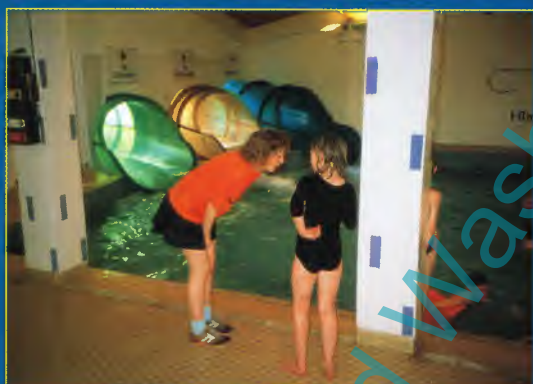


Waterslides

A Code of Practice for their Safe Operation



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SECTION A: OVERVIEW

A1 Foreword

This document was originally drafted by the Institute of Sport & Recreation Management to be published as part of the British and European Standard BS EN 1069 Waterslides over 2 metres in height. At a later stage of consultation in Europe, the Code of Practice on the 'Operation and Use of Swimming Waterslides' was dropped. However, the document is still referenced in the bibliography to BS EN 1069-2. ISRM have updated the draft document and it is published here as a UK Code of Practice for Safe and Proper Operation of Waterslides. It supersedes the publication 'The Operation of Giant Waterslides in the UK' from ISRM.

A2 Introduction

The provision of waterslide installations is now commonplace and concerns are present over the number of injuries resulting from the use of waterslides, some of which are of a serious nature (paraplegia, broken limbs, head injuries). Many of the injuries have resulted from foreseeable circumstances and which, given proper knowledge and control, would have been prevented. Section A6 provides a more detailed and argued case for the justification and importance of a standard/code.

A3 Scope

This Code of Practice is applicable to waterslides over 2 metres in height as defined in 3.1 of prEN 1069-1 Waterslides over 2 m height – Part 1: Specifications and Test Methods.

This Code of Practice specifies the instructions for use, operating and maintenance as well as the documentation and commissioning of waterslides.

A4 Bibliography

In preparing this Standard, reference has been made to the following:

Safety in Swimming Pools ISBN 0 906577837
Published by the Sports Council – 1988

Improving the Safety of Water Slides ISBN 0951 5938 01
Published by SAIL (Safety in Leisure Research Unit) – 1990

The Operation of Giant Waterslides in the UK
Published by the Institute of Baths and Recreation Management – 1990

Waterslides Over 2m in Height – PREN 1069-1



A5 Definitions

Operator	Person with overall control and responsibility for the waterslide facility
Duty Manager	Person in control of facility on behalf of the operator
Competent Person	A designated person, suitably trained qualified by knowledge and practical experience, and with the necessary instructions to enable required tests and examinations to be carried out. Further guidance on competence is provided in the Approved Code of Practice on the Management of Health & Safety at Work Regulations 1992
Exit Area	Place where rider exits from either the catch unit or splashdown area
Accident	An unplanned event or any incident which has given rise to an injury regardless of the severity of that injury
Serious Accident	One which is referred to a hospital or general practitioner
Near Miss	An incident which in less fortunate circumstances could have resulted in an accident
Slide Approach	Path along which the user has to go prior to stairs up to the platform
Stairs	Method by which the user reaches the platform
Equipment	That which is provided to assist supervising staff in operating the installation safely or to add to the quality of experience of the user
Negligence	An act or omission through lack of proper care and attention that results in injury or property damage or could realistically lead to injury or property damage

A6 Justification For and Importance of the Code

A6.1 Rationale of the Code

The rationale of the Code is to ensure that the environment of the waterslide exhibits a minimum risk level which will ensure the

protection of the public from foreseeable injury and the safeguarding of the operator from litigation. This therefore ensures customer satisfaction and minimises any inauspicious costs to the operator.

A6.2 Risk

Throughout life people are constantly exposed to risk. However, there are environments where exposure to risk is perceived as acceptable. For example travelling, where each individual accepts the possible exposure to risk by embarking upon a journey. However, there are environments where it is perceived that the chances of injury are minimal or non-existent. Leisure is one of these environments where death or serious injury invokes a particularly invidious reaction. Leisure environments are created after the basic requirements of shelter, food and safety have been satisfied and hence leisure is generally perceived as a safe environment free from serious injury or death. Death or serious injury at leisure facilities provokes reaction which may involve criminal and civil proceedings. The premise for the start of proceedings is to try and establish that the injury occurred by negligence rather than an accident (an unforeseen event or one which has no apparent cause). An aid to establish whether or not the operator had acted negligently is the available law, Standard or Code which is applicable to this particular area.



Serious accidents which are attributed to negligence will have unwelcome consequences for the operator. Firstly there may be criminal proceedings, secondly the adverse publicity and thirdly claims for damages with the result that customers question the competence of the management. Codes and standards should be seen as the protector for both operators and customers alike. They also allow the examiners of an incident causing injury, to assess whether the incident is just an accident or an act of negligence. Codes and Standards are therefore the basic building blocks of competent management and public protection – providing customer satisfaction and a successful operation.

A6.3 Injuries on Waterslides

Serious injuries (paraplegic, broken limbs, head injuries) and deaths have been attributed to waterslides and the evidence of recent studies (Stevens T. & Jenkins I.S. 1990), (Gordon C.J. & Stevens K.L.H. 1988) have clearly linked many injuries to foreseeable circumstances which, given proper knowledge could have been prevented. The advent of new designs produce new types of hazards and risks which are often identified through experience.

Since the introduction of waterslides, a number of influential studies have been carried out, relating to injuries on waterslides. These have produced a plethora of knowledge relating to the risks and hazards that occur on waterslides. This wealth of knowledge

can now be used to reduce the risks and hazards faced by the public. An effective way to do this is through the introduction of a Code of Practice.

In addition, the consumer has become more discerning and is aware of the proper provision which needs to be taken by operators. Safety is an integral part of quality and the market is at present moving towards increased quality.

A6.4 *Assessment of Risk*

The public expects the equipment it is using to be safe in relation to design and operation. To assist in the achievement of this objective the operator undertakes a risk assessment of the waterslides. This assessment is greatly enhanced with prior information relating to possible areas of concern. This Code of Practice alerts the operator to the key hazards and specifies the environments which are both physically and socially likely to cause high risks. This allows the operator to ensure that the environment offered to the customer is of minimal risk and optimum safety. Hence, the only injuries likely to occur will be attributed to accidents which could not reasonably have been foreseen and not acts of negligence. It should also be noted here that negligence refers to both a lack of proper commitment or an aggressive act which directly/indirectly causes injury. It is not suggested that the operator provides a "hazard free environment" but that the environment of the waterslide exhibits a "minimum risk threshold" and therefore exhibits an "optimum safe level".

A major factor for attaining a "minimum risk threshold" relates to the operator ensuring that each and every incident, whether resulting in an accident or not, is investigated.

A6.5 *The Importance of the Code*

- (a) Provides guidance on correct operational procedures for waterslides which is very important in maintaining customer safety.
- (b) Provides a minimum risk environment.
- (c) Allows hazard identification by operator.
- (d) Assures customers of the integrity of the operator.
- (e) Protects the consumer from adverse risk.
- (f) Protects the operator from unfair allegations of negligence.
- (g) Establishes the minimum acceptable principles of operation.
- (h) More adaptable to change unlike a Standard.

