

Report on the investigation of
the fatal accident at

PRINCES CLUB WATER SPORTS PARK

Bedfont, Middlesex

11 September 2010



**Extract from
The United Kingdom Merchant Shipping
(Accident Reporting and Investigation)
Regulations 2005 – Regulation 5:**

“The sole objective of the investigation of an accident under the Merchant Shipping (Accident Reporting and Investigation) Regulations 2005 shall be the prevention of future accidents through the ascertainment of its causes and circumstances. It shall not be the purpose of an investigation to determine liability nor, except so far as is necessary to achieve its objective, to apportion blame.”

NOTE

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GLOSSARY OF ABBREVIATIONS AND ACRONYMS

AALA	Adventure Activities Licensing Authority
AINA	Association of Inland Navigation Authorities
BST	British Summer Time
BWSW	British Water Ski and Wakeboard
CDA	Club Driver Award
CPR	Cardio-pulmonary resuscitation
DfT	Department for Transport
hp	horsepower
HSE	Health and Safety Executive
IOSH	Institution of Occupational Safety and Health
kph	kilometres per hour
m	metre
MCA	Maritime and Coastguard Agency
mph	miles per hour
MSN	Merchant Shipping Notice
N	Newton
NWSF	National Water Safety Forum
RYA	Royal Yachting Association
SBDA	Ski Boat Driver Award
SCV	The Small Commercial Vessel and Pilot Boat Code of Practice

Times: All times used in this report are British Summer Time (BST) unless otherwise stated

SYNOPSIS



On 11 September 2010, an 11 year old girl was killed when she fell from a banana boat ride.

The driver of the ski boat that was towing the banana boat was not aware that she had fallen in to the water, and did not see her as he continued on a tight circular route. The ski boat ran over the girl and its propeller caused severe injuries. She was pronounced dead soon after arriving at the hospital.

The subsequent MAIB investigation identified a number of factors that contributed to the accident, including:

- The ski boat was operating without an observer and the driver was dividing his attention between looking ahead at where he was going, and behind to check on the welfare of those riding the banana boat.
- The helmet issued to the victim was a grey colour that was difficult to see in the lake water.
- The tight circuit taken by the driver and the limited forward visibility from the boat at the slower speeds required for towing an inflatable, reduced the opportunity to see the victim in the water.
- The implementation and execution of the safety management system used at Princes Club was flawed at every level and had not identified or controlled the risks to children taking part in banana boat rides effectively.
- There is no oversight of operators that provide towed inflatable rides on a commercial basis and no assurance that their operating standards control the risks effectively.
- The licensing requirements for ski boat drivers and ski boats operating on a commercial basis are unclear.

A recommendation has been made to the National Water Safety Forum (NWSF) and British Water Ski and Wakeboard (BWSW) to develop a code of practice that covers not only the activity of towed inflatable rides but also offers guidance on the health and safety management of centres that conduct them. The Health and Safety Executive (HSE) has been recommended to include this activity in what ever arrangements replace the Adventure Activity Licensing Authority.

The Maritime and Coastguard Agency (MCA) has been recommended to clarify the licensing requirements for ski boats engaged in towing inflatables on a commercial basis and, if necessary, work with BWSW in the development of an appropriate driver qualification.

The Health and Safety (Commercial) team of the London Borough of Hounslow Council's Environment Department visited the club following the accident and issued two prohibition and five improvement notices. At the time of publication of this report, its investigation into the accident was continuing. The Council has been recommended to introduce a licensing scheme for this activity in its area.

Princes Club has taken a significant number of actions to address the shortfalls of its safety management system that were present at the time of the accident. MAIB has further recommended that Princes Club review its staff induction programme and introduce a system of auditing drivers' practices.



Princes Club banana boat

SECTION 1 - FACTUAL INFORMATION

1.1 PARTICULARS OF THE ACCIDENT

Vessel details

Registered owner	:	Princes Sporting Club Ltd
Type	:	Ski Nautique 196
Built	:	2008
Construction	:	Fibreglass
Length overall	:	6.5m
Displacement	:	1.2t
Engine power and type	:	Pleasurecraft Marine Engineering Co. 330hp inboard
Top speed (estimated)	:	45mph (72kph)

Inflatable details

Manufacturer	:	Island Hopper
Type	:	12 person in a 6+6 side by side configuration
Length	:	5.05m
Max towed speed	:	15mph (24kph)

Accident details

Type	:	Very serious marine casualty
Time and date	:	1644 Saturday 11 September 2010
Location of incident	:	Princes Club, Bedfont, Middlesex
Persons on board	:	10
Injuries/fatalities	:	1
Damage	:	Nil

1.2 NARRATIVE

1.2.1 Safety instruction, equipment issue and cable skiing

In the early afternoon of Saturday 11 September 2010, a group of 10 children accompanied by four parents arrived at Princes Club water park, for a joint birthday party for two of the children. The party was to consist of 2 hours of wake boarding and knee boarding on Princes Club's cable ski lake¹ "Cable 2" and 1 hour riding on a towed inflatable² on a different lake. The weather conditions were good with little wind and mainly sunny skies.

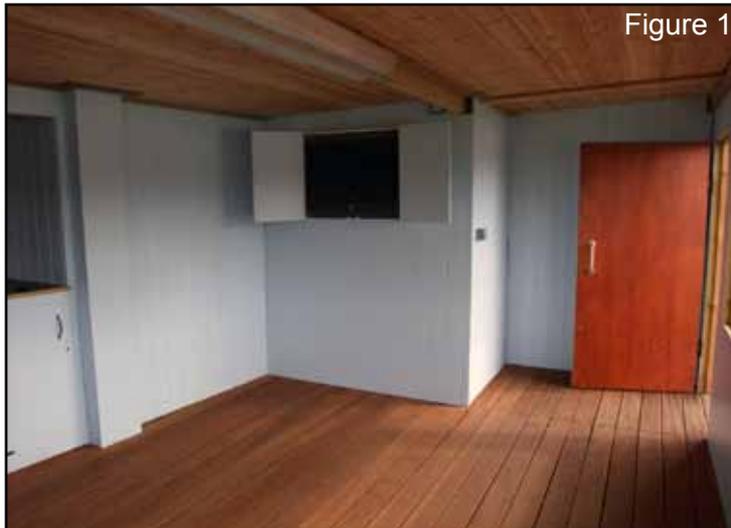


Figure 1

Safety briefing room

Once they had booked in at the club's reception, the group were directed towards a briefing room (**Figure 1**). There, they joined another group and watched a safety video which explained the procedures and safe use of the cable ski equipment. The video did not include any safety instructions or guidance for the banana boat ride that was scheduled to take place after the cable skiing.



Figure 2

Equipment store and briefing room

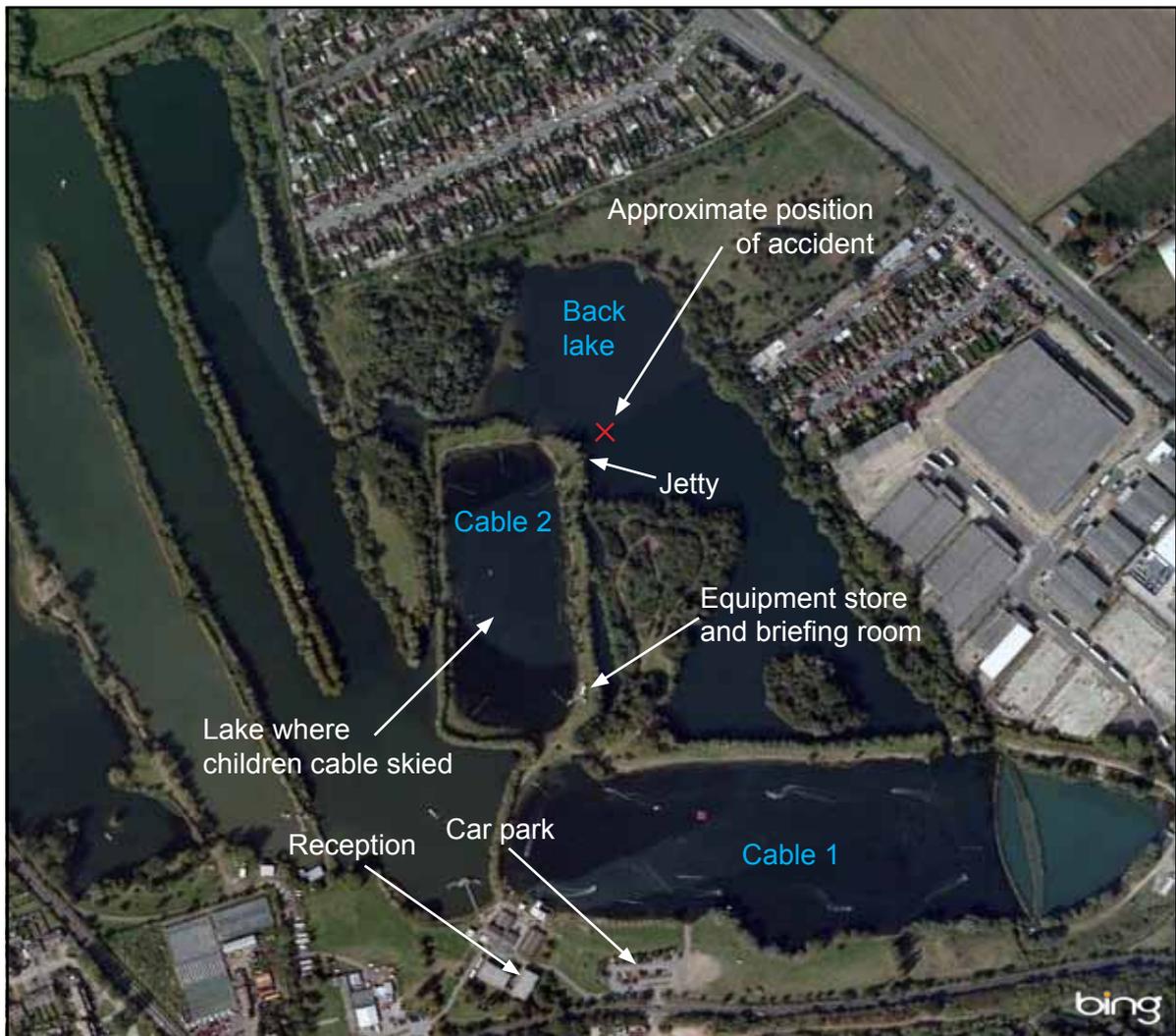
When the safety video had finished, the group went to the equipment store, where each participant was issued with a hard helmet, wetsuit and buoyancy aid (**Figure 2**). It was at this point that an eleventh child, who had arrived late at the park, joined the party. He was directed by reception staff to join his friends at the equipment store and did not watch the cable ski safety video.

¹ Cable skiing is a method of water skiing, wake boarding or knee boarding on a lake without the need for a powerboat. The system consists of wires suspended around the edge of a lake circuit on which a series of electrically-driven carriers tow skiers on a closed loop. It is not unusual for a single cable to carry ten skiers at once, each separated by around 80 metres.

² Towed inflatable rides usually carry between 1 and 12 people at a time depending on the type of inflatable used. The type used at Princes Club was known as a banana boat and could carry up to 12 people in two rows of six. The 'banana' was towed by a boat, known as a ski boat, which was purpose-built for sports towing.

At around 1400, the group started their 2-hour period on the cable ski lake. At 1515, two more children, who had been unable to join the party earlier, arrived at the park. They too were directed by reception staff to go straight to the equipment store before joining the rest of the children at the cable ski lake. Again, they did not receive a safety briefing. Just before 1530, the driver of the ski boat that was scheduled to tow the banana boat went to where the inflatable was stored, put it in the water and towed it to a lake known as Back Lake where the ride was to take place (**Figure 3**). The driver noted that one chamber of the banana boat was slightly under inflated but did not consider it necessary to add any air.

Figure 3



Princes Club water park

1.2.2 The banana boat ride

The driver tied up the ski boat and banana boat to the jetty on Back Lake then, at 1600, walked the 200m to the cable ski area and informed the group that the inflatable ride was ready (**Figure 4**). Some children made one final circuit on the cable lake and then they all went to the equipment room with the intention of exchanging their hard helmets for the soft foam helmets that Princes Club insisted were worn when riding on the banana boat. It was recognised by the club that during a banana boat ride there was a risk that riders could fall against each other, and that if someone was hit by a fellow rider who was wearing a hard helmet the

injury would be worse than if they were wearing a soft helmet. Only ten children were issued soft helmets as this was the maximum number of riders that were permitted to ride the banana boat at any one time.

Figure 4

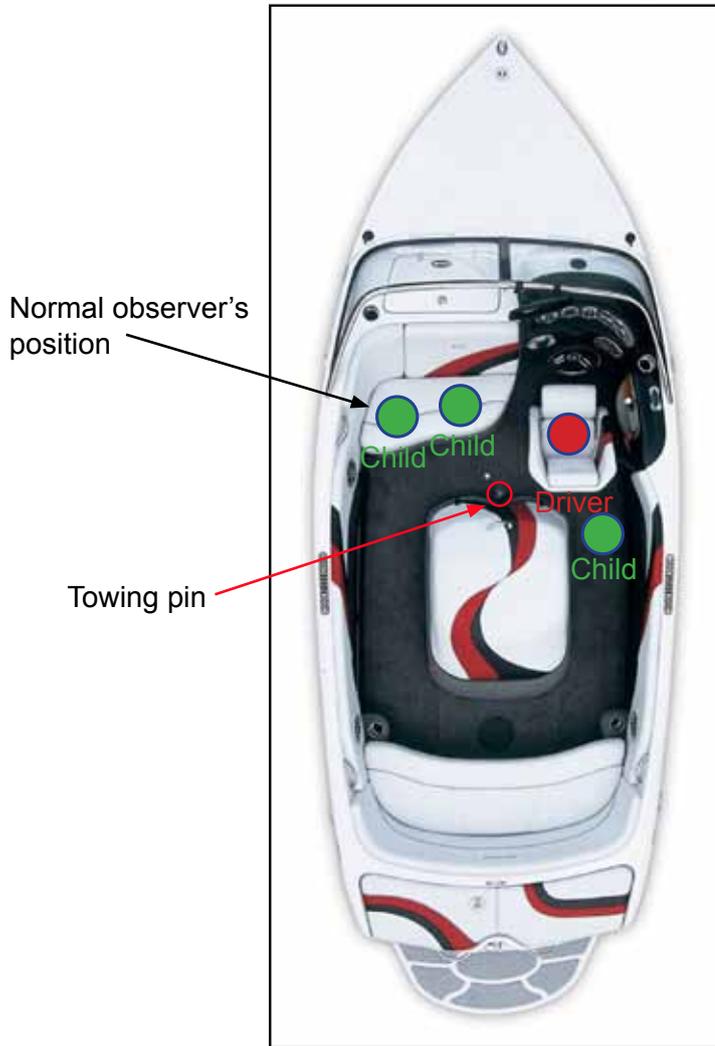


Back Lake jetty

The children then ran to Back Lake, with the parents following behind. The ten children with helmets quickly boarded the banana boat, and the three without climbed into the ski boat. Two of the children sat in the rearward-facing seat next to the driver, the third sat on the floor behind the driver's seat; a position which put the child in close proximity to the towing pin and tow rope (**Figure 5**).

The driver did not give any safety instructions to either the children on the banana boat or those in the ski boat, nor did he nominate any child or adult to act as an observer for him. An observer or spotter is a person nominated to sit alongside the ski boat driver (usually on the rearward-facing seat) to watch the tow and to relay any information concerning it to the driver, thus allowing him to concentrate on navigation and the water ahead (**Figure 6**). British Water Ski and Wakeboard (BWSW) states in its safety recommendations that the ski boat driver should always have an observer (**Annex A**). However, the conditions of Princes Club's insurance policy did not require an observer to be carried provided the activity was taking place on enclosed waters, with only one boat operating at a time, as was the case on Back Lake on the afternoon of the accident (**Annex B**).

Figure 5



Layout of the ski boat

Photograph courtesy of waterskimag.com

Figure 6



Observer's position

The driver explained to the children that when riders fell off the banana boat he would slow down, turn around and stop the ski boat so that they could swim to the stern and climb on board. They would then be required to hand their helmets over to those who were passengers in the ski boat so that they could take their turn on the banana boat. This process was followed for around 30 minutes, during which time riders and passengers swapped places five or six times. It was reported that the boat's engine was not stopped on every occasion that the children climbed on board the ski boat. A sticker next to the steering wheel warned of the dangers of starting or running the boat's engine when "anyone is on or near the boarding platform." (Figure 7).

Figure 7



Propeller warning sign

At approximately 1640, Mari-Simon Cronje, one of the girls of the group, fell off the banana boat about 10 to 15m from the shore. This was the first time that a single child had fallen off the inflatable and went unnoticed by the driver. The driver continued on a tight, roughly circular track. The watching parents, who were sitting at picnic tables near to the jetty, realised that, unlike on previous occasions, the boat was not slowing and they began to shout and wave to attract the driver's attention. Their efforts were not seen by the driver, who was scanning between his rear view mirror, over his shoulder at the banana and ahead of where the boat was going (Figure 8). Trials conducted after the accident found that it was not possible for someone in the boat to hear an adult shouting from the shore over the noise of the engine when the boat was more than 10m away.



Rear view mirror

1.2.3 Emergency response

The boat ran over Mari-Simon, its propeller causing severe leg and perineal injuries. The driver realised what had happened, stopped the boat and then moved it to the nearby jetty, where he tied it up. One child jumped off the banana and swam to her friend's aid. Mari-Simon acknowledged her friend but soon lost consciousness. At the same time, the father of one of the children dived in to the water and swam the estimated 10 to 15m to reach Mari-Simon. He soon became aware of the severity of her injuries and cleared all of the children away from the scene and directed the driver to call the emergency services.

The driver knew there was a doctor on site because the club was running a water ski competition on another lake and his presence was a requirement of competition skiing. Once the driver had called the emergency services and given them the location and brief description of the accident, he handed his mobile telephone to the other father who was present and ran off to get help. When the driver arrived at the competition lake he found that the doctor was on the water, skiing in the competition. Fortunately, the driver came across another staff member who he asked to tell the club's management what had happened and to get a message to the club doctor while he went to prepare for the arrival of the ambulance.

Meanwhile, the father who had dived in to the water had managed to lift Mari-Simon on to the ski boat's aft boarding platform; the second father climbed into the boat and leant over the back seat to assist. The two men continuously carried out cardio-pulmonary resuscitation (CPR), one of them remaining in contact with the ambulance service operator, feeding back information when he was able to do so. One mother shepherded the rest of the children away from the scene, while the other made telephone contact with another emergency operator and, despite her

unfamiliarity with the park, attempted to describe the accident location to guide the emergency services to them. With the driver having now left, the group were on their own.

Unknown to the driver and to the adults at Back Lake, an ambulance had arrived at the park at 1649, within 5 minutes of the first emergency call. It drove in to the main car park, but cars were parked across the inner set of gates and it could get no further. The ambulance crew got out of the ambulance, collected their emergency equipment bags plus additional equipment specifically designed for treating children, and hurried through the inner gates towards reception.

Neither the club's reception staff nor members of the public around the reception area were aware of the emergency at Back Lake or why an ambulance had been called. A receptionist suggested that the ambulance crew go to the control pod of a lake known as Cable One, where a national cable skiing competition was being held, to see if an incident had happened there. This was some 60 metres away from reception, so the ambulance crew gathered their equipment and ran through small groups of spectators to find the organisers of the event to see if they had requested medical assistance. The organisers were not aware of any emergency at the club.

The ambulance crew were in the process of radioing back to their controller for more information, when they were spotted by two members of staff who had been informed of the accident by the ski boat driver. They directed the ambulance crew where to go and the crew gathered all their equipment and made for the scene. In total they ran an estimated 550m with their equipment before reaching Mari-Simon shortly after 1700 whereupon they commenced administering medical treatment.

By the time the second ambulance arrived, the boat driver had collected his bicycle and additional access gates to the park had been unlocked. The second ambulance was able to follow the boat driver on his bicycle all the way to the accident site, reaching the scene only a minute after the first ambulance crew had arrived on foot. Additional emergency vehicles, paramedics and doctors arrived and a medical helicopter landed near to the main entrance to the park to standby to airlift Mari-Simon to hospital.

The boat driver who was towing the doctor involved in the water ski competition had been contacted on his mobile phone and told of the incident. He slowed his boat and, as the doctor stopped in the water, he collected him and took him ashore. The doctor then ran back to his car to collect his medical bag before going on to Back Lake. By this time, the convoy of bicycle and ambulance were ahead of him and he followed them up towards the jetty. The water ski competition doctor made himself known to the ambulance crews and gave assistance until relieved by another doctor from the emergency services. He then spoke with the managing director of Princes Club, who had now arrived at the scene, and advised him to close the club.

At 1739, the medical teams transferred Mari-Simon by road ambulance the short journey to the West Middlesex Hospital, Isleworth. Despite extensive attempts to revive her, Mari-Simon did not regain consciousness and she was declared dead at 1822.

1.3 THE VICTIM

Mari-Simon Cronje was aged 11. She was a good swimmer and had no prior health conditions that would have contributed to her death.

The postmortem examination found that she had died from severe leg and perineal injuries that could have been expected to produce *'immediate and massive haemorrhage and shock'*.

At the time of the accident she was wearing a predominantly black wetsuit, a yellow and red 40N buoyancy aid and a grey coloured foam helmet. All of these were issued to her by Princes Club.

1.4 BRITISH WATER SKI AND WAKEBOARD

Originally formed in 1951 as the British Water Ski Federation, British Water Ski and Wakeboard (BWSW) is the national governing body for the sport of water skiing and wakeboarding in Great Britain. It is a non-profit making organisation and receives funding from its members, Sport England and UK Sport.

BWSW stated on its website that it was not responsible for overseeing towed inflatable rides. However, it recognised that a large number of its affiliated clubs provided such an activity and had included a list of 38 safety recommendations for activities involving towed inflatables in its publication *'Safety Recommendations and Codes of Practice'* (**Annex A**).

1.4.1 Ski Boat Driver Award

Although there are no mandatory qualifications required by drivers of ski boats, BWSW's Ski Boat Driver Award (SBDA) was recognised at ski clubs throughout the UK to be the benchmark for driver standards. The syllabus was based on the contents of the SBDA Manual (**Annex C**) and included rule of the road, buoyage, basic driving techniques, emergency procedures, techniques for towing water skiers and standard water skiing hand signals.

Before taking an SBDA test, a driver's ability will be assessed by an SBDA principal. The principal will then determine the amount of driving practice that the candidate should undertake before taking the practical test. Experienced drivers may only be required to do 1 hour of driving immediately prior to the test. Others may need several days of driving practice. The test consisted of a practical driving test lasting about 10 minutes, followed by a multiple choice question paper of 22 questions for coastal waters or 14 questions for inland waters.

1.4.2 Club Drivers Award

The Club Drivers Award (CDA) is BWSW's next tier of qualification above the SBDA. To qualify, the ski boat driver is usually assessed over an entire season, during which time he/she will tow for a variety of different styles of water skiing and in differing conditions. The driver is then required to pass a written paper on general practices and boat-handling (**Annex D**). The content of the syllabus for this qualification is presently under review within BWSW.

1.5 PRINCES CLUB

Founded in the 1950's, Princes Club had a worldwide reputation for offering some of the best water skiing facilities available on a single site. Spread over 120 acres, it had five individual water skiing lakes, two cable skiing lakes, six squash courts, a gymnasium, a large clubhouse and its own club shop. It offered a club membership scheme but was also a commercial operation, open to the general public on an individual basis or as part of a group booking.



Poor state of the jetty - photograph taken on 11:58 on 12 September 2010, 19 hours after the accident

Following a change of ownership in 2008, the club had invested in a programme of improvements to its facilities including a new changing room block, briefing room and snack area designed to expand its corporate events business. However, some areas, such as the jetty where the children, in bare feet, were to board the banana boat, were found to be in poor repair with exposed rusty nails (**Figure 9**).

Princes Club was an affiliated member of BWSW and was accredited as part of its "working with schools" programme. However, the accreditation was specific to the use of the cable ski by school groups and did not relate to any of the park's other activities.

1.6 PRINCES CLUB PERSONNEL

1.6.1 Managing director

Princes Club's managing director had first worked at the club in the mid 1990's as manager of the gymnasium. He left in 1997, but in 2008 he became aware that the club had been put up for sale. He put forward a business plan to a friend and business partner, who funded the purchase of the club and appointed him as managing director.

1.6.2 Ski boat driver

The driver of the boat was a 22 year old New Zealander who was coming towards the end of his second summer season working at the park. He had been involved in the sport of water skiing from a young age and had represented his country in international competition.

The driver had been driving ski boats from the age of 15 but did not hold the BWSW SBDA or any other marine qualification. There was no requirement for him to hold any qualifications, and his 7 years of experience satisfied the conditions of the club's insurers who stated that the drivers of ski boats should have either an SBDA or 5 years' driving experience.

1.6.3 Health and safety liaison officer

The nominated health and safety liaison officer for Princes Club was a former actress with a background in corporate events, who had been employed as the club's corporate events co-ordinator. In carrying out this role she became involved in ensuring that the club's terms and conditions and relevant indemnity forms were signed by the clients. When she raised concerns that she did not have any experience in water sports, health and safety management or dealing with indemnity forms, the managing director arranged for her to attend a 4-day Institution of Occupational Safety and Health (IOSH) course.

