

GLC – Tilbury Pioneer Academy Flood Warning and Evacuation Plan

This Policy was ratified by the Board of Directors on:	Autumn 2023
This Policy will be reviewed by the Board of Directors on:	Autumn 2025

GLC Mission Statement

The GLC’s mission is to develop active and thriving citizens within a diverse, truly fair and equal community.

This will be achieved through:

- High quality teaching that deliberately develops competencies of curiosity, creativity, communication and critical-thinking;
- An inspiring and meaningful curriculum;
- The development of productive relationships by instilling the values of compassion, resilience, responsibility and aspiration to prepare our young people for learning and life;
- A commitment to the wellbeing of our staff;
- A culture of professional generosity, collaboration, challenge and support throughout the GLC;
- The development of effective external partnerships for the benefit and wellbeing of our community.

Equalities Statement

The GLC’s commitment to equality is enshrined in our mission statement to develop ‘active and thriving citizens within a diverse, truly fair and equal community’.

We are a vibrant, innovative and successful organisation: we work hard to be the place of choice to work and to learn. Across the 5 academies of the GLC, we pledge that everyone enjoys an equality of opportunity. We work tirelessly to ensure that individual characteristics including age, ethnicity, socio-economic background, academic ability, disability, gender, religious beliefs, sexual orientation are not discriminated against in any way. We create inclusive environments characterised by mutual respect where difference is celebrated.

Tilbury Pioneer Academy

The Gateway Learning Community [GLC]

KS2 Four-Classroom Block

FLOOD WARNING AND EVACUATION PLAN

Autumn 2023

Introduction

This Document has been developed as a result of Tilbury Pioneer Academy designated as a site wholly within Flood Zone 3a, as highlighted by the Environmental Agency and is based on the Site Flood Risk Assessment dated December 2013, using data from the Tilbury Pioneer Academy site.

This document should be used in conjunction with the GLC's Health and Safety and Critical Incident Policies.

Potential Sources of Flooding

Flooding From Rivers

Flooding from tidal events on the River Thames form a significant risk to flooding of the site however as the River is tidal at Tilbury, this source of flooding is described in more detail below within the Flooding from the Sea section.

In the event of a 1:200 year fluvial event the site lies within the severe hazard area. In a 1:1000 year fluvial event, the site still lies within the severe hazard area designation, however some other portions of the school curtilage lie within the extreme hazard area designation. It is appropriate to note that for both 1:200 and 1:1000 year fluvial events, almost the entirety of Tilbury lies within the severe hazard area.

Flooding From the Sea

Flooding from tidal events on the River Thames form a significant risk to flooding of the site. The site is close to the northern bank of the River Thames (approximately 2 km) and has a ground level below typical mean high water springs level. The site is currently protected by tidal defenses (to a 1:1000 year event) however should these fail or be breached, the site is at risk of flooding from the sea.

Flooding From Land

The level 1 SFRA provides information regarding areas susceptible to surface water flooding; the site lies outside of the area susceptible to flooding.

Flooding From Groundwater

The site is located in an area of low susceptibility to groundwater flooding.

Flooding from Sewers

The existing surface water sewer network collects the storm water flows from the hard surfaced areas of the site and discharges them to a public sewer. Whilst it is not currently known the capacity of the existing public sewer network it can be anticipated that a typical design return period of 1 in 30 years has been applied. There is therefore a risk of flooding to the site occurring should a rainfall event greater than the 1 in 30 year event be experienced.

The Level 1 SFRA also highlights that the South Essex Catchment Flood Management Plan records incidents of sewer flooding in the Tilbury area. These are identified as related to inadequate

maintenance of the sewer infrastructure leading to blockages or systems being overwhelmed by the quantity of discharge. The map from the Level 1 SFRA indicates 6 recorded incidents of sewer flooding events. None of these are located on or immediately adjacent to the site.

Flooding from Reservoirs, Canals and Other Artificial Sources

EA data indicates that although some areas of the school curtilage are susceptible to flooding in the event of a reservoir failure, the site itself is not within this hazard area.

Flood Risk

The River Thames poses the greatest flood risk. The section of the Thames within the Thurrock area has a continuous form of flood defense from the River Mardyke in the west to Fobbing Horse Barrier in the east. The defenses along the Thames frontage of Thurrock are predominantly defined as 'hard defenses', and provide a high but varying standard of defense offering protection up to, and in excess of, a 1 in 1000-year level.