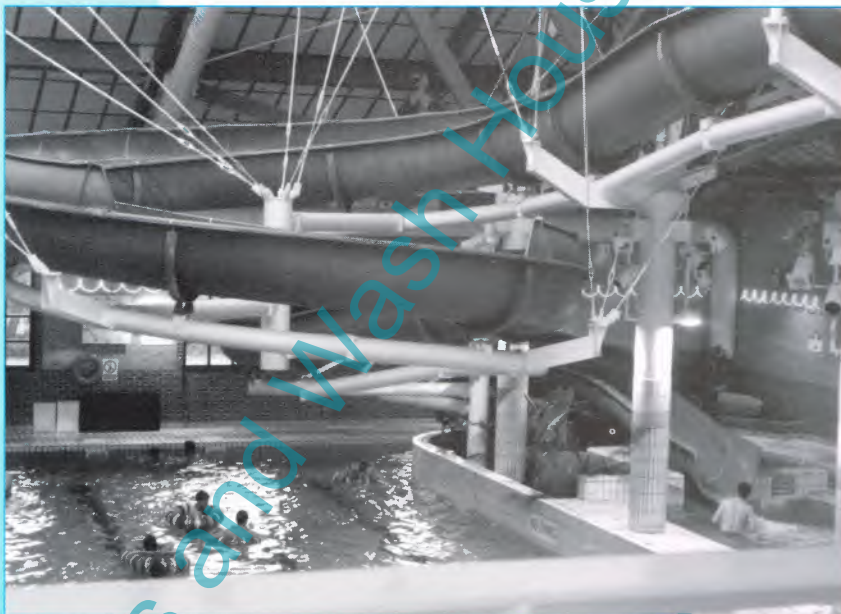
A7 Status and How to Use the Code

This guidance is issued by the Institute of Sport & Recreation Management. There is no statutory requirement to follow this Code of Practice and you are free to take other action. However, compliance with reasonable industry standards may be required when dealing with criminal action or litigation from an injured party.

Many good practice suggestions are provided and operators should review their own operation against the appropriate paragraphs.

The Code of Practice is divided into three Sections:

- Section A – Overview
- Section B – Code Detail
- Section C – Sample Documentation



SECTION B: CODE DETAIL

B1 Waterslide Supervision

B1.1 All waterslides should be provided with competent supervising staff at both the start of the slide and the exit area.

The design of the slide may make it possible to reduce the amount of supervision to either one at the top or bottom of the slide. In addition to management conducting their own risk assessment, the following factors should be taken into account:-

- (a) If the slide exits into a splash tank or pool (rather than a run out area) supervision at the bottom of the slide will be required.
- (b) Supervision at the top will be required if the slide has no other means of effectively spacing riders.
- (c) Supervision at the top will be required unless the operator provides adequate rider education relating to the method of descent.

B1.2 In certain circumstances, however if the operator of the slide has used additional measures to provide control and these are proved by the operator to be adequate, the number of qualified supervising staff may be reduced. For example:-

- Supervised TV monitor system of launch area with direct communication to exit area;
- Spacing systems, e.g. turnstiles;
- Effective signs/audible communication of rules of use;
- Roving/sporadic launch area supervision, including where applicable observation of riders from outside the installation, then communicating problems to exit area;
- Extra vigilance, control and rule enforcement by exit area staff;
- Effective traffic light system.

B1.3 Additional supervising staff should be considered where ride enhancement devices are used (mats, rings) and/or the throughput or design of the ride is such that staff at the start and exit area do not have control over rider progress, e.g. long ride with a number of lagoon areas.

B1.4 To maintain concentration, supervising staff should not remain in a particular post for more than 60 minutes. Where environmental conditions are poor this time should be reduced.

B1.5 Supervising staff should wear a distinctive uniform and be easily seen.

B1.6 Supervising staff should be trained in:

- Customer control and problem awareness;
- Effective customer communication techniques;
- User rules and regulations;
- Normal operating procedures for the facility;
- Emergency operating procedures.

B1.7 Written guidelines should be produced, for supervising staff, detailing the following as a minimum:



- Staffing levels in each area;
- The wearing of uniform;
- Maximum time on supervision;
- Acceptable/unacceptable behaviour;
- Problem users and control mechanisms;
- Normal and emergency operating procedures;
- Danger signs;
- Procedure if quantity of supervision reduced (e.g. rescue);
- Authorisation for changes in staffing levels;
- Use of communication equipment;
- How and where to supervise, do's and don'ts of waterslide riding;
- Customer care.

NOTE: Section C1 provides an example of supervision guidelines.

B2 **User Rules**

B2.1 The operator should produce clear rules of use to be communicated to the slide users.

B2.2 Rules should be based upon advice from the manufacturer of the slide as to speed, method of ride and difficulty.

B2.3 Rules should be communicated verbally where necessary by supervising staff. In addition, signs or leaflets at the ticket sale point should be provided for first time users.

B2.4 Rules should be of a positive nature with negatives "Do Not" being used only as a last resort to clearly illustrate the rule.

B2.5 Rules should be:

- In plain language;
- Easy to understand;
- Sensible and fair.

B2.6 Rules should cover the elements required to provide a safe enjoyable ride:

- Skill level;
- Method of riding;
- Rider spacing;
- Height/age restrictions;
- Physical disbarments and contra-indications to use;
- Wearing of jewellery, spectacles, goggles etc;
- Splashdown area depth;
- Method of exit.

B2.7 Co-ordination of an effective signs plan for the waterslide installation is considered in Section B6.

NOTE: Section C2 provides an example of user guidelines and their justifications.

B3 Emergency Procedures

B3.1 Written procedures should be developed to deal with all reasonably foreseeable emergency situations.

B3.2 The procedures should cover the following situations and include aftercare to customers as a minimum.

(A) Emergencies requiring evacuation:

- Fire;
- Explosion or bomb threat;
- Structural failure;
- Electrical power failure;
- Leak of toxic gas.

(B) Emergencies where evacuations may not be required:

- Rescue from pool;
- Major first aid;
- Public disorder;
- Personal attack.

B3.3 Relevant procedures should be produced in conjunction with the appropriate emergency service, e.g. Police, Fire, Ambulance.

B3.4 Supervising staff should receive regular refresher/update training in the procedures, including the staging of incidents. Such training should be recorded.

B3.5 The procedures should be reviewed regularly and after use in either a training or actual emergency incident.

NOTE: Section C3 provides examples of various Emergency Action Plans.

B4 Minor Accidents

B4.1 The operator should provide a written procedure for supervising staff to deal with minor accidents.

B4.2 Supervising staff should receive training in the procedure.

B4.3 The procedure should include:

- Sympathetic treatment of the patient and reassurance;
- Location of first aid equipment and standard to which it should be maintained;
- Action to be taken and by whom, when first aid is requested to ensure that levels of supervision are not compromised;
- A guidance to injury assessment and action, including the invoking of emergency procedures if the casualty's condition deteriorates;
- The system for recording details of the accident and treatment;
- Follow-up action, including investigation and corrective action procedures;
- Procedures for dealing with reportable accidents under RIDDOR Regulations.

B4.4 All accidents however trivial should be recorded and the information assessed as to:

- The type of injury;
- The precise location of the accident within the waterslide installation;
- The frequency;
- The cause:
 - Method of use;
 - Design;
- The actions of staff:
 - Assessment of accident;
 - Adequacy of treatment;
- The need for changes in operational and user procedures.

B4.5 Water slide accidents should be recorded on a separate report form from other accidents in all but the smallest installations.

NOTE: Section C4 provides an example of a First Aid procedure.

B5 Data Analysis

B5.1 Operators should regularly undertake an analysis of data collected on the operation of the slide including number of users and accidents to monitor and identify risk.

B5.2 To provide information for risk and hazard assessments the operator should maintain two types of records:



- Accidents;
- Near misses.

B5.3 Each set of records should be as specific and detailed as possible.

B5.4 All known accidents and near misses (where practicable) should be recorded regardless of their magnitude.

B5.5 The accident and near miss logs should cover all sections of the waterslide:

- Slide approach;
- Stairs;
- Platform;
- Start section;
- Slide proper;
- Final section;
- Catch unit or splashdown area;
- Exit area.

B5.6 All accidents should be brought to the attention of the Duty Manager for immediate attention to prevent a reoccurrence.

B5.7 Accident entries should be:

- Reviewed on a planned schedule (e.g. weekly management team meeting);
- Accidents totalled yearly and different types calculated.

