Business Compliance & Accident Investigation Services Limited

Risk Assessment Form	Document No. THH-RA1002102
	Date of Issue: May 2014

1 Title	Teddington Ham Hydro	2 Activity Title	Generic Risk Assessment for potential risk to inexperienced and experienced river users carrying out boating activities in the vicinity of the Teddington Ham Hydro Project
3 Location	Teddington Weir up stream close to river bank adjoining The Lensbury	4 Name of Risk Assessor	Martin Riley SIIRSM, RSP, TechIOSH, MIIAI

5 What is type of event, activity or scope of works are being assessed?

Various boating activities involving experienced and inexperienced river users in the vicinity of the Teddington Ham Hydro Project.
This assessment is evaluating the potential risk of an experienced or inexperienced river user capsizing their vessel and being drawn towards the Hydro Structure and resulting in drowning, and other relevant risks for activities on the river.

6 Who are the people affected by this event and its activities? (tick box to indicate)

Yes	Vessel Operator/s	Yes	New and Expectant Mothers
Yes	Trainee/s	Yes	Disabled
Yes	Visitor/s	Yes	Service Users/Vulnerable Persons
Yes	Contractor/s	Yes	Members of the Public

Other/s: All users of the river who carry out boating activities in the immediate vicinity of the Teddington Ham Hydro Project (This may include engine powered, sail and paddle vessels).

	Additional comments
7 Expected number of users? *(includes all instructors and trainees)* — 1 to 300	Numbers may vary according to the venue and type of event
8 Number of instructors supervising the activity? — 2 to 3	Each club determines the number of instructors assigned to a group carrying out their respective activities. (For the purpose of this assessment, it is recommended that a minimum of two instructors should be present during these activities).

9 Full Name of Responsible person/s *(must be in attendance on the day/s of the event)*

Various	Various members of the sailing, kayaking and canoeing clubs who are assigned responsibility for group or individual activities on the river Thames near or close to Teddington Weir/THH Project

10 **HAZARD and RISK**

A Hazard is the potential of a substance, person, activity or process to cause harm. A Risk is the *likelihood* of a substance, activity or process to cause harm. It is important to distinguish between a 'Hazard' and a 'Risk'.

Activities on the river can be regarded as high risk, when it is actually high hazard. Although the hazard may continue to be high, the introduction of control measures will reduce that risk as part of a robust health and safety management system. The remaining risk is then known as the *residual risk*.

There would only be a high residual risk where there is poor health and safety management and inadequate control measures.

11 **FIVE STEP RISK ASSESSMENT**

The Five steps to risk assessment will help to identify the health and safety risks.

1. **Identify the hazards**
2. **Decide who might be harmed and how?**
3. **Evaluate the risks and decide on the precautions (control measures)**
4. **Record your findings and implement the precautions**
5. **Review your assessment and update it if necessary.**

Do not over complicate the process, in most organisations the risks are well known and the control measures relatively easy to apply.

Just remember to consider and include any staff or representatives that may be involved with any of the activities, as they may have useful knowledge or information that can help in carrying out a more thorough and effective assessment.

12 Table 1. Pre-Controls Risk Assessment Matrix

(use this table to calculate the level of risk before implementing any control measures)

Initial Calculation:

Likelihood X Severity

Potential Severity	Very Unlikely	Unlikely	Possible	Likely	Very Likely
	V	V	V	V	V
	X	Likelihood of being injured or harmed			
Inconvenience – Minor injury, bump or bruise V	1	2	3	4	5
Minor Injury – Requiring 1st Aid or medical attention V	2	4	6	8	10
Significant Injury – Lost time or Hospitalisation V	3	6	9	12	15
Major Injury – Broken bones, sight loss or disabling injury V	4	8	12	16	20
Fatality - Death V	5	10	15	20	25

14 Table 2. Post Control Measure Risk Assessment Matrix

(use this table to record the level of risk after implementing the control measures)

Final Calculation:

Likelihood X Severity

Potential Severity	Very Unlikely	Unlikely	Possible	Likely	Very Likely
	V	V	V	V	V
	X	Likelihood of being injured or harmed			
Inconvenience – Minor injury, bump or bruise V	1	2	3	4	5
Minor Injury – Requiring 1st Aid or medical attention V	2	4	6	8	10
Significant Injury – Lost time or Hospitalisation V	3	6	9	12	15
Major Injury – Broken bones, sight loss or disabling injury V	4	8	12	16	20
Fatality - Death V	5	10	15	20	25

Use table 1 for the initial risk assessment, then implement control measures and review again using table 2 for final assessment.

After completion of table 1 (section 12) above move down to section 13 for completion.

After completion of section 13 (next page) move up to table 2 (section 14) for final review.