When she had completed the course the managing director appointed her as the company's health and safety liaison officer in addition to her duties as corporate events co-ordinator. One of her first tasks in this role was to carry out a full site inspection (**Annex E**). This inspection identified 49 safety observations and serious concerns about the attitude to health and safety on site.

1.6.4 Other drivers

There were four other drivers who were employed full-time during the summer season and eight others who could be called upon if extra drivers were required on an ad hoc basis. Princes Club reported that all of these drivers held the SBDA.

1.7 HEALTH AND SAFETY MANAGEMENT SYSTEM

1.7.1 MHL Support Limited

When the club was taken under new management in 2008, the incoming directors decided that, given the size of the site and the varied activities carried out there, they needed to engage specialist assistance to help set up the company's health and safety management procedures. They contracted the health and safety section of MHL Support Limited (MHL)³ on a 3 year agreement to provide this assistance.

MHL had no prior experience of assisting water ski parks and has no record of taking any specialist advice on the subject before or during the contract.

As part of the contract, MHL was required to carry out an initial site survey and to report observations on the club's existing management system. They were then to re-visit the site 3 to 4 months later to carry out what was described as an '*installation visit*' to hand over the club's new health and safety policy and a framework for its safety management system. Thereafter they were contracted to carry out two further annual site visits and to provide a 24-hour helpline for all matters connected with health and safety management.

³ In October 2010 MHL changed its name to Bibby Consulting and Support Limited.

MHL's initial survey of 31 May 2008 (**Annex F**) made 14 safety observations, one of which related to the Adventure Activities Licensing Authority and was therefore not applicable to Princes Club. Of the rest:

- one related to swimming in the lakes
- two related to the squash courts
- five related to the workshop
- one to the caravan site
- one to personnel not wearing sun protection
- one to maintenance
- one to portable electrical appliance testing
- one to carrying out fire drills

There were no specific observations relating to the core activities on the site: water skiing, cable skiing or rides on the banana boat.

Following their initial survey, MHL re-visited the club 2 months later, on 23 July 2008, to carry out the installation visit (**Annex G**) and to hand over the club's new health and safety policy and folders containing safety management documents. This was to a standard template which had been adapted for Princes Club and incorporated some of the club's existing, but partially completed risk assessments. It also included more than 20 pages of risk assessments that were not relevant to Princes Club but which were intended to provide illustrations of the approach to risk assessment and a structure for recording them. These examples were never removed from the health and safety management folders, and risk assessments for fork lift trucks and vehicle inspection pits sat alongside those that had been produced by the previous owners for wakeboarding and water skiing.

The health and safety management folders were divided into 12 sections, with the instruction that one section per month should be reviewed by the club during the year, to ensure its continued compliance with required legislation and as a means of auditing the procedures and risk assessments. Following the accident, the folder for the water sports section of the club was inspected. No evidence could be found that any monthly review had taken place since the implementation visit of July 2008. Record sheets containing task lists, completion dates and signatures were all found blank.

An annual inspection by an MHL consultant should have been carried out by May 2009. However, this visit was cancelled and re-arranged twice by the managing director of Princes Club before eventually taking place in January 2010. No records of the findings of this inspection could be found by either Princes Club or MHL.

The only recorded annual inspection took place in May 2010 (**Annex H**). This inspection made seven observations relating to:

- displaying the health and safety policy
- delegation of duties
- the need to keep risk assessments up to date
- the need to clean the kitchen
- the need to review pest control procedures
- and two observations relating to an inactive fire alarm

The consultant assigned priority timescales from 14 days to 3 months for each observation to be addressed. However Princes Club was not required to report back to MHL when these action points had been completed. Princes Club had no internal procedures to follow up these points.

1.7.2 Emergency procedures

Princes Club's health and safety management system did include an accident response procedure. However, aside from an initial instruction to *'call 999 immediately if a serious accident occurs and remember to unlock gates and clear driveway for an ambulance'*, all the other instructions related to reporting procedures to be taken after an accident. There were no further instructions on how to respond to an emergency (**Annex I**).

Another part of the health and safety management system, called *Major Incident Procedures* had two sections: *'Fire Safety'* and *'Bombs'*. There were no other instructions describing how staff should respond to a major injury on the site.

1.7.3 Risk assessments

The risk assessments filed in the "wakeboard and water skiing" folder included several activities such as firework displays, gym work and kitchen activities that were not relevant to water sports.

Those risk assessments for water sports that did exist had been inherited from the previous owners and were submitted to MHL for incorporation into its health and safety management system. The sections of each risk assessment for the date of the assessment, the review date, the assessment number, the name of the assessor, the hazard number, the people affected and the risk level, were all blank.

A risk assessment for banana boat rides had been prepared and filed in the health & safety management system folder. It considered the hazards of falling off the banana boat, cuts to the body, being hit by other riders, the rope snapping, hitting stationary objects and being hit by a craft (ski boat) (**Annex J**). However, the risk of someone falling from the banana boat and not being noticed by the driver, was not identified.

The control measures in place to prevent a fallen rider from being hit by a ski boat were described as follows:

- *Drivers will drive a path where if the banana boat tips over, riders will fall well away from any hazards.*
- *The picking up of fallen riders will be done in a slow and controlled manner.*
- *Lifejackets and helmets make riders more visible in the water.*
- *Inform riders on how to re-board banana boat after fall.*

Two further risk assessments were found during the investigation, one in the MHL format and one in Princes Club's own format. Both were dated 1 April 2010 and both detailed the review date, name of the assessor and risk levels. However, neither identified the hazard of a rider falling off the banana boat unnoticed and neither was incorporated in to the "wakeboard and water skiing" folder of the health and safety management system.

1.7.4 Driver training and familiarisation

Ski boat drivers employed by Princes Club tended to already possess a significant degree of driving experience, and their induction in to the club typically consisted of shadowing one of the more experienced drivers for 1 or 2 days to gain an understanding of how the park operated. There was no checklist of topics or skills that the new driver needed to demonstrate. Equally, there was no induction programme that ensured new drivers understood and acknowledged the club's health and safety policy or the procedures that were in place.

When the ski boat driver who was involved in the accident was first employed by the club, he had spent 1 day shadowing a driver before being allowed to work on his own. Although he had some experience of towing a different kind of inflatable when he had been working in New Zealand, he did not receive any instruction or advice from Princes Club on towing the banana, or procedures for children's rides on Back Lake.

1.7.5 Terms and conditions

The birthday party had originally been booked in March 2010 to take place on 19 May 2010. At the time of booking, the parent who organised the birthday party was emailed the club's terms and conditions that participants were required to comply with during their time on site (**Annex K**). She was also sent a copy of the indemnity form which had to be signed by the parent or guardian of any participant under 18 years of age.

The terms and conditions stated that '*if banana boat participants are under 18 years of age then at least one adult must ride up front of the speed boat with the driver*'. However, they did not state what the adult was expected to do, if they had to be trained, or whether they could be a member of the paying public or had to be a club employee.

Both the terms and conditions and the indemnity forms were revised by the health and safety liaison officer during the summer, but the party organiser was not informed of the changes.

In the 6 months that elapsed between the terms and conditions being sent to the parents, and the accident, the requirement for an adult to be present in the boat was not re-iterated. The members of the party were not reminded when they booked into the site, and the ski boat driver was unaware that the requirement existed. Furthermore, revised terms and conditions had been brought in to force during the summer that replaced the original requirement with '*if banana boat participants are under 14 years of age then at least one adult must ride on the banana boat*'. This revised requirement was not enforced, and neither the driver nor the party organiser had any knowledge of it.

1.8 THE BANANA BOAT

'Towed inflatable' is a generic term that covers all types of inflatable equipment which are towed behind a powered boat. These inflatables can take the form of single or double seat rings, known as doughnuts or ringos; chairs, sledges or boards that seat up to four; and large tubes, known as sausages or bananas.

The inflatable in use at the Princes Club was constructed with two tubes side by side, 5.05m long and connected to the ski boat by a 14.5m tow rope. The inflatable could carry up to 12 people and was manufactured by Island Hopper (**Figure 10**). The banana boat was clearly labelled that it should not be towed at more than 15mph (**Figure 11**). The driver was aware of this limitation and was able to confirm, from the boat's speedometer, that he had not exceeded this speed while towing the children.

Figure 10



Banana boat



Speed limitation notice

The banana boat had seats and handles for 12, but it was a requirement of the club's insurance policy that it should operate with no more than 10 people on board at a time. The reason for this limitation was not known by the club's managers and was not questioned by them. There was no policy as to which two seats should remain empty, and on the afternoon of the accident it varied each time the children swapped over from riding on the banana boat and sitting in the ski boat. Witnesses agreed that Mari-Simon had been sitting on the left tube of the banana boat immediately before the accident, but were less sure if she was either towards the middle or the rear of the inflatable.

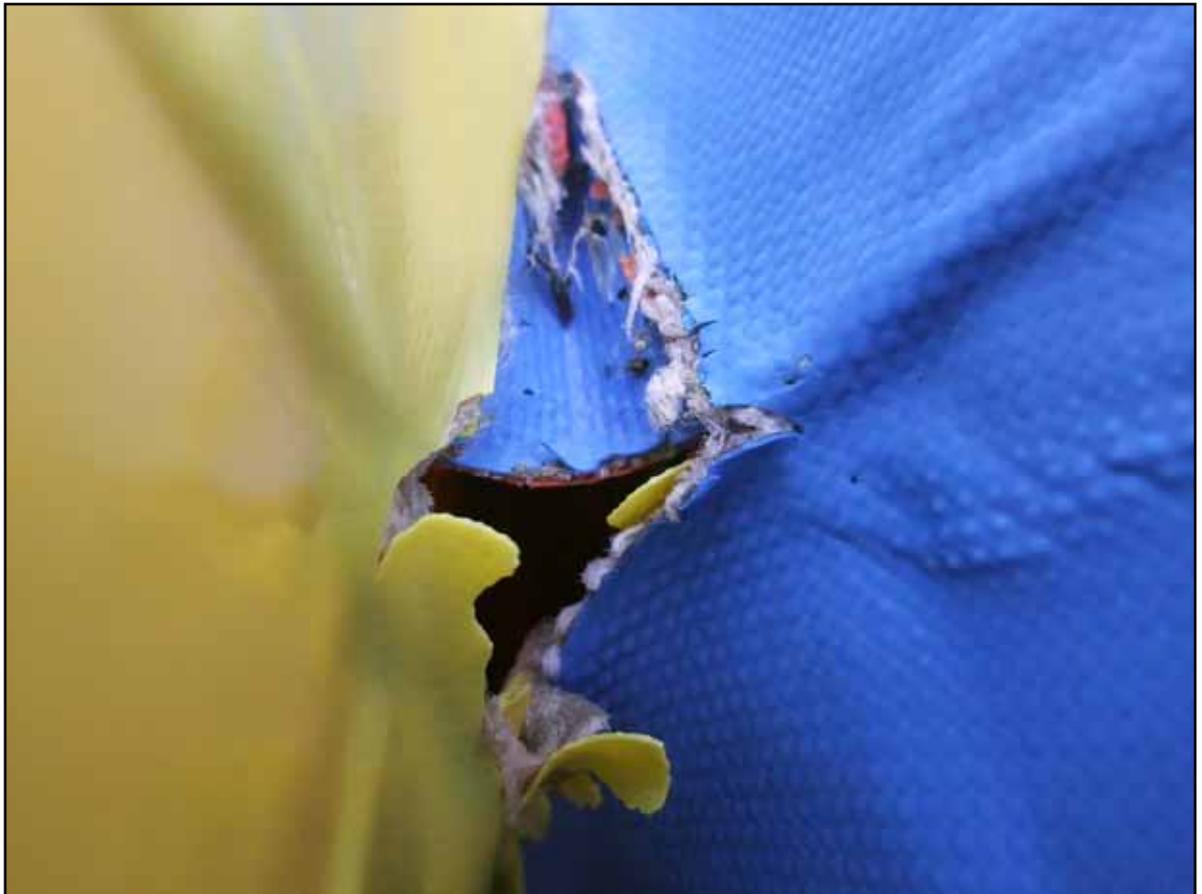
The banana boat was purchased from new in April 2007. An inspection following the accident identified areas where stitching between the panels had begun to part, and there were several puncture patch repairs (**Figures 12 and 13**). It was known among the staff at the club that there was a slow leak on the left hand chamber that acted as the riders' foot rest. A compressed air supply was available close to where the banana was stowed and, although the ski boat driver noted that the chamber was not fully inflated, he did not think it necessary to refill it. The children riding the banana did not notice any adverse effects from the under-inflated chamber, other than that it made it harder to reboard on that side.

Figure 12



Puncture repair

Figure 13



Damage to stitching

1.9 THE SKI BOAT

1.9.1 General

The boat that was towing the banana boat was owned by Princes Club and was a Ski Nautique 196 manufactured in the USA by Correct Craft Inc (**Figure 14**). The Ski Nautique 196 is a purpose-built ski boat designed for sports towing and is very popular in competition skiing. The boat is fitted with a “hydro-gate” which allows the driver to deploy or raise a metal plate at the transom (**Figure 15**). This plate allows the driver to choose between creating a minimum wake for slalom skiing, or creating a larger wake to help water skiers and wake boarders do tricks and jumps. The hydro-gate was used at the time of the accident to create more wake for the banana boat ride.

Figure 14



Ski Nautique 196

Figure 15



Hydro-gate

1.9.2 Visibility from the driving position

The Ski Nautique 196 is capable of speeds up to about 45mph, and in common with most fast boats the forces generated from its hull form and propulsion are balanced so that the boat has a level trim at high speed. At slower speeds, the hydrodynamic lift from the forward part of the hull has a greater effect on the balance of forces acting on the boat and causes the bow to rise higher out of the water. Using the hydro-gate, known as 'jump trim', made little difference to the trim but did increase the turbulence of the wake.

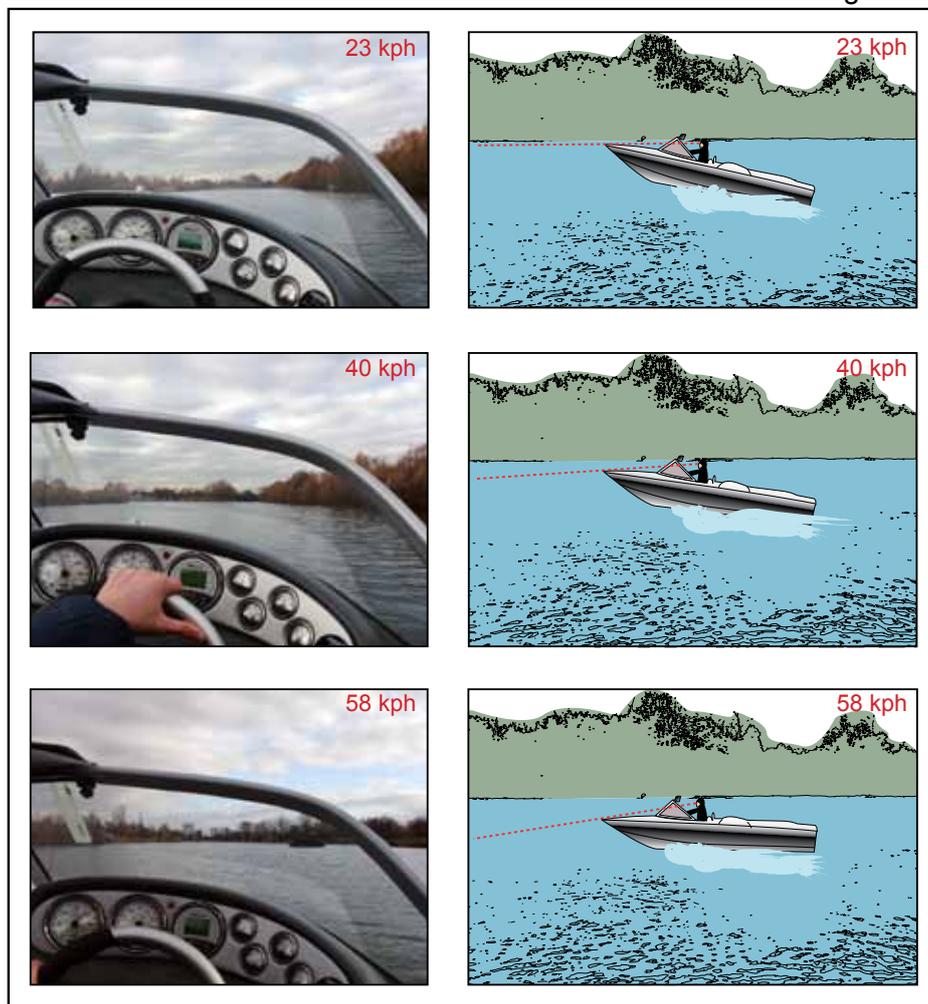
A trial carried out following the accident demonstrated the impact on the vessel's attitude and forward visibility when operating at three different towing speeds:

- 23kph (14.3mph) - the speed at which the banana was towed
- 40kph (24.9mph) - a typical lower speed when towing a water skier
- 58kph (36.0mph) - a typical higher speed when towing a water skier

The trial identified that the Ski Nautique 196 provides the driver with good visibility when performing the task for which it was designed – towing water skiers. However, the driver's view is severely restricted when operating at the slower speed required when towing inflatables.

Photographs of the boat operating at different speeds illustrate this effect and the consequent impact on visibility from the driver's position (**Figure 16**).

Figure 16



Indicative trim of the ski boat visibility from the driver's position

1.9.3 Propeller guards

Propeller guards may be used to protect propeller blades from damage if they come into contact with rocks or other underwater objects and also help keep bearings and seals free from grass or weed. They typically take the form of either a solid ring or nozzle that surrounds the outer tips of the spinning propeller and leaves the front and back open, or a cage that encases the entire propeller. As well as protecting the propeller, they can also serve to prevent any people in the water coming into contact with the spinning propeller blades, and are typically fitted to safety and rescue boats.

Propeller guards tend to increase the amount of drag on a boat and create more turbulent wake. For this reason they are not generally popular on fast boats. The ski boats at Princes Club were not fitted with propeller guards and the manufacturers of the Ski Nautique 196 did not offer one as an option.

1.10 ROUTE

BWSW recommends that inflatables are towed in straight lines with wide turns. Princes Club's *'Health and Safety Policy section 4.3 – Boat Operating Procedures'* did not provide any guidance, but the risk assessment for banana boat operations stated that hazard control measures included drivers being *'trained and required to drive a set route'* and that *'new drivers will be informed of the boat paths to drive'*.

However, no documentation could be found detailing the "set route" and the driver reported that he had never received any instruction on this topic. Other drivers said that they used their common sense and experience to decide how they would tow the inflatable, and did not follow a set route.

Back Lake was approximately 200m by 100m, but its useable area was decreased slightly by weed that was growing at the edges of the water. A trial was conducted soon after the accident when it was found that a wide circuit of the lake could be

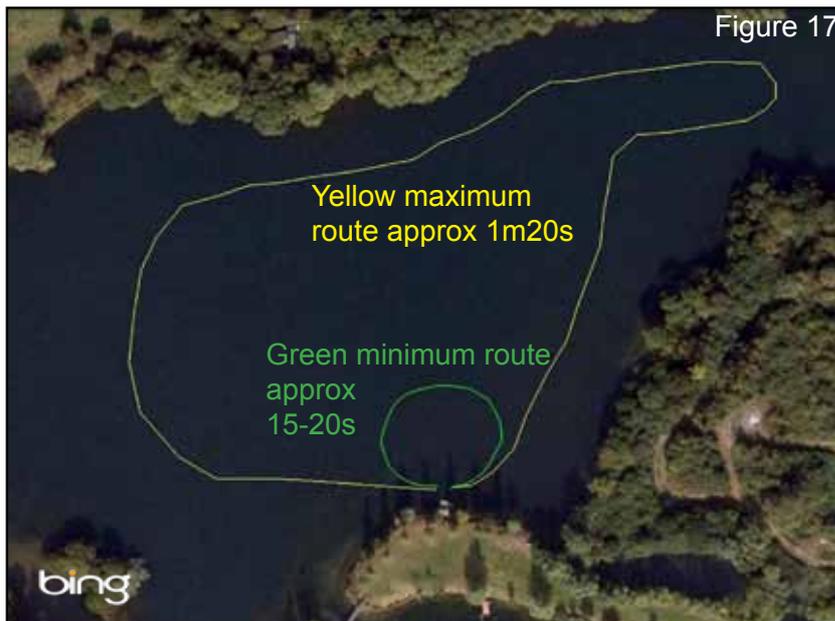


Figure 17

Boat route

carried out by a ski boat operating at the towing speed of about 15mph in 1 minute and 20 seconds. If the driver wanted to make a tight turn he could complete a full circle without an inflatable in 15 to 20 seconds with the boat in jump trim (**Figure 17**). The ski boat was sufficiently powerful that it would have been able to maintain 15mph regardless of whether it was towing an inflatable or not.

In the minutes before the accident, the driver had been carrying out various random manoeuvres; mixing larger turns with tighter turns and circles and ovals in with figures of eight. When Mari-Simon fell off the boat, the consensus from the witnesses was that the boat was following a smaller, roughly circular track.

1.11 COMMUNICATIONS AT PRINCES CLUB

Although there were different leisure activities spread across the entire 120 acres site, Princes Club had no means of internal communications other than word of mouth. The emergency services were summoned using the driver's and one of the parent's mobile telephones. As is normal procedure under such circumstances, once the ambulance service operators had established the address of the accident, they continued to talk to the callers to gain extra information and to give first-aid instructions until the ambulance crews arrived. The driver passed his phone to one of the fathers to continue the call and had no option other than to run across the site to get help from other staff and to make preparations for the arrival of the ambulances.

The driver used his own private mobile telephone to contact the ambulance service; none were supplied by the club and the club's procedures did not require drivers to carry their own mobile telephones. The spectating parents provided the second mobile telephone – in other circumstances mobile telephones might not be available to raise the alarm.

1.12 LICENSING AND OVERSIGHT

1.12.1 Towed inflatable rides

There is no governing body that has oversight of towed inflatable activities within the UK, nor are there any mandatory standards that have to be complied with. BWSW is the only organisation to have produced any form of code of practice, and this is entirely voluntary.

1.12.2 Adventure Activities Licensing Authority

The deaths of four teenagers in a canoeing accident in Lyme Bay in 1994 led to the Activity Centres (Young Persons' Safety) Act 1995 and the establishing of the Adventure Activities Licensing Authority (AALA). The adventure licensing scheme aims to *'ensure that young people can continue to have opportunities to experience exciting and stimulating activities outdoors while not being exposed to avoidable risks of death and disabling injury'*.

Anyone who provides, in return for payment, adventure activities covered by the Regulations to young people less than 18 years of age must be assessed by the AALA in order to gain a licence to operate. Canoeing, kayaking, dragon boating, wave skiing, white-water rafting, sailing and windsurfing are some water sports covered by the Regulations, but riding towed inflatables and cable skiing are not.

The list of activities that fell within the scope of the legislation was kept under review by the AALA and its parent organisation the HSE. However, Lord Young's report to the Prime Minister, *"Common Sense, Common Safety"* published in October 2010, recommended that the AALA should be abolished and licensing replaced with a code of practice.

1.12.3 Driver and ski boat

There is ambiguity as to which regulations should apply to a commercial activity on a small, inland lake like that at Princes Club.

The Small Commercial Vessel and Pilot Boat (SCV) Code applies to vessels up to 24m in length which operate at sea, and therefore does not apply to the ski boats operating at Princes Club.

The Merchant Shipping (Inland Waterways and Limited Coastal Operations) (Boatmasters' Qualifications and Hours of Work) Regulations 2006 apply to commercial vessels operating on inland waterways in both categorised and non-categorised waters as defined in Merchant Shipping Notice (MSN) 1776. The regulation requires masters of vessels which carry more than 12 passengers to hold a Boatmasters' Licence. For vessels which carry fewer than 12 passengers, there are a number of alternative qualifications listed in Annex 1 of MSN 1808, including the RYA/DfT Powerboat Level 2 Certificate.

The Association of Inland Navigation Authorities (AINA) and the MCA have published the *Inland Waterways Small Passenger Boat Code*. This is a set of best practice guidelines, which is not a statutory code but which can be applied under mandatory licensing regimes by local competent authorities. The code is intended to apply to vessels operating in the UK, which do not go to sea and which carry no more than 12 passengers. It recommends certain qualifications for skippers operating on inland waterways including the RYA/DfT Powerboat Level 2 Certificate. The Code notes that '*a review of safety in water sports in 1990 concluded that the current system of self-regulation developed by the governing bodies of sport was sufficient to meet the responsibility for the safety of sports participants*'.

Annex 5 to the *Inland Waterways and Small Passenger Boat Code* is titled '*Beachcraft Guidelines*'. However this annex contains a checklist of operational safety management procedures that are equally appropriate to a ski boat operating on an inland lake such as Princes Club.

Local Authorities have the power under the 1907 Public Health Act to require drivers of boats operating commercially within their area to hold specific licences. The London Borough of Hounslow, under whose authority Princes Club fell, had no such stipulations.

1.13 SIMILAR ACCIDENTS

The Merchant Shipping (Accident and Reporting) Regulations 2005 do not require accidents involving towed inflatables to be reported to the MAIB, therefore any analysis of the MAIB's database would be inconclusive. However it has been possible to estimate the number of people taking towed inflatable rides, and therefore the population that are potentially at risk from similar accidents within the United Kingdom.

A survey carried out by BWSW in the latter part of 2010 identified that of the 40 affiliated clubs that responded, 75% offered towed inflatable rides. Estimates of the number of people taking such rides averaged at 470 per club per year, with just over half of those taking part aged less than 18. This would be equivalent to

approximately 7000 minors riding on towed inflatables in the UK each year. In reality this figure could be even higher as it does not account for non-affiliated clubs that were not surveyed, or include those affiliated clubs that did not respond.

SECTION 2 - ANALYSIS

2.1 AIM

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents occurring in the future.

2.2 FATIGUE

There is no evidence that the ski boat driver was suffering from fatigue and therefore it is not considered to be a contributing factor to this accident.

2.3 THE ACCIDENT

2.3.1 Collision with a fallen rider

The driver of the ski boat did not see that Mari-Simon had fallen into the water and therefore took no action to slow the ski boat or recover her. Forward visibility from the ski boat in slow speed, bow-up operating condition was poor and the clothing provided to Mari-Simon gave little contrast from the surroundings. The ski boat was following one of its tighter circuits and so there was less time for the driver to see Mari-Simon in the water and little opportunity for anyone else to give an effective warning of the danger of collision.

Mari-Simon was struck by the boat and the rotating propeller. The injuries she sustained from the rotating propeller led to dramatic loss of blood, which would have required immediate and highly skilled medical attention to treat successfully.

2.3.2 Towed inflatable rides

The whole concept of riding on a towed inflatable is that it is a 'thrill ride', in which the rider attempts to hold on while the craft is towed through various manoeuvres at speed and over wake. It is inevitable that riders will fall into the water during the activity.

It is therefore essential that if towed inflatable rides are being conducted, robust procedures are in place to ensure that any fallen riders are quickly spotted and safely recovered.

2.4 CONTRIBUTORY FACTORS

2.4.1 Use of a spotter/observer

The BWSW *Safety Recommendations for Inflatable Equipment* advises that the boat driver should always have a dedicated observer to monitor the riders.

The use of an observer was not considered in Princes Club's *Health and Safety Policy section 4.3 – Boat Operating Procedures (Annex L)*, nor was it included as a control measure in the club's risk assessment covering banana boat rides. There was a requirement for an adult to ride in the boat in the original contractual terms and conditions issued to the party. This was later changed to requiring an adult to

ride on the banana itself. However, neither condition set out what this adult was expected to do; neither was enforced by Princes Club; and the driver was not aware of their existence.

The provision of a dedicated observer should have been a fundamental control measure that should have alerted the driver to a fallen rider well before there was a risk of collision. The observer must be able to assess if a fallen rider has been injured or is in some other difficulty in the water. The observer must then work with the driver to use a safe method of recovering the fallen rider while safeguarding other riders, both on the towed inflatable and, potentially, in the water at other locations. The recovery method must minimise the risk of any riders being struck by the boat or coming into contact with the propeller.

A member of the public would need to have specific training and some practice before being able to fulfil this role.

2.4.2 Visibility of the fallen rider

When Mari-Simon fell into the water it was the first time during that activity that just one child had fallen off the banana. On all previous occasions there had been a minimum of three children falling at the same time and it is likely that this factor contributed to the driver not realising that a child was missing from the inflatable. This would have been aggravated by having two empty seats, which could have been at random positions, throughout the banana ride, thereby making an additional empty seat less obvious to the driver. Additionally, as Mari-Simon was sitting towards the furthest corner of the banana from the driver, it is possible that the view of her empty seat, or her fall could have been obscured by the other children.



Buoyancy aid

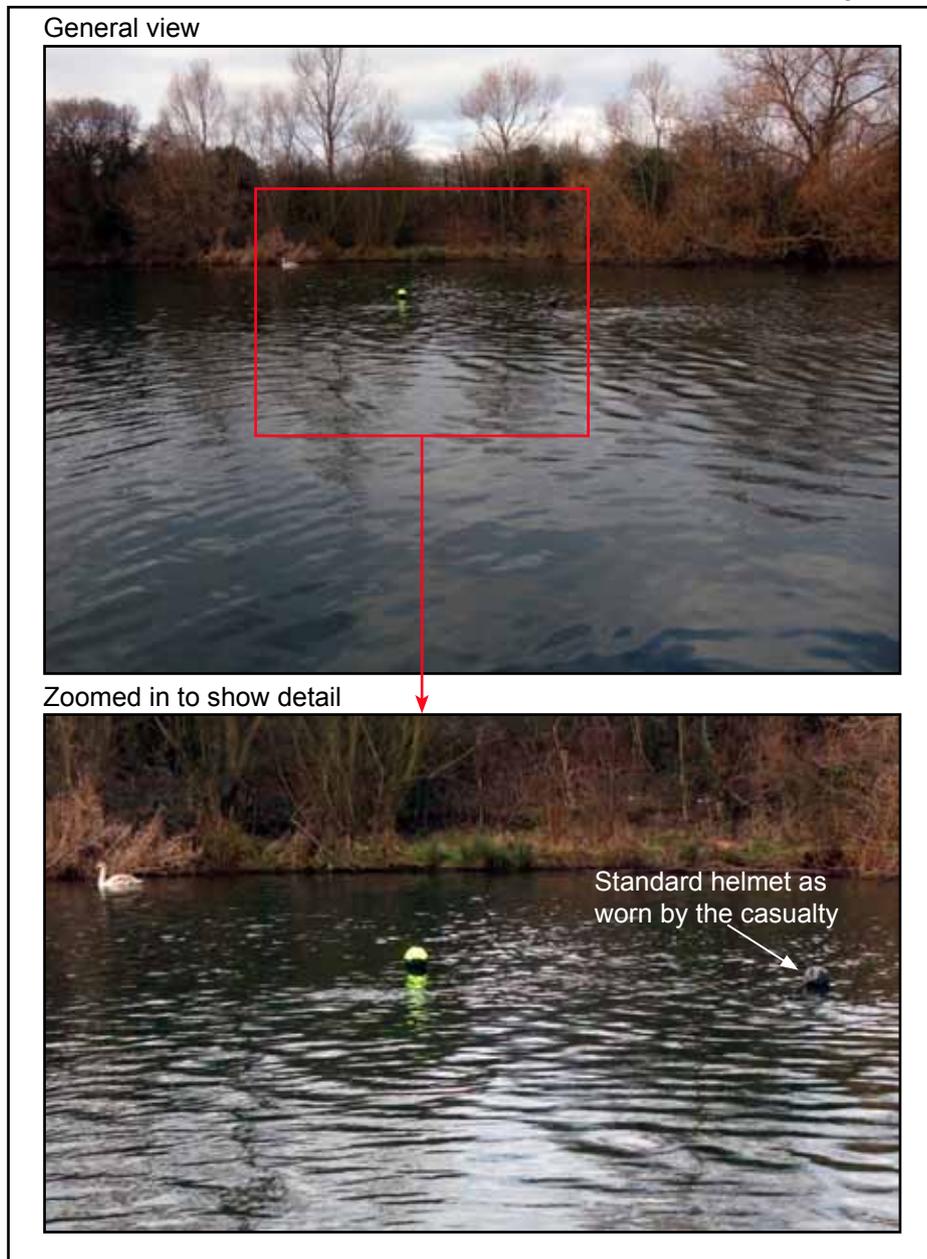
Once she was in the water, Mari-Simon's chances of being spotted were decreased by the dark coloured equipment that had been issued to her. The only brightly coloured item that Mari-Simon was wearing was a yellow and red buoyancy aid (**Figure 18**), but since this was only a 40N buoyancy aid she would have been quite low in the water and not much of it would have been visible. It is also possible that she would have been obscured periodically by the extra wake that was being created with the vessel operating with the hydro-gate deployed.



The wetsuit issued to her was mainly black and her foam helmet was grey (**Figure 19**). At that time of day, much of the lake would have been in shadow from the surrounding trees and there would have been minimal visual contrast between the grey helmet and the background.

Similar helmets in high visibility colours were not readily available, but in subsequent trials conducted by the MAIB, a standard grey helmet was covered with high visibility material to simulate the visual effect. The difference was considerable (**Figure 20**) and a high visibility helmet, suitable for wearing on towed inflatable rides, would significantly increase the likelihood of a fallen rider being spotted.

Figure 20



Demonstration of helmet visibility

2.4.3 Propeller guards

Propeller guards are not popular on fast boats because they can affect the boats' speed and wake (two important factors for ski boats). They reduce fuel economy and do not prevent the risk of injury if a person is struck by a boat operating at speed.

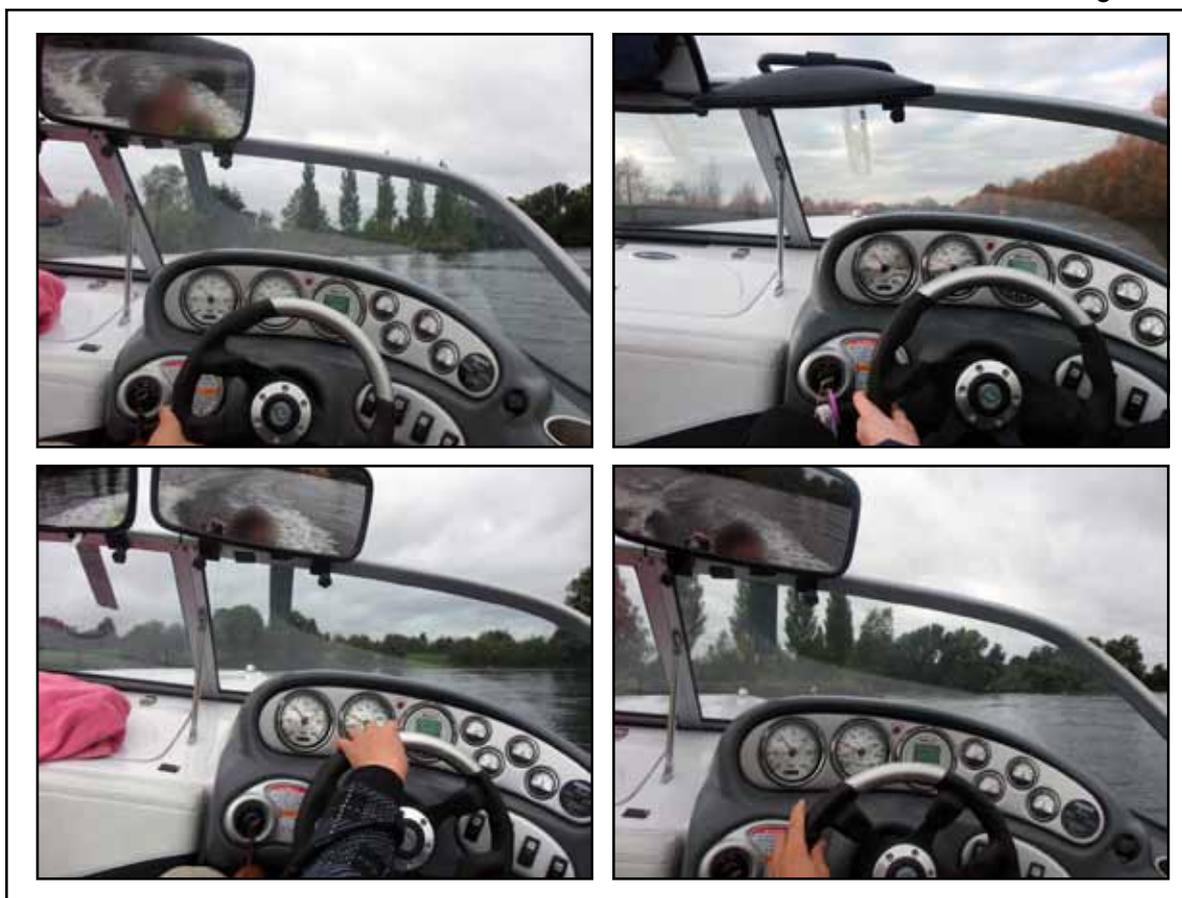
Had a guard been fitted on the boat at Princes Club, it is possible that Mari-Simon would not have suffered such serious propeller injuries. However, it is still possible that she could have been fatally injured from being struck by another part of the boat.

While avoiding a collision with a person in the water remains the most important control measure, contact with a rotating propeller could still occur in other situations, such as when a rider is being recovered from the water. Consequently, other control measures, such as stopping the engine, using a propeller guard or even using a boat propelled by a water jet should be established to minimise the risk of injury.

2.4.4 Vessel trim and forward visibility

The low seating position for the driver and the arrangement of the instruments on the dashboard combined to limit the driver's forward view. This was exacerbated by the boat's bow's high attitude at low speed, and created a substantial blind spot immediately in front of the boat. Although the driver would have had good visibility to the right of the boat, the view directly in front and to the left would have been severely restricted (**Figure 21**). This limitation had not been recognised in either the club's procedures or risk assessment for towing banana boats.

Figure 21



Driver's view at towing speed

Boats that are used for towing inflatables should be chosen so that at appropriate towing speeds, both the driver and observer have maximum visibility to allow them to see people in the water at all distances from the boat. Blind spots in front of the boat must be minimised.

2.4.5 Condition of the banana boat

Although the only reported adverse effect from the under-inflated footrest chamber was that it made it harder to climb back onto the banana boat on the affected side, the overall condition of the craft, and the driver's acceptance of the faults were of concern.

The overall condition and tolerance of a slow puncture indicate that maintenance of the banana boat was not seen as a priority. The acceptance of the banana boat's substandard condition by the driver and other staff at Princes Club indicates that they did not appreciate the potential consequences of poor maintenance on a device that was intended to carry children at speed. In different circumstances, the ability for a child to climb back on using either footrest could be far more significant, and the lack of attention to the craft meant that more serious defects could potentially go unnoticed.

2.4.6 Route

When Mari-Simon fell off the banana and was subsequently struck by the boat, it was carrying out what was described as one of the tighter circuits. The consequence of this was that the driver would have had a far shorter time to spot either a rider missing from the banana, or a rider in the water, before he had completed his circuit back to the position where the rider had fallen off. Trials carried out after the accident suggested that the time between Mari-Simon falling off the banana and being struck by the boat could have been as little as 15 to 20 seconds.

The watching parents would have had even less time to react. Allowing for the time taken for them to realise that, unlike on previous occasions, the boat was not slowing down to recover the fallen rider, and then to get up from their viewing positions and attempt to gain the driver's attention, the chances of being seen and then alerting the driver were extremely small. The chances of being heard were even smaller. Trials carried out after the accident identified that an adult shouting from the shore cannot be heard over the boat's engine noise even when the boat is only 10m away.

2.4.7 Park communications and the delay to the emergency services

The lack of either an internal communication network around the park or a system to quickly cascade information to its employees, meant that when the first ambulance crew arrived, staff did not know where they were needed or the urgency of the situation. The ambulance's path was blocked by parked vehicles, alternative access gates were still locked, reception staff were not aware that an accident had occurred or that an ambulance had been summoned, and nobody was ready to escort it to where it was needed.

Although the doctor supporting the water-ski competition was not expected to provide medical help to the other activities on site, poor communications and the time taken for him to be landed ashore and to retrieve his medical equipment meant that any opportunity for early medical treatment was lost.

An additional consequence of the ski boat driver having to run some distance to get help was that the four parents were left alone to look after the rest of the children while also attempting to save the life of Mari-Simon. They were unsure if more help was coming and, when communicating with the emergency services by mobile telephone, did not have the local knowledge necessary to give clear directions as to the quickest way to reach the casualty.

Despite such traumatic circumstances, the two fathers remained focused and continued to give Mari-Simon first-aid until the ambulance crew arrived. The women gathered the rest of the children together and led them away from the immediate scene, offering comfort and attempting to minimise the effect of the accident. Their efforts, in extremely difficult circumstances, were highly commendable.

Mari-Simon's injuries were so severe that she would have needed immediate access to an operating theatre to have had the best chance of survival. The only treatment likely to have had any effect would have been well beyond the skills of a first-aider and, potentially, even a typical ambulance crew.

Even if the ambulance had been able to proceed straight to the scene, the likelihood of the emergency services being able to save her was sadly very small. However, in other circumstances a similar delay could have been critical. It is therefore essential that Princes Club establish effective procedures to ensure all key staff are immediately alerted in the event of an emergency, and that measures are put in place to facilitate prompt access by the emergency services to whatever location is appropriate.

2.4.8 Emergency procedures

Princes Club's emergency procedures were very limited in scope. In the event of an accident at the site the procedures provided the club's staff with a process to report and record the event rather than how to deal with it.

The club management had never held either a major injury response drill, or a table top exercise. Had they done so it is very likely that they would have identified challenges, such as internal communications and site access. The fact that such a scenario was never exercised and appropriate procedures were not in place, led to the delay in Mari-Simon receiving professional medical care.

2.5 PRINCES CLUB'S HEALTH AND SAFETY MANAGEMENT SYSTEM

2.5.1 General

Many aspects of the banana boat activity on 11 September 2010 were sub-standard. Not giving the children a banana boat safety briefing, not using a spotter, sitting children in the ski boat in close proximity to the tow rope, not stopping the engine when swimmers boarded via the aft platform, and carrying out tight turns while towing the banana, all suggest that the driver did not properly appreciate the risks of towing an inflatable. He had been operating in this manner for almost two seasons,

but the lack of any audit process meant that his and any similar practices by the other drivers were not monitored or corrected. The driver was not ignoring best practice; he did not know what best practice required.

There were several indications that the club had a poor safety culture throughout its organisation:

- the lack of any briefing for the children who arrived late
- the poor state of repair of the jetty
- the use of low visibility helmets
- the lack of a formal induction process for drivers
- the absence of any audit of driver practices
- the incomplete health and safety manuals
- and the lack of preparedness for a major injury at a centre which engaged in extreme sports

Although ultimately the driver's actions led to the collision, he was operating at a club that did not provide him with the information that he needed to work safely and that had significant failings at many levels of its safety management system.

2.5.2 Risk assessments

The change of ownership of Princes Club in 2008 was a lost opportunity for the club's new management team to review all existing risk assessments. Had the risk assessment for the operation of banana boats considered the hazard of a fallen rider not being spotted by the ski boat driver, it is reasonable to expect that better control measures would have been identified, such as carrying a dedicated observer.

Two factors rendered the risk assessments ineffective. Firstly, they had not been produced with the assistance of those involved in the activity. Secondly, whatever value they might have had was lost because staff had no appreciation of the control measures that were supposed to be in place.

2.5.3 MHL Support Ltd

It should have been clear to the MHL consultant who conducted the annual inspection in May 2010 that the health and safety management system at Princes Club was not being utilised as intended and had not been updated since it had been issued some 2 years earlier. Despite this fundamental failing, no mention was made of it in the report issued on the day, nor was there any follow up communication to the club's senior management highlighting any concerns.

MHL carried out two visits, during which 21 observations were made, whereas the club's own health and safety liaison officer, following the completion of a 4-day IOSH course, made 49 observations in a single inspection. This difference demonstrates that whilst MHL might have fulfilled the basic obligations of its contract with Princes

Club, it had a limited ability to conduct a worthwhile health and safety inspection of a 120 acre site in the space of a few hours; particularly given its lack of experience in the sports involved. Similarly, Princes Club had an unrealistic expectation of the service that MHL was providing.

2.5.4 Use of staff in safety management processes

Despite many staff members having considerable experience of water sports, Princes Club's managing director chose to appoint the corporate events co-ordinator as the health and safety liaison officer. As well intentioned as she might have been, she had no background in water sports and was insufficiently familiar with the activities being carried out at the park for which she had oversight. There was no mechanism to involve drivers or water ski instructors in the process of identifying and managing the risks associated with the club's core activities.

2.6 LICENSING AND OVERSIGHT

2.6.1 The activity

The lack of external oversight of towed inflatable rides meant that Princes Club's procedures went unchecked and there was no assurance that, in this case, the operation was being managed safely. Weaknesses in safety management and emergency response procedures that had existed for several years were only exposed by a major incident.

BWSW made it very clear in its 2003 publication '*Safety Recommendations and Codes of Practice*' that it considered it had '*no responsibility for anything to do with inflatable equipment*'. However, it did recognise that many of its members offered towed inflatable rides, and issued 38 safety recommendations to be followed when undertaking such activities. Of these, the following were not being complied with on the day of Mari-Simon's accident:

- tow in straight lines with wide turns
- always have an observer
- check the inflatable is in good repair
- make sure that the rider knows the BWSW aural and hand signals
- switch off the engine before boarding riders from the water
- if a rider falls they are to put their hands in the air to indicate 'OK'
- do not tow an inflatable with an unaccompanied [by an adult] small child
- do not start a tow until the rider shouts '*hit it*'

The BWSW safety recommendations were not compulsory, but in the absence of any other governing body or authority they were the only guidelines available to which Princes Club could refer. The management at Princes Club did not insist that

BWSW guidelines were followed and they did not issue them to their drivers. No other meaningful guidance was provided to the drivers, and with no checks or audits on their performance, drivers were left to decide how to operate on their own.

Cable skiing and riding on towed inflatables have never been included in the list of activities that were required to be assessed and licensed by the AALA. However, this case demonstrates that there are significant gaps in all the key areas of how these activities are run, managed and overseen. Historically, the AALA has supported all these areas; working with operators to develop guidance on best practices, auditing operators to ensure that best practices are being followed and issuing a licence to give assurance to the public. The survey, conducted by BWSW on behalf of the MAIB, indicates that there are a substantial number of children and young people who could potentially be at risk from a similar accident to that at Princes Club.

The current list of licensable activities does not include any that involve powered vessels as it was thought that these are better regulated by other authorities. Towed inflatable rides fall between the regulations for traditional powerboat activities and more conventional shore-based thrill rides, and neither addresses the activity effectively. The AALA was uniquely placed to oversee towed inflatable rides and a logical recommendation to flow from this investigation would have been to add towed inflatable rides to the list of licensable activities. However, it has been recommended that the AALA should be wound up and the licensing scheme replaced with a code of practice that is overseen by the HSE.

Any such code of practice should include riding on towed inflatables and the appropriate standards of safety management that are required to control the risks involved in this activity.

2.6.2 Leadership and guidance

Although BWSW has shown some leadership in developing guidance for towed inflatable rides and has included a relevant module in its CDA, these positive steps were undermined by the organisation's disclaimer that stated that it had no responsibility for non-waterskiing activities that take place at its members' clubs. While this position might be understandable for activities such as trampolining or dragon boating, it is less so for towed inflatable rides which are so closely related to waterskiing and wakeboarding. In order for safety in this activity to be improved, it is essential that a national organisation takes the initiative to improve guidance on best practice and help operators improve standards. Robust guidelines, which cover not only the detail of the activity, but also the wider safety management issues, are required. These need to be supported by appropriate levels of oversight and the relevant underpinning legislation identified. The combination of these measures should give some confidence to the public that, when riding on banana boats, children will not be exposed to unnecessary levels of risk.

2.6.3 Boat licensing

Clarification is needed regarding the licensing of towed inflatable rides and the vessels that tow them. Despite carrying 10 people who had paid for the ride, it would be inappropriate to consider an inflatable banana boat to be a passenger vessel in the normal way and subject it to the regulations that a conventional craft would have to satisfy.

It is less clear whether the three children in the ski boat should be considered as passengers. They had paid to take part in the activity and were riding in the ski boat rather than waiting on the shore for their turn on the banana boat. While it would not be appropriate to expect the ski boat to be equipped to the standard of a conventional passenger vessel, it should be reasonable to expect all the children to have a proper seat and be protected from the tow-rope. None of these points had been considered by Princes Club.

The application of existing regulations is ambiguous and the MCA should work with the appropriate authorities to identify licensing requirements.

2.6.4 Driver qualification

Ski boats are powerful vessels that require a degree of skill and expertise to handle them safely. Several regulations and codes refer to the RYA/DfT Powerboat Level 2 Certificate and, commercially endorsed, this has become the accepted standard to operate boats of this type.

The syllabus and assessment required for the SBDA is far less demanding and would need careful review before being accepted as a satisfactory test of the competence of the driver of a commercially operating ski boat towing an inflatable. The CDA is currently under review by BWSW and contains a section on towed inflatables. Subject to approval by the MCA, the CDA could be a possible alternative to the RYA/DfT Powerboat Level 2 Certificate.

It should be recognised that the syllabus for the RYA/DfT Powerboat Level 2 Certificate does not include the towing of inflatables or water skiers. An additional module would therefore be necessary to ensure that best practice is understood and carried out by ski boat drivers. The most appropriate body to develop such a certificate is BWSW using its existing guidelines and recommendations as a starting point.

2.6.5 Local Authority Licensing

The difficulties in bringing towed inflatable rides under existing licensing requirements could be overcome by local authorities using the 1907 Public Health Act to issue licences to operate. Such licences could be issued when the authority was satisfied that: the drivers held qualifications that met standards endorsed by the MCA, and the activity was being operated in line with guidelines set out in the *Waterways and Small Passenger Boat Code*.