B5.8 A method of calculating descents should be established over a specific period, e.g. week, month, year.

B5.9 The risk ratio should be calculated, e.g:

Total Number of Accidents

Estimated Number of Descents (or if unable to calculate, number of users)

And this should be used to assess the correct level of risk presented by the slide and what corrective action is necessary.

As a benchmark only, there should not be more than one accident for every 10,000 descents and regular measurements can be made throughout the year.

If the risk ratio is worse than 1:10,000 action to correct this situation should be taken.

This figure can be used to compare safety performance between one period and the next.

- B5.10** The 1:10,000 ratio should be used with caution and take into account the nature of the ride, e.g. a free fall ride with this ratio, where accidents may all be relatively serious, should be considered dangerous.
- B5.11** Recorded accidents should be grouped into serious/non-serious and the ratio should not be more than one serious accident for every 23 accidents.
- B5.12** Operators should also monitor accidents for new trends or sequences of accidents/incidents.
- B5.13** Operators may wish to computerise the data to aid analysis and allow immediate access to current risk/hazards to customers.
- B5.14** There should be regular feedback to supervising staff at least once per month to help create awareness, e.g. a planned staff meeting. Such feedback should be minuted particularly for the benefit of non-attendees.

NOTE: Section C5 provides an example of an analysis programme.

B6 Safety and User Information – Signs

- B6.1** Signs should be installed to a co-ordinated plan and located at key areas:

- Pre-purchase – Reception;
- Changing areas;
- Pre-ride entry;
- Platform;
- Exit area.



- B6.2** Pre-purchase signs should give information which indicates who is or is not permitted to ride and such matters as time limits in order to prevent problems at a later stage.
- B6.3** Changing area signs should reinforce key messages from the rules and information.
- B6.4** Pre-ride entry signs should be situated before customers get into the ride system and should communicate rules and information relating to minimum height, age, physical condition.
- B6.5** Launch platform signs will indicate predominantly how to ride the slide – feet first, sitting and water depth of the splashdown area.
- B6.6** Exit area signs should relate to safety – clearing the area quickly.

B6.7 Signs should be checked daily, kept in good readable condition and any repairs or replacements effected quickly.

B6.8 Information and User Rules should be on separate signs.

B6.9 Signs should be:

- Pictorial wherever possible and practicable;
- Brief;
- Specific:
 - Warning of hazards;
 - Identify hazards;
 - How to avoid hazards;
 - Information to enhance the experience;
- Able to satisfy legal requirements;
- Easily understood;
- Well located for purpose:
 - Placing;
 - Height;
 - Orientation in relation to users.

B6.10 Signs may be themed in colour and style based on relevant Regulations, e.g. the Health & Safety (Safety Signs & Signals) Regulations 1996. However, these Regulations only apply to employees, but operators may find the Regulations useful guidance.

B6.11 When pictograms are used these should ensure that instructions for use are in the form of pictograms where necessary with a written explanatory text, in the language(s) of the country where the slide is installed and if appropriate translations in other languages, should be added for all relevant signs. Examples of pictograms are given in the Document BS EN 1069.

B7 **Equipment**

B7.1 **General**

7.1.1 Operators should provide items of equipment to improve standards of safety and may provide equipment which will increase the enjoyment of the ride experience.

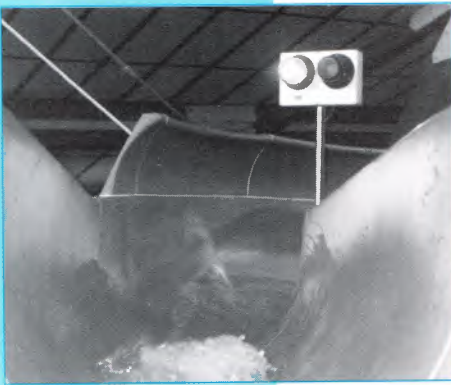
7.1.2 Operators should ensure that all equipment is intrinsically safe in use.

7.1.3 Operators should adopt a regime of daily inspection of safety equipment and faulty or defective equipment should be immediately taken out of use and crucial items replaced. Other equipment should also be inspected daily and all inspections recorded.

B7.2 Safety

7.2.1 Sufficient equipment should be provided to meet safety requirements, this should include as appropriate:

- First aid materials;
- Resuscitation;
- Life rings;
- Poles;
- Rescue hooks.



7.2.2 Operators should consider the provision of equipment to carry a casualty down the stairs of a slide.

7.2.3 Operators should consider the provision of a supply of drinking water at staff control points where conditions are hot and humid.

B7.3 Rider Control

7.3.1 The use of traffic lights to control the spacing of riders should be considered. Such an installation should preferably have rider activated lights at set control points in the slide. Where a time system is used, spacing should be judged from experience and a reasonable safety margin allowed.

7.3.2 To quantify the number of descents, to assist in risk assessment, electronic ride counters can be fitted.

B7.4 Communication

7.4.1 Operators should consider the need for effective and prompt communication between staff and identify specific requirements.

7.4.2 An emergency alarm system at both the launch and exit area should be provided to ensure rapid support for supervising staff.

7.4.3 Communications should be provided between staff on the launch platform and the exit area by means of radios, intercom or telephone.

7.4.4 Voice amplification may be required in excessively noisy conditions.

7.4.5 Close circuit television may be considered to provide staff support where the start platform is not staffed or not easily visible from the exit area.

7.4.6 A public address system should be provided to assist in user control and emergency situations.

B7.5 Entertainment

- 7.5.1 Operators may consider the installation of special effects based on light, smoke, sound or other appropriate means.
- 7.5.2 Operators should ensure that the equipment will not compromise rider safety and effects which cause disorientation should not be used.
- 7.5.3 Music may improve the experience of the ride but should not affect staff communication and should be automatically over-ridden by the public address system.

B7.6 Ride Enhancement Devices

- 7.6.1 Operators should ensure adequate provision and institute regular checks, e.g. mats, tyres, rings.
- 7.6.2 The use of these devices should be carefully controlled and provision made for collection at the exit to rides.
- 7.6.3 The condition of the devices should be inspected regularly for damage.
- 7.6.4 Trolleys used to convey some of these devices should be checked regularly and properly maintained.

B8 Operator/Manufacturer Relationship

- B8.1** The operator should be aware of their market and provide the manufacturer with a brief relating to:
 - Type of customer and therefore the type/thrill level of ride required;
 - Expected throughput;
 - Building design and installation difficulties;
 - Proposed method of operation, e.g. pay per ride, use of mats;
 - Safety equipment and proposed safety systems.
- B8.2** The operator should liaise closely with the manufacturer (designer) throughout the process.
- B8.3** Manufacturers should conform to the European Standard for "Equipment for Swimming Waterslides over 2 m in Height" and provide the operator with information as to the safe operation of the slide.

NOTE: Section C7 provides an example of a checklist of matters which should be investigated when considering a slide installation.

B9 Maintenance

B9.1 The operator of the waterslide should provide an effective written inspection and preventive maintenance programme based upon the manufacturer's recommendations.

B9.2 The operator should keep full records of inspections and maintenance and repair work.

B9.3 The inspection programme, which should be carried out by a Competent Person, should include the following areas:



- Slide approach;
- Stairs;
- Platform;
- Start section;
- Slide proper;
- Final section;
- Catch unit or splashdown;
- Exit area;
- Equipment and signs;
- Water quality.

And is supplemental to inspection of other areas of the leisure facility.

B9.4 The checks to be made should include:

- Lighting;
- Heating and ventilation;
- Floor and wall finishes;
- Balustrading;
- Ride surfaces;
- Catch units or splashdown area finishes;
- Catch unit or splashdown area water quality;
- Cleanliness.

B9.5 The inspection procedure should specify the frequency of inspection which may vary between every few hours to once per week. In addition to regular inspection and maintenance procedures, the operator should consider a programme for long term planned maintenance, e.g. structural and engineering integrity of the installation.