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Complete the risk assessment below identifying all high risk activities and calculate the risk rating using table 1 (section 12 above), then implement the control measures to mitigate the risks, and re-assess your risk rating using table 2 (section 14 above).

Assessment No.	Potential for harm and how?	Types of Hazards	Unmanaged Risk			Control Measure	Managed Risk		
			Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)		Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)
01	All	Access and egress to river, slips, trips or falls	3	3	9	Area of access and egress to and from the river must be inspected prior to entering the water. Visual checks and monitoring should be carried out by trained staff/instructors at all times	1	1	1
02	All	Uneven ground or Slips, trips and falls leading to or away from the river	3	3	9	River access/egress points must be inspected prior to commencing the activity by trained staff/instructors.	1	1	1
03	All	Adverse weather, slips, trips and falls on access/egress to the river	4	3	12	In the event of inclement weather or rain will introduce greater risk; increased river flow, flooding and unstable ground. Pre-planning checks should be made with the river authority, weather forecasts and consideration of increased river flow. All clubs must have in place procedures and guidelines for use of the river during adverse weather	3	2	6

Assessment No.	Potential for harm and how?	Types of Hazards	Unmanaged Risk			Control Measure	Managed Risk		
			Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)		Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)
04	All	Severely cold weather and hypothermia	3	3	9	Extreme weather conditions will impact on any person's ability to function. River users are particularly exposed to the risk of hypothermia if they capsize. All Instructors/supervisors should ensure facilities are available for getting warm and drying clothing.	2	1	2
05	All	Severely hot weather Heat exhaustion and sun burn	3	3	9	Instructors/supervisors should ensure all river users under their control to make adequate provision to protect against sunburn, heatstroke or heat exhaustion. i.e. sun block, water and suitable clothing	2	1	2
06	All	Biological Hazards, waterborne diseases or parasites	3	3	9	Instructors/supervisors should always ensure that all users are trained in the awareness of water borne diseases; Weil's disease and other waterborne risks. Cleanliness and hygiene are paramount in order to avoid contamination.	1	2	2

Assessment No.	Potential for harm and how?	Types of Hazards	Unmanaged Risk			Control Measure	Managed Risk		
			Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)		Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)
07	All	Manual Handling, sprains, strains and back injury	3	3	9	All groups will be instructed and trained in manual handling awareness prior to lifting unfamiliar loads	1	2	2
08	All	Drowning (Upstream of the Weir/THH Project)	4	4	16	All river activities and users are at risk of collision or capsizing, especially where there is a mixture of powered and non-powered craft using the same part of the river. This can lead to a person in the water, which combined with the river flow and undercurrents that can be very unpredictable and may lead to a higher risk of injury and/or drowning. All clubs should have in place emergency procedures for carrying out life saving techniques for the operator of the capsized craft and retrieval of the capsized vessel. Training for this procedure should be given to all of their club members who have attained a recognised level of proficiency. Untrained or inexperienced boating operators should never be permitted on to the river without qualified supervision or trained instructors.	2	2	4

Assessment No.	Potential for harm and how?	Types of Hazards	Unmanaged Risk			Control Measure	Managed Risk		
			Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)		Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)
09	All	Communications	3	3	9	All clubs should implement clear communications and instruction to all their members on the respective rules o their club. Failure to communicate clear instructions or information is often the cause of an unwanted outcome.	1	1	2
10	Minor medical help for: Employees Contractors Members of the Public Mobility impaired, elderly people and children	Major injuries involving a large number of casualties	3	3	9	Emergency procedures will be put in place prior to the event commencing. All staff to be trained in implementing these procedures prior to the event commencing	2	2	4
11	All	River crowding or congestion	3	2	6	Teddington Weir and the lock are within an area of high activity with a varied mixture of vessels (powered non-powered, large and small). This can pose a risk to any user, but in particular a novice operator. Instructors/supervisors should ensure very close supervision of their trainees and ensure that activities are carried out on the river so that they do not put them at risk.	1	1	2
12	All	Drunken behaviour	3	2	6	Controls must be put in place to monitor and limit the consumption of alcohol when operating a vessel on the river.	1	1	2

Assessment No.	Potential for harm and how?	Types of Hazards	Unmanaged Risk			Control Measure	Managed Risk		
			Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)		Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)
13	All	Erection of barriers, booms, fences, gates and signs	3	3	9	The Environmental Agency has installed barriers, booms and signs at Teddington Weir/THH Project to warn of the dangers of this area to all river users. All clubs and their instructors/supervisors should communicate this to all those under their supervision and who may operate a vessel in the vicinity of the weir and lock.	1	1	2
14	All	Major injuries with large number of casualties	3	2	6	Although not mandatory it would be advisable that at least one instructor/supervisor be trained in medical emergency procedures. This is important in the event of other river users that may be in need of medical assistance.	1	1	2
15	All	Welfare Provision First aid, Rest rooms, etc…	2	2	4	All welfare and emergency provisions are essential and should be put in place for all groups prior to any activities on the river.	1	1	2
16	All	Person in the water coming into contact with the THH Project structure – drawn-in or trapped	2	2	4	In the event that a person capsizes their vessel upstream of the structure and drifts downstream toward the THH structure.	1	1	2