SECTION 3 - CONCLUSIONS

3.1 SAFETY ISSUES DIRECTLY CONTRIBUTING TO THE ACCIDENT WHICH HAVE RESULTED IN RECOMMENDATIONS

- Mari-Simon Cronje was not seen to fall in the water because an observer or spotter was not used on the ski boat. [2.4.1]
- Her chances of being seen were decreased because of the low visibility equipment issued to her. [2.4.2]
- Control measures are required to protect people in the water from the hazards of rotating propellers. [2.4.3]
- The slower speed required when towing an inflatable compared to conventional water skiing, gave the ski boat a large bow-up trim that severely restricted the driver's forward visibility. [2.4.4]
- The shorter route taken by the driver limited the time available to see Mari-Simon in the water. [2.4.6]
- The process for completing the risk assessments was flawed and the risk assessment for the banana boat ride did not identify the hazard of a fallen rider not being spotted by the driver. [2.5.2]

3.2 OTHER SAFETY ISSUES IDENTIFIED DURING THE INVESTIGATION ALSO LEADING TO RECOMMENDATIONS

- Princes Club did not have a suitable communications system to cover the park. [2.4.7]
- Princes Club had not prepared for an emergency such as a major injury on one of its lakes. [2.4.8]
- Princes Club staff were not fully apprised of the club's risk assessments. [2.5.2]
- Princes Club's health and safety management system was not being used correctly and this was not brought to the attention of its senior management by MHL during or following its site visits. [2.5.3]
- It was unrealistic for the MHL consultant to carry out a full site inspection in the few hours that were available, or for Princes Club to expect that this service would meet its safety management needs. [2.5.3]
- The person nominated to be the club's health and safety liaison officer had no specialist knowledge of the activities and there were no arrangements for her to be supported by anyone with such specialist knowledge. [2.5.4]
- The lack of external oversight of towed inflatable rides meant that Princes Club's procedures went unchecked and there was no assurance in this case that the operation was being managed safely. [2.6.1]

- Clarification is needed regarding the licensing of ski boats and banana boat rides. [2.6.3]
- An appropriate, nationally recognised qualification, would help ensure ski boat/inflatable drivers are trained and competent to perform the task. [2.6.4]
- The difficulties in bringing towed inflatable rides under existing licensing requirements could be overcome by local authorities using the 1907 Public Health Act to issue licences to operate. [2.6.5]

SECTION 4 - ACTION TAKEN

The **MAIB** has:

Submitted this report and the recommendation that has been made to the HSE to the formal consultation process on proposals to change the health and safety regulatory regime for young people's adventure activities.

Princes Club has:

- Engaged a new company of health and safety advisors.
- Decided that it will no longer offer towed inflatable rides.
- Put all of its current drivers through advanced training to Club Driver Award standard.
- Updated its risk assessments for the remaining activities which take place on Back Lake.
- Liaised with the fire and ambulance services to discuss access requirements, the club's emergency procedures, equipment levels and staff training.
- Provided a written safety document to all visitors at the club, which includes a map detailing emergency points of reference, emergency contact numbers, first-aid facilities and lifeboats. Large versions of the map have been posted at strategic locations around the site.
- Installed clearly marked and signposted emergency telephones at Cable One and Cable Two, which have a direct link to reception and sound a distinctive ring tone.
- Replaced the jetty and steps at Back Lake and installed flotation devices at each jetty. A boat driver's checklist ensures that the jetties are inspected on a daily basis.
- Created formal written procedures for rescuing casualties in the water and for incidents involving the emergency services.
- Commenced in-house training for personnel potentially involved in water rescue to supplement the first-aid and SBDA training already undertaken.
- Provided emergency procedure training to all staff at the club and will carry out regular emergency drills.
- Produced staff handbooks that cover health and safety reporting, health and safety rules and risk assessments.
- Issued each boat with a two-way radio, emergency mobile telephone and tablet PC as three possible methods of communication.
- Issued each boat with a pack containing a first-aid kit, space blanket, throw rope and scissors.

Bibby Consulting and Support (formally known as MHL Support Ltd) has:

- Engaged expert health and safety lawyers to assist in reviewing its health and safety systems and procedures to ensure that they provide a workable framework that clients can use to comply with statutory health and safety provisions.
- Included the system that it was contracted to deliver to Princes Club in the ongoing legal review process.
- Begun a review of the way in which it makes clear the parameters of its service, so that there is no misunderstanding between Bibby Consulting and Support and its clients as to those health and safety arrangements covered by its service and those that are excluded from it.

London Borough of Hounslow Council has:

Inspected the site and issued Princes Club with five improvement and two prohibition notices. It was continuing with its investigation into the accident at Princes Club at the time of publication of this report.

SECTION 5 - RECOMMENDATIONS

British Water Ski and Wakeboard and National Water Safety Forum are recommended to:

- 2011/119 Work together to develop a system to provide guidance to operators and oversight of organised towed inflatable activities to give assurance to the public that proper safeguards are in place. The system should:
- Provide guidance on the best practices for the safe operation of towed inflatable rides and the management systems required to control the associated risks.
 - Include a mechanism to ensure that those who operate towed inflatable rides meet the appropriate standards.

Health and Safety Executive is recommended to:

- 2011/120 Include oversight of the activity of riding on towed inflatables into the arrangements that are currently being considered to replace the Adventure Activities Licensing Authority.

The **Maritime and Coastguard Agency** is recommended to:

- 2011/121 Take appropriate action to improve the safety of towed inflatable rides by:
- Considering the British Water Ski and Wakeboard Club Driver's Award as a standard for commercially operating boats towing inflatables, and including it in the list of suitable alternative qualifications to the Boatmaster's Licence.
 - At its next review, amending the '*Inland Waters Small Passenger Boat Code*' Annex 5, so that the guidance is relevant to boats operating on inland waters and not just beachcraft.

Princes Club is recommended to:

- 2011/122 Review its safety management system such that:
- There is a review of all risk assessments.
 - An induction programme, which includes guidance on the club's operating procedures and best practice, is developed for new drivers.
 - A system of auditing its drivers' practices is introduced.

Bibby Consulting and Support (formally known as MHL Support Ltd) is recommended to:

2011/123 Review the service provided to clients to ensure that:

- If it is identified that a client is not following a safety management system provided by Bibby Consulting and Support, as intended, that there is a formal system to inform and advise that client on the corrective actions required.
- The limitations of any inspections carried out by its consultants are made clear to the client and, in particular, that the inspection may not necessarily reflect the standard of the entire operation.
- Either proper, technical advice is sought when assessing specialised activities, or that the limitations of the service are made clear to the client.

The London Borough of Hounslow Council is recommended to:

2011/124 Take appropriate action to improve the safety of inland waterways activities by:

- Using the 1907 Public Health Act to introduce a licensing scheme for commercial operators of towed inflatable rides. Licences should be issued when the council is satisfied that boat drivers hold an appropriate MCA approved qualification and the activity is being operated in line with guidelines set out in the '*Inland Waterways Small Passenger Boat Code*'.
- Promulgating the lessons learned from this accident through the national Environmental Health Officers' network.

Marine Accident Investigation Branch
July 2011

Safety recommendations shall in no case create a presumption of blame or liability

BWSW safety recommendations and codes of practice

Safety Recommendations & Codes of Practice



Amended 2003

Introduction

Safety is the single most important factor when participating in any sport. Safety not only means the safety of those participating in the sport, but also the safety of other water users, general public, spectators, etc.

British Water Ski has drawn up this Code of Safety Recommendations for the guidance of those who participate in the sport of water skiing, and for the authorities who manage and control water ski areas. British Water Ski is confident that if these recommendations are accepted and scrupulously followed, water skiing may be enjoyed by all without danger to participants or to other water users.

Definitions

"Skier" means any person being towed as part of the water skiing activities listed below.

*Note - Wakeboarders like to be known as **riders** but for the purpose of these Recommendations ALL water skiers are referred to as "Skiers" to avoid confusion with riders of Inflatable Equipment.*

"Boat" means any vehicle used to tow a skier.

"Inflatable equipment" means any other towed water sport as shown below.

The Towing Vehicle

Water skiing can take many forms and not all water skiers are towed by boats!

Water skiers would normally be towed by a boat; personal watercraft (PWC) or by a cable tow. British Water Ski does not differentiate between boats and PWC's as towing "vehicles". The same rules apply for the driver and observer.

Similarly, no matter what the towing "vehicle" the skier should follow these Safety Recommendations at all times.

Water Skiing Activities

The following activities are all considered to be part of the sport of water skiing:-

The term "water skiing" includes any activity associated with the sport and includes, but is not limited to:

- Water skiing on 2 skis or 1 ski;
- Slalom skiing,
- Trick skiing,
- Jumping,
- Wakeboarding,
- Kneeboarding,
- Barefooting
- Water ski racing.

British Water Ski has also taken responsibility for producing safety recommendations for activities that are not "technically" water skiing, such as

- Ringos,
- Tubes
- Biscuits
- Sausages
- Bananas

All of which are covered by the recommendations for towing Inflatable Equipment.

- **Cable Tow water skiing**

British Water Ski has published a separate Code of Practice for Cable Tow Water Skiing. Also available is the Operator's Manual for Cable Tow Water Skiing. Copies available from the British Water Ski office.

- **Driver Qualifications – Ski Boat Driver Award**

1. British Water Ski strongly recommends that all water ski boat drivers acquire the British Water Ski Ski Boat Driver Award (SBDA). This voluntary certificate of competence can be gained via courses and tests at Centres throughout the UK. Details of your nearest Centre can be obtained from the British Water Ski Offices.
2. British Water Ski recommends that all water ski boat drivers, aboard and in charge* of a water ski boat on **public** waters (the sea, estuaries, rivers and inland waters with a public right of navigation) should be in possession of the SBDA. *Novice drivers and drivers in training for the SBDA should be permitted to drive a water ski boat if a qualified driver, holding a SBDA, is aboard and supervising the activity.
3. In the interests of safety, improved awareness, and the reduction of the conflict with other activities, British Water Ski recommends, wherever possible, that an SBDA is held by all water ski boat drivers. Water Ski Clubs and Associations, Local and Harbour Authorities are asked to make this a **requirement** for all Ski boat drivers, operating in areas of water under their authority or supervision.

The Ski Boat Driver Candidates Manual contains a whole host of valuable information on safe boat driving for all forms of water skiing. Copies of the SBDA Manual are available from British Water Ski at a cost of £1. Candidates who take the SBDA tests are provided with a Manual free of charge.

- **British Water Ski Safety Recommendations**

1. All Water Ski boats; PWC's and power boats towing water skiers, on public waters and on enclosed sites where more than one water ski boat operates, shall, at all times whilst towing be occupied by two competent persons, thus enabling the driver to concentrate on navigation and the water ahead, whilst the second person is responsible for watching the skier and relaying his signals to the driver.
2. At water ski schools and water ski clubs on enclosed waters, where only one water ski boat operates at any time and help can be summoned at any time, it is reasonable and safe for a qualified driver/coach to drive for water skiing without a second person aboard. Water ski schools and Clubs are strongly advised to carry out a risk assessment, as to the need for a second person in the boat where there is any possibility of another boat or activity using the water area at the same time.
3. All boats towing skiers shall be operated in a careful and prudent manner, and at a reasonable distance from persons and property so as not to endanger the life or limb or the property of any person.
4. No boat shall tow a skier from the period of one hour after sunset to one hour prior to sunrise, provided that the rule shall not apply to boats used in duly authorised training and coaching sessions, ski tournaments, competitions, expositions or trials.
5. No person shall manipulate any vessel or tow rope by which the course of water skis or water skiers may be influenced in such a way as to cause a collision or accident.

6. No person shall operate a boat or water ski in a reckless or negligent manner.
7. No person operating a boat towing a skier shall allow any person to ride or sit on the gunwales or decking of the vessel while underway.
8. When operating on the sea or other large expanse of water, the skier shall wear a life jacket, and the towing boat must carry a life buoy or other approved life preserver. It is also recommended that all boats carry fire extinguishers and that the engine cover be lifted for a short period after refuelling.
9. When skiing takes place from a public beach or other area where swimmers and other water users are present, one experienced person shall be in charge of skiing operations and assume responsibility to ensure that all necessary safety precautions are rigidly observed. Take off and landing points shall be clearly marked and buoys, ropes or guard boats used to indicate these approach areas to other water users, and careful watch kept to ensure that swimmers in particular do not enter the danger area. Apart from take off and landing operations, all normal skiing shall be carried out away from the shore at a safe distance beyond areas used by swimmers, pedalos and similar craft.
10. No person shall operate a boat towing a skier within a water area which has been clearly marked by buoys or some other distinguishing device, as a bathing or otherwise restricted area provided that this rule shall not apply in case of emergency.
11. Where water skiing takes place on areas of water where rowing or canoeing also take place, wash from ski boats can seriously disturb their activity. In the worst cases wash can swamp or even sink canoes and rowing boats. Water ski boat drivers shall stop their boat and allow the rowers and canoeists to pass by with no wash. All water skiers are asked to "Give one minute of their time to make friends and allow other water users to enjoy their activity".
12. Wherever practicable water ski boats, operating within a speed limit area or in any area close to other craft, are recommended to proceed at a NO WAKE speed.
13. REMEMBER Water Ski Zones and the removal of speed limits are created to enable ALL water skiers to enjoy the sport. Water skiers should use all water ski zones with respect for both the environment and other users of the area. Water skiers should conduct themselves, at all times, in such a way that that all water skiers will be welcomed back for years to come.



Rules for Safe Water Skiing

WATER SKIERS

ALWAYS be confident in the water and always wear a buoyancy aid / ski vest and a wetsuit or drysuit. If you cannot swim make sure the boat driver and/or your instructor know this.

A buoyancy aid need not be worn by competent trick skiers who can swim. Competent means capable of performing 240 trick points.

ALWAYS use approved signals between skier and observer and driver

ALWAYS let the observer know you are OK after a fall

ALWAYS watch the water ahead of you at all times.

ALWAYS check your equipment is safe, wing nuts, loose binding, splinters and sharp metal.

ALWAYS ski clear of solid obstacles - jetties, boats, mooring buoys, rocks, banks etc.

ALWAYS throw away the handle on falling.

ALWAYS use an approved life jacket and helmet when jumping

ALWAYS wear neoprene shorts when jumping – learners advised to wear two pairs

TAKE CARE to remove jewellery that the rope might catch on

TRY TO avoid falling forwards - sit down, or if falling sideways, curl yourself into a ball.

TRY TO recover skis quickly

NEVER shout 'hit it' to the driver until the rope is taut and your ski tips are up

NEVER wrap rope around any part of your body (fingers, hand or foot)

NEVER place any part of the body through the handle (neck, arm or leg)

NEVER ski in shallow water.

NEVER ski at night.

DO NOT ski directly ahead of, or to the side of another boat.

DO NOT attempt fast landing directly towards the shore - sit down if coming in too fast.

DO NOT ski in unknown waters.

DO NOT jump from a boat whilst it is moving.

LADIES should always wear neoprene shorts

SKI BOAT DRIVER

ALWAYS have a competent observer in the boat when towing a skier.

ALWAYS wait for the skier's signal and his ski tips above the water before starting.

ALWAYS steer clear of other boats and floating obstacles.

ALWAYS when skiing in restricted waters stop and allow canoeists and rowers (who are easily swamped) to pass. You can make friends doing this!

ALWAYS BE AWARE you have a long rope behind you that should be recovered as soon as possible and before you pick up your fallen skier – if the skier is not injured and not in danger.

ALWAYS make sure observer understands water ski signals.

ALWAYS give the skier a smooth and steady pull on take off.

ALWAYS shut off your motor before taking aboard a skier.

ALWAYS return immediately to pick up the skier

ALWAYS carry an extra life jacket in the boat.

DO NOT turn sharply and put the skier in the water or on the whip - gradual wide turns are the rule.

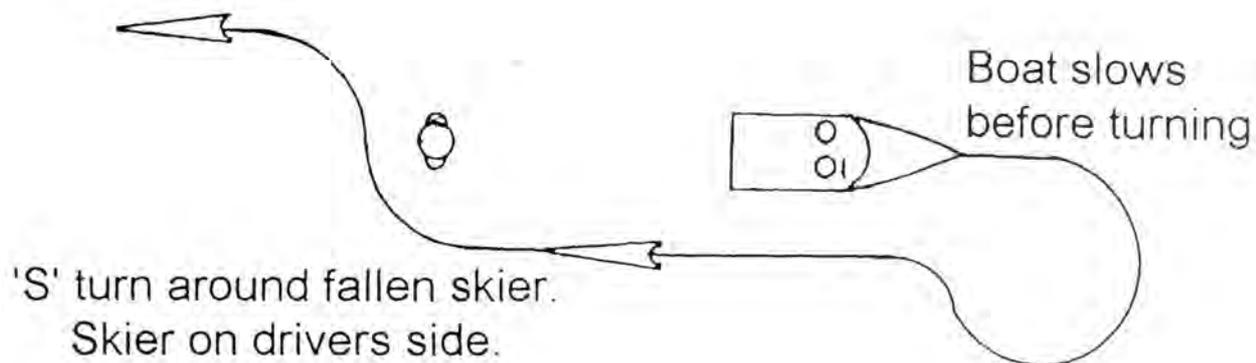
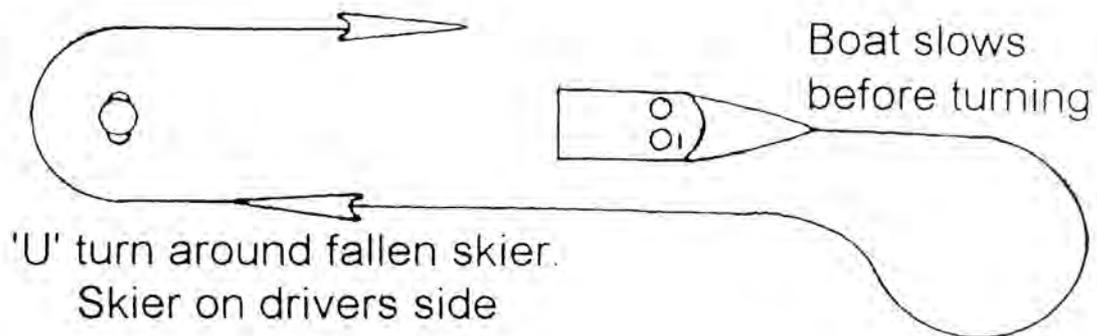
DO NOT take the skier aboard without shutting off the engine first.

DO NOT drive the boat through swimming or restricted areas.

DO NOT operate boat sitting on the side, sit in the seat.

NEVER put the boat into reverse when a skier is in the water

Diagram for Recovering a Fallen Skier



British Water Ski's Abridged International Maritime Regulations for Use in Crowded Waters

Speed limits and their boundaries must be adhered to at ALL TIMES. Within speed limit zones, where ever possible, operate your water ski boat at a NO WAKE speed. Typically an 18-20ft.water ski boat creates the maximum wash at about 10-12mph.

It should be noted that the International Regulations for the Prevention of Collisions at Sea apply to all vessels upon the high seas and in all waters connected therewith navigable by sea going vessels.

Based Upon: The Merchant Shipping (Distress Signals and Prevention of Collisions) Regulations 1989 (Statutory Instrument 1989 No.1798) as amended by S.I. 1991 No.638. These Regulations apply the International Regulations for the Prevention of Collisions at Sea 1972 (as amended) to UK shipping.

1. Two speed boats meeting head on shall alter course to "starboard".
2. Two speed boats crossing: the vessel which has the other on her starboard side gives way.
3. Speed and sailing vessels: the speed boat shall give way.
4. Vessels to keep course and speed: the vessel with the right of way shall keep her course and speed.
5. Vessels overtaking shall keep well clear of an overtaken vessel.
6. Vessels in narrow channels: every speed boat shall. When it is safe and practicable, keep to that side of the fairway (e.g. entrance to harbour) which lies on her starboard side.
7. Speed boats when launched from slipways must proceed directly to sea at low speed - no warming up or exercising in harbours will be permitted.
8. Towing vehicles and carriages must be removed from slipways and approaches immediately after launching
9. Every vessel which is directed to keep out of the way of another vessel shall, so far possible, take early and substantial action to keep well clear.
10. Any action taken to avoid collision shall, If the circumstances permit, be positive, made in ample time, and with the observance of good seamanship. If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion. (re: rules 9,10 and 11, these have been included at the express wish of the Ministry of Transport in the full knowledge that they will seldom apply in waters used by water ski clubs. However, we can see that there could be special circumstances which might arise and made the observance of these particular rules essential).
11. Power driven vessels shall In general keep out of the way of vessels engaged in fishing. However a vessel engaged in fishing shall not impede the passage of any vessel navigating within a narrow channel or fairway. A vessel of less than 20 metres length shall not impede the passage of a vessel which can navigate safely only within a narrow channel or fairway.
12. Special circumstances; in construing and complying with these rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels Involved, which may make a departure from these rules necessary to avoid immediate danger.
13. Nothing in these rules shall interfere with the operation of special rules made by an appropriate authority for estuaries, harbours, rivers, lakes or inland waterways connected with the high seas and navigable by sea going vessels.

SOUND SIGNALS

1 Short Blast	Altering Course to Starboard (Right)
2 Short Blasts	Altering Course to Port (Left)
3 Short Blasts	Going Astern

• Towing Inflatable Equipment

British Water Ski has no responsibility for anything to do with inflatable equipment. Nevertheless ski boats are usually used to tow such equipment and often the drivers involved are quite inexperienced so it is prudent in these Safety Recommendations for drivers to be made aware of the hazards involved.

Inflatable equipment includes a variety of designs including “Ringos”, “tubes”, “Biscuits”, “Sausages”, “Bananas”, “Sledges”, and many other trade names. They are all designed to carry at least one rider and usually more while being towed along the water.

The riders have no control of the path of the equipment and it must be clearly understood that the boat driver determines what happens to the equipment. For example when the boat turns sharply the equipment will slide across the water in a manner described as “on the whip”. If the boat is driven too fast or over water that is too rough, the equipment may dive into the water or capsize. Many serious accidents have occurred because riders of inflatable equipment have been sent into collision with other boats, jetties, or shore banks when drivers do not allow sufficient turning room. Other accidents have occurred from riders being thrown out at excessive speed.

All riders of inflatable devices are advised to wear protective helmets. Serious injuries have occurred when unprotected heads have banged together during falls.

Safety Recommendations for Inflatable Equipment

THE BOAT DRIVER

1. Always follow the manufacturers recommendations.
2. Do not overload equipment with riders.
3. Check that your boat insurance covers inflatable equipment.
4. Always have an observer.
5. Tow in straight lines with wide turns.
6. Do not put inflatables on the “whip”.
7. Do not increase speed on turns.
8. Do not try to throw the rider out.
9. The rider must wear a ski vest (buoyancy aid).
10. Do not tow an inflatable over a jump or through a slalom course.
11. Do not tow an inflatable within a tow ropes distance of any solid object.
12. Always use a tow line of the type recommended by the manufacturers
13. Check the water is clear of floating debris.
14. Check that local rules allow towed inflatables on the water.
15. Do not tow an inflatable over the wash of other boats.
16. Do not tow an inflatable with an unaccompanied small child.
17. Check the inflatable is in good repair, including the ropes and towing “eye”.
18. Make sure the rider knows British Water Ski aural and hand signals.
19. Do not continue a tow if a rider falls.
20. Use standard procedures for crowded waters.
21. Always approach a fallen rider on the drivers side.

22. Switch off the engine before boarding riders from the water.
23. Do not start a tow until the rider shouts "hit it".
24. Keep away from other boats and other water users.
25. Do not tow an inflatable at night.
26. Do not tow an inflatable in shallow water.

RIDERS OF INFLATABLE EQUIPMENT

1. Wear a ski vest (buoyancy aid).
2. Wear head protection.
3. Do not stand up.
4. Do not try to throw other riders overboard.
5. Do not attempt to steer an inflatable.
6. Know British Water Ski standard hand and aural signals.
7. Do not attempt to abandon an inflatable during a tow.
8. Do not hold the towing rope.
9. Do not fasten any part of your body to an inflatable.
10. If a fall takes place, put your hands in the air to indicate "OK".
11. Do not shout hit it until the rope is taught and all riders are prepared.
12. Do not ride an inflatable unless you can swim.

Conditions of the club's insurers

Warranties (To be complied with at all times)

- Subject to the warranties and other terms of the policy insurers will cover you in respect of physical loss of or damage to the vessel and legal liability to another person arising whilst the vessel is being used for water skiing, kneeboarding and wakeboarding tuition subject to BWS Safety Recommendations and Codes of Practice and the following additional warranties:
 - (1) Life jackets/buoyancy aids to be worn at all times by all persons receiving tuition, other than in the case of competent trick skiers who can swim and are capable of 240 trick points
 - (2) A parent or guardians' letter of consent to be obtained in respect of any person under the age of 18 years at the time of tuition commencing
 - (3) Experienced skipper to be in control of Vessel at all times
 - (4) Competent observer (over 16 years old) to be in attendance at all times other than on enclosed waters, where only one ski boat operates at any time and help can be summoned at any time
 - (5) All manufacturers' recommendations to be strictly adhered to

Towed Items (Ringos, Biscuits, Tubes and Bananas)

- (1) All participants must wear life jackets/buoyancy aid, and one of the passengers on the banana inflatable must always be age 18 years old or older unless all passengers are aged 14 years or over.
- (2) No more than 2 persons are towed or preparing to be towed by the insured vessel at any one time in respect of ringo's, biscuits and tubes (it is noted the Insured does not use ringo's).
- (3) No more than 10 persons are towed or preparing to be towed by the insured vessel at any one time in respect of the banana.
- (4) When the craft is being used for the above purposes, it should not be driven by any person with less than 5 years experience unless a Ski Boat Drivers Award is held. A competent observer (over 16 years old) should be onboard at all times other than on enclosed waters, where only one water ski boat operates at any time and help can be summoned at any time.
- (5) All manufacturers' recommendations are strictly adhered to.

