



High March

HIGH MARCH SWIMMING POOL

NORMAL OPERATING PROCEDURES (NOP)

EMERGENCY ACTION PLAN (EAP)

THE POOL MAINTENANCE PROCEDURE (PMP)

Person responsible for latest revision:	Mrs B Avery
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This policy applies to the Early Year Foundation Stage, Key Stage 1 and Key Stage 2

Useful Websites	

A. NORMAL OPERATING PROCEDURES

1. Objective and Scope

It is the objective of High March to ensure that swimming pool activities are controlled to maintain a safe, enjoyable and beneficial practice. This procedure identifies the processes and procedures designed to ensure a safe, healthy and controlled environment for all users. The procedures are used in conjunction with other operational procedures to satisfy the relevant requirements of 'Safety in Swimming Pools' and the requirements of the Health and Safety at Work Act and regulations made thereunder, the Health and Safety (Safety Signs and Signals) Regulations 1996 and the Management and Health and Safety at Work Regulations 1999 which require the assessment of risks of swimming pool activities and the making of arrangements for

- implementing health and safety measures identified to reduce risk
- appointing competent people to help implement arrangements
- provide clear information and training to employees
- establishing procedures for employees to follow

These procedures have been reviewed by reference to "Safe Practice in School Swimming Policy" dated October 2015 and prepared by Buckinghamshire Learning Trust in association with Bucks County Council. Regard has also been given to 'ASA Guidelines for School Swimming 2015' and 'Standards for Safeguarding Children in Sport'.

2. Details of the Pool

Indoor heated pool

Length: 20 metres Width: 8.5 metres

Depth: 0.9 metres going down to 2 metres

Pool surround: non-slip tiles

The shallow end is a constant 0.9 metres before it slopes down into deeper water indicated by the pool depth signs on the wall. The water level in the pool is on the same level as the poolside.

3. Access to the Pool

Entry to the poolside from the foyer is via a number-code security door to prevent access by unauthorised persons and in particular pupils and siblings with their parents visiting the pool to collect pupils. The pool may also be accessed via the changing rooms. Pupils are not permitted poolside unless supervised at all times.

4. Changing Room Supervision

Supervisors have access to the changing rooms to check behaviour and safety of pool users. Supervisors will use their discretion when entering the changing rooms. Only staff employed by High March and those adults who have been given specific permission by the Head/Bursar may enter the changing room areas during normal school hours. Supervisors have authority to check

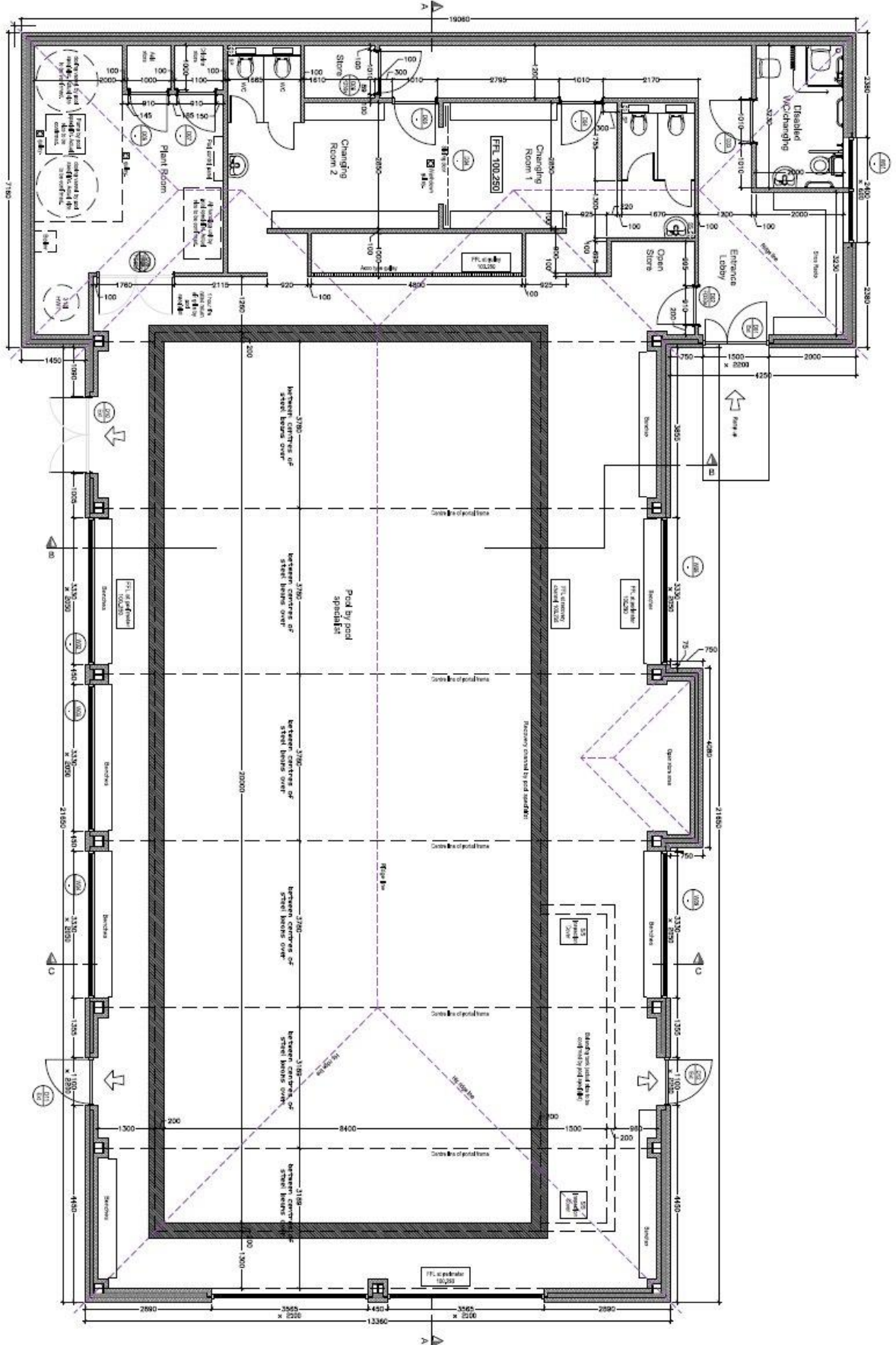
showers, seating, floors, equipment such as hairdryers and toilets.