B9.6 The operator should provide suitable test equipment and where necessary suitable safety equipment – safety harness for checking the slide proper.

B9.7 The procedure should allow for all inspections to be recorded and provide for a quick response to maintenance problems including putting out of use the dangerous areas.

- B9.8** Appropriate staff should be given training in undertaking inspections and testing with regular updating taking place.
- B9.9** The records of inspections should be reviewed regularly by a nominated manager.
- B9.10** Operators should consider general safety inspections once per year by persons skilled in safety audits.
- B9.11** Operators should ensure that maintenance work is carried out only by appropriately skilled personnel. Appropriate checks should be made before public access is allowed.

NOTE: Section C8 provides an example of a maintenance programme checklist.

B9.12 *Water Quality Standards*

- 9.12.1 Where there are prescribed water quality standards for certain areas, these should be maintained.
- 9.12.2 Water quality standards should be in accordance with standards defined in 'Swimming Pool Water Quality and Guidelines' published by the Pool Water Treatment Advisory Group and endorsed by ISRM.
- 9.12.3 Tests of the catch unit or splashdown area water for chlorine and pH should be taken on a regular basis throughout the day with other chemical tests taken at least weekly.
- 9.12.4 The water within the catch unit or splashdown area should have an appropriate turnover period to maintain water quality.

B9.13 *Air Quality Standards*

- 9.13.1 The air temperature should be 30°C maximum and maintained at 1°C above the water temperature and at a level of 50% to 60% relative humidity in indoor installations.
- 9.13.2 Air temperatures should be checked daily and relative humidity regularly.

B9.14 *Illumination*

General lighting levels should not fall below 300 lux. Lighting should be suitable and sufficient so that lifeguards can see all parts of their supervision area clearly, including the pool bottom.

B10 *Operating Guidelines*

- B10.1** The operator should produce a written operating plan which details the duties and responsibilities of all key personnel.

B10.2 The plan should include all those actions which are required to ensure the safety and enjoyment of the customer and to ensure the safety of fellow employees.

B10.3 The plan should include personnel involved in:

- Supervision;
- Maintenance;
- Reception/ticket selling;
- Management;
- Security and other related areas.

B10.4 The plan should include the written procedures identified elsewhere in this code of practice and should specify, where appropriate, how tasks are to be undertaken.

B10.5 The plan may provide for customer feedback and a system of obtaining and recording all customer complaints and compliments.

B10.6 Personnel should receive instruction in their direct aspect of the plan and there should be on going training.

B10.7 The plan should include a system for periodic review of methods of work.

B11 Training

B11.1 In order to successfully implement the operational rules and requirements for a waterslide installation, the operator should provide a programme of training.

B11.2 This programme should:

- Identify the operational needs of a post and the required training to meet these needs;
- Identify the abilities and training needs of individuals;
- Provide a system to record progress with training;
- Monitor and review the training.

B11.3 Training should be provided for all personnel:

- Supervising staff;
- Management;
- Reception staff;
- Cleaning staff;
- Maintenance staff.

B11.4 Training should be considered in two aspects:

- Induction;
- In-service or ongoing.



B11.5 The operator should identify in the plan:

- Responsibility for the training programme;
- Dates and deadlines for completion;
- The competency requirements of the trainer;
- Competency objectives of the training;
- The role of incident (situation) training;
- The need for refresher training;
- An appraisal process.

NOTE: Section C9 provides an example of training requirements for induction.

B12 **Marketing**

B12.1 Marketing should be addressed by the operator as an adjunct to safety.

B12.2 Research should be ongoing to determine:

- User satisfaction levels;
- User safety concerns.

B12.3 Marketing should be devised to promote the facility accurately to potential users by:

- Describing type of ride;
- Who the rides are designed for;
- Explaining those who should not use.

B12.4 Advertising should at all times portray safe practices.

SECTION C: ANNEXES

C1 Waterslide Supervision Guidelines – Example

C1.1 General

- 1.1.1 It is important that staff maintain continual and effective communication with users.
- 1.1.2 When two staff are on duty they must not stand together.
- 1.1.3 Staff will rotate from one position to another every 30 minutes.

C1.2 Supervision of Mat Issue Point (assumes a slide installation with mats).

The member of supervising staff on duty shall:

- Check that the platform area and exit area are supervised and slide activated before issuing any mats;
- Check that the user is not wearing glasses or jewellery which could cause injury to themselves or damage to the waterslide;
- Ensure that mats are issued only to those who possess a ticket and are not in contravention of user rules (e.g. too young);
- Assist and advise members of the public with queries;
- Remove any damaged mats and place in the quarantine area at the first opportunity;
- Ensure that unauthorised users do not help themselves to mats;
- Issue replacement mats to users who have lost their mats in the slide, ensure clearance is given by the assistant on exit area;
- When mats have been lost in the slide these should be cleared before further rides take place;
- Ensure that mats are surrendered at the end of customer session.

C1.3 Exit Area Supervision

- 1.3.1 The exit area shall be staffed by one member of the supervising staff at all times, qualified in lifeguard skills, first aid and trained in the normal and emergency procedures.
- 1.3.2 The member of supervising staff shall:
 - Stand in a position so that all users can be easily seen exiting the slides;
 - Ensure that the waterslides are used safely and that no potentially dangerous usage is allowed (e.g. stopping in the slide, forming chains);



- Ensure that users move away from the slides as quickly as possible thereby preventing the possibility of injury with one rider colliding with another;
- Inform the staff on mat issue duty if a rider has lost a mat (telephone or verbal as appropriate).

C1.7 Platform Area Supervision

1.7.1 The platform area shall be supervised by one member of the staff qualified in lifeguarding skills and first aid and trained in the normal and emergency procedures.

1.7.2 The member of the supervising staff shall be positioned either standing or seated facing the public between the slides where they have the best possible control and vision of the user (i.e. level with the slide entrance) and shall:

- Check that the riders are not wearing any jewellery or glasses which may cause injury to themselves or damage to the waterslides;
- Ensure users ride the waterslides in the recognised safe manner either feet or head first as appropriate and staff must be in a position to prevent misuse by instructing in following the traffic light system;
- Check that riders are in possession of a mat;
- Ensure that children under five years old do not ride the waterslides unaccompanied. The beginner slide may be ridden by a parent with a child on their lap;
- Ensure as far as possible novice riders use the beginners slide;
- Ensure riders do not stop inside the slides, form chains or otherwise cause a potentially dangerous situation;
- Users known or suspected of dangerous behaviour shall be given a maximum of one warning, and if the offence is repeated, the user must be excluded on safety grounds;
- Be positioned to gain easy access to the emergency button and telephone;
- Monitor the traffic light system, riders only to descend on "green light". In the case of a heavy rider following a smaller lighter rider, the staff on duty shall exercise discretion in extending the delay if necessary.

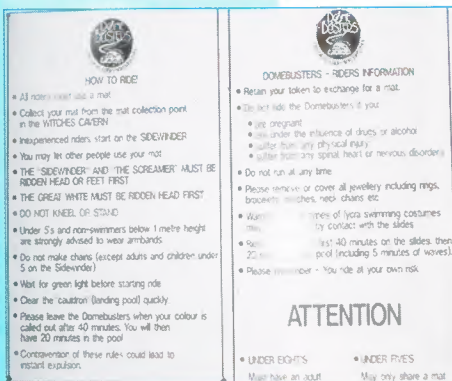
1.7.3 If refreshment is required by the supervising staff member and available, it should be obtained before taking up the supervising position. There shall be supervision of the slides irrespective of numbers of users.

1.7.4 Essential communication should be of a relevant nature, brief and kept within safe practice.

C2 User Rules – Example

The following is an example of the type of rules which should be operated. It is not exhaustive and depends upon the type of installation.

