C or B+D or B+E or B+F or G or H	Engines built to meet Essential Requirements & maximum Emission limits. Full notified Body involvement
	<b>Noise Emissions</b> For craft with inboard engines or stern drive engines without integral exhaust.	Aa or G or H	Boat Manufacturer to Test with Notified Body involvement.
	For craft with inboard engines or stern drive engines without integral exhaust.	A or Aa or G or H	May use Froude Number and P/D ratio for displacement craft or Reference boat database.
	For craft with Outboard or stern drive engines with integral exhaust and PWC	Aa or G or H	Engine Manufacturer to Test
	<b>Components as Annex II</b> Ignition protection equipment. start-in -gear protection devices. Steering wheels, mechanisms and cable assemblies. Fuel tanks intended for fixed installations. Prefabricated hatches and port lights.	B+C or B+D or B+F or G or H	Component manufacturer with full Notified Body involvement

\*The use of harmonised standards gives a presumption of conformity, however this does not preclude the use of other standards that may be appropriate.

**Module A - Internal Production Control**

This module is entirely self-assessment with no involvement of a Notified Body, or any other third party.

**Module Aa - Internal Production Control plus Tests**

Stability and buoyancy data and emission or tests have to be verified by a Notified Body, all other criteria are self-assessed.

**Module B - EC Type-Examination**

A “type-approval” procedure - the Responsible Person submits a completed boat and its Technical Documentation for approval by a Notified Body.

**Module C - Conformity To Type**

When one boat of a class or family has been approved under Module B, subsequent craft of the same class or family may use Module C, which is another self-assessment module.

**Module D - Production Quality Assurance**

This is the equivalent of ISO 9002. The quality assurance procedure itself needs to be approved by a Notified Body.

**Module E – Product Quality Assurance**

Final product inspection and testing under the surveillance of a notified body.

**Module F - Product Verification**

Inspection by a Notified Body either of every product or of homogeneous lots.

**Module G - Unit Verification**

Suitable for custom craft over 12m - Notified Body examines the individual product.

**Module H - Full Quality Assurance**

The equivalent of ISO 9001, similar to Module D, but with additional emphasis on quality assurance of design.

## **7 ESSENTIAL REQUIREMENTS FOR THE DESIGN AND CONSTRUCTION OF CRAFT**

The following is a summary of the Essential Requirements taken from Annex I of the Directive. The term “craft” covers recreational craft and personal watercraft.

### **1 Boat Design Categories**

Details as given in Section 5

#### **2.1 Craft Identification**

Each craft shall be marked with an identification number including the following information:

- a) country of manufacture
- b) manufacturer’s code
- c) unique serial number
- d) year of production
- e) model year

The relevant harmonised standard gives details of these requirements.

*(NB: BMF records the Manufacturer’s Identification Code element of the number on behalf of the DTI to ensure that there is no duplication. DIY builders should contact the Royal Yachting Association).*

#### **2.2 Builder’s plate**

Each craft shall carry a permanently affixed plate mounted separately from the craft identification number, containing the following information:

- a) manufacturer’s name
- b) CE marking (Annex IV)
- c) boat design category according to clause 1
- d) manufacturer’s maximum recommended load according to clause 3.6 excluding the weight of the contents of the fixed tanks when full
- e) number of persons recommended by the manufacturer for which the boat is designed to carry when under way.

#### **2.3 Protection from falling overboard and means of reboarding**

Craft shall be designed to minimise the risks of falling overboard and to facilitate re-boarding dependant on design category.

#### **2.4 Visibility from main steering position**

For motorboats, the main steering position shall give the operator, under normal conditions of use (speed and load), good all-round visibility.