2010 Renewal Negotiations

We have marketed this risk to specialist Small Craft Water Ski Underwriters but have not been able to obtain any more competitive quote in terms of cover and premium.

The Limits of Indemnity were also increased at the last renewal.

SBDA candidates manual



SKI BOAT DRIVER AWARD

CANDIDATES MANUAL

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TEL: 01932 560007**

EUROPEAN REGULATIONS ONLY



A4
NO
OVERTAKING



A9
NO
WASH



A12
NO
MOTOR CRAFT



A13
NO
SPORT CRAFT



A14
NO
WATER SKIING



A15
NO
SAILING



A16
NO HAND
PROPELLED CRAFT



A17
NO
SAILBOARDS



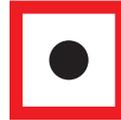
A18
END OF ZONE
FOR HIGH SPEED



A19
NO
LAUNCHING



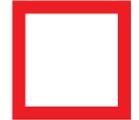
A20
NO
WATER BIKES



B7
MAKE A
SOUND SIGNAL



B8
KEEP A
SHARP LOOKOUT



C4
NAVIGATION
RESTRICTIONS



A1
NO ENTRY



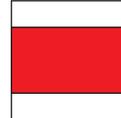
A10
PASS BETWEEN
THE SIGNS



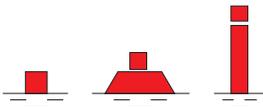
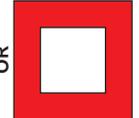
B5
STOP BEFORE
BRIDGE OR LOCK



B6
SPEED LIMIT
IN KM / HR



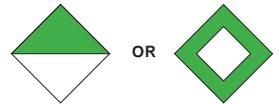
5
NAVIGATION CHANNEL NEAR
RIGHT BANK
(FACING DOWNSTREAM)



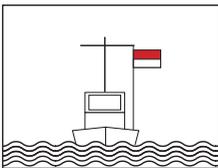
1
BUOYS INDICATING RIGHT
SIDE OF CHANNEL
(FACING DOWNSTREAM)



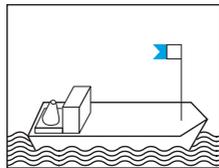
2
BUOYS INDICATING LEFT
SIDE OF CHANNEL
(FACING DOWNSTREAM)



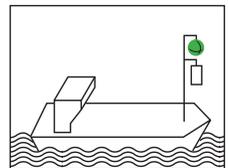
6
NAVIGATION CHANNEL NEAR
LEFT BANK
(FACING DOWNSTREAM)



76a
REDUCE YOUR WASH
NEAR THIS VESSEL



82A
DIVER WORKING UNDERWATER
NEAR THIS VESSEL



41A
FERRY-BOAT MOVING INDEPENDENTLY
AND HAVING PRIORITY

FREE DISTRIBUTION TO CANDIDATES FOR THE SKI BOAT DRIVER AWARD WHO ARE MEMBERS OF BRITISH WATER SKI & WAKEBOARD

PRICE £1 IF NOT SUPPLIED
AS PART OF A COURSE OR
PRIOR TO A TEST

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SKI BOAT DRIVER AWARD MANUAL

8th Edition - March 2010 (minor revisions)

THE SCHEME

The Ski Boat Drivers Award (S.B.D.A.) is a voluntary scheme that allows British Water Ski & Wakeboard members to be instructed and tested at approved centres in basic boat handling and the driving of boats for water skiing. All candidates must pass the written and practical tests, however experienced drivers may, at the discretion of the examiner, take the tests without undergoing a course of instruction.

The test is comparable to the ordinary car driving test and represents the basic level of competency to drive safely. It is NOT a professional qualification and instruction on how to ski is NOT covered.

Approved S.B.D.A. centres are situated around the country either at established water ski clubs or at commercial ski schools. In most cases the clubs rely on volunteer centre principles who will arrange courses and examinations according to demand from club members and their own availability. Commercial S.B.D.A. centres arrange courses and tests for members of the public who may join British Water Ski & Wakeboard at the centre immediately prior to the test.

The S.B.D.A. scheme is approved by the Marine Safety Agency and the Maritime and Coastguard Agency who are responsible to the Department of Environment, Transport and Regions. The scheme complies with the requirements of United Nations Economic and Social Council Resolution No. 40 for the issue by British Water Ski & Wakeboard of International Certificate of Competence. All members who pass the S.B.D.A. and additionally are UK citizens or normally resident in the UK, may apply for an International Certificate of Competence (I.C.C.). Valid for coastal waters in Europe. If an additional written examination is passed an I.C.C. valid for European inland as well as coastal waters, may be applied for.

The administration of the scheme and issue of S.B.D.A and I.C.C. certificates are solely the responsibility of British Water Ski & Wakeboard.

ARE YOU FIT AND CAPABLE?

When you fill in the declaration form before or after you take the tests you must sign to confirm that you are physically fit and over the age of 16. If you are fit enough to hold a car driving licence you would normally be judged fit enough to drive a ski boat, provided you prove your competence. Your ability will be judged during the written and practical tests but if you have the slightest doubt about your skill in driving boats for water skiing then you must arrange suitable training prior to taking the test.

WHAT DO YOU HAVE TO KNOW?

The syllabus for basic boat handling is given in this manual and a full explanation is given in the book "POWERBOATING" by Peter White. Additional information about European rules is given in the booklet "EURO REGS FOR INLAND WATERWAYS" written by Marian Martin and published by Adlard Coles Nautical. The test does involve a basic knowledge of coastal boating and regulations. The written test takes the form of 22 multiple choice questions and 30 minutes are allowed for answering them. The questions are based on information given in this manual and the book Powerboating. Your practical boat handling skills will be judged during your S.B.D.A. test. The practical test involves a brief ski tow of less than 10 minutes using standard British Water Ski & Wakeboard procedures as detailed in this manual. An S.B.D.A. course at an approved centre will cover all these aspects.

WHAT DO YOU GET?

Both the S.B.D.A. and I.C.C. certificates are laminated in ski pass size plastic folders with the holders photograph for positive identification. The S.B.D.A. is valid indefinitely whilst a British Water Ski & Wakeboard member. The I.C.C., which requires more recent and detailed information about the holder, is valid for 5 years from the date of issue. The description of the qualification is translated on the back of the I.C.C. into French, German, Italian, Spanish and Greek languages.

WHAT DOES IT COST?

If the test is not done in your own boat then the cost of using the centre boat will be by mutual arrangement. The cost of commercial courses is a matter for centres to decide.

- The examiner may charge £5 to cover expenses.
- The centre may charge £1 for the declaration, test form, administration and postage.
- The current cost of S.B.D.A and I.C.C. certificates is indicated on the candidates application form / the British Water Ski & Wakeboard price list.

All certificates are supplied by British Water Ski & Wakeboard and application forms must each have personal photographs attached. The cost of certificates includes V.A.T. All cheques to be made payable to the "British Water Ski & Wakeboard". Visa and MasterCard credit cards may be used if the appropriate information is given on the application form.

WHAT ABOUT EXISTING S.B.D.A.'s?

All existing older style S.B.D.A. certificates remain valid indefinitely whilst a British Water Ski & Wakeboard member. The holders may, if they wish, at any time complete the application forms giving the centre and date at which they passed their tests and apply for either or both the new S.B.D.A. and I.C.C. certificates laminated in plastic. A replacement fee is payable in order to issue a new style S.B.D.A.

HOW DO I BOOK A TEST?

You must make your own bookings directly with your chosen centre. The British Water Ski & Wakeboard office holds a list of club and commercial S.B.D.A. centres. Commercial centres run courses throughout the year but not all centres run courses at all times. The weather, priority for water skiing, and the demand for tests all pose limitations to available dates so you need to book well in advance.

Club S.B.D.A. centres normally only examine club members but in some cases by prior arrangement they may be able to test experienced drivers from other clubs who do not have their own approved principle. Club centres do not have facilities for training non member novice drivers. Centre principles are expressly forbidden from testing away from their own approved centres.

WHAT DO I NEED FOR THE TEST?

Besides suitable clothing you will need a form of payment, your British Water Ski & Wakeboard membership card if you have one, and a passport photograph with a second passport photograph if you are also applying for an I.C.C. Make sure you print your name on the back of each photograph.

WHEN DO I GET MY CERTIFICATE?

The centre principal will send your combined application form and written test paper together with your payment and photograph(s) to British Water Ski & Wakeboard who will issue the certificates within 4 days of receipt of a correctly completed form in legible writing. If you were not a British Water Ski & Wakeboard member prior to the test but your application form is accompanied by a membership application together with payment, then there will be no delay in issuing the certificates.

Both certificates are valid whilst a member of British Water Ski & Wakeboard.

WHAT IF I LOSE MY CERTIFICATE?

Contact British Water Ski & Wakeboard - there is no need to retake your test however there is a small charge for a replacement.

CAN THE S.B.D.A. BE WITHDRAWN?

If it comes to the attention of British Water Ski & Wakeboard that your driving has been dangerous or has brought British Water Ski & Wakeboard into disrepute, then British Water Ski & Wakeboard reserves the right to withdraw the S.B.D.A. and I.C.C. certificates. Appeal against the decision may be made to the management committee of British Water Ski & Wakeboard.

WHAT IF I FAIL THE TEST?

If you fail the practical test then the center will allow you up to one month to obtain further practice before taking the test again. If you fail the written test then the center will allow you a few days to revise the knowledge of the manuals before taking the test again. You can take the test again after one month to allow you time to practise. You may take the test at the same or another centre. The centre principle will return the application form showing a failure to British Water Ski & Wakeboard Certificate fees are only payable when one is issued but expenses to the examiner and to the club for the application form, may still be payable.

WHAT TUITION CANDIDATES CAN EXPECT

COMMERCIAL CENTRES are expected to provide driving courses throughout the year to any member of the public as long as British Water Ski & Wakeboard membership is current or applied for at the time of the test and the candidates are fit and over the age of 16. Candidates without previous experience must be given a minimum of two days instruction. Such tuition will be a mixture of shore based tuition and practical boat work. Typically at least one day will be required to cover basic boat handling and another day to learn and practice driving for skiers. Longer courses are encouraged and may be essential for some candidates. British Water Ski & Wakeboard will not tolerate commercial centres charging for alleged driving courses and then failing to provide good value in the tuition. For example it is not acceptable for candidates to simply be given the manual for self study and then examined. Commercial centres are expected to explain the syllabus in detail and to cover all the points on which there are questions. For water tuition in ski boats the pupil to instructor ratio of 4 to 1 must not be exceeded so that pupils are not left unoccupied for too long. For shore tuition classes may be of any size. Commercial centres will make their own decision on what fees to charge for tuition and use of boats and equipment.

Candidates with previous boat driving experience must be judiciously assessed by the commercial centre principal and the length of course may be suitably adjusted. Customers must be told if they are being offered an abbreviated course and allowed the option of paying for a full course if they should want one.

CLUB CENTRES examine BWSW members who in many cases already have their own boats and variable amounts of experience. Clubs are not expected to provide courses at short notice to complete novices who are not members of their clubs. However Club Centre Principals may, if convenient to themselves, examine BWSW

members from other BWSW clubs but only on their own water that they have approval to examine on. Principals must adjust the length of the courses they provide prior to the test according to the candidates experience. Clubs may have local rules or conditions that require training and this may be combined with the basic S.B.D.A syllabus. If there are additional examinations required by club rules, these must be completed separately to the S.B.D.A. although they may be done at the same time.

BASIC BOAT HANDLING SYLLABUS

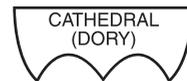
All boats used must have insurance that covers skiers and water skiing

1. ONSHORE TEACHING

The following syllabus is given in outline form so that an instructor can expand on the topics covered. The primary reference source is the book "POWERBOATING".

TYPES OF PLANING POWERBOATS

The advantages and disadvantages of inboard, sterndrive, outboard powerboats, deep V hulls, flat bottoms, dories and semi-rigid inflatables.



ENGINES

How to check the oil for inboard engines. Oil mix for outboard engines or oil reservoirs as appropriate. Checking and changing propellers. Use of different propeller pitches. Use of outboard power tilt for different conditions. Tilting outboard engines for launching. Opening air vents for outboard fuel tanks. Priming fuel lines. Use of blower on inboard engines before starting and after refuelling. What to look for on inboard boat gauges. Purpose and use of kill switch on engine controls. Types and use of various engine control boxes, including use of idle throttles and neutral locks.

FIRE EXTINGUISHERS

Most boat insurance policies require that ski boats with inboard engines be fitted with an automatic extinguisher within the engine compartment. Inboard boats are advised to carry a second hand held extinguisher. Outboard boats need an extinguisher in an accessible place away from possible fires.

BOAT EQUIPMENT

If there is the slightest chance of losing sight of the land due to reduced visibility or a long trip, then a compass suitable for fast small boats must be fitted and you must understand how to use it. A bilge pump must be fitted and an alternative mechanical pump or buckets are recommended. Paddles, flares, (with valid expiry date) and anchor must be carried unless only operating on a small lake. Always carry spare buoyancy aids or life jackets in numbers and sizes sufficient for all persons on board.

N.B. The Coast Guard and British Water Ski & Wakeboard recommend that you carry a marine band V.H.F. or mobile telephone when using coastal waters. Marine V.H.F. sets are now available in hand held versions and are relatively cheap but they could make the difference between summoning help from a friend in good time or a major tragedy developing.

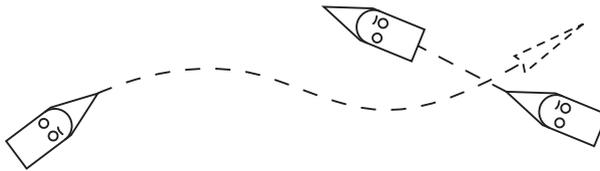
Mobile phones are commonly carried but in an emergency they do not communicate directly with the coastguard and identifying your position could be a problem. Marine band V.H.F. sets enable you to talk directly to lifeboats and helicopters and you might be able to render assistance to others. An operators licence is required.

BOAT TRAILERS

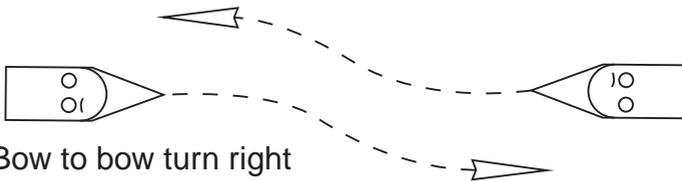
Wheel bearing maintenance, Operation of winches, Breakback trailers, Trailer brakes, Lighting boards, Hitch locks and safety chains.

RULES OF THE ROAD

Summary of International Regulations for Preventing Collisions at Sea. Importance of finding out local rules and bylaws from the Harbour Master or local authority. Keep right, turn right.



Give way to boat on the right and pass behind



Bow to bow turn right

TIDES AND CHANNELS

A very basic knowledge of how often tides go up and down is required. The purpose of buoys marking restricted channels must be known. Further information is given in "Powerboating" by Peter White.

PREPARATION FOR LAUNCHING

Allow the trailer bearings to cool before launching. Check the state of the tide and the condition of the slipway at your proposed time of return.

Removing lighting board, checking bung, removing tie down straps, tilting engine, checking propeller, skeg, and controls, checking equipment including sufficient fuel, paddles, and for coastal use, flares, anchor and rope.

ON THE SLIPWAY

Use of ropes and winch. Effect of tides and currents. Courtesy to other users of the slipway. Move car and trailer away from slipway after use.

LAUNCHING CHECK LIST

Bilge empty, bung in

Sufficient fuel, tank secure

Tank breather open

Battery secure

Throttle, gear shift & steering cables

free movement, no excessive wear.

Compass

Anchor chain/rope

Flares

Paddles

Marine band VHF radio, or mobile telephone

LAUNCHING CHECK LIST continued

Outboard engine tilted	Fire extinguisher
Propeller and locknut secure	Skis, vests, lines, wet suits,
Skeg for damage	Engine oil sufficient
Speedometer pitot tube clear	Screen and mirror clean
Relevant spares	

TRAILER TOWING CHECK LIST

Hitch and safety chain	Outboard tilted and secured
Lighting board	Tyre pressure & condition
Wheel nuts	Propeller protected
Wheel bearings for slackness	Boat tied down

2. PRACTICAL HANDLING

STARTING

Propeller clear of shallow water or people. Blower on inboard boats. Use of starting controls. Initial engine readings on inboard boats.

SLOW SPEED HANDLING

Use of controls. Movement of the stern of the boat when selecting forward or reverse. Momentum of the boat. Effect of wind, current or tide. Simple figure of eight manoeuvres, coming alongside a buoy and finally docking to a fixed jetty with consideration for winds, current or tide. How to moor a powerboat and the use of fenders should be practised.

HANDLING AT PLANING SPEEDS

Positioning crew and effect of weight distribution on planing. Angle of boat and visibility when coming onto plane. Use of engine power trim. Turns of the type used when towing water skiers should be practised. The only type of emergency stop that need be practised is to reduce power rapidly and select neutral gear while steering a straight line.

ANCHORING

Should be practised and the effect of tides and rope lengths or chains, explained.

PICKING UP A FREE FLOATING BUOY

The manoeuvre is equivalent to picking up a skier or a man overboard . The novice driver must be proficient before proceeding to learn how to drive for water skiers.

EUROPEAN REGULATIONS FOR COASTAL WATERS (APPLICABLE TO S.B.D.A)

In 1988 the United Nations Economic Commission for Europe issued the "CEVNI" REGULATIONS" defining codes and regulations for using pleasure craft in Europe. Two questions in the S.B.D.A. syllabus relate to European regulations. Possession of the S.B.D.A. gives the holder the right to apply for an International Certificate of Competence (I.C.C.) valid for use in European coastal waters only. For the I.C.C. to be valid on European inland waters, an additional 14 question examination must be taken.

Major European rules, which are entirely in line with the British Water Ski & Wakeboard codes for ski boats, are that water ski tow boats are only driven by persons over the age of 16, an observer is always carried, water skiing takes place only in daylight and good visibility, keep clear of all other vessels, and unless skiing in a designated area, retrieve ski ropes from fallen skiers immediately. Ski boats must carry a fire extinguisher, bailer and anchor with at least 10 metres of line. The engine must have a kill switch.

"Normal", i.e. large vessels always have right of way and indeed water ski boats give way to everything else and most importantly leave ample room for large vessels to manoeuvre. When meeting other small powered vessels the usual International rules of keep right, turn right, apply.

All vessels, including ski boats, must be identifiable. The identification marking shall be fixed in clearly legible Latin letters and Arabic numerals in a dark colour on a light background or by light colour on a dark background. The identification shall be displayed on both side of the boat in the middle of the hull or on the bows. The characters shall not be less than 100mm high and easily legible.

EUROPEAN REGULATIONS FOR INLAND WATERS (I.C.C.)

To qualify for an I.C.C. valid on inland waters now requires knowledge of the rules governing European marine navigation and known as the Code Européen des Voies de la Navigation Intérieure, or more commonly the CEVNI rules.

Their primary purpose is to control the very intensive use of inland waterways by large vessels and indeed 'normal vessels' in CEVNI rules refer to vessels over 20 metres in length. These normal vessels have many specific identifications and rules for narrow channels as well as special procedures when going upstream and downstream. Nevertheless the CEVNI rules also contain regulations for operating small powered boats and water ski tow boats. All vessels may additionally be subject to local and national rules.

The following extracts contain all the information required to answer the 14 questions on the additional multi choice examination paper that will enable an I.C.C. to be issued with an endorsement making it valid for driving boats towing water skiers on EUROPEAN INLAND WATERS.

WARNING

This manual contains a summary of the European Regulations that are relevant to drivers of water ski boats only.

Anyone wishing to navigate other recreational craft such as cruisers or sailing vessels, are advised to take the appropriate RYA examinations and must refer either to the full United Nations regulations or the Royal Yachting Association's booklet 'EuroRegs for Inland Waterways' by Marian Martin and published by Adlard Coles Nautical for £5.

In particular this manual has no information about night signals or marking because water skiing at night is prohibited.

BOATMASTER

All vessels must be under the control of a boatmaster. This person must be qualified, over the age of 16, and not intoxicated by drink or drugs.

SKI BOATS

On your ski boat you must carry a certificate of registration or national navigation permit. The boat must be identified by its name in the following manner: -The name shall be inscribed on the outside of the craft, on both sides, in Latin characters not less the 10 cm. high, easily legible and indelible, their inscription in oil paint being considered indelible. Alternatively if the craft has no name it must bear the name (or its usual abbreviation) of the organisation to which it belongs, followed where applicable, by a number.

There must be clear vision in all directions from the steering position and the ability to hear sound signals.

You must not pollute the water in any way such as by the discharge of sewage or dumping of fuel or oil.

The boatmaster shall endeavour to clear a navigation channel of any floating material (i.e. ropes, skis, and skiers) as soon as possible.

The following article 6.35 of the regulations applies specifically to water skiing: -

- 1 Water skiing and similar activities are permitted only by day and in good visibility. The local competent authorities shall designate areas where these activities are permitted or prohibited.
- 2 The boatmaster of the towing vessel shall be accompanied by a person responsible for the tow and for the supervision of the skier and competent for those purposes. (In other words a competent observer is compulsory.)

Local competent authorities may specify the minimum age of the observer.

- 3 Except when navigating in a channel, which is reserved for their exclusive use, towing vessels (water ski boats) and water skiers shall keep at sufficient distance from all other vessels, from the bank, and from bathers. The distance to be determined by the competent authorities, who may extend this provision to other categories of equipment.
- 4 The tow rope shall not be trailed unheld. (In other words you must retrieve the ski rope when the skier falls)

Further regulations concerning water ski boats are contained in United Nations Resolution No. 41 which in summary say that the boat must carry a paddle, buoyancy aids for all the people on board, a mooring rope at least as long as the craft, effective steering, a fire extinguisher, a bailer, an anchor with at least 10 metres of line, and "a device to automatically stop the engine if the helmsman leaves the steering position" - in other words a kill switch tied to the driver.

The water skier must not create a nuisance or danger for other users of the waterway.

RULES OF THE ROAD

Rivers are classified as Class I and canals, lakes and broad waterways are classified as Class II. The direction of the current on Class I rivers is important because "normal" vessels over 20 metres in length have certain priorities when proceeding upstream or downstream. Also so far as small craft such as ski boats are concerned, you must give way to everything and most importantly not obstruct the navigation of "normal" vessels in any way. Large "normal" vessels do not necessarily keep to the right on waterways. When for instance the deeper channel is on the outside of bends, then that is where the normal vessels will navigate.

- In general the international collision rules apply with modifications for the large vessels operating in narrow or shallow channels and ski boats must always keep out of the way of normal vessels and give them plenty of room to manoeuvre.
- A ski boat navigating a narrow marked channel will keep to the right and maintain its course when meeting another small powered vessel. If a vessel sees there is a risk of collision it will sound a series of very short blasts on its horn.
- As a general rule, an overtaking vessel shall pass to the port (left) of the vessel being overtaken. Where the channel is unquestionably wide enough, the overtaking vessel may also overtake to starboard (right) of the vessel being overtaken.
- Signs are displayed where overtaking is prohibited.
- Vessels may turn only after making certain that the movement of other vessels will allow them to do so safely, and without obliging such vessels to change their course or speed abruptly.
- No vessels are allowed to drift in navigation channels.

REDUCE WASH

- Vessels shall regulate their speed to avoid creating excessive wash likely to cause damage to stationary or moving vessels or structures. In particular reduce speed in good time near harbour entrances, moored vessels, ferry-boats, or where there is a sign.
- Reduce speed and do not create wash if you see the sign.
- Vessels moored or moving, and floating equipment that needs special protection from wash will fly a flag with red upper half and white lower half, or a board with the same colours, or a red flag above a white flag.
- All vessels, including water ski boats, must reduce speed and keep clear of anything showing such signals.

- Vessels, which are unable to manoeuvre, will display two black balls suspended from a mast. Towed vessels display a yellow ball suspended from a mast. Vessels fishing display two black cones point to point, and one above the other.
- Vessels used for underwater diving display the international 'A' flag which is blue and white.

GENERAL NAVIGATION SIGNS

Navigation on any waterway may be prohibited by the display of the general "NO ENTRY" sign.

Ferry-boats crossing waterways carry a green ball suspended from a mast at the stern if they are pulled by cables, or a green ball suspended from a mast at the bow if they can navigate independently. They all have priority over water ski boats but if they also have priority over other vessels then they show a white cylinder suspended below the green ball.

If passage under bridges, through weirs, or through locks is restricted, then all vessels, including water ski boats, must pass between the signs.

One or more red lights before a moveable bridge, weir or lock, means that passage is prohibited. Small craft including water ski boats must always keep away from other vessels in or near locks. One or two green lights mean that entry is permitted into a lock.