The changing rooms must always be supervised by a member of staff during curriculum swimming lessons, stroke improvers and free swimming or squad training sessions.

Supervisors and all staff involved in swimming teaching and supervision will have due regard to the terms of the School's Safeguarding and Child Protection Policy.

5. Plan of the Pool

Floor Plan
Scale: 1:50



6. Risk Factors

6.1 Awareness of Risks – Main Hazards and High Risk Users

Under the basic principles of risk assessment, risk factors within the pool and pool house are assessed and reviewed informally daily (whenever the pool is in use) by the Pool Technician and/or Facilities Manager, formally on a weekly basis by the Pool Technician who also checks safety equipment and from time to time on an informal basis by the PE staff and swimming coaches. Swimming pool practice/procedure and facilities are reviewed on a termly basis by the Swimming Staff and Extra-Curricular Swimming Staff. The NOP/EAP is reviewed and amended as necessary on an annual basis by Health and Safety Committee and by SLT. There is hence continual on-going assessment of risks in and around the pool.

Known Hazards

The following have been factors in past fatalities (or serious injuries) in swimming pools in the United Kingdom and therefore should be considered as possibilities:

- Prior health problems e.g. heart trouble, asthma, epilepsy etc.
- Youth and inexperience (half of those who drown are U15)
- Alcohol, drugs or food before swimming
- Poor behaviour – running on poolside
- Direct access from all changing rooms
- Possible breakage of large glass windows on either side of pool
- Reduced visibility due to reflection from windows/glare factor
- Weak or non-swimmers straying out of their depth
- Diving into insufficient depth of water
- Pool users returning to the pool from the changing rooms after supervised session has ended
- Missing pupils
- Unruly behaviour and misuse of equipment
- Assault on staff or pupils
- Swimming aids and other objects in the water can obscure the supervisor's view
- Unclear pool water, preventing casualties from being seen
- Absence of, or inadequate response by pool staff in an emergency
- Lane ropes can take pupils out of their depth

6.2 Users at Risk

- Weak and non-swimmers
- Children under the age of 16 including spectators
- Disabled children
- The boisterous and show-offs
- Those wearing arm-bands or other forms of buoyancy aid
- Swimmers using inflatables and other fun flotation aids
- The elderly
- Swimmers with disabilities/special needs
- Swimmers under the influence of alcohol and /or drugs
- Swimmers inadequately/inappropriately supervised
- Unauthorised swimmers

The supervisors on duty are best placed to observe, before they enter the water area, users who may be considered to be at particular risk. Some may be excluded from entering the pool.

6.3 Reducing the Risks

All pool users must: -

- observe the code of conduct strictly for all groups
- only dive into the deep-end shown by notices on the poolside

All pool supervisors must:

- Take a head count before and after any swimming class. This should be recorded.
- Ensure that everyone is out of the pool area at the end of each session and that the number code security doors are firmly shut.
- Understand that STRICTLY NO ACCESS for unauthorised persons to the poolside is permitted unless a supervisor is present.
- Comply with SENDA.
- ensure that reasonable adjustments are made to assist any disabled pupils to learn to swim.
- Ensure that any disabled swimmers are offered access to a hoist if required.

Pool operators must:

- Observe safe recruitment and safeguarding principles in accordance with the School's Child Protection and Safeguarding policies including regular training.
- Observe the provisions of the School's Missing Pupil Policy as relevant and necessary (see below: EAP) in the event that a child goes missing.

It is the responsibility of High March parents/guardians/carers to notify the school of any medical conditions or learning difficulties relevant to their pupils, at the commencement of each term. All swimming staff are notified by the School, by means of the Holistic Registers, and Overview of Medical Conditions and Dietary Needs at the beginning of each term, of any special needs, learning difficulties or medical or dietary conditions which may affect any of the pupils swimming in the pool.

6.4 Risk Assessment

Risk assessment is an on-going process and existing documentation will be reviewed regularly. All staff should be responsible for contributing to ensure that procedures and training for safe pool operation continue to be relevant. Copies of risk assessments are in the pool house and with the Bursar. A copy of the Penguin Pools' Maintenance Instructions for Swimming Pool equipment will be appended to the risk assessment and manual. A pool risk assessment template is attached to this Policy as Appendix 1 As part of standard risk assessment processes, staff and authorised visitors are requested to report any damage or deficiencies in equipment or facilities to the Facilities Manager or to the Pool Technician as soon as reasonably practical. Fire risks and risks under the COSHH Regulations 2002 and guidance from the HSE from time to time are regularly assessed and fire drills undertaken. Any safeguarding or child protection concerns should be reported immediately to the Headmistress as Designated Child Protection Officer or to Mrs Belinda Avery, Governor with responsibility for Safeguarding and Child Protection issues.

7. Swimming Pool Code of Conduct

- Do not enter poolside unless a supervisor is present.
- No person may swim in the pool unless another adult is present in the pool/poolside. This rule is non-negotiable.
- Do not enter the water without permission.
- No running is permitted on the poolside.
- No fighting, pushing, bombing or ducking is permitted.
- No diving may take place at all in the shallow end, and no acrobatics, for example: no back dives.
- No shouting is permitted.
- No eating or drinking is permitted on the poolside or in the changing rooms or foyer save for drinking of water from plastic sealable bottles.
- No outdoor shoes may be worn on the poolside
- No glass, whether bottle, jar or drinking glass may be taken into the swimming pool area or changing room. Only sealable vessels are permitted poolside.
- Swimmers must shower on entering and exiting from the poolside.
- No shampoo, conditioner or other detergents are to be used in the poolside showers. Shampoo and conditioner may be used in the staff/disabled shower.
- Accompanying adults must not leave children unattended in the pool or poolside.
- Keep all balls within the pool area – do not bounce them off the walls or kick them on the poolside.
- All children must wear swimming hats and may wear goggles, if they wish. Swimmers should bring and wear their own named goggles to avoid cross-infection and High March cannot take any responsibility for any infections contracted as a result of use of another swimmer's goggles.
- If a swimmer has a verruca, he or she must wear a verruca sock or protective cover.
- If the School has been notified that a pupil may require an inhaler during exercise, the inhaler must be accessible at all times poolside.
- Mats may be used at the supervisor's discretion. Mats should only be lifted from the water by an authorised member of staff who must undertake a routine check to ensure no one is trapped underneath mats or the pool cover.
- The pool platform may only be used with the express consent of and under the strict supervision of a qualified member of the swimming staff, and if properly positioned on the bottom of the pool.
- Where children sustain either a head or significant injury and any First Aid is administered, parents/carers should be informed as soon as possible.
- Listen for whistles/ alarm-
- 1 whistle- stop and listen
- 3 whistles- stop and clear the pool
- 1 whistle/ shout to alert staff, followed by- 1-2-3 entering the water/ need assistance
- Continuous ringing bell-fire alarm