Assessment No.	Potential for harm and how?	Types of Hazards	Unmanaged Risk			Control Measure	Managed Risk		
			Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)		Likelihood 1-5	Severity 1-5	Risk Ranking (LxS)
						Design features have been incorporated in the THH structure to take into account a person in the water being drawn to it by the flow of water. Instructors/supervisors should endeavour to avoid boating manoeuvres beyond the safety limit as indicated by the EA warning signs. Inexperience boat users or non-club members are outside of normal control measures and their activities on the water near this location are at their own risk.			
		Total (table 1)	48	44	**135**	**Total (table 2)**	22	21	**38**
		Risk Ranking Total for Table 1 (total risk ranking score by total number of questions divided) i.e. 335 ÷ 40 = 8.3 Round up to the next nearest number e.g. 9			**8.5**	**Risk Ranking Total for Table 2** (total risk ranking score by total number of questions divided) i.e. 100 ÷ 40 = 2.5 Round up to the next nearest number e.g. 3			**2.4**

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PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIRED:

Only complete this section if it is applicable

What type of Personal Protective Equipment is required? (circle the appropriate system)	i.e. Type, Colour, ISO/BS/EN Number

Personal Protective Equipment (PPE) *indicate by completing the boxes*									
 Lifejacket or buoyancy aid to BS EN393:1994									

Is health surveillance being carried out? (If yes, describe the type, level and frequency is being taken in the box below)

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This risk assessment is based upon a generic design for boating activities on river Thames near the weir and/or Teddington lock, as a result of this certain caveats apply. This assessment does not constitute a comprehensive site specific or activity specific risk assessment. Any activities organised must have a specific risk assessment carried out by a competent person prior to commencement of the event in order to identify any potential hazards associated with the event or activity. Examples of this may include but not restricted to: Competitions, or games, etc…

The person/s responsible for organising any river based activity in this area must ensure that all reasonable and practical measures are implemented for the purpose of managing any associated high risk hazards and that appropriate control measures are put in place. This will enable the responsible person/s to demonstrate they have taken all reasonable measures to ensure they comply with the 'Health and Safety at Work act 1974' and 'The Management at Work Regulations 1999'.

Activities carried out on the water by inexperienced river users or those not affiliated to the boating clubs that use this area of the river are outside the bounds of this risk assessment as they are not under anyone's direct control. They are therefore deemed to be 3rd party and come under the river authorities' responsibility.

The only remaining body that uses the waterway in the vicinity of the river and in particular the Weir/THH Project is The Lensbury. This is a commercial enterprise and they are therefore outside the remit of this assessment. The Lensbury are solely responsible for their own health and safety risk assessments as Teddington Ham Hydro have no rights of access on their property they also do not have any control over the implementation of any safety control measures. The river bank along this part of the river is under the direct control of The Lensbury.

An initial on-site survey took place on Thursday 8th May at 11:00 and it must be noted that the weir sluices had been opened to reduce the level of the water for powered vessels attempting to pass under Kingston Bridge. Due to construction work on Kingston Bridge some large powered vessels experienced restricted passage through the normal arch. The lock keeper had decided to adjust the sluice gates to allow at least some of the vessels clear passage.

This is an important observation, as there are numerous changes that can be made short notice that can affect the river flow and it highlights the need for all river users to be aware of any changes like this.

The second observation is that The Lensbury has placed a sign on the river bank adjoining their property that clearly states 'Private Property No Mooring'. However, there were a number of powered vessels moored up. This allows for a mix of powered and non-powered vessels to converge in the area of the river and poses a greater risk to those concerned. This is beyond the control of THH and it is advised that The Lensbury is informed of risk potential.

It was my understanding that powered vessels used the opposite side of the river following the channel to the lock to avoid contact with canoeists and kayakers that utilise this particular area on the river. This is no longer the case and I advise that all other boating clubs take this into consideration when taking groups on to the river. Best practice and good guidance must be applied and instructors must ensure vigilance if boats are still moored up during their activities.

Next Review: 8th May 2015 or alternatively when significant changes or adaptations take place.

Assessed by: Martin Riley

Date of Assessment: 8th May 2014

Signature: