

GENERAL RISK ASSESSMENT FORM

Faculty/Directorate

FACH (Greenwich Maths Centre)

Title of risk assessment/work being assessed

Festival of Mathematics and its Applications, June 27 and 28 2017

Location of work being assessed (Campus, building, room)

Queen Anne Court – most rooms on ground and first floor

Date of assessment

5/4/2017

Brief description of work being assessed

Include brief details of stages of the process, numbers of people involved, scale of operation, duration, timing and frequency of work (attach protocol or method if preferred)

Greenwich Maths Centre / the Department of Mathematical Sciences is hosting a two-day Festival of Mathematics and its Applications. This is open to the general public. It is expected that around 1000 visitors will attend on each day, mainly school students with most of these in Year 10. Parties of school students will be accompanied by teachers. A range of talks, workshops and hands-on activities is provided. Visitors are encouraged to register in advance and many of the events are bookable. The event is sponsored and promoted by the Institute of Mathematics and its Applications and other organisations including the Further Mathematics Support Programme and two Maths Hubs.

The events on offer as currently planned are:

Talks by experienced maths communicators in QA080 and QA180, and perhaps also in QA065 and QA280.

An exhibition of wall-mounted photographs in QA170 / QA177 (circulation areas).

A range of “hands-on” mathematical exhibits in QA063 and in the covered space outside. These are all exhibits used at open days and similar outreach events. Many of them are provided by the Institute of Mathematics and its Applications as part of a “Large Outreach Kit” designed for school students at exactly this kind of event. They were used at similar events in 2015 and 2016. Each activity will be overseen by a named member of staff throughout the event.

A range of workshops provided by various mathematics communicators in QA165, QA175 and possibly other rooms. These are designed for year 10 students. They may involve cutting paper (see below) but do not involve higher-risk activities. Those involved will be asked to confirm that their workshops are fully covered by this risk assessment and, if not, a separate risk assessment will be required.

Presentations / displays / hands-on activities about current mathematics research provided by active research staff at Greenwich and other Universities. Those involved will be asked to confirm that their workshops are fully covered by this risk assessment and, if not, a separate risk assessment will be required.

Displays and possibly activities by mathematical organisations such as the Mathematical Association, British Society for the History of Mathematics, MathsWorld UK etc in rooms like QA038, QA039, QA138 and QA139. Those involved will be asked to confirm that their workshops are fully covered by this risk assessment and, if not, a separate risk assessment will be required.

Visitors will be able to eat packed lunches (which they provide themselves) in the circulation areas on the first floor of Queen Anne Court (QA170/QA177), or in the grounds of the campus if weather permits.

Refreshments (other than water) will be provided for presenters / organisers only.

There will be a "Treasure Hunt" requiring students to observe numbers and mathematical patterns around the campus (on statues and the outside of buildings). Students will not leave the campus and will not leave standard tourist areas.

There are plans for an activity in Queen Anne Courtyard which will be the subject of a separate risk assessment.

The Greenwich Foundation for the Old Royal Naval College have been informed via FM.

Things to consider within the assessment – this list may not be exhaustive

- **Personal safety** e.g. Physical or verbal attack; disability or health problems; delayed access to personal or medical assistance; failure of routine or emergency communications; security of accommodation and support; getting lost, or stranded by transport; cultural or legal differences - List aspects of the work with significant hazards, and give brief details of how foreseeable harm/injuries could occur
- **Equipment hazards - Storage, handling and use of equipment and materials** e.g. Tools; machinery; vehicles; manual handling; noise; work at height; electricity; fire; vacuum; high pressure; high temperature; ultra violet; laser; vibration - List equipment and materials with significant hazards, and give brief details of how foreseeable harm/injuries could occur
- **Biological hazards - Storage, handling, use, and disposal of biological agents, intermediates, products and waste, "any micro-organism, cell culture or human endoparasite including any which have been genetically modified, which may cause infection, allergy, toxicity and other hazards to human health". This includes bacteria, viruses, fungi and parasites. Include routes of exposure** e.g. Blood borne infection; skin contact, skin sensitisation; sensitisation by inhalation; toxic by ingestion or inhalation. List biological agents with significant hazards, and give brief details of hazard classification and foreseeable harm/injuries
- **Natural physical hazards - Effects of the natural environment, climate, landscape, plants, animals** e.g. Extreme weather; earthquakes and volcanoes; mountains, cliffs and rock falls; glaciers, crevasses and icefalls; caves, mines and quarries; forests including fire; marshes and quicksand; fresh or seawater, tidal surges
- **Environmental impact** e.g. Pollution and waste, deposition of rubbish, disturbance of eco-systems, trampling, harm to animals or plants
- **Chemical hazards - Storage, handling, use, and disposal of chemical reagents, intermediates, products and waste** e.g. Toxic by inhalation or ingestion; irritant; corrosive, flammable; explosive; oxidising; radioactive. Include routes of exposure e.g. skin contact; skin sensitisation; sensitisation by inhalation; toxic by ingestion or inhalation. ***If the chemical is a group 3 or 4 chemical (see RA guidance sheet) then a separate COSHH assessment MUST be carried out.***

Risk Assessment:

Description of Hazard <small>(only include significant hazards inherent within the task or the activity)</small>	Person(s) at risk <small>e.g. staff, students, visitors, new & expectant mothers etc.</small>	Current control measures in place	Current risk rating			Further control measures required and by whom <small>(usually only necessary where the risk rating is either high or medium)</small>	Final risk rating		
			Likelihood	Severity	Risk Rating		Likelihood	Severity	Risk Rating
Security incident	Visitors, staff	To the best of our knowledge, there is no reason to believe that the Festival or the University will be a target for extremists. The University is in close contact with the security services and the University and the Festival organisers will follow their advice.	1	5	5	An extra security officer will be on duty throughout the Festival, patrolling the building. All Festival visitors will register on arrival, and will be given an identifying sticker so that any intruder can be identified. (Responsibility: Festival organiser)	1	5	5
Injury to visitor from misuse of equipment	Visitors	Each activity is supervised by a member of staff or external presenter. The IMA large outreach kit equipment is purpose-designed by IMA for events of this type. One activity involves soapy water. If spilt, this could provide a slip hazard. Staff will ensure that in the unlikely event of spillage any liquid is immediately mopped up.	2	1	2		2	1	2
Trip injury inside buildings	Visitors, staff	Any equipment requiring power cables will be stationed against wall so cable will not be a risk. There will be no trailing cables. Otherwise risk is that of normal user of buildings	1	1	1		1	1	1
Trip injury outside	Visitors	Risk is that of a normal visitor to campus	1	1	1		1	1	1

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			Likelihood	Severity	Risk Rating		Likelihood	Severity	Risk Rating
Scissors injury	Visitors	One activity involves students cutting paper. This activity will be carefully supervised.	2	2	4	Activity leaders will be briefed to call Security immediately in the event of any injury. All Security staff are trained first aiders.	2	2	4
Visitor becoming separated from school party	Visitors	There is a central registration desk to which any lost visitor can report	2	1	2		2	1	2
Safeguarding issue	Visiting school students	Many under-18s will be attending Festival events in school parties accompanied by teachers. Staff organising the event, and student ambassadors helping, have DBS clearance and student ambassadors have been trained in safeguarding issues.	1	3	3	Organisers will be aware which presenters have DBS clearance and will ensure that any speaker who does not have DBS clearance is not alone with a small group of school students. Teachers leading school parties will be made aware that this event is open to the general public.	1	3	3
Lifting injury	Staff, student helpers	All staff should have had University training in lifting heavy weights. Limited lifting will be required (barracudas, possible moving of tables and chairs). Student helpers will be instructed to leave any heavy lifting to members of staff. Major moving of furniture and equipment will be carried out by University porters.	1	1	1		1	1	1

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Food allergy	Presenters	Light refreshments will be provided for presenters. They will be asked to notify us of any allergies etc and normal university catering practices will be followed.	1	1	1		1	1	1
Other illness	Visitors, presenters, staff	All rooms have first aid information clearly visible. School parties will be led by teachers. Risk similar to everyday risk for University students and staff.	1	1	1		1	1	1
Dehydration	Visitors		2	1	2	Water point to be provided outside QA063 should weather be hot.	1	1	1
Crowding	Visitors	Total numbers in the rooms in use will be similar to those using these rooms in normal teaching times.	2	2	4	The major events require advance booking and all school parties will book in advance, so individual events will not be over-subscribed. Student helpers will direct visitors to undersubscribed events. A generous 15-minute interval is allowed between events to allow plenty of time for movement	1	2	2
Mobility issues and resulting evacuation issues	Visitors	Emergency evacuation from first and second floor rooms is difficult for those with mobility issues	2	2	4	Information on visitors requiring special access arrangements will be gathered in advance wherever possible. All staff will be aware of the refuge areas for those	1	2	2