8. Poolside Rules for Supervisors (Safety guidelines for staff)

- Supervisors must be fully conversant with the Normal Operating Procedures (NOP) and Emergency Action Plan (EAP) and ensure that they fully understand their role within the swimming pool safety team.
- High March staff and supervising staff of other outside organisations that use the High March Swimming Pool must have passed their National Rescue Award for Teachers and Coaches (NRASTC) in order to be a supervisor of a swimming.
- No swimming sessions can take place without there being at least one qualified supervisor/teacher (i.e. someone who has a current NRASTC) for every 20 swimmers in the water and a second responsible adult in attendance.
- Nobody enters the pool until sufficient qualified staff are present.
- The number coded security door must remain locked and all staff must check this carefully when leaving the pool and ensure that the external door to the poolhouse is kept closed after entry in order to ensure constancy of air temperature.
- Staff must not disclose the door entry code to the children or to unauthorised adults.
- Supervising staff must carry/have immediate access to a whistle at all times.
- Supervising staff must never leave children in the pool unattended.
- Supervising staff must supervise all diving at all times.
- Supervising staff must ensure the relevant bathing loads are adhered to (see section 10).
- Supervising staff must observe the pool cover opening and covering the pool in order to ensure that it unfurls and rolls up evenly without damage to equipment. This is particularly important in hot weather.
- All supervisors must know the location of all the safety equipment and be trained to use it. The safety equipment comprises a long reach pole, short reach poles and throw bags which are all located poolside on /against the tiled walls. Heat blankets are also located on the blue trolley poolside near the changing rooms.
- All staff must adhere to the 'Normal Operating Procedures' so that the users recognise a consistent approach and learn what sort of behaviour is expected of them.
- All staff must ensure that in the event of an emergency, the EAP is followed.
- All staff and their immediate families, or any other visitors to the pool who have been authorised in advance by the directors of the School to use the pool, must sign in and out before and after swimming, in the designated pool signing-in book in the School Office. Failure to observe this rule may disentitle any claimant the School's insurance in relation to any loss or damage sustained to person or property within the pool.

9. Supervisor Training

The Head of PE / Headmistress will, with the assistance of the Administrator/PA to the Directors co-ordinate the arrangements for taking the NRASTC for staff who either need to become qualified for the first time or who are retaking their test every two years. Copies of the certificates of those who have a current NRASTC will be kept on file with the Bursar.

10. Bather Loads and Minimum Supervision Ratios

- Maximum Load: 40.
- The ideal target for normal class use is no more than 20 pupils in any class.
- One qualified supervisor to 20 children plus one responsible adult.

- For non-swimmers and beginners one qualified supervisor to 12 children plus one responsible adult.
- Adult with infants/swimmers with disabilities: these classes should be conducted on a 1 to 1 ratio.

11. Conditions of use of pool other than by the High March pupils and staff

All non-curricular use of the swimming pool is undertaken through the Bursar's Office – Peter Honiball (Bursar's Office 01494 685744). Any third party who wishes to use the school swimming pool will be asked to read and understand the NOP and EAP as a condition of use or hire and confirm that they have done so and will agree to the hire for the duration of their event of a qualified supervising lifeguard.

12. Swimming Galas including Emergency Procedure

- Swimming staff organising galas will consider guidance from the Association for Physical Education (AfPE) covering planning and involvement in the event, including risk assessments.
- All swimmers must start from the deep end if diving.
- There must be a sufficient number of qualified staff on duty.
- The Head of PE /her designated deputy in charge of the gala will carry out an equipment check before every gala, taking care to check lane ropes, diving blocks, sharp edges of tiles and lane ropes in position as well as the slipperiness of the poolside.
- The supervising person in charge of the gala will inform everyone where the fire exits are and, in the event of an emergency if they hear an alarm they should head swiftly and calmly to the Junior House playground. The supervisor should point out the shallow and deep ends and state that there should be no diving in shallow water and that spectators must keep the sides of pool free for staff.
- Young children with adult spectators or swimmers must be carefully supervised at all times and on no account left unattended.

13. Cleanliness

It is the responsibility of the pool operators, as delegated to the Bursar, to ensure that the pool is kept clean and tidy at all times and that the water, poolside, changing room and reception areas are cleaned and appropriate cleanliness and chemical checks undertaken thoroughly and regularly. In the event of fouling of the pool by faeces or blood, immediate cleaning with suitable chemicals must be undertaken and pool closure should be considered with immediate effect for 24 hours, dependent upon the nature and extent of fouling. As below (EAP) in all such cases, Darren Perry / Kevin Higgs should advise as to the most suitable course of action and with reference to PWTAG COP .

Rubbish including plasters and plastic bottles must be disposed of in the bins in the changing rooms.

14. Communications

There is a phone in the Swimming Pool Foyer.

The School Office can be reached by dialling 221 or 232

Outside EMERGENCY SERVICES can be reached by dialling 9 then 999

The pool address is:

High March Swimming Pool
High March
23 Ledborough Lane
Beaconsfield
Buckinghamshire
HP9 2PZ

Tel: 01494 675186 (School office)

The School Office will need to be informed that the emergency services are on their way, so that they can arrange for the gates to be opened and an escort to be at the gate to direct them to the entrance of the pool.

Other numbers that may be useful:

The Bursar, Peter Honiball, can be reached on 01494 685744

In emergency the following numbers may also be used: 07813-837225 (Belinda Avery) /
07500-664964 (Michael Chapples)

B. EMERGENCY ACTION PLAN

1. Objective and Scope

It is the objective of High March to ensure that emergency situations are dealt with in a manner which minimizes the risk to staff, pupils and other users.