Extreme water levels can be generated in the Thames Estuary by intense low-pressure systems over the North Sea, which artificially increase sea levels due to the pressure differential. This effect, combined with wind and wave action, is a storm surge. The height of the surge typically increases as the weather system travels south. The highest water levels in the North Sea will be generated when storm surges are combined with high spring tides generated by gravitational forces. Tidal barriers have been constructed at the mouth of Tilbury docks to protect this area, much of which is below mean high tide level. Low lying areas around Tilbury have numerous pumping stations to drain the marsh areas, as well as a collection of drainage channels. This arterial drain-work may experience flooding as a result of high rainfall, blocked channels, rainfall exceeding pump capacity or pump failure.^[1] Thurrock's recommended flood risk management policy for the area is categorized as P4: to take further action to sustain the current level of flood risk into the future, responding to the potential increases in risk from urban development, land use change and climate change.

See detailed map below



MAP LEGEND

Dark Blue: Flooding from rivers or sea without defenses

Light Blue: Extent of extreme flood

Pink broken lines: Flood defenses, not all may be shown

Hatching: Areas benefiting from flood defenses, not all may be shown

The Level 2 SFRA investigated the impacts of a breach of the River Thames flood defenses and the residual risk to development currently protected by the defenses. The nearest breach locations considered in the Level 2 SFRA were 20m wide breaches at 564832E, 175210N (C006) and 566216E, 175373N (C007).

The output from this breach modelling provided the following information for the Tilbury Pioneer Academy site:

- *Approximate Maximum flood depth = 1.4 m for 1 in 200 year tidal event (2109)*
- *Approximate Maximum flood depth = 2.8 m for 1 in 1000 year tidal event (2109)*
- **Moderate hazard** (with areas of Low and Severe) rating for 1 in 200 year tidal event (2009)
- **Extreme hazard** rating for 1 in 200 year tidal event (2109)
- **Significant hazard** rating for 1 in 1000 year tidal event (2009)
- **Extreme hazard** rating for 1 in 1000 year tidal event (2109)
- *Time to inundation = 16 – 20 hours (with a small area of 4 – 8 hours) for 1 in 200 year tidal event (2109)*
- *Time to inundation = 1 – 4 hours for 1 in 1000 year tidal event (2109)* [SEP]

Emergency Plan for Flooding

There are four levels of flood warnings for river, coastal and tidal flooding; which may be issued by the Environmental Agency in any order. A flood alert could be followed by a severe flood warning. However, the absence of these warnings does not mean that there is no threat of flooding from other sources such as flash flooding and tidal.

Flood Warning Areas

Flood warnings are issued to specific areas, as this ensures that each community receives the information that is most relevant and appropriate to them. For Thurrock there are two Flood Alert Areas, one for coastal flooding and one for fluvial flooding.

FLOOD LINE WARNINGS

The school is registered with the Environmental Agency's Floodline warning service. These are the points of contact registered to receive notification of flood alerts

- **MAIN SCHOOL OFFICE:** 01375 488420

Designated Flood Officers are:

- **Jo Allison (SSM)** 07548 232365
- **Jo Jones (GLC Finance Director):** 01375 489034

There will always be a designated flood officer on duty, aware of higher risk periods such as Spring Tide and who will be responsible for monitoring weather conditions and flood warnings during these periods.

The CEO, Head of School and Senior Leadership Team will also obtain further information by consulting the environmental Agency Website www.environment-agency.gov.uk/flood, Meteorological office www.metoffice.gov.uk and BBC Essex 103,5/95.3 FM.

The Environmental Agency aims to issue Flood Alerts a minimum of 12 hours prior to a tidal event, and a minimum 2 hours prior to a river flood event. Added to this, the Met Office may give severe weather warnings.

Preparation for a flood event

Information provided by the Environment Agency indicates that flooding at the Academy would either be through a gradual rise in the Thames, breaching defenses, or percolation through the local silt and via drainage systems. This means that flooding would be gradual, with advance warning as the Thames rises. This plan is written in that context.

The GLC has been registered with the Environment Agency's Flood Line to receive automatic notifications. The GLC will regularly monitor all communications at times of high alert.

Flood Alert warnings issued by the Environmental Agency may either come directly to the GLC, or through other agencies such as the Police, local radio, or Thurrock Council. It is important therefore that

- All staff are aware of the plan, understand it and are fully briefed on the risk assessment.
- Designated Flood officers implement the evacuation plan.
- The GLC has the list of key contact numbers to hand.
- Site staff are familiar with how to turn off the utilities and their location.

- An emergency first aid kit, torches and batteries are available at the Academy.
- A dedicated landline, and mobile phones are available in an emergency.

Where a warning is given to the GLC about the risk of flooding, the predicted extent of the flood alongside the time available before it arrives, will determine the GLC's course of action.

- Inform the Local Authority Team Coordinator and apprise them of the situation. Seek advice on whether to close the school or not, in consultation with the CEO and the Chair of the Board.
- Decide whether or not to send pupils home early; again, in consultation with the CEO.
- Decide whether to close down all, or sections of the Academy and, where appropriate, notify students to stay at home via local radio, website or phone.
- Implement procedures to safeguard life, plant and equipment. Having ensured pupils are safe through the use of the above measures, move equipment to a safe place if appropriate to do so; and where time allows, arrange for utilities to be turned off if advised to do so by the emergency services or LA team coordinator.
- Seek immediate advice on when to re-open the Academy, in consultation with the emergency services.
- Implement procedures to resume Academy activities as quickly as possible. ^[L]_[SEP]

In the event of immediate flooding outside

In the unlikely event of immediate flooding without advance notice whilst the children are in attendance at the Academy, the following actions would occur:

- The Academy fire bell will be let off and pupils will move to their muster points.
- Emergency services will be notified of the evacuation by the chief fire officer or Head of School.
- If safe to do so, the children will make their way to the nearest Emergency Safe Refuge at the Gateway Academy which has a main building level above the maximum flood level. If this is not safe, pupils will be taken to GLC- Herringham Primary Academy in Chadwell.
 - Mobile evacuation by car or minibus of all disabled or immobile staff or pupils to the Gateway Academy [or Herringham as appropriate]. This journey typically takes approximately 10 minutes.
 - Remaining pupils will walk with their teachers and designated support staff to the Gateway Academy [or Herringham as appropriate]. This walk will typically take approximately 15 minutes [30 minutes to Herringham]. Two members of admin staff will go ahead with pupil contact details.
 - The notification of the flood closure will be given by GLC website, text, telephone and Essex radio to parent / carers to collect pupils from Gateway.
 - As Gateway is the designated safe refuge centre and homes may be inaccessible, pupils and parent / carers will be kept at Gateway Academy until the all clear is given. This will be covered by the Council's Disaster Plan and DoE guidance
- If unable to do so, they are to remain in their classrooms with all doors and windows closed to prevent potential ingress of water from outside.
- The Head of School, or Senior Managers in the absence of the Head, will telephone the Emergency services so relevant appraisal of the situation can be made; and adequate support given quickly.
- As soon as the safety of all pupils has been secured to the best of the school's ability, the school will inform parents in order to reassure them, and to inform them of any instructions they need in terms of transporting pupils' home. It may not be safe for parents to come to the school immediately, and this must be taken into account.
- In the event of a wider flood, where parents may not be able to access the school, the pupils will be kept at school until such time when the Emergency Services deem it appropriate and safe for pupils to be transported off site by parents, carers or any other method as advised by Emergency Services. The LA Team Coordinator will be kept informed of any decision made.

- Where parents and carers are unable to be contacted, the school will remain in charge, and look to keep those pupils at school until such a time as they can safely be delivered home. During this period, the on-site coordinator of events will be the Head Teacher, or in the absence of the Head, the Deputy Head. If both Head and Deputy are off site, Senior Management Team will take responsibility for the coordination, and will contact the Head Teacher, Deputy Head and Chair of Governors in that order.

During this time, appropriate actions will be taken as per the requirements of the Thurrock Major Emergency Plan.

Longer Term Issues

There can be considerable effects of an involvement in a major incident, such as a flood, and we as a school recognise this, should staff and pupils be subjected to a flood during school time, thought would be given to

- Working with staff to monitor pupils, and providing pastoral support.
- Clarifying procedures to refer any affected pupils for individual help.
- Be aware that some staff too may also require help or support in the longer term.
- Once flooding has ended, a full structural, health and safety audit of the premises will be carried out and a repair schedule prepared.
- The ICT manager will be responsible for computer backup and sensitive materials. This would include key child protection files.
- All salvageable equipment and stock will be relocated to partner GLC schools or secure storage.
- During the period of closure, alternative accommodation will be sought at partner GLC schools until the building is usable again.