## **2.5 Owner's Manual**

Each craft shall be provided with an owner's manual in the official Community language or languages, which may be determined by the Member State in which it is marketed. The manual should draw particular attention to risks of fire and flooding and shall contain the information listed in clauses 2.2, 3.6 and 4 as well as the unladen weight of the craft in kilograms

## **3.1 Structure**

The choice and combination of materials and method of construction shall ensure that the craft is strong enough in all respects. Special attention shall be paid to the design category according to clause 1, and the manufacturer's maximum recommended load in accordance with clause 3.6.

## **3.2 Stability and Freeboard**

The craft shall have sufficient stability and freeboard considering its design category according to clause 1 and the manufacturer's recommended load according to clause 3.6

## **3.3 Buoyancy and Flotation**

The craft shall be constructed to ensure that it has buoyancy characteristics appropriate to its design category according to clause 1 and the manufacturer's maximum recommended load according to clause 3.6. All habitable multihull craft shall be so designed as to have sufficient buoyancy to remain afloat in the inverted position.

Boats of less than 6m in length that are susceptible to swamping when used in their design category shall be provided with appropriate means of flotation in the swamped condition.

## **3.4 Openings in Hull, Deck and Superstructure**

Openings in hull, deck(s) and superstructure shall not impair the structural integrity of the craft or its weathertight integrity when closed.

Windows, port-lights, doors and hatch covers shall withstand the water pressure likely to be encountered in their specific position, as well as point loads applied by the weight of persons moving on deck.

Through-hull fittings designed to allow water passage into the hull or out of the hull, below the waterline corresponding to the Manufacturer's maximum recommended load according to clause 3.6, shall be fitted with shutoff means, which shall be readily accessible.

## **3.5 Flooding**

All craft shall be designed so as to minimize the risk of sinking. Particular attention should be paid where appropriate to:

- a) cockpits and wells, which should be self-draining or have other means of keeping water out of the boat interior
- b) ventilation fittings
- c) removal of water by pumps or other means

### **3.6 Manufacturer's Recommended Load**

The manufacturer's maximum recommended load (fuel, water, provisions, miscellaneous equipment and people (in kilograms)) for which the boat is designed, shall be determined according to the design category (clause 1), stability and freeboard (clause 3.2) and buoyancy and flotation (clause 3.3)

### **3.7 Liferaft Stowage**

All craft of categories A and B, and craft of categories C and D longer than 6m shall be provided with one or more stowage points for a liferaft (liferafts) large enough to hold the number of persons the boat is designed to carry as recommended by the manufacturer. This (these) stowage point(s) shall be readily accessible at all times.

### **3.8 Escape**

All habitable multihull craft over 12m in length shall be provided with viable means of escape in the event of inversion.

All habitable craft shall be provided with viable means of escape in the event of fire.

### **3.9 Anchoring, Mooring and Towing**

All craft, taking into account their design category and their characteristics, shall be fitted with one or more strong points or other means capable of safely accepting anchoring, mooring and towing loads.

## **4 Handling Characteristics**

The manufacturer shall ensure that the handling characteristics of the craft are satisfactory with the most powerful engine for which the boat is designed and constructed. For all recreational marine engines, the maximum rated engine power shall be declared in the owner's manual in accordance with the harmonised standard.

### **5.1.1 Inboard Engine**

All inboard mounted engines shall be placed within an enclosure separated from the living quarters and installed so as to minimise the risk of fires or spread of fires as well as hazards from toxic fumes, heat, noise or vibrations in the living quarters.

Engine parts and accessories that require frequent inspection and/or servicing shall be readily accessible.

The insulating materials inside engine spaces shall be non-combustible.

### **5.1.2 Engine Ventilation**

The engine compartment shall be ventilated. The ingress of a dangerous amount of water into the engine compartment through all inlets must be prevented.

### **5.1.3 Engine Exposed Parts**

Unless the engine is protected by a cover or its own enclosure, exposed moving or hot parts of the engine that could cause personal injury shall be effectively shielded.

### **5.1.4 Outboard Engines Starting**

All boats with outboard engines shall have a device to prevent starting the engine in gear, except:

- a) when the engine produces less than 500 newtons (N) of static thrust;
- b) when the engine has a throttle-limiting device to limit thrust to 500N at the time of starting the engine.

### **5.1.5 Personal Watercraft running without Driver**

Personal watercraft shall be designed either with automatic engine cut-off or with an automatic device to provide reduced speed, circular, forward movement when the driver dismounts deliberately or falls overboard.

### **5.2.1 Fuel System – General**

The filling, storage, venting and fuel-supply arrangements and installations shall be designed and installed so as to minimise the risk of fire and explosion.

### **5.2.2 Fuel Tanks**

Fuel tanks, lines and hoses shall be secured and separated or protected from any source of significant heat. The material the tanks are made of and their method of construction shall be according to their capacity and the type of fuel. All tank spaces shall be ventilated.

Petrol fuel shall be kept in tanks, which do not form part of the hull and are:

- a) insulated from the engine compartment and from all other sources of ignition;
- b) separated from living quarters:

Diesel fuel may be kept in tanks that are integral with the hull.

### **5.3 Electrical System**

Electrical systems shall be designed and installed so as to ensure proper operation of the craft under normal conditions of use and shall be such as to minimise risk of fire and electrical shock.

Attention shall be paid to the provision of overload and short-circuit protection of all circuits, except engine starting circuits, supplied from batteries.

Ventilation shall be provided to prevent the accumulation of gases, which might be emitted from batteries. Batteries shall be firmly secured and protected from ingress of water.

#### **5.4.1 Steering System – General**

Steering systems shall be designed, constructed and installed in order to allow the transmission of steering loads under foreseeable operating conditions.

#### **5.4.2 Steering - Emergency Arrangements**

Sailboat and single-engine inboard motorboats with remote-controlled rudder steering systems shall be provided with emergency means of steering the craft at reduced speed.

### **5.5 Gas System**

Gas systems for domestic use shall be of the vapour-withdrawal type and shall be designed and installed so as to avoid leaks and the risk of explosion and be capable of being tested for leaks. Materials and components shall be suitable for the specific gas used to withstand the stresses and exposures found in the marine environment.

Each appliance shall be equipped with a flame failure device effective on all burners. Each gas-consuming appliance must be supplied by a separate branch of the distribution system, and each appliance must be controlled by a separate closing device. Adequate ventilation must be provided to prevent hazards from leaks and products of combustion.

All craft with a permanently installed gas system shall be fitted with an enclosure to contain all gas cylinders. The enclosure shall be separated from the living quarters, accessible only from the outside and ventilated to the outside so that any escaping gas drains overboard. Any permanent gas system shall be tested after installation.

#### **5.6.1 Fire Protection – General**

The type of equipment installed and the layout of the craft shall take account of the risk and spread of fire. Special attention shall be paid to the surroundings of open flame devices, hot areas or engines and auxiliary machines, oil or fuel overflows, uncovered oil and fuel pipes and avoiding electrical wiring above hot areas of machines.

#### **5.6.2 Fire Fighting Equipment**

Craft shall be supplied with fire-fighting equipment appropriate to the fire hazard, or the position and capacity of fire-fighting equipment appropriate to the fire hazard shall be indicated. The craft shall not be put into service until the appropriate fire-fighting equipment is in place.

Petrol engine enclosures shall be protected by a fire extinguishing system that avoids the need to open the enclosure in the event of fire. Where fitted, portable fire extinguishers shall be readily accessible and one shall be so positioned that it can easily be reached from the main steering position of the craft.

### 5.7 Navigation Lights

Where navigation lights are fitted, they shall comply with the 1972 Colreg or CEVNI regulations, as appropriate.

### 5.8 Discharge Prevention

Craft shall be constructed so as to prevent the accidental discharge of pollutants (oil, fuel etc.) overboard. Craft fitted with toilets shall have either:

- a) holding tanks; or
- b) provision to fit holding tanks.

Craft with permanently installed holding tanks shall be fitted with a standard discharge connection to enable pipes of reception facilities to be connected with the craft discharge pipeline.

In addition, any through-the-hull pipes for human waste shall be fitted with valves, which are capable of being secured in the closed position.

***Not all of the above Essential Requirements will be applicable to every boat built. For instance, only about 8 to 10 of them will be applicable to a small Design Category D craft with no engine.***

There are several ways in which a boatbuilder can satisfy the above Essential Requirements, and these are listed in the table below.

1 Comply with harmonised standards where these are available
2 Comply with advanced Draft Standard, being written to meet the Essential Requirements
3 Comply with existing known recognised satisfactory standards or codes
4 Comply with acceptable empirical knowledge that meets current expectations.

It will generally be best to choose a harmonised standard wherever possible. Whatever other set of criteria are chosen, the Notified Body, when involved, will have to be convinced that this alternative is an adequate substitute. There is a risk that an inadequate substitute could be picked up by the Trading Standards officer, or the authorities in the country to which a boatbuilder is trying to export.

## **8 ESSENTIAL REQUIREMENTS FOR EXHAUST EMISSIONS PROPULSION ENGINES**

Propulsion engines shall comply with the following essential requirements for exhaust emissions.

### **8.1 Engine Identification**

**8.1.1** Each engine shall be clearly marked with the following information:

- a) engine manufacturer's trademark or trade name,
- b) engine type, engine family, if applicable,
- c) a unique engine identification number,
- d) CE marking, if required under Article 10 of the Directive

**8.1.2** These marks must be durable for the normal life of the engine and must be clearly legible and indelible. If labels or plates are used, they must be attached in such a manner that the fixing is durable for the normal life of the engine, and the labels/plates cannot be removed without destroying or defacing them.

**8.1.3** These marks must be secured to an engine part necessary for normal engine operation and not normally requiring replacement during the engine life.

**8.1.4** These marks must be located so as to be readily visible to the average person after the engine has been assembled with all the components necessary for engine operation.

### **8.2 Exhaust Emission Requirements**

Propulsion engines shall be designed, constructed and assembled so that when correctly installed and in normal use, emissions shall not exceed the limit values obtained from the following table:

<b>Table 1</b>								
<b>Type</b>	<b>Carbon Monoxide CO = A + B/P<sub>N</sub> g/kWh</b>			<b>Hydrocarbons HC = A + B/P<sub>N</sub> g/kWh</b>			<b>Nitrogen oxides NO<sub>x</sub> g/kWh</b>	<b>Particulates PT g/kWh</b>
	A	B	n	A	B	n		
Two-stroke spark ignition	150,0	600,0	1,0	30,0	100,0	0,75	10,0	Not applicable
Four-stroke spark ignition	150,0	600,0	1,0	6,0	50,0	0,75	15,0	Not applicable
Compression ignition	5,0	0	0	1,5	2,0	0,5	9,8	1,0

Where A, B and n are constants in accordance with the table, P<sub>N</sub> is rated engine power (kW) and the exhaust emissions are measured in accordance with the harmonised standard EN ISO 8178-1:1996.

For engines above 130 kW either E3 (IMO) or E5 (recreational marine) duty cycles may be used. The reference fuels to be used for the emissions test for engines fuelled with petrol and diesel shall be as specified in Directive 98/69/EC (Annex IX, Tables 1 and 2), and for those engines fuelled with Liquefied Petroleum Gas as specified in Directive 98/77/EC.

### **8.3 Durability**

The manufacturer of the engine shall supply engine installation and maintenance instructions, which if applied should mean that the engine in normal use will continue to comply with the above limits throughout the normal life of the engine and under normal conditions of use.

This information shall be obtained by the engine manufacturer by use of prior endurance testing, based on normal operating cycles, and by calculation of component fatigue so that the necessary maintenance instructions may be prepared by the manufacturer and issued with all new engines when first placed on the market.

The normal life of the engine is considered to mean:

- a) inboard or stern drive engines with or without integral exhaust: 480 hours or 10 years, whichever occurs first;
- b) personal watercraft engines: 350 hours or 5 years, whichever occurs first;
- c) outboard engines: 350 hours or 10 years, whichever occurs first.

### **8.4 Owner's Manual**

Each engine shall be provided with an owner's manual in the Community language or languages, which may be determined by the Member State in which the engine is to be marketed. This manual shall:

- a) provide instructions for the installation and maintenance needed to assure the proper functioning of the engine to meet the requirements for durability (see clause 8.3)
- b) specify the power of the engine when measured in accordance with the harmonised standard
- c) contain a copy of the Declaration of Conformity for the engine

## **9 ESSENTIAL REQUIREMENTS FOR NOISE EMISSIONS**

Recreational craft with inboard or stern drive engines without integral exhaust, personal watercraft and outboard engines and stern drive engines with integral exhaust shall comply with the following essential requirements for noise emissions.

### **9.1 Noise Emission Levels**

**9.1.1** Recreational craft with inboard or stern drive engines without integral exhaust, personal watercraft and outboard engines and stern drive engines with integral exhaust shall be designed, constructed and assembled so that noise emissions measured in accordance with tests defined in the harmonised standard EN ISO 14509 shall not exceed the limit values in the following table:

<b><u>Table 2</u></b>	
<b>Single Engine Power (kW)</b>	<b>Maximum Sound Pressure Level = <math>L_{pASmax}</math> (dB)</b>
$P_N \leq 10$	67
$10 < P_N \leq 40$	72
$P_N > 40$	75

where  $P_N$  = rated engine power in kW at rated speed and  $L_{pASmax}$  = maximum sound pressure level in dB.

For twin-engine and multiple-engine units of all engine types an allowance of 3 dB may be applied.

**9.1.2** As an alternative to sound measurement tests, recreational craft with inboard engine configuration or stern drive engine configuration, without integral exhaust, shall be deemed to comply with these noise requirements if they have a Froude number of  $\leq 1.1$  and a power displacement ratio of  $\leq 40$  and where the engine and exhaust system are installed in accordance with the engine manufacturer's specifications.

**9.1.3** "Froude number" shall be calculated by dividing the maximum boat speed  $V$  (m/s) by the square root of the waterline length  $lwl$  (m) multiplied by a given gravitational constant,

$$(g = 9,8 /s^2) \quad Fn = \frac{V}{\sqrt{(g.lwl)}}$$

"Power displacement ratio" shall be calculated by dividing the engine power  $P$  (kW) by the boat's displacement  $D$  (t) =  $P/D$

**9.1.4** As a further alternative to sound measurement tests, recreational craft with inboard or stern drive engine configurations without integral exhaust, shall be deemed to comply with these noise requirements if their key design parameters are the same as or compatible with those of a certified reference boat to tolerances specified in the harmonised standard.

**9.1.5** “Certified reference boat” shall mean a specific combination of hull/inboard engine or stern drive engine without integral exhaust that has been found to comply with the noise emission requirements, when measured in accordance with the standard harmonised (see section 7 clause 9.1.1) and for which all appropriate key design parameters and sound level measurements have been included subsequently in the published list of certified reference boats.

**9.2 Owner’s Manual**

For recreational craft with inboard engine or stern drive engines with or without integral exhaust and personal watercraft, the Owner's Manual required under Directive Annex I.A (see Section 7 clause 2.5) shall include information necessary to maintain the craft and exhaust system in a condition that, insofar as is practicable, will ensure compliance with the specified noise limit values when in normal use.

For outboard engines, the owner's manual required under Directive Annex I.B.4 shall provide instructions necessary to maintain the outboard engine in a condition, that insofar as is practicable, will ensure compliance with the specified noise limit values when in normal use.

**10 COMPONENTS**

The following components, listed in Annex II of the Directive, are subject to the conformity assessment B+C procedures (See Section 6) and must be CE marked or labelled.

<b><u>Components</u></b>	
1	Ignition-protected equipment for inboard and stern drive petrol engines and petrol fuel tank spacers
2	Start-in-gear protection devices for outboard motors
3	Steering wheels, steering mechanisms and cable assemblies
4	Non integral fuel tanks and fuel hoses (this does not include 27L outboard tanks covered by the Machinery Directive)
5	Prefabricated hatches and port lights

This means that a) anyone, other than the boatbuilder, who is manufacturing any of the above items has to ensure they comply with the appropriate standard and that they are CE marked and b) any boatbuilder purchasing any of the above items has to ensure that they are CE marked.

Where the boatbuilder makes these components for his production they are covered by the CE marking of the boat and do not need separate assessment.

## **11 STANDARDS**

There are some 60 standards either complete or being developed for this Directive. Many of these standards relate to components, different materials used in construction or are appropriate for different sizes or types of craft.

Therefore the manufacturer of a complex (and probably large) craft may need to focus on approximately 20 standards, a simple craft perhaps only 8 to 10.

## **12 NOTIFIED BODIES**

These are Government appointed organisations who are employed by the manufacturer to assess conformity with the requirements of the RCD, where required. As section 6 above states, they have only limited interest in craft of less than 12m and none in design category D craft. There are currently 26 Notified Bodies of which 4 or 5 are currently active in the UK. Any company requiring the services of a Notified Body might find it worthwhile getting quotes, as it is a competitive market.

## **13 PART-COMPLETED CRAFT**

Part-completed or kit boats must be sold with a declaration (Annex IIIa of the Directive) stating that the package meets the Essential Requirements up to the stage of completion when sold, and that the craft is intended to be completed by others. This means that further Essential Requirements need to be met before the craft can be fully assessed and CE marked.

## **14 DOCUMENTATION**

Any company producing recreational craft (or engines or components) within the scope of the RCD must also carry out the following:

- a) Produce and maintain a detailed Technical file on each model or family of craft (or engine or component). This must include all relevant data or means used by the manufacturer to ensure that the craft comply with the relevant Essential Safety requirements.
- b) Produce an adequate Owner's Manual in the language of the country where the craft is being sold.
- c) Produce written Declaration of Conformity. This will include references to the harmonised standards or other codes or standards used and where appropriate, reference to the type-examination certificate and the Notified Body.
- d) Label the craft (or engine or component) with a CE mark. On the craft this will normally be on the builder's plate.
- e) Keep the Technical file and copies of Declaration of Conformity for 10 years after the last example was placed on the market.

## **15 SUMMARY**

While all the above may seem very daunting, many boatbuilders will find that they already comply with many aspects of the Directive if they currently use “good boatbuilding practices”. The important thing is that all companies a) make sure they know what they have to do to comply and b) carry out all the correct procedures with regard to assessment, records etc.

While it is recognised that the large production boatbuilder will find the Directive easier to cope with than the small, custom boatbuilder, it is equally important for every company to comply. The consequences of not doing so are the same for everybody - not just an inability to sell boats, but a possible £5,000 fine and/or 3 months imprisonment and the probable recall of non-complying craft.

The Directives (94/25/EC) and (2003/44/EC) do not make particularly easy reading, and do not contain the detailed technical information necessary for companies to fully understand the implications of the RCD. To help the boatbuilder the BMF has produced a user-friendly RCD Workshop Manual which includes the full text of the RCD, the UK regulations, the European Commission Comments and Interpretation and the RSG Guide. The key feature is the entirely reworked manual supported by 11 in-depth case studies.

Access to British Standards relating to the RCD is now available via a new website [www.rcdweb.com](http://www.rcdweb.com)

For information on the BMF Workshop Manual please contact Carole Abel, Technical Secretary e-mail: [cabel@britishmarine.co.uk](mailto:cabel@britishmarine.co.uk) or 01784 223 634