- | | | | |
|-------------|---------------|---|---|
| C2.1 | Rule | - | Specify allowed method of riding, e.g. head first only, feet first only. |
| | <i>Reason</i> | - | Some rides have a disproportionate risk with certain modes of descent. All unsafe methods of descent (e.g. standing) should be banned. |
| C2.2 | Rule | - | Advise users of depth of the water in the landing area. |
| | <i>Reason</i> | - | Head first riders may “pike dive” on entry in shallow splash areas, other riders may be surprised by the shallowness or depth of water. |
| C2.3 | Rule | - | Individual riders must be at least five years old or 1.2m tall and except for catch units be a competent swimmer. Swimming competence is relevant only for riders who are not able to stand in the splashdown area due to the depth of water (assumes water 1 metre deep vis a vis height restriction). |
| | <i>Reason</i> | - | Management may differentiate either by height or by age. Height is easy to identify and gives an indication of age, and may be related to the depth of water in splashdown area. Age can be used as a determinant as this pre-supposes that an average five year old is confident enough to descend a waterslide unaccompanied. |
| C2.4 | Rule | - | Seven year olds and under shall be under the direct supervision of a responsible adult. |
| | <i>Reason</i> | - | It is considered that children under the age of eight years should not be left to manage and organise themselves in a busy public facility. |
| C2.5 | Rule | - | Specify which, if any, rides are suitable for an adult to take an under five year old on their lap. |
| | <i>Reason</i> | - | Certain rides will be suitable for toddlers with parents, but many will not. |
| C2.6 | Rule | - | Do not allow chain/multiple riding except where expressly allowed. |



- Reason* - In allowing multiple riding the possible effect of injury in the catch unit/splashdown area has to be considered, as well as any threat to the structural integrity of the installation.
- C2.7** *Rule* - Specify that stopping in the slide is not permitted.
- Reason* - Collisions and rider delay.
- C2.8** *Rule* - Riders to be excluded if under the influence of alcohol or drugs.
- Reason* - Alcohol impairs judgement and may cause injury to the rider or others.
- C2.9** *Rule* - Users to remove loose fitting jewellery and spectacles.
- Reason* - Personal injury, possible damage to ride surface.
- C2.10** *Rule* - Specify whether or not ride enhancement devices are to be used.
- Reason* - The ride will be designed to be used with or without specific equipment and riders should be aware in advance of any features.
- C2.11** *Rule* - Do not ride the waterslide when suffering from any heart, spinal or nervous disorder, or physical injury which may cause harm to the rider.
- Reason* - Watersliding could place increased risk on certain categories of user.
- C2.12** *Rule* - Do not engage in anti-social behaviour in, on or around the waterslide. Dangerous behaviour will result in expulsion.
- Reason* - Potential personal injury or injury to others.
- C2.13** *Rule* - Users are requested to comply with all requests of the trained supervising staff on duty.
- Reason* - As a back up to the staff to ensure disciplined use of the waterslide.
- C2.14** *Rule* - State if any of the waterslides require a skill level, e.g. an advanced slide may only be ridden after becoming confident and competent on the beginners slide.



Reason - Higher possibility of risk with complete novice riders using the high thrill ride first, plus such users may be put off watersliding.

C2.15 Rule - No running in the waterslide complex.

Reason - Slip and fall accidents are common.

C2.16 Rule - Never kneel or attempt to stand when descending the waterslide.

Reason - In enclosed tubes, high risk of head injuries, in open slides, the possibility of falling over the side.

C2.17 Rule - Do not commence descent of the slide until permitted by supervisor or traffic light system.

Reason - In-slide or exit area collisions through incorrect spacing of riders.

C2.18 Rule - Commence descent as directed by supervisor or sign. Do not dive into slide.

Reason - High risk of head injury from diving into slide.

C2.19 Rule - Management reserve the right to exclude any user or potential user on the grounds of safety.

Reason - Ultimate back up for staff to ensure corporate rather than just individual safety considered.

C3 Waterslide Emergency Procedures – Examples

C3.1 Routine Rescue

3.1.1 This details a routine rescue where a member of the supervising staff has entered the water.

3.1.2 Where a rescue is performed in the landing area, the casualty should be removed from the water and rested/treated away from the water area.

3.1.3 Communicate to other staff (specify how) that a rescue has been performed. Other staff should take over the supervision of the landing area.

3.1.4 The lifeguard performing the rescue should assess the casualty, to ascertain if any first aid treatment is necessary.

3.1.5 Preventative advice and action should be initiated by the staff member to prevent a repetition.

- 3.1.6 The casualty should only be allowed to continue to use the waterslide if in the opinion of the staff member he/she is fit to do so.
- 3.1.7 A rescue report form should be completed detailing name, address, age of the casualty, method of descent, reason for rescue, name of staff member, details of any first aid and advice given to casualty.

C3.2 Serious Rescue

- 3.2.1 This details a rescue which in the opinion of the member of the supervising staff poses a serious (or is likely to become a serious) threat to life, e.g. unconscious casualty, epileptic fit, spinal injury.
- 3.2.2 Staff member sounds alarm and performs rescue. If suspected spinal injury, handle in accordance with spinal cord injury management training.
- 3.2.3 Immediately commence first aid. If not breathing commence Expired Air Ventilation (in the water if necessary). If the heart has stopped, commence External Cardiac Compression.
- 3.2.4 Staff not on waterslide (excluding those on pool supervision duty) on hearing the alarm must immediately attend the scene and the following duties are to be allocated by the Duty Manager:
- (a) Inform Reception to call ambulance with location and details of incident;
 - (b) Mute any alarms;
 - (c) Take first aid kit and resuscitation equipment to the scene;
 - (d) One member of staff to meet ambulance and direct to appropriate area,
 - (e) If possible, collect belongings of the casualty and reassure friends/family/witnesses.

3.2.5 Continue with first aid until medical support arrives.

3.2.6 Refer to Emergency First Aid example procedure.

C3.3 Evacuation e.g. Fire/Bomb/Gas Leak/Structural Failure/Power Cut

- 3.3.1 This evacuation procedure pre-supposes that the site or the emergency is not in the actual waterslide complex, but that the emergency may spread quickly to the waterslides. However each individual emergency procedure addresses the actions to be taken if the emergency is in the waterslide area itself.

3.3.2 On hearing the Alarm/Emergency Call/Emergency Code Supervisor at Exit Area:



- (a) Assemble members of the public in your area by fire exit.
- (b) If necessary, be prepared to assist with evacuation of launch area and other facilities.
- (c) DO NOT SWITCH OFF WATER FLOW DOWN THE SLIDES AS THIS MAY BE A MEANS OF ESCAPE (This means of escape depends upon the emergency not having affected the depth of water in the splashdown area).
- (d) Issue aluminium foil warm wraps to each user immediately the decision to evacuate is confirmed. NEVER DELAY EVACUATION BY ISSUING WRAPS. IT IS PREFERABLE TO ISSUE THEM OUTSIDE AND CLEAR OF THE BUILDING (Assumes indoor installation).

3.3.3 Supervisors at Launch Area:

- (a) No more riders to descend the tubes.
- (b) Riders stack mats prior to descending.
- (c) All riders to descend the launch area slowly and holding onto the handrails. Advise riders to take their time, wait at the bottom of the stairs by the nearest fire exit.
- (d) If more than one member of staff available, one should lead the group down the stairs. The second member of staff to follow at the back.
- (e) If one member of staff, follow the riders down the stairs ensuring the launch area is clear.
- (f) Assemble at the bottom of the launch area.
- (g) Issue aluminium foil warm wraps to each user (as per C3.3.2(d) at bottom of stairs).

3.3.4 False Alarm

- (a) Riders to return to the top of launch area and continue use.
- (b) Session times may have to be put back accordingly.

3.3.5 Evacuation

Supervisors at exit area:

- (a) Evacuate riders and take them to the evacuation point at the front of the Centre.