On lakes and broad waterways, weather warnings may be given by a yellow strobe light flashing at 40 times per minute indicating caution and at 90 flashes per minute meaning imminent danger of bad weather.

CHANNEL MARKINGS

The convention for right and left sides of a channel is taken from the position of an observer facing downstream in a river. On canals lakes and broad waters the appropriate authorities will designate which sides are right and left.

- Right hand side channel markers are red cylinders or red buoys with red cylindrical topmarks.
- Left hand side channel markers are cone shaped or buoys with a cone top mark and coloured green.
- When the channel divides buoys or marks are coloured in green and red bands.
- When the navigable channel for normal vessels lies close to the right bank then red and white markers are placed on the bank.
- (Do not confuse with no entry sign).
- Like wise navigable channels close to the left bank are green and white.
- Black and yellow rectangles or a yellow cross indicate point where the navigable channel crosses from one side to the other.
- Isolated danger marks may be shown.
- When a stop is required before moveable bridge or lock it will be indicated by a black horizontal bar in a red square.
- Speed limits in km/hour are shown as black numbers in a red square.
- The requirement to give a sound signal is shown as a black dot in a red square.
- A requirement to keep a particularly sharp lookout is shown by a vertical black bar in a red square.
- When there are restrictions on navigation about which you must make enquiries, a simple red square is shown.

WATER SKI CHANNELS

Special areas which for example may be designated to protect swimmers canoeists, rowers or water skiers may be defined by a series of yellow buoys which may also carry a red flag. An example of how a channel specifically for water skiing might be marked to cross a swimming area where all types of craft are prohibited, is given in Figure WSC. An example of an area where motorised craft are prohibited is given in Figure MCP and of an area where there is a 12 km/h speed limit in Figure GL12.

DISTRESS SIGNALS

Any vessel in distress and needing assistance may make repeated long blasts on a horn or ring a bell. Additionally all of the following visual signals may be used: -

- Waving a flag or any other suitable object in a circle.
- A flag having above or below it a ball or anything resembling a ball.
- A light waved in a circle.
- Rockets or shells throwing red stars.
- A light signal showing SOS in Morse Code (... --- ...)
- Flames by burning oil etc.
- Red parachute or hand held flares.
- Slow movement of the arms extended on each side, up and down.
- All these signals are illustrated in figure 74a

SOUND SIGNALS

There are numerous signals used by normal vessels between each other to indicate what they are going to do but for water ski boats the important general signal is a series of short blasts indicating "imminent danger of collision" when they must promptly get out of the way. Also repeated long blasts indicate a distress signal.

Summarised by Robin Nichols from information contained in United Nations Document TRANS/SC.3/115/Rev.1 No liability accepted for any mistakes or omissions. For all questions requiring a full definition, the original document should be referred to. European regulations are not copyright and may be copied if acknowledgement is made to the United Nations and British Water Ski & Wakeboard, The Tower, Thorpe Road, Chertsey, Surrey, KT16 8PH.

WATER SKIING SYLLABUS

ONSHORE TEACHING

The following syllabus is given in outline form so that an instructor can expand on the topics covered.

BOAT CREW

The importance of always having a rear facing ski observer so that the driver can always concentrate on where he is going. The need for at least two people in a boat to assist an injured skier. Give examples of cases where drivers without observers have lost skiers or have driven over swimmers.

SKI ROPES

Explain the advantages of braided plastic rope that floats, is easily visible, easily spliced, and resistant to rotting. No metal attachments at the skier's end which might catch a skier's hand. Different lengths for recreation, slalom, tricking, jumping, knee boarding, racing, barefooting, and inflatable toys. Advantages of ski pylons (poles) or of a transom bridle and pulley for a small boat. Hazard to fingers of ropes. Hazard of driving over floating ropes. Importance for a skier in the water to let the rope pass through his hands and not behind his head.

SKIERS EQUIPMENT

The difference between a lifejacket which supports an unconscious person face up, and a buoyancy aid giving freedom of arm movement and which skiers use. Need for close fitting ski vest (Buoyancy aid) which does not slip up around a skier's ears. Protection to a skier's internal organs that is given by a ski vest. Protection against enemas by wearing a wet suit. Types of wet and dry suits. Dangers of rings catching in ski ropes. Danger of losing contact lenses or false teeth during falls.

STANDARD SKI SIGNALS

Drivers, skiers and observers must all know and understand the visual signals given in this booklet together with the standard aural signals of "in gear" and "hit it".



Importance of not annoying other water users who have equal rights to use public water such as yachtsmen, wind surfers, canoeists, swimmers, divers, and anglers. Stay well clear of boats flying the blue and white flag indicating a diver below. The future of water skiing on public waters is increasingly in jeopardy if the environmental and safety codes given in this booklet are not followed.

LOCAL RULES

The increasing presence of local rules that make it essential to find the harbour master or other controlling authority before skiing in an area you do not know. Use of buoys to protect swimmers and ski lanes at coastal resorts.

BOARDING AN INJURED SKIER

Discuss types of injury such as those which require urgent action when there is a severe loss of blood or breathing has stopped. Accidents where care is necessary such as spinal injuries, bone breakage and limb dislocation. How to board an injured skier on boats without a ski platform. Use of the observer to support an injured skier. Communications, nearest telephone, mobile phones, marine band radio.

INSURANCE

All boats must be insured for third party liability to and of water skiers. When candidates use their own boats for the test, proof of valid insurance must be shown to the examiner.

The currently approved British Water Ski & Wakeboard insurance broker offers a discount when ski boats are driven only by holders of the S.B.D.A.

EQUIPPING A BOAT FOR WATER SKIING

Many boat manufacturers say their boats are suitable for water skiing but some need a little adaptation. A bridle with a pulley mounted on the transom is the best solution for small boats but for larger boats a ski pylon or pole will give the best pull for a skier.

A mirror should always be fitted. The rearward facing observer needs to be comfortable while watching the skier. Except for purpose built ski boats, this will probably mean turning the passenger seat around. Boarding a skier, especially one who is tired or injured, needs either a boarding platform or boarding ladder. Sharp deck fittings that pose a hazard to skiers going over the side, may need removing. A speedometer is useful for keeping a constant speed when towing a skier.

DRIVING TECHNIQUES FOR WATER SKIERS

First familiarise yourself with local surroundings and conditions. Check where you can and can not ski and take careful notice of any local Bylaws, details of which can be obtained from the local Harbour Master, library, coast guard, or council offices. It is advised that you drive a circuit of the water to be used in order to familiarise yourself before actually towing a water skier.

You must carry an observer and see that they can sit comfortably and do their job of watching the skier. Communication from the skier to the observer and from the observer to the driver is essential and should be clearly understood from the start. The recommended hand signals are shown in the diagram given earlier in this manual. It is also the observers job to look after the ski line including throwing the handle to the skier at the start, making sure the line is clear of knots and not entangled with the boat or engine, and retrieving the line and handle at the end of the ski.

The ski line is potentially the most dangerous bit of equipment on the boat so make sure your observer treats it with respect and never touches it once the boat is moving because serious injury can be sustained if a finger or limb becomes trapped.

As you would in a car, adjust the seat and mirror before you start. If there is no seat adjustment then you may need to use cushions or life jackets to achieve a position where you can reach the controls easily and see properly. Never sit on the back of the seat or side of the boat. If you do so you are not properly in control of the boat. You may be thrown out and the boat would probably continue in circles without control!! Kill switches with cords attached to the driver are fitted to prevent this occurrence in rough water.

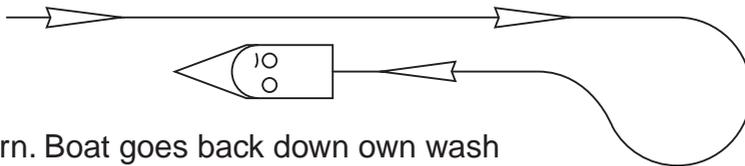
The ideal driving position is with one hand on the steering wheel and the other always on the throttle. Boat steering mechanisms are notoriously prone to corrosion and if you need two hands to turn the wheel, then the steering needs maintenance. Perhaps a new steering cable or maybe just some grease.

With an inboard boat that has not been running for a few minutes the most important thing you must always do before turning the ignition key is to turn on the blower. This will blow out any petrol or gas fumes that may have accumulated in the bilge and avoid the possibility of an explosion when you start.

Find out from your skier the speed, start method, and type of skiing that they want. Make sure your skier will use the standard aural signals of "in gear" and "hit it". Other words can be confusing. I.e. "go" can sound like "no". Also make sure your skier is familiar with the standard hand signals given in this manual.

When the skier is ready check the line is clear of snags with the ski tips above the water and rope between the skis. Before starting ensure that the engine (outboards) or rudder (inboards) is lined up straight ahead before applying power. **YOU MUST LOOK AHEAD BEFORE ACCELERATING.** When applying the throttle be smooth but firm. It requires a lot of power to pull the skier out of the water and get the boat onto the plane, but beware, as soon as the boat and skier are planing on top of the water that the boat wants to race away. Now is the time to gently ease back on the throttle and achieve the desired speed smoothly. Once under way ensure that the boat path is clear not only for the boat but also for the skier who may be viraging from side to side. For jetty or beach (scooter) starts, any loops of slack that the skier may have taken, must be thrown away before you open the throttle. A loop around a limb or finger is very dangerous.

Give smooth acceleration dependent on weight of skier and type of ski. Drive a constant speed dependent on the skier's weight and type of skiing. Give a smooth response to skier's signals. A "P" type turn to return down the boats own wash, is the preferred pattern.



'P' turn. Boat goes back down own wash

Look for flat water and attempt to create as few wake problems of your own as possible. The water is being flattened behind you but being made wavy on either side which is why you should make a "P" type turn and return down the centre of your own wash. Before you start a turn be aware of which side your skier is on and signal your intention to them. Ensure you have plenty of room for the turn and if the skier is a beginner make allowances for a wider than usual turn. If the skier is out of control on the whip and on the outside of the turn, you can assist them by easing back on the throttle but don't forget to put the speed back up as you come out of the turn. The opposite action might be required for a beginner caught on the inside of a turn and needing a bit more throttle to keep his speed up. If you have allowed yourself enough room you can also widen the arc of your turn.

If you are driving on water that has other users or perhaps on a narrow strip of water, and your forward course becomes blocked, NEVER try to force your way through just because you have a skier on the back. You can and should always STOP. It will mean the skier has to make another start but towing a skier gives you no right of way over other users of the water.

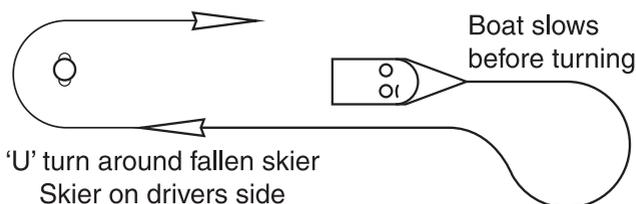
When a skier falls without any apparent injury, the observer should immediately tell the driver. You should then slow the boat before turning and going back to the skier. The skier must be on the driver's side and always in view to the driver. If there are no other boats in the area it is accepted practice to return with the ski rope trailing and do a "U" turn or "S" turn around the skier so that they can regain the handle, and as illustrated in the diagram. The skier should let the rope pass through their hands in front of their face and never let the rope be pulled around their neck.

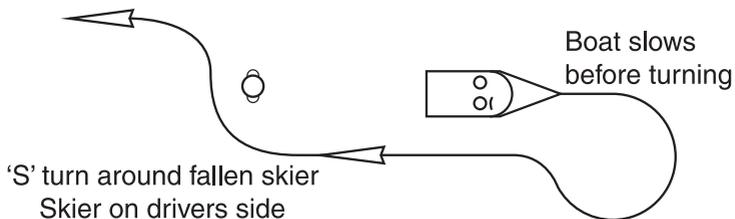
On water crowded with other boats it is safer to first pull in the ski line before returning to the skier. The observer can then throw the handle to the skier for another start. At some clubs with many boats operating this is a compulsory rule.

If you need to board a fallen skier always switch off the engine first.

When returning to the dock or beach slow down slightly and drive parallel to the dock or beach. Never put the skier into the dock or beach too fast or out of control. Skiing up the beach or into the dock can be as much the drivers fault as the skier's. Clear the landing area and retrieve the ski line before trickling slowly back to the dock or beach. Look out for swimmers, boats, or skiers who might have come into the area while you were away skiing.

Remember that when you drive a boat with a skier you are controlling a boat that is effectively 25 metres long and travelling at between 30 and 60 k.p.h. Take it seriously, don't drink and drive and don't allow your boat to





be used as a toy by unqualified drivers. The whole image of water skiing suffers when the public sees ski boats being driven recklessly or needlessly running round in circles without even a skier on the back.

The golden rule is the driver drives and the observer watches the skier. Take pride in giving the best ski tow by smooth control and constant speeds and you will be rewarded by as much satisfaction as the skier gets.

S.B.D.A. PRACTICAL TEST

PREPARATION

If the candidate provides their own boat for the test, they must also provide the examiner with written proof that the boat is currently insured for towing water skiers. The skier to be used during the test may be supplied either by the candidate or the testing centre. The skier must be competent on two skis, stay in the centre of the wake behind the boat for the whole test, and not do anything that might cause a fall and be over the age of 14. It is permissible to use a wakeboarder providing the rider stays in the center of the wake at all times.

The examiner may act as the observer and will relay the skier's signals as well as keeping the driver informed if the speed is not suitable for the skier or if the skier is having difficulty during turns. Alternatively an additional person may be carried to act solely as the observer.

The test will be preceded by a briefing from the examiner to the skier and the candidate. This will describe the test and the area of water to be used.

Throughout the test the candidate must remain properly seated and not perched on the seat back or side of the boat.

The test should not be prolonged for any item and should be completed in less than ten minutes. The candidate must pass all sections. The examiner will tell the candidate the result of the test immediately on its completion.

DETAILED PROCEDURE

- 1 The test will start when the skier is in deep water and the observer passes or throws the handle to the skier. It is the candidate's duty to supervise this operation and ensure that the rope has no knots or is not caught up on any part of the boat. It is also the candidate's duty to ensure that the skier is wearing a ski vest.
- 2 The candidate will drive the boat slowly out to a position where the ski rope is just taught.
- 3 The candidate will look over their shoulder and check that the skier is ready with the rope between their skis.
- 4 When the skier shouts "hit it" THE CANDIDATE MUST FACE THE FRONT and check the water ahead is clear before accelerating.

- 5 The candidate will accelerate the boat in a straight line at a rate suitable for the weight of the skier.
- 6 The candidate will drive in a straight line until the examiner indicates that a turn is required. This will be after approximately 300 metres. The examiner will expect a reasonably straight course with a constant speed suitable for the weight of the skier. The examiner will not expect tournament type accuracy but will require a good recreational ski tow to be given. The candidate must watch where they are driving and rely on the observer (or examiner) to relay the skier's signals and speed requirements.
- 7 The candidate will execute a smooth and uniform turn through 180 degrees to return to the centre of the boat's previous wake. The turn should be of a size and speed suitable to the weight of the skier who is being towed.

During the turn the candidate must primarily watch the area ahead but they are permitted an occasional glance over the shoulder to check the skier's path and speed although it is preferred that a mirror and the observer are used for this purpose.

- 8 The candidate will continue in a straight line back down the boat's original wash. At a suitable point the examiner will signal to the skier that they must let go of the handle.
- 9 The observer (or examiner) will tell the candidate that the skier has let go of the handle. The candidate must immediately slow the boat without turning. The candidate will RETURN AT IDLE SPEED WITH THE SKIER ON THE DRIVERS SIDE. The candidate must keep the skier in sight throughout the return. The handle may be returned to the skier either by an "S" or "U" turn with the rope trailing through the skier's hand, or by the observer retrieving the rope and throwing the handle to the skier when close enough.
- 10 When the skier is ready and shouts hit it, the candidate will again face the front and do another start followed by a straight line tow and a turn in the opposite direction to the first turn if local skiing rules will permit this.
- 11 The candidate will return the skier to the drop off area previously designated by the examiner and the observer will signal the skier to let go.
- 12 The candidate will return the boat to the jetty and demonstrate a safe docking. If the test is carried out where there is no jetty, this manoeuvre will be demonstrated alongside a moored boat or raft. The boat must be driven in a slow and controlled manner. The examiner will make due allowance if the candidate is not familiar with the type of boat that the test is taken in.
- 13 At all times while the skier is being towed, the candidate will not drive closer than a ski rope's distance (23 metres) from any other boat, obstruction, shallow water or shore.

HIGHER QUALIFICATIONS

In the world of competitive water skiing the S.B.D.A. is an elementary qualification from which to progress to higher licences. Details of more advanced licences for tournament driving, club driving, ski racing and barefoot driving are available from British Water Ski & Wakeboard

FIRST AID

It is strongly recommended that all participants in water skiing are fully conversant with methods of resuscitation and first aid. It is recommended that first aid training is refreshed every three years.

British Water Ski & Wakeboard SAFETY RECOMMENDATIONS

(Amended 2003)

British Water Ski & Wakeboard has drawn up a code of safety rules for the guidance of those who participate in the sport, and the authorities in whose control the sport is vested. British Water Ski & Wakeboard is confident that if these recommendations are accepted and scrupulously observed, water skiing may be enjoyed by all without danger to participants or to other water users.

Speed regulations are sometimes imposed because it is a popular fallacy that there exists a relationship between speed on the one hand and danger, noise and damaging wakes on the other. As all experienced boat men realise, a slow moving craft can often prove more hazardous than one moving more readily, and statistics prove that speed is hardly ever a contributory factor in boating accidents.

Contrary to what those unfamiliar with boats may believe, a fast moving motorboat with a planing hull creates less wake and wash than one proceeding more slowly; and with modern marine outboard engines the noise levels have been reduced to acceptable levels.

It should be noted that the International Regulations for the Prevention of Collisions at Sea apply to all vessels upon the high seas and in all waters connected therewith navigable by sea going vessels.

British Water Ski & Wakeboard's Abridged International Maritime Regulations for use in Crowded Waters

Based Upon: The Merchant Shipping (Distress Signals and Prevention of Collisions) Regulations 1989 (Statutory Instrument 1989 No.1798) as amended by S.I. 1991 No.638. These Regulations apply the International Regulations for the Prevention of Collisions at Sea 1972 (as amended) to UK shipping.

- 1 Two speed boats meeting head on shall alter course to "starboard".
- 2 Two speed boats crossing: the vessel which has the other on her starboard side shall give way.
- 3 Speed and sailing vessels: the speed boat shall give way.
- 4 Vessels to keep course and speed: the vessel with the right of way shall keep her course and speed.
- 5 Vessels overtaking shall keep well clear of an overtaken vessel.
- 6 Vessels in narrow channels: every speed boat shall. When it is safe and practicable, keep to that side of the fairway (e.g. entrance to harbour) which lies on her starboard side.
- 7 Speed boats when launched from slipways must proceed directly to sea at low speed - no warming up or exercising in harbours will be permitted.
- 8 Towing vehicles and carriages must be removed from slipways and approaches immediately after launching
- 9 Every vessel which is directed to keep out of the way of another vessel shall, so far possible, take early and substantial action to keep well clear.
- 10 Any action taken to avoid collision shall, if the circumstances permit, be positive, made in ample time, and with the observance of good seamanship. If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion. (re: rules 9,10 and 11, these have been included at the express wish of the Ministry of Transport in the full knowledge that they will seldom apply in waters used by water ski clubs. However, we can see that there could be special circumstances which might arise and made the observance of these particular rules essential).
- 11 Power driven vessels shall in general keep out of the way of vessels engaged in fishing. However a vessel engaged in fishing shall not impede the passage of any vessel navigating within a narrow channel or fairway. A vessel of less than 20 metres length shall not impede the passage of a vessel which can navigate safely only within a narrow channel or fairway.
- 12 Special circumstances; in construing and complying with these rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from these rules necessary to avoid immediate danger.

- 13 Nothing in these rules shall interfere with the operation of special rules made by an appropriate authority for roadsteads, harbours, rivers, lakes or inland waterways connected with the high seas and navigable by sea going vessels.

SOUND SIGNALS

- 1 Short Blast Altering Course to Starboard (Right)
2 Short Blasts Altering Course to Port (Left)
3 Short Blasts Going Astern

SAFETY RECOMMENDATIONS

- 1 All Water Ski boats; PWC's and power boats towing water skiers, on public waters and on enclosed sites where more than one water ski boat operates, shall, at all times whilst towing be occupied by two competent persons, thus enabling the driver to concentrate on navigation and the water ahead, whilst the second person is responsible for watching the skier and relaying his signals to the driver.
- 2 At water ski schools and water ski clubs on enclosed waters, where only one water ski boat operates at any time and help can be summoned at any time, it is reasonable and safe for a qualified driver/coach to drive for water skiing without a second person aboard. Water ski schools and Clubs are strongly advised to carry out a risk assessment, as to the need for a second person in the boat where there is any possibility of another boat or activity using the water area at the same time.
- 3 All boats towing skiers shall be operated in a careful and prudent manner, and at a reasonable distance from persons and property so as not to endanger the life or limb or the property of any person.
- 4 No boat shall tow a skier from the period of one hour after sunset to one hour prior to sunrise, provided that the rule shall not apply to boats used in duly authorised training and coaching sessions, ski tournaments, competitions, expositions or trials.
- 5 No person shall manipulate any vessel or tow rope by which the course of water skis or water skiers may be influenced in such a way as to cause a collision or accident.
- 6 No person shall operate a boat or water ski in a reckless or negligent manner.
- 7 No person operating a boat towing a skier shall allow any person to ride or sit on the gunwales or decking of the vessel while underway.
- 8 When operating on the sea or other large expanse of water, the skier shall wear a life jacket, and the towing boat must carry a life buoy or other approved life preserver. It is also recommended that all boats carry fire extinguishers and that the engine cover be lifted for a short period after refuelling.
- 9 When skiing takes place from a public beach or other area where swimmers and other water users are present, one experienced person shall be in charge of skiing operations and assume responsibility to ensure that all necessary safety precautions are rigidly observed. Take off and landing points shall be clearly marked and buoys, ropes or guard boats used to indicate these approach areas to other water users, and careful watch kept to ensure that swimmers in particular do not enter the danger area. Apart from take off and landing operations, all normal skiing shall be carried out away from the shore at a safe distance beyond areas used by swimmers, pedalos and similar craft.
- 10 No person shall operate a boat towing a skier within a water area which has been clearly marked by buoys or some other distinguishing device, as a bathing or otherwise restricted area provided that this rule shall not apply in case of emergency.
- 11 Where water skiing takes place on areas of water where rowing or canoeing also take place, wash from ski boats can seriously disturb their activity. In the worst cases wash can swamp or even sink canoes and rowing boats. Water ski boat drivers shall stop their boat and allow the rowers and canoeists to pass by with no wash. All water skiers are asked to 'Give one minute of their time to make friends and allow other water users to enjoy their activity'.
- 12 Wherever practicable water ski boats, operating within a speed limit area or in any area close to other craft, are recommended to proceed at a NO WAKE speed.
- 13 REMEMBER Water Ski Zones and the removal of speed limits are created to enable ALL water skiers to enjoy the sport. Water skiers should use all water ski zones with respect for both the environment and other users of the area. Water skiers should conduct themselves, at all times, in such a way that that all water skiers will be welcomed back for years to come.

WATER SKIING

WATER SKIERS

- ALWAYS be confident in the water and always wear a buoyancy aid / ski vest and a wetsuit or drysuit. If you cannot swim make sure the boat driver and/or your instructor know this.
- A buoyancy aid need not be worn by competent trick skiers who can swim. Competent means capable of performing 240 trick points.
- ALWAYS use approved signals between skier and observer and driver.
- ALWAYS let the observer know you are OK after a fall.
- ALWAYS watch the water ahead of you at all times.
- ALWAYS check your equipment is safe, wing nuts, loose binding, splinters and sharp metal.
- ALWAYS ski clear of solid obstacles - jetties, boats, mooring buoys, rocks, banks etc.
- ALWAYS throw away the handle on falling.
- ALWAYS use an approved life jacket and helmet when jumping.
- ALWAYS wear neoprene shorts when jumping & learners advised to wear two pairs.
- TAKE CARE to remove jewellery that the rope might catch on.
- TRY TO avoid falling forwards - sit down, or if falling sideways, curl yourself into a ball.
- TRY TO recover skis quickly.
- NEVER shout 'hit it' to the driver until the rope is taut and your ski tips are up.
- NEVER wrap rope around any part of your body (fingers, hand or foot).
- NEVER place any part of the body through the handle (neck, arm or leg).
- NEVER ski in shallow water.
- NEVER ski at night.
- DO NOT ski directly ahead of, or to the side of another boat.
- DO NOT attempt fast landing directly towards the shore - sit down if coming in too fast.
- DO NOT ski in unknown waters.
- DO NOT jump from a boat whilst it is moving.
- LADIES should always wear neoprene shorts.