2. Emergency Equipment

Around the walls of the pool are:

- 2 throw bags
- 2 torpedo buoys (flotation aid)
- 2 reach poles
- 1 hooked reach pole
- 2 Emergency exits through the marked doors

In the poolhouse foyer

- First Aid Kit (also one in the Junior House First Aid area)
- Defibrillator
- Inhalers - High March Emergency inhaler kits, comprising 1 x "junior" kit, and 1 x "senior" kit
- Auto injector pen - High March Emergency injector pen kit.

It is the responsibility of the supervisor to know the location of the safety equipment and to ensure it is in place at the start of each session. Pupils requiring emergency medication should bring their emergency equipment to the pool house.

The Pool Maintenance Manager checks the emergency equipment for suitability and defects weekly and reports any damage or defects to the Bursar who will authorise replacement of any defective or damaged equipment.

3. Minor Injuries Poolside

A minor emergency is an incident which, if handled properly, does not result in a life threatening situation. The relevant provisions of the School's Main First Aid policy, a copy of which is appended to the NOP/EAP in the Pool Reception and both Upper School and Junior House staffrooms should be adhered to at all times so far as practicable.

It will normally be dealt with by the nearest supervisor who acts as follows:

- Notify all other staff on the poolside
- Clear the pool if necessary
- Administer first aid if necessary
- Casualty will be referred to appropriate location
- Supervisor must complete accident report – these are located in the swimming pool foyer

When dealing with first aid anywhere in the swimming pool or pool house, the supervisor must not leave him/herself in a compromising position.

4. Major First Aid Emergencies

A major emergency is one where an incident occurs resulting in a serious injury or life-threatening situation.

As with minor emergencies, the response to most major emergencies follows a general pattern. This has two steps:

- A supervisor who identifies a serious situation alerts another responsible adult and users by three long whistle blasts. This person will be known as **'Rescuer No. 1'** and will initiate the rescue by taking the appropriate action.
- The responsible adult, on hearing the three blasts of the whistle, should immediately help to clear the pool and make safe other users before going to telephone for assistance – ringing 221 or 232 or 9 and 999 for the emergency services. On their return they should assist 'Rescuer No 1'. This adult becomes **'Rescuer No. 2'**.

Rescuer no 2 will call for an ambulance (either on his/her mobile or by using the telephone in the swimming pool foyer), if this hasn't been done already.

'Rescuer No 1' will complete an incident report, filing the original in the accident report book and providing a copy to the child's form teacher for filing and copying to the child's parent.

The relevant provisions of the School's Main First Aid Policy should be adhered to at all times so far as reasonably practicable.

5. Lack of Water Clarity

If the pool is not clear, the pool should not be used. As a rule, no part of the Pool should be used if the bottom lines in that area cannot be seen clearly. In that event the pool should be evacuated without delay and until clarity reaches an acceptable level (as a minimum, the ability to see the body of a small child at the bottom of the pool). Please make further reference to the Penguin Pools' users' manual.

If this situation arises, contact Darren Perry, Kevin Higgs, or the Bursar, immediately.

6. Fire Alarm

This is a continuous ringing bell and evacuation should be through either:

- a) the fire exit leading out towards the entrance pathway to the northern elevation
- b) the fire exit leading to the external pool surround to the southern elevation

The supervisors will instruct users which exit to take and will then lead them to the assembly point which is on the playground adjacent to the Anderson wing. The fire alarm in the poolhouse is connected to the monitoring station by way of a dialler device.

7. Lighting Failure

Should the lights fail at a time when artificial light is required for safe pool usage, evacuation of the pool should be immediate. Darren Perry, Kevin Higgs or the Bursar should be notified immediately.

8. Dealing with Blood, Vomit and Faeces etc.

8.1 Diarrhoea and Solid Stools

If a substantial amount of faeces, either loose or solid, is introduced to the water, the pool shall be immediately closed to swimmers.

The maintenance/cleaning staff shall immediately be informed and they will deal with the situation in the appropriate way always having reference to the PWTAG COP.

8.2 Blood and Vomit

If substantial amounts of blood or vomit are spilled into the pool, it shall be temporarily cleared of users to allow the pollution to disperse. Darren Perry, Kevin Higgs or the Bursar should be notified immediately.

Spillages of blood or vomit on the poolside shall be contained and wiped up with the appropriate cleaning cloths. The cloths for this purpose should be safely disposed of immediately. The supervisor should then complete an incident report.

In all cases of major contamination, the pool should be closed for up to 24 hours, allowing time for at least one complete filter cycle, Darren Perry, Kevin Higgs or the Bursar should advise.

9. Bomb Threat / Escape of Toxic Gases/ Chemical Spillage

In the event of a bomb threat or escape of toxic gases or chemical spillage, all pool users and staff should evacuate the building immediately to 23 Ledborough Lane and should not use mobile phones in the event of a bomb threat.

10. Lockdown

In the event of a Lockdown alert, all pool users and staff should leave the water, the pool surround and the foyer, and assemble in the changing room. The main entrance door should be locked and all lights turned off.

The lockdown alarm signal sounds similar to the fire alarm, the difference being that the fire alarm sounds continuously, whereas the lockdown alarm signal emits one long pulse followed by a one second silence. This sequence is repeated until the alarm is turned off. A member of staff should take a register of the pupils and adults who are with them and email it to the following email address: lockdown@highmarch.co.uk. The Headmistress, SMT, the Office and Administrator/PA to the Directors will all receive this email. The email can include individual names or could read as the example below:

All of form 5J with the exception of ?? who is absent from School are with Mrs ???, Mrs ??? and Miss ??? in the Pool. Please include the surnames of the adults in your email.

Please put the form name in the subject box of any email you send. If you do not have the email facilities to do this, and it is safe to do so, please make your way to the telephone extension in the foyer and dial 221 or 232 – make sure you speak to someone – do not simply leave a voice message.

Staff should reassure and support pupils and keep them calm and quiet. Staff are to remain in lockdown positions until informed by a member of SMT or the School Office

that there is an all clear. The Headmistress, or in her absence a member of SMT, will determine this.

It can take up to 15 minutes to check that everyone is accounted for so prepare the children for this. The alarm should continue to ring for this entire period until the all clear is sent round.

If the alarm stops, please remain in lockdown until you receive an email or a member of staff comes round to tell you otherwise.

11. Structural failure

In the event of structural failure, the pool should be evacuated as a matter of emergency.

12. Missing Pupil Procedure

In the event that a child is lost, the pool should be evacuated, the changing rooms, and poolhouse thoroughly searched and an immediate search undertaken for the child. The provisions of the School's Missing Pupil, Security and Supervision Policy should be observed so far as necessary and desirable – displayed in the poolhouse foyer and available from the School Office on request.

C. POOL MAINTENANCE PROCEDURE

1. Daily Routine

The following routine is to be carried out prior to any swimming activity taking place, and use of the pool must be planned to allow for adequate cleaning / testing and chemical dosing:

- Water quality checked for ph, chlorine and temperature, three times daily.
- Pool sides swept and pool base vacuumed.
- Pool surround cleared.
- Safety equipment / first aid kit checked and kept in correct location.
- Chemicals applied as appropriate, water balance re-checked.
- Operating plant checked for faults / leaks, all faults to be reported to the Site Manager and noted on the appropriate form - Pool Operating Daily Checklist.

2. Weekly Routine

- Backwash filters and replace water as required.
- Clean filter / filter baskets.
- Check water for total dissolved solids.
- Check pool pump and clean pump strainer basket.
- Wash and clean poolside.

3. Chemical Handling / Storage / Application

- Personal protective clothing must be worn at all times.
- Chemicals should be applied as per the dosage instructions, by a qualified / competent person.
- All chemicals are to be stored in the chemical storage unit when not in use.
- Any spillages must be dealt with immediately and the area cordoned off until clear.
- In the event of a major spillage / high dosage, the area must be cleared and dealt with as per the emergency instructions.
- All precautions must be taken in accordance with the relevant COSHH data sheet (see 6.8).
- All chemicals must be used in strict rotation, according to their use by date.
- All chemicals past their usage dates are to be disposed of by the school appointed contractor in compliance with COSHH.

4. Plant and Equipment

A programme of visual checks takes place on a daily basis, but more stringent checks should be carried out as follows:

- Visual and manual checks / lubrication / cleaning should take place at the beginning of each month.
- Annual service of all machinery by an authorised contractor, should take place during the summer break.
- Annual inspection should take place of all water storage systems by an authorised contractor.

- Any faults / defects are to be reported to the Site Manager and noted on the appropriate form – Pool Operating Daily Checklist).
- All safety equipment and the operation of the pool cover is checked daily, and safety equipment is replaced as necessary. This is particularly important in the case of throw lines, which should be used on a monthly basis and repacked, preferably by the persons most likely to use them in an emergency situation.

5. Pool Safety

- PE staff are to practise evacuation procedures on at least an annual basis.

All new High March swimming staff who are involved in the swimming programme will undergo pool familiarisation training as well as taking their NRASTC every two years.

The Teacher/Supervisor on duty will take care after each class (unless there is another class immediately following) to ensure all pupils are out of the water, all children are accounted for on departure from the poolhouse, and the poolhouse at the end of each session, that the pool cover is put on the pool, lights are switched off, doors are closed in particular the door from the pool reception to poolside, and that the door to the poolhouse is locked.

Pool Technical Operational Procedures – High March School

1. Statement of policy – Our intention is to always provide a swimming pool technical operation that is safe, healthy, and environmentally friendly. We shall maintain compliance with the PWTAG Code of Practice and where relevant other national and European standards
2. The person responsible for writing and reviewing the PTO (Pool Technical Operational Procedures) for this pool is Darren Perry We carry out a formal review of our written plan on an annual basis and or whenever we carry out major adaptations or if there is a notable incident affecting pool water safety. We provide training and qualification for the key staff at the pool which is always maintained within current requirements and /or employ certified personnel to undertake key roles as essential to comply with PWTAG Code of Practice
3. Staff structure and responsibilities. - for this pool we always ensure that a swimming pool technical operator is on (call) duty during all hours of curriculum swimming and we ensure that there is a technical operator available by phone during third party hire
4. Description of pool and operation – 20m x 8m school pool
5. Schematic of swimming pool system and key indicators – our simple schematic plan of the pool is attached Key indicators:
 - a. Medium rate sand filters
 - b. 100% surface water removal turn over period 3 hours
 - c. Maximum capacity bathers = 40
 - d. Disinfection is Sodium Hypochlorite
 - e. pH correction is Sodium Bisulphate
6. Normal operational procedures for the pool water - The water treatment system for the pool is based upon PWTAG requirements, European and national standards and considers:
 - a. Public health hazards
 - b. Mains water quality and storage, dilution and drainage, coagulation, filtration, and disinfection
 - c. The size and type of pool, bathing load circulation rate, circulation hydraulics and turnover period
 - d. Pool operation, water treatment system and plant room.
7. Public health hazards – our risk assessment for this pool considers the following hazards:
 - a. Death through drowning, including hair and limb entrapment
 - b. Neck and head injuries from diving into shallow water or hitting other swimmers
 - c. Injuries from falls, slipping, etc.
 - d. Ingestion of pool water containing pathogens including the protozoal parasites Cryptosporidium and Giardia that can cause gastroenteritis
 - e. Contact with contaminated water, especially in contact with open wounds
 - f. Inhalation of aerosols containing hazards e.g., Legionella specie sin distributed water, such as when using showers
 - g. Skin infections of the feet, including warts, verrucas, and athletes' foot