Supervisors at launch area:

- (a) Unless information to the contrary has been received, all riders will have descended the launch area and are being kept at the bottom of the stairs by the Fire Exit.
- (b) Evacuate riders around to the front of the Centre.
- (c) Should the exits be blocked, evacuation down the slides may be necessary as a last resort. A minimum amount of delay (i.e. 4 seconds) between riders to evacuate down the slides.
- (d) The situation may dictate faster throughput on the evacuation. Your skill and judgement will be important.

C3.4 Public Disorder and Personal Attack

- 3.4.1 Staff involved in the supervision of waterslides may occasionally be present or involved in an incident of public disorder and may themselves be under threat of assault.
- 3.4.2 Staff must at all times have primary concern for the safety of all users on the waterslide and must use their judgement if an incident occurs to ensure reasonable supervision of the waterslide whilst attempting to resolve the incident.
- 3.4.3 If at all possible, the first priority is to summon assistance/back up/ staff witnesses.
- 3.4.4 Staff should never get physically involved and if personally under threat, attempt to walk away or summon help. In the last resort activate any emergency alarm (e.g. fire alarm). Every attempt should be made to maintain constant supervision of users. If necessary stop further descents of the slide and ensure landing area is clear.
- 3.4.5 The objective of supervising staff is to maintain supervision, but to avoid any conflict deteriorating into a more violent incident, which then may in itself create a risk to other users.
- 3.4.6 Specific guidelines should detail the role of other staff in attending the incident, ensuring that one person is nominated to calm the situation and attempt to remove the incident from the waterslide area.
- 3.4.7 Aftercare of employees involved in cases of personal threat is vital. Staff in shock or distress should be relieved of duty for the rest of the shift.
- 3.4.8 Full records should be kept of any incident, including names and addresses of witnesses.

C3.5 Emergency First Aid

3.5.1 An emergency may occur anywhere in the waterslide complex, e.g. changing areas. Action may save the casualty's life. The alarm shall be raised when the emergency is judged to be life threatening.

3.5.2 Assessing the Situation

- (a) Assess the situation before committing yourself to possible risk of injury;
- (b) Keep calm;
- (c) Act quickly and without fuss;
- (d) Keep the situation under control.

3.5.3 Examples of Emergency First Aid

- (a) Cardiac arrest;
- (b) Asphyxiation;
- (c) Accident resulting in major internal or external bleeding;
- (d) Spinal injury.

3.5.4 Action

- (a) Get qualified assistance and equipment to the incident;
- (b) Inform Reception. If it is not possible to leave the subject, members of the public must be utilised and told to:
Go to Reception;
Tell the Receptionist there is an emergency first aid incident;
Tell the Receptionist where the incident is.
- (c) If a telephone is available and you can leave the casualty, then contact Reception and return to the incident.

3.5.5 Receptionist

- (a) Make emergency call to alert staff. Repeat. Await further instructions and keep telephone line available;
- (b) Call emergency services when requested to do so.



3.5.6 Supervisor

- (a) Go immediately to the area concerned. In all emergency incidents it is vital that the Duty Manager (or whoever is in charge) becomes aware of the circumstances quickly and concisely, i.e. cause, history of illness, etc. and action taken to date;
- (b) Instruct Reception if required to telephone for an ambulance;
- (c) Stop the public entering the facility concerned or using the waterslides;
- (d) A complete and accurate summary of the incident must be recorded.

3.5.7 Equipment

Ensure the resuscitator and first aid box is taken to the appropriate area.

3.5.8 Other Staff

- (a) If on pool duty – remain at your post;
- (b) All others proceed to scene. Ensure the resuscitator and first aid equipment has arrived. If not, collect.

3.5.9 General

- (a) The members of staff who attend the incident may be requested to leave to complete some task set by the Duty Manager. They should always return to the incident scene when the task is completed as they are a vital link in the communication chain;
- (b) In any emergency it is most important that there is one person in charge. This will normally be the Supervisor/Duty Manager.

3.5.10 Emergency Services

One employee to meet the ambulance and direct to location of the incident.

3.5.11 After Care

Once the casualty is in the hands of the medical service, Duty Manager to ensure a full report completed on the incident detailing probable cause of accident, casualty details, action taken and names of staff involved. Witness statements shall be taken where applicable.

C3.6 Gas Leak



- 3.6.1 Few pools will have chlorine gas as the disinfectant medium. However, chlorine gas can be given off from the mixing of chemicals in cleaning processes or in the water circulation equipment, e.g. Sodium Hypochlorite and Hydrochloric Acid.
- 3.6.2 Chlorine gas accidentally forming in the waterslide circulation plant may be pushed through into the landing tank or into the water entry point at the top of slide, (although this will depend on the design of individual installations).
- 3.6.3 Staff must be alert and any signs of what looks like air coming from the inlet, but with a pungent smell, must be acted upon quickly.
- 3.6.4 Chlorine gas has an irritating pungent smell. If you suspect a leak prompt action is vital.
- 3.6.5 Act immediately. Clear the area.
- 3.6.6 Inform launch area to stop descents.
- 3.6.7 Get all users away from the source of the leak.
- 3.6.8 Inform Reception there is a chlorine gas leak.
- 3.6.9 Seal off the area when the evacuation is complete.

IMPORTANT: Where risk of gas leak exists from an alternative form of disinfection, then an appropriate procedure shall be in place.

C3.7 Power Cut

- 3.7.1 It is assumed that the waterslide installation will have an emergency back up system enabling sufficient light to facilitate an evacuation.
- 3.7.2 Use of the waterslides should not be permitted in a power cut as the slide pumps will be off.
- 3.7.3 Be aware of riders descending the slide at the time of the power cut, as their speed of exit will probably increase.
- 3.7.4 Staff should be attentive to customers and ensure there is no panic.
- 3.7.5 Staff should also be aware that the reason for the power cut may be due to something more serious (e.g. fire) and be ready to respond.

3.7.6 All users are to be moved to the nearest fire exit and held there to await further instructions. It is not necessary, unless the situation deteriorates, to evacuate users but aluminium foil wraps should be issued in anticipation of an evacuation.

3.7.7 If the power is not reinstated within 15 minutes, users should be taken to the changing areas or outside as appropriate.

C3.8 Structural Failure

3.8.1 Staff supervising the waterslides would be required to respond instantly in the case of structural/storm damage to the waterslide installation.

3.8.2 Damage may occur to the access tower, the slide itself and its structural supports or the landing area building. Where slides run outside of buildings and stand alone launch towers are installed, the likelihood of structural/storm damage to the waterslide area is greater.

3.8.3 Reports or observations of excessive movement in the slide itself or the access tower should be acted upon immediately by closing the waterslides and evacuating users.

3.8.4 Prompt evacuation well clear of the danger area is vital.

C3.9 Bomb

3.9.1 Bomb alerts occasionally occur in public buildings and whilst there is every possibility that the alert is a false alarm, each incidence must be dealt with professionally and thoroughly.

3.9.2 Most organisations evacuate in response to all bomb alerts (even the probable hoaxes) whilst some, in agreement with the Police, allow a limited response where there is a high probability of the call being a hoax.

It is recommended that all bomb alerts invoke the evacuation procedure unless specific exemptions have been arranged with the Police.

3.9.3 Staff should be alerted of the situation by a coded message on the public address system to enable them to commence evacuation when instructed.

3.9.4 Staff identifying suspicious packages in the waterslide complex should report it to their superior immediately, clear the users from the area and prevent further descents of the waterslides.

C3.10 Fire

Discovery of a Fire – Ride Exit and/or Launch Area Staff

- 3.10.1 If you discover a fire, however small, an immediate decision must be made, i.e. CAN YOU EXTINGUISH IT IMMEDIATELY? For example, a waste bin just starting to catch fire may be best dealt with by taking it outside. If in any doubt or you feel you need help or the fire is a potential threat, then the following procedure must be followed:
- 3.10.2 First, sound the fire alarm by hitting the nearest break glass. Ensure you know where the alarms and extinguishers are located. An audible alarm will sound.
- 3.10.3 Clear the public away from the surrounding area and get them to a position of safety, even if the fire appears minor and controllable. YOU ARE NOT EXPECTED TO RISK YOUR OWN SAFETY. IF YOU FEEL THAT AN AREA HAS BECOME TOO DANGEROUS TO ENTER - GET HELP - DO NOT GO IN.
- 3.10.4 It is probable that assistance has arrived at the scene by this time. Another member of staff (or failing that a member of the public) should be sent to report the location, nature and extent of the fire, plus any known casualties to Reception.
- 3.10.5 Stay in the vicinity of the fire (without taking personal risk) to prevent public straying into the area, until instructed otherwise.
- 3.10.6 Attack the fire only if you are trained in fire fighting techniques and the use of available appliances. DO NOT TAKE PERSONAL RISKS.
- 3.10.7 Evaluate in accordance with the evacuation procedure.

C4 First Aid Procedures – Example



- C4.1 The objective of first aid is to prevent the situation deteriorating.
- C4.2 First aid shall only be administered by first aid qualified staff.
- C4.3 Except in urgent cases, users needing first aid shall be treated by staff not on waterslide supervision duties. Urgent cases to receive immediate attention.
- C4.4 Where non-emergency first aid is required, contact..... by telephone to request assistance.
- C4.5 Staff performing first aid must practice extreme care to ensure appropriate treatment.

- C4.6** Treatment in the first aid room on a one to one basis (i.e. without any third party present) should be avoided if at all possible, to avoid any possibility of staff being accused of misconduct.
- C4.7** Where in doubt as to the correct treatment, seek advice of qualified colleague or if appropriate despatch to hospital.
- C4.8** Should the situation deteriorate, treat in accordance with the emergency procedures.
- C4.9** After treatment and advice is given, full details are to be recorded on the accident form.
- C4.10** Where the accident is significant or unusual, try to obtain names and addresses of any witnesses.
- C4.11** Accident forms are to be returned to the first aid room upon completion, for forwarding to the Facility Manager at the end of the day.
- C4.12** The Facility Manager shall check all accident forms within 72 hours to ascertain any trends or follow up action required.
- C4.13** Accidents reportable under RIDDOR Regulations are faxed through immediately to Council Health & Safety Officer for action.

Waterslide Accident Form

(To be completed by qualified First Aider if First Aid administered)

PLEASE COMPLETE IN BLOCK LETTERS AND TICK CORRECT BOXES WHERE APPLICABLE

For Office Use:

Manager Asst. Asst. Asst. Admin.
 Manager Manager Manager

Sign _____

(a) Date of Accident: _____ Time: _____

(b) Nature of Accident: _____

(c) Details of injury (state part of body and injury sustained): _____

(d) Casualty Personal Details

Surname: _____ Age: _____

Forename: _____

Build (Adults Only) Small _____ Medium _____ Large _____

Mr/Mrs/Miss/Ms _____

Address _____

_____ Post Code: _____

Telephone No. _____

No. of previous visits First visit _____ 1-10 Visits _____

More than 10 Visits _____

(e) Circumstances in which accident occurred _____

Area of Accident: _____

Slide One: Slide Two: Launch Area: _____

Landing Area: Other (state which) _____

Signature of Casualty _____

Witness (1) Name: _____ (2) _____

Address: _____

Telephone No. _____

Witness Account of Incident (if applicable) _____

Signature of witness (1) _____ (2) _____

(f) First Aid Treatment

Treatment Given _____

Condition of Patient after Treatment _____

Ambulance called? YES _____ NO _____

Signed _____ Signed _____
(First Aider) (Duty Supervisor)

(g) Follow up procedure (for Hospital cases)

Detained more than 24 hours YES _____ NO _____

Details _____

(h) Managers follow up (action taken)

Signed _____ (Manager)

Date _____

(j) Further action (as necessary)

1. Injury/Dangerous Occurrence Form
YES/NO – Date sent to Health & Safety Officer _____

2. Is there an indication that a claim for compensation
may be received?

YES/NO _____

If YES, copy to Group/Admin Officer/Insurance Co.

Date: _____

C5 Example of Analysis Programme

C5.1 Daily

The previous day's logs are examined by the Duty Manager. If a serious accident occurs the Duty Manager should be notified immediately and where appropriate corrective action is taken.

C5.2 Weekly

Accident and near miss records are examined for patterns. These might take the form of new occurrences or identical/similar injuries with a high rate of occurrence (e.g. minor cut to foot, location – splash pool, cause - landing into splash pool).

Possible indication:

- (1) Loose tile.
- (2) Sharp fragments of abrasive material.

Corrective action:

Lifeguard/attendants search pool for possible cause.

C5.3 Monthly

Calculate risk ratio of accidents to descents and compare with previous months and average for the year. As a benchmark, the risk ratio should not be lower than 1:10,000. If ratio is lower, e.g. 1:8,000 close monitoring of this trend must be kept to establish whether this a random occurrence or the start of a consistent increase in risk. If there is a consistent increase in risk which exceeds the benchmark (1:10,000) then operating procedures or design parameters need to be changed.

C5.4 Scan records for consistent patterns of injury, e.g. nature, type and cause of injury. If a consistent pattern is present then immediate corrective action is required.

C5.5 Staff meetings to take place to discuss or review accidents or near misses. Discussion of near miss incidents and possible identification of new hazard areas. If possible new hazard areas established and review operating procedure to minimise change of occurrence. Where applicable review operating procedures in relation to the month's accident records.

C5.6 Annually

Detailed review of the frequency and nature of accidents/near misses. Risk ratio to be calculated and assessed. Trends in injuries to be examined and if pattern occurs establish cause and take corrective action.



Staff review of years accidents with detailed discussion of areas that may need improvement. Discussion of possible new areas of risk and identify changes required to minimise/eradicate this risk. The review should provide an action plan for management.

C6 Location and Type of Signs – Examples

C6.1 Pre-Purchase/Decision

6.1.1 Siting: At ticket sales point.

6.1.2 Information:

- To ride the waterslides, purchase a ticket at Reception;
- Exchange ticket for mat at bottom of waterslide access stairs;
- Waterslide sessions are 45 minutes maximum.

6.1.3 Rules – For your own safety

- Do not ride waterslide if you:
 - Are pregnant;
 - Are under the influence of alcohol or drugs;
 - Suffer from any heart, spinal or nervous disorder or physical injury.
- Under 8s must be accompanied by a responsible adult.
- Under 5s may only ride the beginners slide sharing with an adult.

C6.2 Changing Areas

6.2.1 Siting: On exit from changing rooms to waterslide complex.

6.2.2 Information:

- Retain your ticket to exchange for mat at bottom of waterslide stairs.

6.2.3 Rules – For your own safety

- Horseplay and irresponsible behaviour will result in expulsion;
- No running in the waterslide complex.

C6.3 Pre-Ride Entry

6.3.1 Siting: Bottom of waterslide access tower.

6.3.2 Information:

- The beginners slide is a medium speed yet exciting ride with one bend;
- The advanced slide is a speed slide with one sharp bend and one drop.

6.3.3 Rules – for your own safety

- Under five year olds may only ride with an adult on the beginners slide;



- First time and novice riders are asked to start on the beginners slide until confident;
- Under eight year olds must be under the supervision of a responsible adult;
- No riding without a mat;
- Please follow staff instructions and observe notices;
- No running.

C6.4 Platform Area

6.4.1 Siting: At specific slide entry.

6.4.2 Information:

- This is an advanced speed slide with one sharp bend and a drop (N.B. We recommend this is also shown diagrammatically);
- Shallow water on exit (one metre deep) – do not dive on entry to splash area.

6.4.3 Rules – For your own safety

- Ride feet first seated or on back, feet first only;
- Do not kneel or stand;
- Wait for green light before starting;
- Observe staff instructions;
- No stopping in the slide;
- On exit clear the splash area immediately.

C6.5 Exit Area

6.5.1 Siting: Facing riders as they exit the waterslide.

6.5.2 Information:

- Water one metre deep.

6.5.3 Rules – For your own safety

- Clear the splash area immediately;
- No waiting;
- If your mat is left behind see Attendant.

C6.6 Pictorial Signs

Pictorial signs should be used wherever possible and practicable.

Use of standard sizes, shapes and colours of signs as detailed in the latest Safety Signs and Signals Regulations.

C7 Checklist for Determining Type of Waterslide

C7.1 Research

- 7.1.1 The first stage in the process is research of the potential market, other operators and potential suitable manufacturers.
- 7.1.2 Determine the target market, e.g. families or high thrill “white knuckle” rides.
- 7.1.3 Visit other installations, where possible talk to other operators, identify shortfalls and problems. Compare different manufacturers.
- 7.1.4 When short listing potential manufacturers, examine their track record and whether they have expertise or the ability to provide the type of waterslide required.

C7.2 Specifics

- 7.2.1 Having clearly defined the market, preferred mode of operation and potentially suitable manufacturers, the operator is in a position to play an influential role in the design process. The specific items here are not exhaustive, but will aid a competent manufacturer in providing a safe and suitable waterslide.
- 7.2.2 Will the slide use mats, ring, rafts or nothing?
- 7.2.3 Will a separate splash tank or aqua catch be required, or will the slide exit into an existing pool?
- 7.2.4 How will riders access the waterslide? Will there be any “flow” problems with other users? Will congestion occur?
- 7.2.5 How will queues be controlled?
- 7.2.6 How will users be charged? Operators must decide whether to allow use by time limit, charge by the ride or to allow free use as part of overall admission fee.
- 7.2.7 Identify location points for signs. Clarify signs to be provided by manufacturer.
- 7.2.8 Identify supervision policy, members of staff and their location. Do staff have adequate space to supervise? How will access and use be controlled?
- 7.2.9 Determine the general requirement as to special effects and require the manufacturer to specify how to ensure they are used safely.

- 7.2.10 Effective filtration, circulation and disinfection systems are essential to safe operation. The operator should request the manufacturer to clearly specify the capacity of the intended system, including the flow rate of water down the waterslide. Wherever possible, back up pumping equipment should be incorporated at the design stage.
- 7.2.11 Indoor installations with high throughput, can put pressure on the heating and ventilation systems, with resultant difficulties for staff involved in supervision. The ability of the system to maintain air temperatures and reasonable circulation of air must be ensured.
- 7.2.12 Specify required customer capacity and anticipated throughput.
- 7.2.13 Operators should require manufacturers to specify the nature of the slide they are recommending, clarify its ride path, where potential hazards will be and the risk factors which could lead to injury.
- 7.2.14 The allowable method of riding must also be specified by the manufacturer. Operators should recommend that new slides are not designed for head first riding unless there is a significant reason to the contrary, as head first riding injuries have a greater propensity to significant injury.

The ride path should not allow users to lose control, easily stop in the waterslide or become airborne. Tight, twisting high speed ride paths which create a significant risk of user impact with the slide should be avoided.

The angle of entry into the landing area should be suitable to the depth of water, i.e. users must not be forced to the bottom of a landing tank at speed, thus increasing the risk of injury through collision with the bottom of the pool.

- 7.2.15 The quality of the actual ride surface is vital to the safety of the experience. Operators must satisfy themselves that manufacturers are providing a smooth ride path, which will not readily deteriorate in use. This includes quality of waterslide path joints.
- 7.2.16 Manufacturers should be requested by the operator to specify preventative maintenance routines and the expected timescale of any overhaul requirements (see maintenance section).
- 7.2.17 If the waterslide is to be used at night, then lighting requirements must be considered in all parts of the installation.
- 7.2.18 Identify potential general risk areas to users and staff, e.g. slippery surfaces, handrail requirements, sharp surfaces, exposed bolts.

- 7.2.19 Identify potential vandalism risks.
- 7.2.20 Consideration may be given as to how the slide may be upgraded in future years (e.g. risk enhancement).
- 7.2.21 Specify communication systems required.
- 7.2.22 The manufacturer should be asked to confirm that they will be designing and installing in accordance with all relevant codes and standards.

C7.3 Summary

By providing the potential manufacturer/contractor with a full picture of the anticipated method of operation, from point of sale to frequency of water composition tests, the operator has a good chance of preventing poor or inappropriate design or inadequate information upon which to operate.

C8 Maintenance Programme Checklist

C8.1 Inspect ride surface daily prior to opening (walk slide) checking for joint repairs, damage to slide surface and general external inspection for damage or potential hazards.

C8.2 Overhaul internal ride surface when required through long term wear, scale formation and accumulation of minor damage.

The slide surface requires regular cleaning based on manufacturers instructions using a non-abrasive cleaner to remove chemical deposits which appear as a white powder, this will help in prolonging the life of the flume ride surface.

On an annual basis re-polishing of the riding surface to remove water staining and deposits may be best undertaken by a flume specialist who has the necessary expertise and equipment.

C8.3 External – Re-coat outside surfaces when required due to weathering.

C8.4 Check torque settings on slide section bolts at least annually.

C8.5 Inspect infrastructure.

C8.6 Annual inspection of building structure.

C8.7 Inspect access tower stairs for damage etc., and condition of handrails at least weekly.

C8.8 Lighting – internal and external inspection.

C8.9 Separate landing pools – annual emptying and clean.

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- C8.8** Lighting – internal and external inspection.
- C8.9** Separate landing pools – annual emptying and clean.

- C8.10** Circulation areas – monthly inspection for safety hazards, obstacles etc.
- C8.11** Emergency lighting inspected and tested monthly.
- C8.12** Daily inspection of satisfactory operation of filters, pumps.
- C8.13** Back-washing in line with written procedures/manufacture's recommendations.
- C8.14** Annual inspection of filter condition.
- C8.15** Refresh media in line with manufacturer's recommendations.
- C8.16** Overhaul of pumping equipment to check for satisfactory operation and flow rate.
- C8.17** Check dosing system and key points prone to failure or error.
- C8.18** Daily inspection for satisfactory operation of dosing system.
- C8.19** Test water quality and composition throughout the day to the frequency required to ensure that the service is being delivered to the required standard.
- C8.20** Heating and Ventilation system (H & V) daily inspection for satisfactory operation.
- C8.21** Quarterly H & V inspection for corrosion.
- C8.22** H & V overhaul as per manufacturer's recommendations.
- C8.23** Alarm inspection for satisfactory operation weekly.
- C8.24** Telephones, close circuit television, music systems, call out systems routine daily inspection.
- C8.25** Special effects inspection and overhaul in accordance with manufacturer's recommendations.
- C8.26** Safety equipment, e.g. ropes, resuscitators, life rings, inspected daily.



C9 Training Requirements – Employee Induction

C9.1 All Staff

- Site familiarisation;
- Specific job requirements and safety features;
- Emergency and safety procedures;
- Facility hazards;
- Customer care;
- Internal staff communication policy;

- Fault reporting and handling policy;
- Operational information (e.g. opening times/programme).

C9.2 *Management Specific*

- Rules of Use;
- Supervision policy;
- Dealing with accidents;
- Reception operation;
- Technical understanding.

C9.3 *Maintenance Specific*

- Risk of areas of technical operation;
- Safe handling of chemicals, protective clothing etc.

C9.4 *Reception Specific*

- Reception operation and security;
- Rules of use/restrictions to use.

C9.5 *Cleaning Specific*

- Safe handling of chemicals, protective clothing etc.;
- Cleaning programme/timetable;
- Customer safety during cleaning;
- Cleaning priorities;
- The role of cleanliness in safety.

C9.6 *Lifeguard Specific*

- Rules of use;
- Supervision policy;
- Dealing with accidents;
- Use of equipment;
- Areas of user and staff risk;
- Rescue training.



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