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			Likelihood	Severity	Risk Rating		Likelihood	Severity	Risk Rating
						unable to use stairs. Standard University evacuation procedures will be followed.			
Lack of space for visitors to eat packed lunch	Visitors	The first floor circulation areas will be allocated for visitors to eat packed lunches. Weather permitting, many will eat outside.	1	2	2	At previous events this arrangement has been successful and take-up of the space has been limited.	1	2	2
Accumulation of rubbish	Everyone		2	1	2	We will liaise with FM over cleaning. Student helpers will help clear up regularly and will be equipped with rubber gloves and refuse sacks. FM have agreed to employ an extra cleaner on both days of the Festival.	1	1	1
Objects falling from trolleys	Staff and student helpers	Care will be taken in loading and moving trolleys. Porters will be used whenever possible.	1	3	3	Student ambassadors working with trolleys will be briefed on safety issues. Trolleys will only be moved outside the times when visitors are present.	1	3	3
Theft of materials	Staff, student helpers		2	2	4	Staff, students and presenters will be able to leave valuables in a locked room.	1	1	1

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			Likelihood	Severity	Risk Rating		Likelihood	Severity	Risk Rating
Lack of cleaning in toilet facilities	Everyone	In view of the large number of visitors there will be pressure on toilet facilities roughly equivalent to that in normal teaching times.	2	2	4	We will liaise with FM to ensure regular cleaning of toilets commensurate with the number of visitors. FM have agreed to employ an extra cleaner on both days of the Festival.	1	2	2
Emergency Evacuation	Everyone		1	3	3	All activity leaders will be briefed in emergency procedures	1	2	2

Person(s) completing this assessment:

(Person carrying out or managing the activity day-to-day)

Name Title Signature Date

Other person(s) commenting on this assessment (where required under Faculty/Directorate arrangements)

(Line Manager or Supervisor responsible for the activity, others involved in the decision-making process, others advising on the activity eg Health & Safety Manager, Health & Safety Local Officer)

Name Title Signature Date

Person approving this assessment:

(Person with overall responsibility for the activity e.g. Faculty Operating Officer/Director of Professional Service, Senior Academic or Manager)

Name Title Signature Date

Review of assessment, and revision if necessary

(For continuing work: the assessment must be reviewed for each visit in a series; when there are significant changes to work materials, equipment, methods, location or people involved; and if there are accidents, near misses or complaints associated with the work. If none of these apply, the assessment must be reviewed at least annually)

REVIEW DATE	--/--/----	--/--/----	--/--/----	--/--/----
Name of reviewer				
Signature				
No revisions made				
Changes to activity, hazards, precautions or risks noted in text.				

Appendix 1 – Risk Matrix

The hazards identified within the risk assessment should be assigned a risk rating – this should be assigned for any control measures which are currently in place and any further control measures which will be required.

You should assign a value for the likelihood of an incident occurring based on the hazard from 1 to 5 and a value for the severity / impact of the hazard from 1 to 5. These should then be multiplied together to give a final risk rating e.g. 3 x 2 = 6.

IMPACT	5 CATASTROPHIC	5	10	15	20	25
	4 MAJOR	4	8	12	16	20
	3 SERIOUS	3	6	9	12	15
	2 MODERATE	2	4	6	8	10
	1 MINOR	1	2	3	4	5
		1 RARE	2 UNLIKELY	3 POSSIBLE	4 LIKELY	5 ALMOST CERTAIN
LIKELIHOOD						

Risk score = likelihood of the hazard to cause harm x impact		
High	Medium	Low
<p>Rating 15 or more Immediate action is required to control and/or lower the level of risk. Exposure to the identified hazard is prohibited or severely restricted.</p>	<p>Rating 8 - 12 Urgent review of the equipment, activities, system of work within the workplace with the aim of lowering the risk to the next level.</p>	<p>Rating 1 – 6 Usually, no further action will be required except for monitoring to ensure the risk does not change. However, if it is possible to reduce the risk levels still further, by using controls that are “reasonably practicable”, then this should be done.</p>