- h. Exacerbation of asthma due to excessive disinfection byproducts in the air
 - i. Illness from water contaminated by chemicals
 - j. Potential drowning where cloudy water prevents surveillance of swimmers under the water
 - k. Cuts and abrasions due to sharp edges, cracked tiles etc.
8. Mains water quality - Our water treatment system considers the mains water characteristics
 9. Pool water clarity – we monitor pool water to ensure no danger to bathers
 10. Primary disinfection – our primary disinfection is sodium Hypochlorite which is monitored and dosed automatically.
 11. Dilution with fresh water – we replace pool water with fresh mains water as a regular part of the water treatment regime with up to 30 litres per bather according to pool bather usage.
 12. Bathing load – the maximum bathing load (number of bathers) allowed for at any one time is 40.
 13. Turnover period – the turnover period for this pool is 3 hours
 14. Water circulation – this pool operates the water treatment system continuously
 15. Surface water removal – this pool uses a deck level surface water removal system and bottom drains. 80% of the water removal is from the surface
 16. Inlets and outlets – inlets and outlets, grilles and covers are in accordance with BS EN 13451-3. They are inspected visually every day, and once a month subject to closer examination for obstruction, impact damage and vandalism and to make sure that they are correctly in place. If they are damaged or missing, swimming is suspended immediately.
 17. Filters and filtration rate - This pool uses medium—rate pressure filters: with sand as the main filter medium.
 18. Serviceable filters – the filters are inspected annually for corrosion and problems with the filter medium.
 19. Backwashing – filters are backwashed at least once a week and whenever the pressure loss across the filter media bed reaches the level specified, at the end of bathing for the day. Our filters do not have flow meters fitted
 20. Coagulation – we dose with aluminum sulphate into the strainer baskets during backwashing
 21. Bather hygiene procedures – we provide pre-swim showers and toilets en-route to the pool and encourage everyone to use them before swimming. Hand washbasins with liquid soap and hand drying facilities are provided. Staff and notices enforce all operational procedures including when not to use the pool during and after diarrheal illness.
 22. Young children – we have scheduled sessions for the young
 23. Pool cleaning – equipment and surfaces – all floors in the pool hall area, changing rooms, toilet and shower areas are cleaned each day. We ensure that floor cleaning materials do not enter the pool water

24. Showers – showers comply with HSG 274 part 2 the control of legionella bacteria in hot and cold-water systems and are cleaned and descaled in accordance with HSG 274 part 2 requirements.
25. Pool covers – pool covers are checked regularly for any contamination and cleaned as necessary with sodium bicarbonate
26. Pool equipment – all equipment is checked to ensure it is hygienic and clean before being used in the pool
27. Balance tanks – balance tanks are inspected at least once a year and cleaned, as necessary.
28. Pool bottom – the pool bottom is kept clear of contamination, algae, and general debris by weekly suction cleaning.
29. Monitoring water quality – we have documented procedures for testing the pool water, which follow the guidance of PWTAG and the kit instructions, and operators are given full training in their use for monitoring pool water quality. The documented procedures include detailed actions for operators to take if there are unexpected test results, especially if they show the pool water chemical composition is either below or exceeding safe limits. We test the water chemically three times per day and the target levels for pH and disinfection are pH 7.0 to 7.4 free chlorine 0.5mg/l to 1.0mg/l. on a weekly basis we test the water for balance and chemical levels alkalinity between 60 and 200mg/l. TDS no more than 2000 above source water calcium hardness between 75 and 360mg/l
30. Automatic monitoring of chemical levels – the readouts from the controller are checked daily against the results from manual tests of the sample cell. The manufacturers' recommendations for the calibration of the equipment, including the use of suitable test solutions, are followed. Records of all calibration tests and results are recorded on log sheets and retained.
31. pH – readouts from the controller are checked daily against the results from manual tests of the sample cell. If the difference is more than 0.2, the controller is standardized in accordance with the manufacturer's instructions.
32. Disinfection – readouts from the controller are checked daily against the results from manual tests of the sample cell. If the difference is more than 15%, the controller standardized in accordance with the manufacturer's instructions.
33. Microbiological testing – the swimming pool is microbiologically tested each month to monitor for the presence of potentially harmful microorganisms by Turner's Watercare UK Ltd, a UKAS accredited laboratory. Tests are also done before it is put back into use, after having been shut down e.g., for repairs. If there are difficulties with the treatment system. If contamination has been noted. As part of any investigation into possible adverse effects on bathers; health. The required microbiological conditions are in accordance with the PWTAG Code of practice
34. Acting on failures/pool closure:
 - a. If a result is unsatisfactory, a preliminary investigation is undertaken, and the test repeated as soon as practicable.
 - b. If the second result is also unsatisfactory, we investigate further and the test repeated.
 - c. If the third result is still unsatisfactory, we take immediate remedial action.

35. Plant room – the plant room is a secure area not accessible by unauthorized persons. It is not used for general storage, or for storing hazardous chemicals, unless chemicals are in containment structures or devices designed to control spillages with adequate separation from other chemicals and substances stored in the plant room; plant, including electrical equipment is inspected and maintained in accordance with a planned programme.
36. Safety systems provided and maintained – relevant safety and safety equipment and personal protective equipment is held in the plant room, maintained in accordance with a planned programme. Monthly inspection of personal protective equipment is carried out to check its continuing suitability.
37. Confined spaces – staff are not permitted to work in confined spaces.
38. Chemical safety – pool management ensure a competent person assess the risks associated with hazardous substances in the workplace and that we put in place procedures to eliminate or control those risks. These procedures are systematically recorded to include
 - a. Identification of the hazards
 - b. Disinfection and pH chemicals
 - c. Identification of who might be harmed and how
 - d. Swimming pool technical staff
 - e. Evaluation of the risks arising from the hazards, and decisions about precautions
 - f. Based upon the safety data sheets
 - g. The findings are recorded here
 - h. Sodium hypochlorite
 - i. Sodium bisulphate
 - j. Aluminum sulphate
 - k. Cleaning materials
 - l. We carry out regular review of the assessments and make necessary revisions.
 - m. We ensure SDS's are provided and available for all the chemicals in the plant room including pool chemicals, cleaning chemicals, pool water testing chemicals and chemicals used in maintenance programs.
39. Training in chemical handling – we provide all staff involved in the handling and use of chemicals with appropriate training and instruction.
40. Personal protective equipment (PPE) – pool management take advice of suppliers about what PPE is needed and ensure this is provided and maintained:
 - a. Gloves
 - b. Overalls
 - c. Goggles
 - d. Footwear
 - e. Particle filter masks
41. Chemical spillage – any spillage is cleared away using a safe method agreed between chemical supplier and pool operator. The method is displayed on a notice, together with the provision of the necessary equipment and its location.
42. Safety information on site - precaution cards and first aid instructions are displayed for each chemical.