SKI BOAT DRIVER

- ALWAYS have a competent observer in the boat when towing a skier.
- ALWAYS wait for the skier's signal and his ski tips above the water before starting.
- ALWAYS steer clear of other boats and floating obstacles.
- ALWAYS when skiing in restricted waters stop and allow canoeists and rowers (who are easily swamped) to pass. You can make friends doing this!
- ALWAYS BE AWARE you have a long rope behind you that should be recovered as soon as possible and before you pick up your fallen skier - if the skier is not injured and not in danger.
- ALWAYS make sure observer understands water ski signals.
- ALWAYS give the skier a smooth and steady pull on take off.
- ALWAYS shut off your motor before taking aboard a skier.
- ALWAYS return immediately to pick up the skier.
- ALWAYS carry an extra life jacket in the boat.
- DO NOT turn sharply and put the skier in the water or on the whip - gradual wide turns are the rule.
- DO NOT take the skier aboard without shutting off the engine first.
- DO NOT drive the boat through swimming or restricted areas.
- DO NOT operate boat sitting on the side, sit in the seat.
- NEVER put the boat into reverse when a skier is in the water.

CODE OF PRACTICE

WATER SKIING AND THE ENVIRONMENT

Water skiing is an exciting and exhilarating family recreational activity. It is also one of Britain's most successful sports. Water skiing is an activity which most people would like to try, and as such has great potential for growth.

The popularity and success of water skiing are placing increasing pressures on water ski areas. At the same time the conservation value of water ski areas is becoming more important in relation to their surroundings. This has resulted in the need to work towards maximising the use of the areas for water skiing whilst enhancing or maintaining their conservation value. Many water ski clubs already manage their areas on this basis and co-exist harmoniously alongside or even within important conservation areas, such as Sites of Special Scientific Interest and Nature Reserves.

The provision of new water sites is largely dependent upon decisions made by local planning authorities. Water skiing must present a good case to the local authorities by demonstrating that water ski sites are always well managed and responsibly run, with minimal disturbance to local residents or wildlife.

The Codes of Practice for Clubs, and for Skiers and Boat Drivers, are a guide to the good management of water skiing areas, and to responsible behaviour, which in turn will lead to an overall better image for the sport of water skiing.

Clubs Should:

- 1 Identify the wildlife on their water skiing areas, particularly birds, other animals and plants.
- 2 Identify which parts of the area have the most wildlife value, and whether the area contains designated conservation sites e.g. nature reserves or Sites of Special Scientific Interest and International designations such as Special Protection Areas or RAMSAR Sites.
- 3 Work with local conservation groups to determine the best way of protecting important species or conservation Sites, throughout the year.
- 4 Seek ways of helping wildlife on the area, through such actions as making new islands or setting aside refuge areas. Consider during long periods of cold weather whether a voluntary cessation of water skiing would be beneficial. Seek the advice of RSPB or local English Nature officer.
- 5 Monitor changes in wildlife from year to year, particularly bird populations.
- 6 Appoint a 'Conservation and Access Officer' to liaise as necessary with the NRA, local authorities, conservation interests, local residents, etc. Also run at least annual working parties to improve the area.
- 7 Produce or input into a management plan for the area.
- 8 Discourage boats and skiers from using lake margins or shallow silty areas.
- 9 Ensure only recognised and accepted landing places and launch sites are used, which cause minimal disruption to wildlife or other users.
- 10 Reduce wash by correct grading or lining of banks and encouraging weed growth along lake margins.
- 11 Ensure refuelling and bilge pumping are carried out away from sensitive wildlife sites.
- 12 Encourage members to use propane gas or unleaded petrol, together with biodegradable oils.
- 13 Ensure all club members' boats conform to the Noise Code of Practice for water ski boats.
- 14 Ensure all club members' boats are clearly and individually identifiable to other water users or observers e.g., by registration numbers.
- 15 Ensure all new members and visitors are fully informed about the site, including any conservation interest, management measures or zones currently in practice.
- 16 Include the Codes of Practice in all levels of instruction and training of skiers, observers, drivers and officials.
- 17 Ensure the Codes of Practice are observed by members and visitors.

Skiers and Boat Drivers Should:

- 1 Be aware of and respect other water users, local residents and the wildlife which depends on water ski areas.
- 2 Give other water users a wide berth and manoeuvre carefully, well away from them.
- 3 Reduce wash as much as possible.
- 4 Stay out of shallow water and well away from lake margins.
- 5 Take care not to disturb birds, particularly during nesting or moulting, and during very cold weather.
- 6 When using a water ski site for the first time always consult the appropriate Authority before launching.
- 7 Always respect bye-laws, zoning or other management systems affecting the area.
- 8 Always launch and land at authorised locations.
- 9 Only refuel or use the bilge pump well away from any sensitive wildlife sites.
- 10 Prevent any spillage of oil or fuel.
- 11 Use propane gas or unleaded petrol.
- 12 Do not make unnecessary noise.
- 13 Take litter home.

TOWING INFLATABLE EQUIPMENT

British Water Ski & Wakeboard has no responsibility for anything to do with inflatable equipment. Nevertheless ski boats are usually used to tow such equipment and often the drivers involved are quite inexperienced so it is prudent in this manual for drivers to be made aware of the hazards involved.

Inflatable equipment includes a variety of designs including 'Ringos', 'tubes', 'Biscuits', 'Sausages', 'Bananas', 'Sledges', and many other trade names. They are all designed to carry one or more riders while being towed along the water.

The riders have no control of the path of the equipment and it must be clearly understood that the boat driver determines what happens to the equipment. For example when the boat turns sharply the equipment will slide across the water in a manner described as 'on the whip'. If the boat is driven too fast or over water that is too rough, the equipment may dive into the water or capsize. Many serious accidents have occurred because riders of inflatable equipment have been sent into collision with other boats, jetties, or shore banks when drivers do not allow sufficient turning room. Other accidents have occurred from riders being thrown out at excessive speed.

All riders of inflatable devices are advised to wear protective helmets. Serious injuries have occurred when unprotected heads have banged together during falls.

SAFETY RECOMMENDATIONS FOR INFLATABLE EQUIPMENT

THE BOAT DRIVER

- 1 Always follow the manufacturers recommendations.
- 2 Do not overload the equipment with riders.
- 3 Check that your boat insurance covers inflatable equipment.
- 4 Always have an observer.
- 5 Tow in straight lines with wide turns.
- 6 Do not put inflatables on the 'whip'.

- 7 Do not increase speed on turns.
- 8 Do not try to throw the rider out.
- 9 The rider must wear a ski vest (buoyancy aid).
- 10 Do not tow an inflatable over a jump or through a slalom course.
- 11 Do not tow an inflatable within a tow ropes distance of any solid object.
- 12 Always use a tow line of the type recommended by the manufacturers
- 13 Check the water is clear of floating debris.
- 14 Check that local rules allow towed inflatables on the water.
- 15 Do not tow an inflatable over the wash of other boats.
- 16 Do not tow an inflatable with an unaccompanied small child.
- 17 Check the inflatable is in good repair, including the ropes and towing 'eye'.
- 18 Make sure the rider knows British Water Ski & Wakeboard standard aural and hand signals.
- 19 Do not continue a tow if a rider falls.
- 20 Use standard procedures for crowded waters.
- 21 Always approach a fallen rider on the drivers side.
- 22 Switch off the engine before boarding riders from the water.
- 23 Do not start a tow until the rider shouts 'hit it'.
- 24 Keep away from other boats and other water users.
- 25 Do not tow an inflatable at night.
- 26 Do not tow an inflatable in shallow water.

INFLATABLE RIDERS

- 1 Wear a ski vest (buoyancy aid).
 - 2 Do not stand up.
 - 3 Do not try to throw other riders overboard.
 - 4 Do not attempt to steer an inflatable.
 - 5 Know British Water Ski & Wakeboard standard hand and aural signals.
 - 6 Do not attempt to abandon an inflatable during a tow.
 - 7 Do not hold the towing rope.
 - 8 Do not fasten any part of your body to an inflatable.
 - 9 If a fall takes place, put your hands in the air to indicate 'OK'.
 - 10 Do not shout hit it until the rope is taught and all riders are prepared.
 - 11 Do not ride an inflatable unless you can swim.
 - 12 Wear head protection.
-

WHY JOIN?

AS A MEMBER YOU WILL RECEIVE THE FOLLOWING BENEFITS:-

> MAGAZINE

British Water Ski & Wakeboard full colour magazine sent to your home five times a year. Contains all the latest news and views plus developments in the sport.

> PERSONAL INSURANCE

As a member you are automatically covered at no extra charge by our personal accident scheme - cover up to £25,000 whilst skiing anywhere in the world or travelling to and from our calendar events in the UK.

- Optional insurance top up cover.

Liability cover for registered, qualified volunteer Instructors and Officials when acting on behalf of your affiliated club or at our calendar events.

> SUPPORT AND ADVICE

Where can I ski in the UK? What documents do I need to take my boat abroad? From everyday questions to specialised technical advice - you will also have access to expert assistance on all aspects of waterskiing.

> QUALIFICATIONS

Access to our range of qualifications e.g. Instructor, Coach, Ski Boat Driver Award and International Certificate of Competence and Officials.

> COURSES AND SEMINARS

Access to our range of courses and seminars held nationwide throughout the year.

> DISCOUNTS

- 10% off **Markwarner** Summer watersports holidays.
- 10% off **Neilson** Summer and Winter Active holidays.
- Special rates with our Boat Insurance Scheme operated by GJW Direct.
- Ski Boat Driver Award holders receive an additional discount.
- Healthcare plan with Hospital & Medical Care Association.
- Special rate Travel Insurance scheme operated by Swinton Insurance plus discounted premiums for all personal and business insurance.
- Reduced or free entry to major water ski events in the UK.
- Special rate breakdown & recovery club with HMCA.
- Special rates with National Car Rental.
- Discount car leasing with Bowater Price plus free GAP insurance - NEW for 2010.

> OTHER BENEFITS

- British Water Ski Credit Card.
- British Water Ski Online.
- Cutting Edge - Youth Scheme.
- Personalised membership card.
- British Water Ski & Wakeboard Magazine online - NEW for 2010.

BRITISH WATER SKI & WAKEBOARD
THE FORUM HANWORTH LANE CHERTSEY KT16 9JX

Telephone: 01932 570006 Facsimile: 01932 570028

Email: membership@bwsf.co.uk Web site: www.britishwaterski.org.uk



E15
MOTORISED
VESSELS
PERMITTED

E16
SPORT
CRAFT
PERMITTED

E17
WATER
SKIING
PERMITTED

E18
SAILING
VESSELS
PERMITTED

E19
NON MOTORISED
NON SAIL CRAFT
PERMITTED

E20
SAILBOARDS
PERMITTED

E21
ZONE FOR HIGH
SPEED SMALL SPORT
OR LEISURE CRAFT



E22
LAUNCHING
VESSELS
PERMITTED



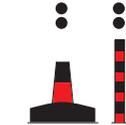
E23
INFORMATION
AVAILABLE ON
RADIO CHANNEL



E24
WET BIKES
PERMITTED



E6
ANCHORING
PERMITTED



23
ISOLATED DANGER MARKS
WITH OPTIONAL BLACK
SPHERICAL TOP MARKS

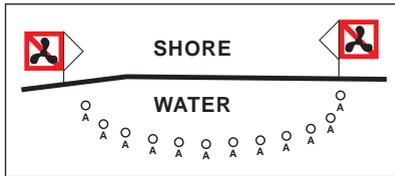


Fig. MCP

MOTORISED CRAFT PROHIBITED
INDICATED BY SIGNS AND BUOYS



74a

DIFFERENT METHODS OF
INDICATING DISTRESS

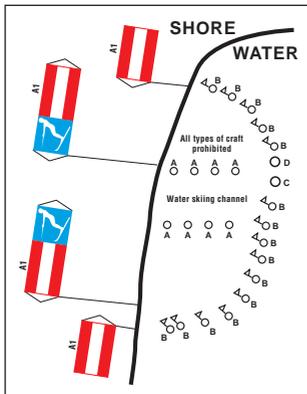


Fig. WSC

WATER SKIING CHANNEL MARKED BY SIGNS
AND BUOYS THROUGH A SWIMMING AREA

BUOYS LABELLED:-

- A:**
YELLOW COLOURED
- B:**
YELLOW WITH OPTIONAL RED FLAG
- C:**
YELLOW WITH RED TOP
- D:**
YELLOW WITH GREEN TOP

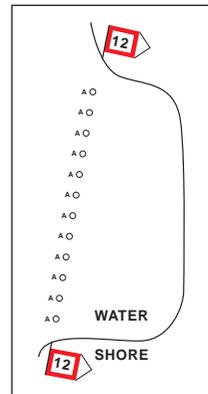


Fig. 74a

AREA MARKED BY SIGNS AND
BUOYS WHERE A 12 KM / HR
SPEED LIMIT IS ENFORCED



THE FORUM HANWORTH LANE CHERTSEY KT16 9JX

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web: www.britishwaterski.org.uk

CDA Course Notes 2010

Club Driver Course Notes 2010



Introduction

The Club Driver Award (CDA) is the next step in the BWSW Driving Qualifications after the Ski Boat Driver Award. A driver with this award would give any member of a club the confidence that they would be given a proficient tow in line with British Water Ski & Wakeboard safety policy.

The Club Driver Award should, normally, be taken in sections, to build up to developing a driver who is both safe, and who provides a high level of tow for all levels of club skiers.

The student must pass the general knowledge and boat handling paper, and be proficient driving slalom, wakeboard/skate, tricks, and with the boom.

Once all sections for the award have been signed off by the qualified examiner / tutor, the completed application form can be sent to BWSW for registration.

General

Waterskiing is a 'team sport' in as much as the Boat Driver can be instrumental in the success of the set or ride. If the Driver is not proficient, the entire ski session can be ruined. Good driving is consistent and considerate driving.

These notes are primarily for the lake-based club, using a tournament type boat. But, in the main, they can equally apply to sea based driving

The principles are:

1. Know your area
2. Know your boat and equipment
3. Know your skier
4. Know your procedures
 - Signals
 - Equipment
 - The Observer
 - The Towline
 - Falls and Spills
5. Know your wake
6. Know yourself

1. Know your area

Getting to know the area in which you plan to drive is one of the most important precautions to take before "Hit It" is called. Know the depth of the water in both the skiing and landing area. Be aware of any unusual water flow conditions such as power plant outlets or currents. Determine the location of weeds, lily pads, and any submerged obstacles such as rocks or stumps. Always inspect the area before your first run - it is easier to go on a voyage of discovery before your attention is diverted by a skier. When working in an area where tournament courses are installed,

e.g. slalom, jump, trick be very aware of submerged wires, buoys, anchors etc. Crossed anchoring lines at the jump tend to enter the water at a shallow angle and are, therefore, obvious no go areas.

Check any local regulations and then plan your routes and turns, keeping the back wash effect to a minimum whilst giving the skiers the best possible route for the discipline. Decide on a docking method and direction, taking in to consideration the impact of a fitted ski boom, and brief the skiing team. For the rest of the season, keep to the agreed paths and patterns.

2. Know your boat and equipment

If you have never driven a particular boat, try it first without a skier. This will give you the opportunity to familiarize yourself with the location of all controls and to determine the handling characteristics of the hull. Do not sit on the back of the seat - it puts you too far from the controls and makes it very difficult to stay in control of the boat during high speeds and difficult situations, such as a steering failure (and it wrecks the seat!).

Learn how to use the speed control system installed in your club boat. This includes making the correct settings for an accurate speed for a particular person in the current weather conditions. It is also important to understand the initial set up of the system i.e. base lines or plotting a course and to be capable of doing it. Familiarise yourself with the relevant instruction manuals for the system which, if not available at the club, are downloadable from the company's websites.

Check all safety equipment before beginning a session. Make sure that the bilge pump works or carry a baler. You should also have at least one paddle on board. Consider the amount of fuel required for the session and ensure that there is enough and that you understand how to refuel that particular boat. If on a large lake or the open sea, an anchor and a suitable flare are essential. It is also sensible to familiarise yourself with where the engine is, and make a quick check for oil levels, loose cables, belts etc.

3. Know your skier

A driver should assess the skier's experience before the session and tailor the session to the skier's needs. Always use caution in the first pass and you will soon get a feel for your skier.

4. Know your procedures

The driver's negligence can cause a safe sport to become potentially dangerous. It is imperative, therefore, that the driver knows all of the safety procedures as laid out in the SBDA Manual. Always plan the session. i.e. 1 pass then stop, or spin etc, as miscommunication can be dangerous.

Signals

Signal communication is the only way the skier can communicate with the driver. The universal signals that we use in the SBDA are generic throughout the sport. If the skier is new to you, you must check that they understand the hand signals.

Equipment

You will already have checked the equipment in the boat, but a good driver will not hit the throttle until he or she is sure that the skier's equipment is also in good order. Is the skier wearing a correctly sized and fitted life jacket? Is the towline in good condition, with no knots, and properly attached to the boat? Are the skis in good condition, with no protruding bolts or screws and the correct size, type for your skier for the planned session?

The Observer

The rearward facing observer should be an adult who is experienced and a competent member of the team. The observer and the driver must understand the signals and the division of responsibility and communicate freely. Never ski without an observer when there is more than one boat in use on the lake. Anytime the boat is moving, the observer must be seated.

The Towline

Ensure that the line is in good condition free of knots, fraying and that any splicing is sound and safe. Never move the throttle out of neutral unless you can see the entire towline. Get the observer to feed the line out ensuring it is clear of the prop or any other obstructions. During a deepwater start, make sure you can see a completely taut line running right down to the skier's handle. On a dock start, make sure that the skier works with the line coiled in clear view and that the last loops are thrown up and away so that you can see them. Never allow the skier to throw the entire line into the water as the boat pulls away from the dock. Coiled line in the water is a definite hazard. Injuries have been caused by careless handling of the towline.

Falls and Spills

Inevitably, skiers fall during the course of a ride. The driver should insist on the proper "OK" signal from the skier after a fall - clasped hands over the head.

Always approach the skier on the driver's side where possible. If you are working with a qualified instructor or when using a boom it may be necessary to approach from the passenger's side. When you approach a skier in the water - or even the dock - consider the effect of wind and current. Always approach the skier so the wind is blowing the boat away, not in toward the skier. Treat currents the same way. When the boat is near a fallen skier, be careful not to back over the towline. The observer should assist the skier and watch to make sure that the line does not become tangled in the prop.

5. Know your wake

The driver should always be aware of the effect that the wash is having on the ski area. Always drive in a straight line, and after the turn, drive back through your original path where possible, this will guarantee that the wash will not cause disturbances throughout the skiing area.

Some boats, especially inboards, leave a "roll" disturbance in the water when moving at a slow speed between idle and on the plane. This disturbance is at roughly 90 degrees to the direction of the boat. Always drive in a way that gives the least wake disturbance to your skier and to other skiers who may be nearby. Power turns are not considered best practise, they use more fuel, stress the steering parts and throw the passengers around in the boat. Be aware that bow wakes can cause as much wash as any other forms.

6. Know yourself

Experience and maturity tend to foster respect for driving. Driving a tow boat is a difficult, exacting, but rewarding task. The driver has the responsibility to make the tow fun and enjoyable giving the skier / rider the best chance to improve. If you are not sure of certain aspects of your driving please ask someone with more experience, N.B. they won't bite your head off.

Driving with a Boom

Always load your boat correctly and position your passengers so that the boat is balanced, understand that it will affect the height of your boom and your skier's position. You must ensure that the boom is at a suitable height for the skier i.e. chest height.

Always take off into open water.

Always be prepared for a lack of steering control on take off.

At the end of the lake or ski area tell the skier to sit down as the boat is stopping, turn the boat into the boom and then the mass of the skier in the water will turn the boat round ready for the next run.

When driving with a Boom for beginners the candidate must:

- Execute smooth starts anticipating the sideways pull and calculating the direction of the boat once the skier is up.
- Execute a smooth 'slow and stop' keeping the boat straight whilst the skier sits back down into the water.
- When the skier falls the driver should immediately come out of gear and turn to the boom side. This will take the stern away from the skier. If the skier falls but does not let go of the boom, a turn to the boom side will help to prevent the skis or board from being pulled off by the water pressure.
- It is most important when driving with for a beginner on the boom to be one half of a team with your instructor. The instructor should not have to ask the driver to speed or slow the boat, this should be within the drivers understanding of the skiers needs.
- Consider the wash, where it will go and how it will affect the skier
- Present the skier to the dock safely with regard to their speed
- Park the boom out from dock. (This can be against the rotation of prop).N.B. If you are not working with an instructor always ensure that you have a competent observer who has experience with the training boom

Start Methods

The main start methods are as follows:

Deep Water Start on Two Skis / Wakeboard

Deep Water Start on one ski.

Sitting Start on Two Skis / wakeboard.

Sitting start on one ski.

Stepping dock start / wakeboard

beach on one ski

The Club driver should be familiar and experienced with all the above starts (unless there is no one within that club capable of doing a sitting or standing start on one ski)

Driving for Slalom

Always load your boat correctly and use the passengers to balance the boat, understand that it will affect the wake and the handling of the boat so ultimately affecting your ability to anticipate the directional pull created by the skier.

The candidate must:

- Be able to set speed and programme their club boat's current speed control system i.e. 'Zero Off', 'Perfect Pass' or 'Star Gazer' and understand the difference between each of the settings.
- Within two passes, he must obtain a 'good time' (ie – the second pass must be within tolerance)
- Drive the slalom course at all slalom speeds with a full line skier, showing a good boat path and understanding boat placement within the course and consequences of bad boat path.
- Must be able to stop the boat and the skier at the end of the course without pulling the skier through the water. The boat should come to rest within a suitable distance of the skier to allow the driver / coach to talk to the skier.
- Pull the skier back up and into the course smoothly engaging the speed control as early as possible once in a straight line, without creating backwash.
- Be able to spin with a skier whilst changing the speed and, if necessary, making adjustments for wind direction and strength, on the speed control system maintaining a suitable towing speed and direction.
- If the skier falls mid course the boat must be brought off the plane in the direction of travel before turning back, at tickover speed (to minimise wash) to collect the skier.
- Consider the wash were it will go and how it will affect the skier at all times.
- Return the skier to the dock safely considering their speed of approach.

Stop the boat without creating backwash for the next skier, retrieve line and return to the dock promptly and park.

Wakeboard / Trick / Wake Skate

Always load your boat correctly and use the passengers to balance the boat so there is an even wake of the correct size. How the boat is loaded also affects the handling of the boat. If your boat is heavy it takes longer to stop. The boat speed should be quite slow for a beginner but determined by the weight of the rider/skier.

When driving for a novice rider who has learned to ride heel side and toe side, the rider will probably want to ride on the whip during the turn, the driver should make sure that there is enough room for this. A beginner on heel side edge may not be able to control the speed and be out of control across the wake and out on the whip, the driver can help control these points by turning in the opposite direction putting the rider onto their toe side edge.

Dock Starts

As wakeboards planes at lower speeds than skis the starts are at a low speed and as the line goes taught power is applied progressively according to the weight of the rider.

The candidate must:

- Be able to pull all starts (as defined above). Always start in a straight line, especially using a tower or high pole.
- Be able to maintain a straight line away from fixed objects noting the length of line.
- Be able to maintain speed without speed control on. Anticipate loading from the rider and compensate with steering and throttle.
- Be capable of setting and using their club boat's speed control system.
- Drive a Double up controlling the speed on exit and giving a tight line and easy/smooth access to the wake for the skier / rider.
- Consider the wash, where it will go and how it will affect the skier / rider
- Return the skier / rider to the dock safely with regard to their speed; how much they have, how much they need, and how much they are generating themselves through their actions.
- Stop the boat without creating backwash for next skier and be aware of wash that can overcome the boat, water logging boat and passengers.
- Know how to adjust the wake to make it symmetrical by moving passengers / ballast within the boat.

It is quite difficult to hold a speed for this type of skier / rider. Often, the speed you are trying to achieve is somewhere in the area just between the displacement speed of the boat and the planing speed.

A good skier / rider can tell if the driver changes course even slightly, or if the speed varies even fractionally. Set the speed and course and maintain both throughout.

Be aware of the wake. If the boat is not evenly loaded, it will lean slightly to one side. This will produce an uneven wake, usually with froth on one side. It is easy to correct this by moving the observer or passengers slightly, generally towards the side with froth.

If a skier falls, stop the boat in a straight line and then turn gently at tickover, being careful not to throw wash through the course.



CLUB DRIVER AWARD ASSESSMENT FORM

NAME OF CANDIDATE -

ACTIVITY	DATE COMPLETED SATISFACTORILY	ASSESSMENT CENTRE	NAME OF EXAMINER	SIGNATURE OF EXAMINER
1				
Driving with training boom				
1.a				
With a child on 2 skis				
1.b				
With an adult on 2 skis				
1.c				
In windy conditions				
1.d				
With a wakeboarder				
2				
Starts				
2.a				
Deepwater start on 2 skis				
2.b				
Deepwater start on 1 ski				
2.c				
Sitting start on 2 skis				
2.d				
Sitting start on 1 ski				
2.e				
Standing start on 1 ski				
3				
Slalom				
3.a				
Setting the speed control system				
3.b				
Adjusting the speed control system during a set				
3.c				
Driving a set with an adult skier at 43 kph				
3.d				
Driving a set with an adult skier at 55 / 58 kph				
3.e				
When the skier falls in the course bringing the boat off the plane in a straight line				
3.f				
Re-starting within the course				
3.g				
Stopping with a skier at the end of a pass				
3.h				
Spinning with a skier at the end of a pass (skiers speed 55 kph or 58 kph)				
3.j				
Balance the boat to ensure an even wake				

4	Wakeboard				
4.a	Drive a straight course irrespective of the pressure variations on the line at a constant speed				
4.b	Balance the boat to ensure an even wake				
4.c	Drive the double-up for both goofy & regular				
4.d	Drive for the slider (if club has one)				
5	Tricks				
5.a	Drive a straight course at a constant speed				
5.b	Balance the boat to ensure an even wake				
6	Kneeboard				
6.a	Jetty start				
6.b	Deepwater start				
6.c	Balance the boat to ensure an even wake				
7	Inflatables				
7.a	Understand the particular risks involved and drive a set				
8	Written Test				

NAME OF EXAMINER FINALIZING THIS ASSESSMENT

ASSESSMENT CENTRE

SIGNATURE

DATE

Once completed please send to your Regional Driving Examiner

REGIONAL DRIVING EXAMINER

DATE

Health and safety liason officer's site inspection report

Health & Safety Report

Conducted by [REDACTED]

Thursday 19th November 2009

Froot Loop

1. Gas tank left out next to cooker-**flammable risk-needs to be moved out of harms way-fire risk**
2. No fire alarm -**Fire risk**

Cable 2

1. No fire alarm-**fire risk**

Back Lake Island

1. Several large rusty cans of diesel engine oil-**flammable-toxic-must be disposed of appropriately-fire/injury risk**
2. Entire hut area where the cans are situated is unsafe and unmanned-**potential danger to campers/anybody who comes into contact within the area – injury risk**
3. Planks of wood lying on the field of Back Lake Island-**tripping risk-must be removed.**

Cable 1 (On the green)

1. Ill fitting panel stones near the hot room leading onto the lawn-**Injury/tripping risk-needs to mended ASAP**

Cable 1 (Building)

1. Flammable fluids not stored appropriately (oil, petrol, resin); no flammable signs for the fluids-**fluids should be stored in a safe area. Incompatible chemicals shouldn't be stored together-fire/explosion risk**
2. Compressor-**no voltage signs**
3. Skis, boards etc lying around the compressor, flammable liquids etc-**bad housekeeping-injury/tripping risk**
4. Fire extinguisher obstructed by brooms-**Fire risk**
5. Additional No Enter signs required on dock surrounding cable operator chair.
6. Ropes in yellow bin- **tripping risk**
7. No fire alarm-**fire risk**

Mapple/Main Dock

1. Fire extinguisher is kept in the ski room-obstructed by clutter-fire risk
2. Hot room thermostat outside ski room-no electricity/voltage signs
3. Broom lying across floor of dock-Injury/tripping risk
4. Banana boat to be stored away during the winter season
5. Gate on the dock should be locked when not in use to prevent unsupervised children etc wandering onto it-drowning risk

Gym

1. Wire issue in gym office (right hand corner upon entering) too many wires leading to CCTV-tripping and electrical fire risk.
2. Floor cluttered-tripping risk
3. Cleaning products should be stored in a suitable cupboard-fire/explosion risk
4. Fire extinguishers not accessible-kept behind filing cabinet-fire risk
5. No fire/smoke alarm-Fire risk

Clubhouse

1. Power supply situated outside changing rooms (dry entrance) no voltage-electricity signs on display

Kitchen

1. Incorrect fire extinguisher, new one needs to be ordered-fire risk
2. Large can of oil in the kitchen, should be stored from harms way in case of spillages-flammable/injury risk
3. Flammable/cleaning liquids under the sink should be tidied and stored appropriately.
4. Sparse first aid kit

Studio

1. No voltage/electricity sign on the mains door

Squash Courts

1. No voltage/electricity sign on mains door
2. Wire from heater trailing all the way across the floor on the upper level-tripping risk

Reception

1. No fire/smoke alarms-fire risk

Compound

1. Numerous barrels of flammables. If empty, the cans should be disposed of - chemical leakage risk
2. Bad housekeeping-tripping disaster-whole site
3. Fire extinguishers are obstructed-fire risk
4. Welding Fire extinguisher needs to be ordered-fire risk
5. Sharp objects lying around-injury risk

Between Compound & Seaton

1. No fire extinguishers in the caravan area-fire risk
2. Waste ground, cans of petrol, sharp objects-fire risk, injury risk

Upstairs Office

1. Clock card area is cluttered and needs to be cleared-obstruction/injury risk
3. Intercom on downstairs door should be installed, prevent trespassers entering-safety measures/personal safety risk
4. Corridor entrance-cluttered-fire extinguisher perched on top of clutter-incorrect location-fire risk
5. Upstairs fire extinguishers are stored behind the fridge-incorrect location-not easily accessible-fire risk

Wakeboard Alley Dock

1. Unsafe bridge leading up to the dock-two gaps in bridge-injury risk
2. No fire extinguisher-fire risk
3. Bad housekeeping, untidy area, cluttered with disarray stock-injury risk
4. Plastic gallon can of petrol lying abandoned on the dock-fire risk

Additional Info -Other improvements which need to be made;

- 1. It is illegal and unsafe to store customer credit/debit card details on outlook. Outlook is available to the vast majority of staff meaning that there is little control over who views the confidential information. Outlook is also easily accessible to hackers. Card details should be both written down and shredded or alternatively a proper signed declaration should be implemented.**
- 2. Paving stone maintenance. There are quite a few loose/unstable paving stones on The floor path past the gym etc these should be seen too ASAP.**
- 3. PAT testing?**
- 4. Fire drill needs to be scheduled ASAP (before Christmas)**
- 5. There is generally a very lax attitude regarding Health and Safety at Princes Club. The consensus is that certain procedures have been carried out for so long therefore why change?! It really needs to be drummed into staff that Health and Safety is important and nobody is invincible. Before the beginning of 2010 summer season it might be worthwhile having a 'guest speaker' talk to staff/run a workshop about Health & Safety and what could happen if staff aren't vigilant?**

MHL Support Ltd's initial survey report

HEALTH AND SAFETY INSPECTION REPORT
PRINCES SPORTING CLUB LTD
BEDFONT, FELTHAM, TW14 8QA

SECTION 1 INTRODUCTION

SECTION 2 PREMISES INSPECTION

2.A *WHOLE OF PREMISES*

1. INTRODUCTION

This health and safety report has been compiled following my recent visit to your premises. It aims to raise points regarding working practises, maintenance standards and premises safety issues which were identified at the time of the inspection. These points will be listed on the report and then graded to the degree of risk, taking into account current legislation.

The report also proposes recommendations for improving the areas where hazards have been identified.

Risk Rating

The findings of this report are prioritised in the following way:

Risk Rating - A - Immediate action required within 14 days

Risk Rating - B - Urgent action required with 28 days

Risk Rating - C - Routine action required within 3 months

Risk Rating - D - Long-term action required within 12 months

It is in everyone's interest that the observations in this report are addressed in order of priority by implementing a remedial action plan incorporating the recommendations stated. mhl support ltd will plan a suitable mission statement, which will specify planned dates for the completion of each task utilising their unique Health and Safety Management System.

The information outlined on this report is accurate for *Princes Sporting Club Ltd, Bedford, Feltham. TW14 8QA* based on observations made on *31st May 2008*.

2. PREMISES INSPECTION

2. A WHOLE OF PREMISES

1. Observation

During swimming training activities it was observed that at some times the boat was not out patrolling the area. If an incident was to occur while the boat was not patrolling, this could prevent the optimal response time and cause a more serious consequence.

Risk Rating – A

Recommendation

During the open water swimming activities the boat should be out patrolling the area at all times. Also consider having two personnel in the boat during these times.

Date completed:.....Signed:.....

2. Observation

The fluorescent lights in the squash courts did not have any covering, which if struck by the ball could lead to the light smashing and exposing players to glass and mercury.

Risk Rating – C

Recommendation

Covers to be installed over the fluorescent lights in the squash courts.

Date completed:.....Signed:.....

3. Observation

There was evidence that heaters in the squash courts were burning the roof and increasing the likelihood of fire exposure.

Risk Rating – C

Recommendation

Heat covers to be installed.

Date completed:.....Signed:.....

4. Observation

At the time of inspection various gas cylinders were noted to be freestanding and empty (particularly in the workshop area).

Risk Rating – A

Recommendation

Ensure all compressed gas cylinders are securely chained or strapped in place to prevent them from toppling. Or the gas cylinders which were described as empty need to be collected.

Date completed:.....Signed:.....

5. Observation

The onsite caravan area was observed to have limited formalised process in place for the management of health and safety issues. As the caravans are part of the site and being provided by Princes Sporting Club it is necessary to ensure that it is being effectively managed with regards to health and safety.

Risk Rating – A

Recommendation

The caravan site is subject to planning permission via your local authority, and a subsequent licence applied for detailing the safety arrangements for that site.

I strongly recommend you contact ourselves to discuss this matter further.

Date completed:.....Signed:.....

6. Observation

The door in the oil storage area was damaged during the inspection.

Risk Rating – A

Recommendation

Fix and secure the door for the oil storage area.

Date completed:.....Signed:.....

7. Observation

The welding chains in the workshop area currently being used for lifting have not been certified and approved by an authorised source. It was explained that these chains were only being used to lift 1T boats and have the capacity to lift 4T each; however they still had not been approved due to age.

Risk Rating – B

Recommendation

Chains to be replaced and approved and inspected by a competent person on a 6 monthly basis.

Date completed:.....Signed:.....

8. Observation

Access to the welding area in the workshop was not being controlled.

Risk Rating – A

Recommendation

A location for welding activities should be determined and appropriate safety equipment for welding to be implemented, such as welding curtains, PPE, etc.

Date completed:.....Signed:.....

9. Observation

Abrasive wheels in the workshop did not have guarding.

Risk Rating – B

Recommendation

Guarding to be installed on all abrasive wheels.

Date completed:.....Signed:.....

10. Observation

During the visit the requirements relating to the Adventure Activities Licensing Regulations 1996 were discussed.

Risk Rating – C

Recommendation

The Adventure Activities Licensing Authority (AALA) will undertake audits / inspection of adventure activity providers’ safety management systems in order for them to become licensed.

Licensing schemes only apply to those who offer activities to young people under the age of 18 years and who operate these activities in a commercial manner.

With regards to water sports it is only the below activities that would be licensable.

- Canoeing
- Kayaking
- Dragon boating
- Wave skiing
- White-water rafting
- Improvised rafting
- Sailing
- Sailboarding
- Windsurfing

Further information on AALA can be obtained from the following website:
<http://www.aals.org.uk/index.php>

Date completed:.....Signed:.....

11. Observation

Some personnel were noted not to be wearing UV protection.

Risk Rating – B

Recommendation

All outdoor staff to be advised of UV related issues and provided with sunscreen.

Date completed:.....Signed:.....

12. Observation

There are currently no formal safety arrangements for maintenance activities carried out on the cable pulley frame.

Risk Rating – A

Recommendation

A permit to work system and risk assessment is to be implemented for maintenance activities on the cable pulley frame. Further details of the permit system will be provided during the forthcoming visit.

Date completed:.....Signed:.....

13. Observation

Regular fire evacuation drills and testing of alarming system are not conducted.

Risk Rating – C

Recommendation

Regular fire evacuation drills and testing of alarming system are not conducted.

Date completed:.....Signed:.....

14. Observation

It was noted that portable electrical appliances had not been subject to routine inspection or test to ensure electrical safety.

Risk Rating – C

Recommendation

Arrange for all portable electrical appliances to be routinely inspected/ tested by a competent person (electrician). However, not all electrical equipment and appliances will require a full inspection and test. In many cases a formal visual inspection to identify any defects to the individual items will suffice. The HSE publication ‘ Maintaining portable electrical equipment in offices and other low risk environments’ provides further advice on the testing requirements. The document can be accessed at the following website address:

<http://www.hse.gov.uk/pubns/indg236.pdf>

Date completed:.....Signed:.....

The author has exercised great care in the compilation of this document. The highlighted actionable items remain your responsibility and, as the subject matter and variables are

complex, the author cannot accept responsibility for the consequences of any decision made on the basis of the information given.

The author's role is to provide specialist advice and support to you, however, the author cannot be held responsible for loss occasioned to any person acting or refraining from action as a result of material in this report.

Should you require any further advice or assistance regarding the above please do not hesitate to contact me.

██████████ – BSc (Hons) NEBOSH Dip 1 MIOSH
Health and Safety Consultant

MHL Support Ltd's installation report

INSTALLATION REPORT

Company Name: Princes Sporting Club

Address: TW14 8QA

1.	Has the company received its health and safety inspection report for premises and do they understand it completely	<input checked="" type="radio"/> Yes	No
2.	Have the following sections of the Health & Safety policy/Management System Documentation been explained in full and are they understood?	<input checked="" type="radio"/> Yes	No
(a)	Contents of Health & Safety Management System	<input checked="" type="radio"/> Yes	No
(b)	Statement of intent and structure of Health & Safety Policy	<input checked="" type="radio"/> Yes	No
(c)	Accident Reporting and Notification of incidents/accidents to the Support Line	<input checked="" type="radio"/> Yes	No
3.	Have the employer's and employees general responsibilities been defined and are they understood?	<input checked="" type="radio"/> Yes	No
4.	Has the company been advised of its legal duties to providing training, information and instruction to all employees?	<input checked="" type="radio"/> Yes	No
5.	Has the company been advised of its legal duties to record information and retaining records?	<input checked="" type="radio"/> Yes	No
6.	Has the company been instructed and advised on legal duties regarding Risk Assessments ?	<input checked="" type="radio"/> Yes	No
7.	Has the company/responsible person been instructed on how to conduct a general Risk Assessment ?	<input checked="" type="radio"/> Yes	No
8.	Has the use of the sample Risk Assessments included in the management system been explained?	<input checked="" type="radio"/> Yes	No
9.	Does the Client require additional Risk Assessment training?	Yes	<input checked="" type="radio"/> No
10.	Have safe working procedures cards been issued? Details.....	<input checked="" type="radio"/> Yes	No
11.	Do you know any other companies who would benefit from our services? Details.....	Yes	<input checked="" type="radio"/> No

Further Actions Required

Additional Information Required by Client

Client Signature: _____

Consultant: _____

Print Name: _____

Time: _____

Date: 23/7/2008

MHL Support Ltd's annual inspection May 2010



ANNUAL HEALTH AND SAFETY INSPECTION REPORT

NAME & ADDRESS OF CLIENT

Princes Sporting Club, Clockhouse Lane, Feltham, TW14 8QA

HEALTH & SAFETY SYSTEM AND INSPECTION OBSERVATIONS AND RECOMMENDATIONS MADE AT THE TIME OF THE VISIT:

REF	OBSERVATIONS / RECOMMENDATIONS	PRIORITY	DATE COMPLETED & SIGNATURE
1.	Ensure H&S policy is signed and displayed on H&S notice board, next to H&S poster and Employer's liability certificate	B	
2.	Delegate work e.g. Food Safety, Reception Maintenance Cleaning etc to each department and store/return all documents in <u>ONE</u> H&S folder	C	
3.	Ensure All risk assessments are up to date and reviewed annually	B	
4.	Write a safe operating procedure (SOP) while fire Alarm remains inactive. Ensure All staff sign and understand what to do in the event of a fire and know how to raise the alarm	B	
5.	Advise all members the fire alarm is 'inactive' at the point of entry	A	
6.	Kitchen was observed to needing a deep clean. Review cleaning routine with your contractor and ensure a rigorous cleaning system prevents build up of grime	B	
7.	Investigate / Review pest control procedures e.g. Kitchen, bar, external areas	B	

Comments / additional information issued (e.g. Safe working practice cards)

- Kitchen was grimey and requires a deep clean
- Fire Alarm - not working - ensure all staff, guests & visitors are advised the alarm is not working and seek to rectify ASAP

Priority Key

The tasks listed above should be actioned within the following time scales:

- A. Immediate (14 days) B. Urgent (28 days) C. Routine (3 months) D. Long Term (12 months)

Client Signature: Meeting Start: Consultant: [REDACTED]
 Client Name: Meeting End: Date: 21/05/2010

Princes Club's accident procedure

ACCIDENT PROCEDURE

Should a serious accident occur then please follow the below procedure.

Call 999 IMMEDIATELY if a serious accident occurs and remember to unlock gates and clear driveway for an ambulance.

All accidents and near misses must be reported in the Accident Folder by a member of Princes Club staff.

When an accident occurs contact a qualified first aider and ask them to come quickly to the area. They will then assess the situation. If a serious accident occurs a Department Manager should be contacted immediately.

Fill out an Accident Record Form, this includes: -

Detail of injured person, description of accident etc

Witness Information

Details of injury sustained

Details of first aid administered

Is the accident reportable to the HSE/Local Authority (Only in the case of Death, major limb loss/major injury and injury through faulty equipment/building i.e. Scaffolding falling etc)

Complete as much information as possible

Casualties with head injuries should be advised to go to hospital for a check up (or an ambulance called)

There is a walk in A&E department at St. Peters Hospital, Chertsey please remember; If the casualty is under 18 years of age, disabled or has suffered serious injuries they must be accompanied.

The parents/guardians of casualties under 18 years of age should be contacted immediately if they are receiving hospital treatment.

Staff must NEVER offer to drive an injured person to hospital.

Risk assessment for the banana boat

RISK ASSESSMENT

Company Name: Princes Club	Date:	Review Date:	Assessment No:
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Assessor: _____ **Task: Banana Boat Rides**

Haz No.	Significant Hazards <small>Look only for hazards which you could reasonably expect to result in significant harm e.g. slips/trips, work at height, falling objects, vehicles, electricity etc.</small>	People Affected <small>List groups of people who may be at risk e.g. maintenance staff, contractors, cleaners, public etc.</small>	Existing Controls <small>List controls that are already in place to control the risk e.g. physical safeguards, training, personal protective equipment etc.</small>	Level of Risk <small>Decide on the level of risk remaining. (Likelihood x Severity)</small>			Further Action Required <small>List further action required to control significant risks. If there is lots to do, make an action list.</small>
				High	Med	Low	
	Falling off Banana (Lake)	(STEP 2)	(STEP 3) Falling off is part of the allure of the banana boat, so the key is to fall off safely. This is down to the group behaviour and driver skill/training. Safety equipment must be worn by all riders (helmets and life jackets) and instruction given on banana boat use before each ride. Drivers are trained and are required to drive to a set path.				(STEP 4) Checks on safety equipment and banana boat to be made prior to use. New drivers will be informed of boat path to drive and will be accompanied by an experienced driver for first use.

Haz No.	Significant Hazards (STEP 1) Look only for hazards which you could reasonably expect to result in significant harm e.g. slips/trips, work at height, falling objects, vehicles, electricity etc.	People Affected (STEP 2) List groups of people who may be at risk e.g. maintenance staff, contractors, cleaners, public etc.	Existing Controls (STEP 3) List controls that are already in place to control the risk e.g. physical safeguards, training, personal protective equipment etc.	Level of Risk Decide on the level of risk remaining. (Likelihood x Severity)			Further Action Required (STEP 4) List further action required to control significant risks. If there is lots to do, make an action list.
				High	Med	Low	
	Cuts to body		Helmets are worn by all riders to avoid cuts to head, lifejackets are also worn which will protect body.				
	Hit by other riders		Helmets are used to control this and all riders are given a safety briefing before use. Drivers are trained and are required to drive to a set path. Maximum of 6 people are allowed on 6-person banana and 10 on the 10-person banana. Users are positioned on banana in a way that minimises impact if hit by another user (bigger people at the back)				

Haz No.	Significant Hazards (STEP 1) Look only for hazards which you could reasonably expect to result in significant harm e.g. slips/trips, work at height, falling objects, vehicles, electricity etc.	People Affected (STEP 2) List groups of people who may be at risk e.g. maintenance staff, contractors, cleaners, public etc.	Existing Controls (STEP 3) List controls that are already in place to control the risk e.g. physical safeguards, training, personal protective equipment etc.	Level of Risk Decide on the level of risk remaining. (Likelihood x Severity)			Further Action Required (STEP 4) List further action required to control significant risks. If there is lots to do, make an action list.
				High	Med	Low	
	Rope snapping		The towrope is secured to the towing pole on the boat and then onto 4 fastening ropes on the banana. This is to relieve undue stress on the towrope and to distribute the weight more evenly across the banana. It is also an attempt to prevent the rope from snapping and pinging back into the boat. Tow rope is checked regularly for defects.				
	Hitting stationary objects		Users are given a safety briefing before use. Helmets and lifejackets are worn to prevent injury if this happens. Drivers are trained and required to drive in a set manner.				

Haz No.	Significant Hazards Look only for hazards which you could reasonably expect to result in significant harm e.g. slips/trips, work at height, falling objects, vehicles, electricity etc.	People Affected List groups of people who may be at risk e.g. maintenance staff, contractors, cleaners, public etc.	Existing Controls List controls that are already in place to control the risk e.g. physical safeguards, training, personal protective equipment etc.	Level of Risk Decide on the level of risk remaining. (Likelihood x Severity)	Further Action Required List further action required to control significant risks. If there is lots to do, make an action list.
				High Med Low	
	(STEP 1) Being hit by craft	(STEP 2) Drivers will drive a path where if the banana boat tips over, riders will fall well away from any hazards. The picking up of fallen riders will be done in a slow controlled manner. Lifejackets & helmets make riders more visible in the water.	(STEP 3)		(STEP 4) Inform riders on how to re-board banana boat after fall.

Action Timescale Guidelines

High Risk – Action Immediately **Medium Risk** – Action within 2 months **Low Risk** – Re-assess after next review

Terms and conditions sent to the party organiser



CABLE/BANANA BOATS/ALL WATERSPORTS

TERMS & CONDITIONS

Please read the below Princes Club Terms and Conditions which guests must abide by whilst onsite.

Payment must be received in full prior to your event (see invoice for further details)

Guests must not bring any alcohol or drugs onto the premises (only alcohol purchased at Princes Club may be consumed). If anyone is found to be in possession of alcohol purchased outside of Princes, and or any illegal substances they will be immediately removed from site and Princes reserves the right to close down the bar and function.

Please arrive on time for your event or else you risk losing time on the water.

It is strictly prohibited to bring any outside food, beverages, BBQ's and picnic coolers onsite.

If any damage is caused to the premises throughout the course of the events due to the customers negligence (e.g. broken windows, damaged land etc) then the customer will be held liable for any costs incurred in the replacement or repair.

Princes Club will not be held liable for the loss or theft of any personal belongings.

Abusive or threatening behaviour will not be tolerated. Princes Club reserves the right to close down a function should any abusive behavior take place.

Car Park is used at the owner's risk.

Guests must stay to the area they have been allocated to and are not permitted to wander into the members changing rooms, gyms etc

Any pre-existing injuries or medical conditions must be brought to the attention of Princes Club staff and noted on your indemnity form.

In the event of extreme weather conditions i.e. The lake freezing over then you will be contacted and offered an alternate date. Please be advised that your event will NOT be cancelled in the event of rain.

For Health and Safety reasons glass consumables may not be brought outside.

All watersports participants must:-

- Be confident swimmers;
- 10 years of age or over;
- Wear the correct equipment provided i.e. lifejacket and helmet while on the water.
- Watch the instructional video/safety briefing and answer any questions asked by Princes Club staff.
- Obey the safety instructions given by Princes Club staff.
- If banana boat participants are under 18 years of age then at least one adult must ride up front of the speed boat with the driver.
- Children under 18 years of age must be supervised at all times.
- Litter must be disposed of in a responsible fashion.



**Princes Club Parent / Guardian Consent Form
Cable and / or Banana boat use**

To be completed and signed by parent/guardian of any under 18 year old taking part in any Princes Club activity.

Sign only after you have read and understood the terms and conditions supplied with this form or available to download from our website

I/We understand that will be partaking in a hazardous activity which can result in injury, and does so entirely at their own risk.

I/We agree will abide by the rules and regulations of Princes Club and with all instructions given by members of Princes Club staff and instructors at all times.

Name of Participant.....

Age.....

Address.....
.....
.....
.....

Signature of Parent/Guardian

Date

Princes Club's Health and Safety Policy Section 4.3 - Boat Operating Procedures

- scrutinise bolts
- tower alignment
- support cables and weights
- clear all tree or plant material from cable eyes
- Check running Cable
- Oil Cable

4.3 BOAT OPERATING PROCEDURES

4.3.1. As a member of the PRINCES SPORTING CLUB LTD Boat driving team you are expected to assist your fellow drivers wherever possible, and co-operate in making the Club a safe and enjoyable environment for users.

4.3.2. Procedure for Meeting and Greeting:

- Welcome individual/group.
- Ensure that they have a lifejacket.
- Ascertain their level of competence.
- Explain the format if they are booked in for a course.
- Explain where the boat will be operating.
- Introduce the equipment and explain how it works.
- Tell them about the boat, where the prop is, and how they get in and out safely.
- Teach them about hand signals – faster, slower, stop, head home, and if they fall 'I'm okay'.
- When they are ready to get on the water explain where they should aim to be on corners to remain in control. It is very important that participants understand this.

4.3.3 Boat drivers must be aware of the skier/boarders position approaching turns or docks. If you feel that the skier/boarder is not in control you must STOP, and then correct them.

4.3.4 Ensure that the boat engine is turned off when the skier/boarder is around the rear of the boat and/or attempting to re-board.

4.4 BOAT REFUELLING PROCEDURES

4.4.1 When refuelling a boat you must ensure that:

- The boat is tied securely to the dock and the engine is turned off.
- There are no naked flames or spark causing devices within the immediate vicinity.