43. First aid – first aid provision including equipment for dealing with the consequences of direct contact with chemicals is provided which includes.
 - a. Eyewash facilities should be near the hazard to enable immediate action.
 - b. A washbasin with running water should be provided in case chemicals meet the skin or eyes.
44. Delivery of chemicals – everyone involved in the transport, handling and storage of pool chemicals receives initial and refresher training in the procedures involved. Deliveries proceed only when a trained staff member is available to receive and check the materials.
45. Transport from offloading area to store – chemical containers are taken to a suitable storage area as soon as possible; not left unattended in an offloading area; are kept upright and never rolled; and are used in stock rotation. The method of handling chemical containers is described in the “How To...” and staff informed and trained in these.
46. Chemical store – chemical stores are kept clean and dry for the storage of solid materials. Protected from sunlight and hot pipework or plant. Chemical stores have warning signs. Are secure and accessible only to authorized, appropriately trained people.
47. Dosing – hand dosing in normal operation is not permitted in the pool
48. Chemical dosing operations – written procedures (“How To...’s”) are provided for day tank filling, mixing or diluting chemicals and cleaning injectors. Chemical dosing systems monitors, and automatic controls are interlinked with the circulation pumps and the circulation of water through the system, so that dosing stops if there is pump failure or significant loss of pumping rate. These systems are designed to always fail to safety and require manual restart when circulation is restored.
49. Chemical line safety – all chemical pipework, suction lines delivery lines and tanks are marked to identify the contents and the direction of flow. All pipes used for delivery of chemicals to injection points are double sheathed. Disinfectant and pH dosing systems are kept separate. Dosing sets are separated in individual bunds.
50. Preparing dosing chemicals – chemicals are added to water and never the other way around when preparing solutions. Non-liquid chemicals are kept dry until dissolved in water.
51. Heating and air circulation – this pool’s water temperature is maintained between 28 and 30 degrees Celsius
52. Pool hall air – the pool hall air temperatures are maintained at no more than 1degree Celsius above or below that of the water temperature. Air temperatures over 30 Celsius are not permitted. Relative humidity is maintained at a level of 60% (no less than 30% and no more than 70%) throughout the pool hall area. Ventilation systems are designed and operated to provide a level of fresh air for each occupant of the pool hall.
53. Emergency procedures for pool water, heating, and ventilation plant:
 - a. Faecal accidents and cryptosporidium – this pool has a written agreed procedure for dealing with faecal fouling which follows the guidance on the PWTAG website and in the code of practice. See Appendix 3 “Technical Note – Faecal Accident Procedure”. A Faecal Diary is held for posterity. This is recorded as handwritten details of the incident and additional actions taken at the bottom of the weekly pool test sheets. All relevant notes are highlighted in pink and the completed

sheets are stored in the Junior House Maintenance Workshop in the box file marked "Water".

- b. Blood and vomit pool water contamination – if significant amounts of blood are spilled into the pool, it is temporarily cleared of people, to allow the pollution to disperse and any infective particles to be neutralized by the residual disinfectant. We then confirm that disinfectant residuals and pH values are within the recommended ranges and bathing can then resume.
 - c. Contamination of pool surround – any blood spillage on the poolside is dealt with using strong disinfectant – of a concentration equivalent to 10,000mg/l of available chlorine. The blood is covered with paper towels, gently flooded with the disinfectant, and left for at least two minutes before it is cleared away.
 - d. Vomit in the pool – our procedures for vomit in the pool and vomit on the poolside are the same as when dealing with blood.
54. Pool closures and microbiological contamination – we close the pool immediately if there is chemical or physical evidence of unsatisfactory disinfection e.g., poor clarity or low free chlorine concentration. The pool is closed if microbiological testing indicates gross contamination. Which means one of two things:
- a. E. coli over 10 per 10ml PLUS either colony count over 10cfu per ml or Pseudomonas aeruginosa over 10 per 100ml (or, of course, both)
 - b. Pseudomonas aeruginosa over 50 per 100ml PLUS colony count over 100 per ml.
55. Toxic gas leak – There is an emergency action plan for dealing with any major release of toxic gas. The procedure includes safety of staff and customers arrangements for any necessary evacuation co-ordination with emergency services, who are consulted in the preparation of this plan.
56. Records and logs – see the "How To..." and "Who's who" annex' for example:
- a. Daily swimming pool water log
 - b. Monthly bacteriological log
 - c. Swimming pool water incident log and faecal accident log
 - d. Automatic monitoring calibration
 - e. Monthly inspection of safety equipment and PPE
 - f. Staff training in handling chemicals
 - g. Staff training in pool water testing

Appendix 1: Sample Pool Risk Assessment

Neil Bailey Swimming - Risk Assessment All Sessions - High March School Swimming Pool –

February 2023

Step 1: Hazards?	Step 2: Who might be harmed and how?	Step 3: What are you already doing? necessary?	Step 4: What further action is required
<p>Arrival in car park at start of sessions</p> <p>Inspect car park for unusual items left/stored or other workmen on site</p>	<p>Parents/ Guardians/ Carers/ Staff - potential car users/pedestrians/cyclists arriving for lessons</p>	<ul style="list-style-type: none"> • Ensure car park is safe to use • If other users of car park ensure their work does not impact pool users on foot and in vehicles and if tools/equipment/vehicles are there that a safe and secure access is available for pool users • Make sure any bins are safely out of the way and do not block or impede safe access and exit • Check disabled parking space is free and accessible 	<ul style="list-style-type: none"> • Remove bins/rubbish if required • Ensure no parking cone is placed on disabled to deter non disabled drivers • Encourage use of other parking choices in High March Estate at Upper School and if needed side streets for off road parking
<p>Car Park to Pool footpath at start of sessions</p> <p>Inspect footpath for unusual items left/stored or other workmen on site</p>	<p>Parents/ Guardians/ Carers/ Staff - potential pedestrians/cyclists arriving for lessons</p>	<ul style="list-style-type: none"> • Ensure footpath is safe to use • Ensure any bicycles/scooters and other transport equipment is not in way and put into a suitable rack 	<ul style="list-style-type: none"> • Remove bikes/scooters and place in bike racks • Encourage users of bikes and scooters to use bike racks • Ensure main pool entrance is safe to use and free from trip hazards

Appendix 2: Sample Record Sheet

DAILY POOL CHECKS

		HUMIDITY	AIR TEMP	WATER TEMP	pH DISPLAY	pH ACTUAL	FREE CHLORINE DISPLAY	FREE CHLORINE ACTUAL	TOTAL CHLORINE	COMBINED CHLORINE
MONDAY	AM									
	PM									
TUESDAY	AM									
	PM									
WEDNESDAY	AM									
	PM									
THURSDAY	AM									
	PM									
FRIDAY	AM									
	PM									
SATURDAY	AM									
	PM									

WEEKLY POOL CHECKS

TAP WATER pH	TAP WATER FREE CHLORINE	TAP WATER TOTAL CHLORINE	TAP WATER COMBINED CHLORINE	TAP WATER TDS	POOL WATER pH VALUE	TEMP FACTOR	TOTAL ALKALINITY FACTOR	CALCIUM HARDNESS FACTOR	TDS FACTOR	BALANCED WATER TEST RESULT

FILTER BACKWASHING

FILTER 1				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

FILTER 2				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

DAY TANK LEVELS

CHLORINE				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

ACID				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

WEEK COMMENCING _____

SIGNED _____

Appendix 3: Technical Note - Faecal Incident Procedure

Dealing with a Faecal Incident

If faecal contamination has been reported and there is some doubt about the accuracy of the report, its presence should be confirmed. Pool operators should assess the risk and may decide that the risk of harmful contamination is low and allow bathing to resume. This assumes that pH and disinfection are within normal limits. All faeces contain potentially harmful microorganisms. The actual risk to pool users depends on whether the faeces are solid or runny.

Solid faeces

Solid faeces are easy to deal with. It is unlikely that the perpetrator is suffering from acute gastrointestinal illness. The microorganisms in it are contained.

Procedure

- The stools should immediately be removed from the pool using a fine mesh net and flushed down the toilet (not put in any pool drains).
- There should be certainty that all the faeces have been captured and disposed of. If not, and there is possible widespread distribution of the faeces in the pool, then the pool should be closed and the advice below for runny faeces followed.
- All equipment that has been used in this process should be disinfected using a 1% solution of hypochlorite.
- If the pool is operating properly with appropriate disinfectant residuals and pH values, no further action is necessary.
- Faeces that are smeared on the sides, tiling or other surfaces in contact with pool water should be cleaned off and the surface disinfected with a 1% solution of hypochlorite. Only if faeces have spread in the pool should the procedures described below for runny faeces be followed.

Runny faeces

If the stool is liquid, runny or soft and breaking up (e.g. diarrhoea), the risk of infection is greater, as the perpetrator is more likely to be carrying enteric pathogens.

The infectious causes of diarrhoea include viruses, bacteria, and protozoa. (Other causes include alcohol, emotion, diet, and medicine side effects) most bacteria and viruses that cause diarrhoea – E coli, Shigella, norovirus, for example – are killed within minutes in a satisfactorily disinfected pool water. So, the pool should at least be closed and cleared of bathers for half an hour while disinfectant residuals are turned up to the top of the set range for the pool (2.00ppm) it should then be safe for bathing to resume. But if the diarrhoea is caused by Cryptosporidium, a chlorine-resistant protozoan, the contamination will not be inactivated by these concentrations of chlorine. Cryptosporidiosis is the most compelling cause of gastrointestinal illness in pools and its diagnosis is now notifiable. It affects children more than adults, and they are the main source of infection. Toddler, learner, and leisure pools are the most vulnerable.

Dealing with *Cryptosporidium* oocysts requires much more time and/or disinfectant. But it is difficult for pool operators to know if *Cryptosporidium* had caused the diarrhoea. Diarrhoea from someone suffering from cryptosporidiosis is often not just runny but watery. It is just possible that the perpetrator or their family may know that they have an infection. Or, the pool manager may know that there is an outbreak in the community. A phone call to the local health protection agency may establish that there is an outbreak locally. Usually, though, pool operators will not know whether cryptosporidium is involved. This makes deciding what to do to be difficult. The safest option is to assume that it may be cryptosporidium. The High March pool has medium rate filtration, the main emphasis is on flocculation and filtration, which if effective should remove some 99% of the cryptosporidium oocysts in each pass, coagulation is critical in this should be continuous and the residence time should be long enough for flocculation to happen – at least 10 seconds at a flow velocity no more than 1.5m/sec.

This is the procedure

- Close the pool, customers should shower after leaving the pool.
- Hold the disinfectant residual at the top of its set range (2ppm) and the pH value at the bottom of its range (7.2pH).
- Add aluminium sulphate (see manufacturers guidance for dosing instructions).
- Vacuum the pool floor and sweep the pool tank walls.
- Filter for six turnover cycles (18 hours).
- After six turnovers backwash both filters.
- Circulate the water for a further 8 hours.
- Check disinfection levels and pH. If they are satisfactory re-open the pool.

Appendix 4: Technical Note – Water Test Traffic Light System

The following guidelines and corrective actions (when necessary) as detailed below are followed:

Water Test Traffic Light System

Information adapted from Bourne Leisure Limited. This is an STA risk assessed traffic light system within parameters recommended in PWTAG’s publications and HSG 282.

FACILITY	READING	GREEN ZONE	AMBER ZONE	RED ZONE
Pool	pH	7.2 to 7.4	7.0 to 7.2 7.4 to 8.0	<7.0 >8.0
	Free Chlorine	1.0mg/l to 3.0mg/l	0.8mg/l to 1.0mg/l 3.0mg/l to 5.0mg/l	<0.8mg/l >5.0mg/l

Water test result(s) within ideal parameters - green zone

- No action required.

Water test result(s) outside ideal parameters – amber zone

- If the result(s) from the first water test of the day are within the **Amber Zone**, the facility can open but corrective action must be taken to ensure that results from the re-test are returned to the **Green Zone**.
- If the results from water tests during opening hours are within the **Amber Zone**, the facility can remain open but corrective action must be taken to ensure that results from the re-test are returned to the **Green Zone**.

Water test result(s) outside acceptable parameters – red zone

- If the result(s) from any water test is in the **Red Zone**, close the facility and take corrective action. Do not open the facility at the start of the day, or re-open the facility during the day until water test results return to within the **Green Zone**. Seek specialist advice as necessary.
- In addition to **Red Zone** results from water test results, there are other **Red Zone** situations namely, loss of water clarity, gross contamination (e.g. diarrhoea) and physical contamination (e.g. broken glass).

Corrective Actions

Wherever possible corrective actions should only be carried out by a qualified and competent pool plant operator. In accordance with written procedures and risk assessments.

All completed corrective actions must be followed by a re-test. Both the corrective action taken and the re-test results must be recorded on a water test remedial action sheet.