



# City Batteries Ltd

Albion Yard, Manor Road, Erith. DA8 2AD

## Flood Prevention Plan

### Introduction

City Batteries Ltd, Albion Yard, Manor Road, Erith, is situated in Flood Zones 2 and 3. Although historically there is no history of the site flooding over the previous 30 years, the site is close to the River Thames and so flooding could be a potential risk.

This Flood Prevention Plan details how the site will approach mitigating the impact of flooding and the risk assessments, mitigation strategies and recovery plans in place.

**Appendix 1** to this Plan: Site Layout and storage plan

**Appendix 2** to this Plan: Site Drainage Plan.

**Appendix 3** to this Plan: Overall Site Plan.

**Appendix 4** to this Plan: A Map of the Area showing the site location.

**Appendix 5** to this Plan: Flood Risk Assessment.

### Flood Prevention, Protection and Preparation

#### The Site

The boundary of the site is surrounded by a 6-foot wall that is composed of a brick construction. The site also houses a warehouse that is of brick construction. Such constructions act as a protective bund and reduce the likelihood of rising flood water from the river/sea. The perimeter wall also acts as a protective bund should the site need to retain liquids for any reason (e.g. fire or spillage water in the event of an accident).

The base (surface) of the site is composed of non-porous concrete therefore reducing the likelihood of rising ground water entering the site. In addition, the entrance to the site is 8 feet above the main floor level on site. This means that any flood water would need to reach this level before flooding occurred on site.

The toilet block and access to the main drainage system (located at the entrance to the site) is 8 feet above the main level of the site preventing flood water from entering the main drainage system.

The loading/ offloading area on site has a sealed drainage system with a large interceptor. The interceptor is checked regularly and cleaned to prevent it from overflowing. There is no waste stored in this area.

#### Site Location

The site is located in East Erith, Kent and is within the London Borough of Bexley. The postcode for the site is DA8 2AD with grid reference TQ 520 777. The site is situated to the North of Manor Road and covers an "L" shaped footprint.





# City Batteries Ltd

Albion Yard, Manor Road, Erith. DA8 2AD

The site is situated approximately 200 meters to the south of the River Thames and lies to the west of the river Darent which is a tributary to the River Thames.

In general, the topography of the site runs from Manor Road down to the yard area located at the front of the site. The entrance to the site, just off Manor Road, has a recorded ground level of 7.1 meters and the ground levels slope from Manor Road down to the site. The entrance level is approximately 6.6m AOD sloping down to a level of approximately 4.7 AOD.

## Site Drainage

The site has a sealed drainage system that contains any spillages or incidents on site. The main sewer is on the upper level of the site, over 2 meters above the working level. This helps prevent flood water entering the main sewer system. Weekly checks are carried out on the tanks and interceptors located on site and all records are kept in the safety log.

## Product

As the site only accepts Redundant Lead Acid Batteries and non-ferrous metal, there are no vulnerable products stored on site.

All wet cell batteries that are brought on to site are stored in sealed Dolav boxes and therefore, in the event of a flood on site the batteries would be protected. This is because the boxes would be too heavy to float and so all hazardous waste contained within the boxes would remain within the boxes, negating any cross-contamination. All wet cell batteries, following acceptance on site (in accordance with the site's waste acceptance procedure) are drained of acid in preparation for the breaking process. The acid drained from the batteries is stored in two sealed acid tanks located by the breaking shed. Again, the sealed acid storage tanks are emptied and monitored regularly. Should there be a flood on site, such containers are sealed and so the hazardous waste contained inside would be unable to escape, negating any cross-contamination.

All dry cell (Gel) batteries on site are stored on pallets and are shrink wrapped. Dry Cell batteries by their nature are sealed which prevents the risk of any cross-contamination.

All general waste produced by the site is collected and stored in a 40-yard skip and is emptied regularly. In the unlikely event of flooding on site, the general waste would remain contained in the skip.

## **Site Specific Flood Hazards**

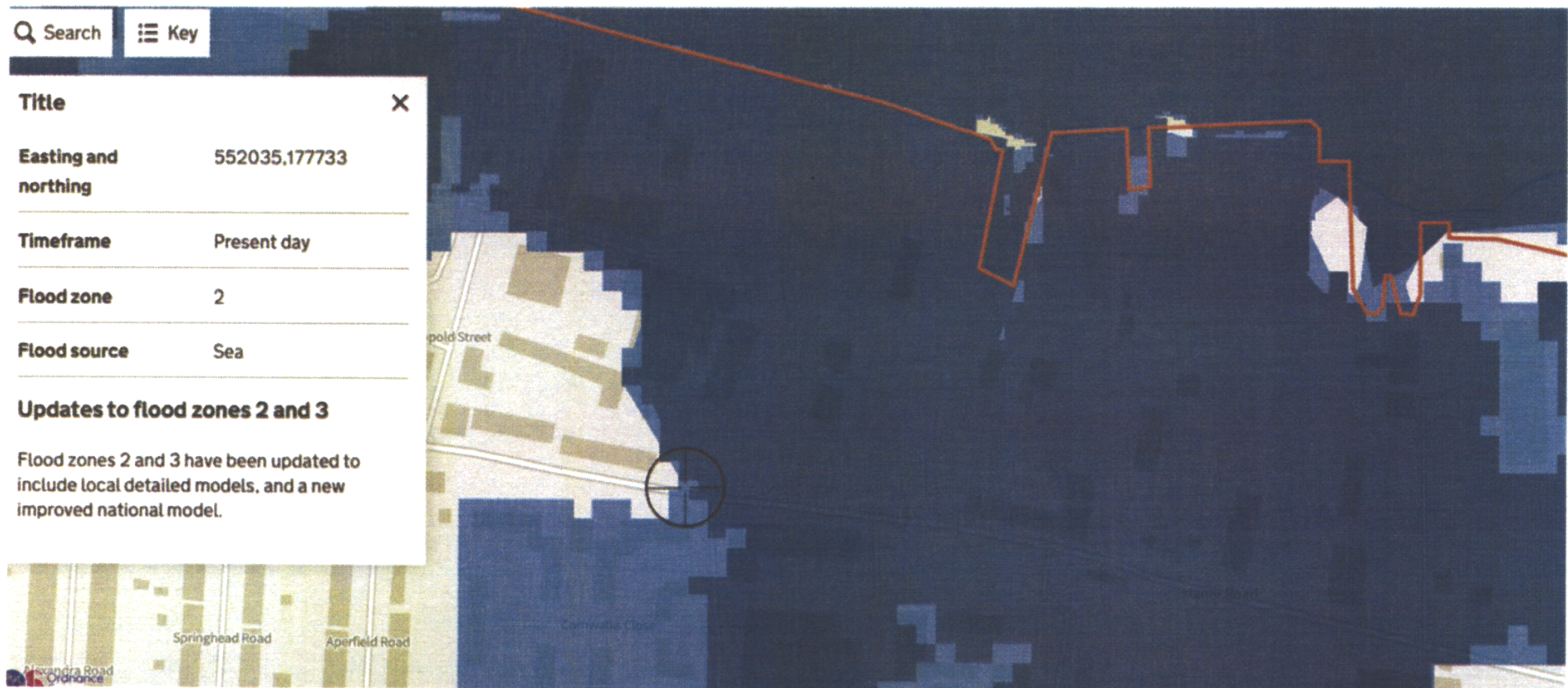
The site lies within Flood Zones 2 to 3 with the main risk of flooding coming from a fluvial (River) source.





# City Batteries Ltd

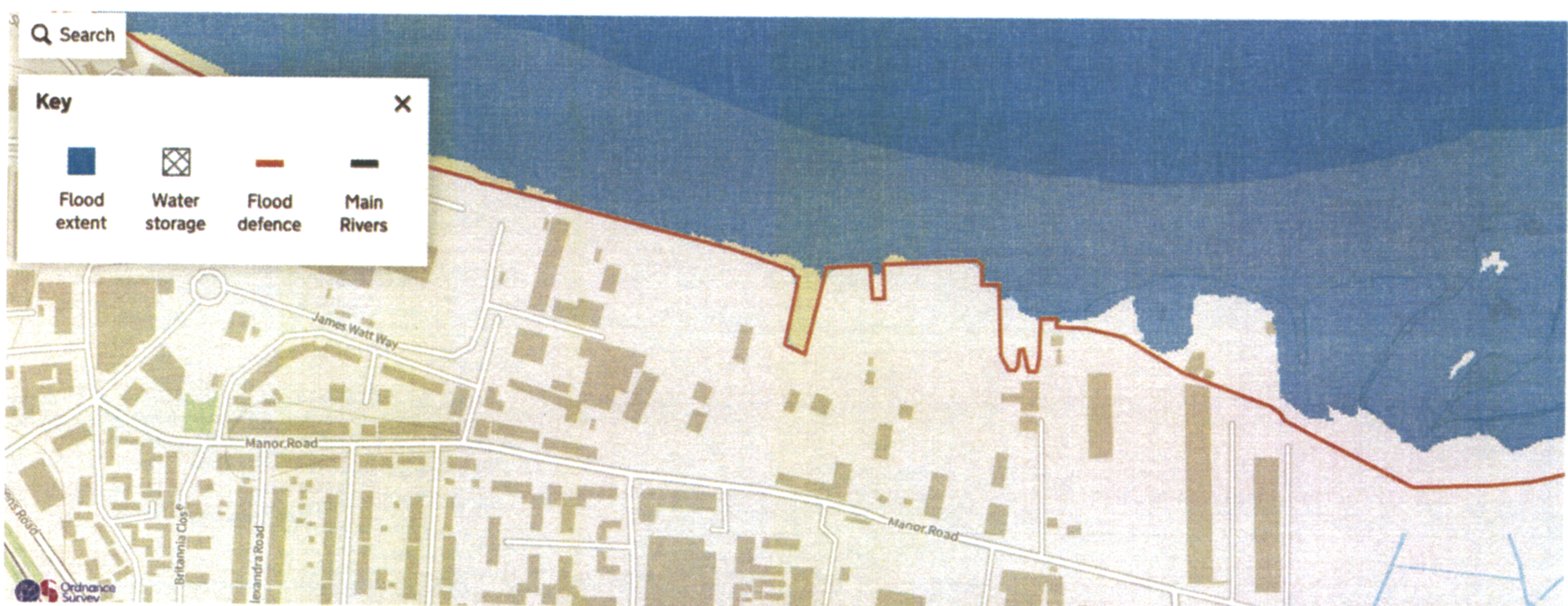
Albion Yard, Manor Road, Erith. DA8 2AD



## Fluvial Flooding

Flood model data via the Government's existing flood modelling data shows that whilst the site falls within Flood Zones 2 and 3, the annual likelihood of flooding from rivers and sea 1 in 30 is very unlikely.

The main risk of flooding comes from the River Thames and as shown on the Government's existing flood modelling data, the River Thames has good flood defenses in place which significantly reduces the risk of flooding from the fluvial source.



## Flood Risk Management

### Evacuation Procedures in the event of Flooding

There are flood defences present on the River Thames as highlighted above. These defences will provide protection against tidal flooding. The topography of the site provides natural defences against rising flood water which allows us to use the main entrance (leading to Manor Road) as the site's primary route of escape should the site need to be evacuated.

The site's evacuation procedure is as follows:





# City Batteries Ltd

Albion Yard, Manor Road, Erith. DA8 2AD

- Turn off all power supplies to Plant, Machinery and administration blocks.
- Leave the area as quickly as possible and make your way to the fire evacuation point at the entrance to the site (on Manor Road).
- Complete roll call to ensure all personnel and visitors have left the site. Where individuals are missing, do not re-enter the site to locate them until it is safe to do so and call the emergency services immediately.
- Once the site is clear, secure the front gates and move to a safe position.
- Inform the Environment Agency and emergency services of the flood and the location.
- Provide contact details to the agencies with personnel who have access to the site.
- Do not return to the site until permission is granted from the emergency services.

## Flood Control Measures

- A 6-foot wall surrounding the premises with a composition of brick and cement.
- The base of flooring on site is non-porous and so, this reduces the risk of ground water entering the site.
- Entrance to the site is 8 feet above site level and so which is where the main drainage system is located.
- Goods on site are stored in leakproof and sealed containers so as to avoid any cross-contamination in the event of flooding.
- Pumping kits are located on site so in the event of any flooding any excess water can be pumped from site.

## Flood Mitigation Measures

- The site benefits from a Site Flood Plan, A Flood Risk Assessment, A Flood Prevention Plan and training is undertaken by all staff on site. Such training is recorded in our training matrix.
- The site is subscribed to the Environment Agency's flood warning service. During exceptional weather conditions the 5-day flood risk forecast (available on the GOV.uk website) will be checked and monitored regularly. Where there is an imminent threat of flooding on site, this plan will be used to reduce the effects of flooding damage to stock and safety of personnel on site.

## **Flood Warning Service**

### Types of Warnings

The Flood Warning Service sets out three types of flood warnings:

1. Flood Alert – this is normally communicated anywhere from 2 hours to 2 days in advance of any flooding and therefore, given the possibility of flooding, the mitigating steps set out in this plan should be taken.
2. Flood Warning – this is normally communicated anywhere from 30 minutes to 1 day in advance of potential flooding and means that flooding is expected. In this case, imminent action is required.





# City Batteries Ltd

Albion Yard, Manor Road, Erith. DA8 2AD

3. Severe Flood Warning – this is normally communicated when a flood is imminent and there is a significant threat to life. **In the event of such a warning, all staff should be evacuated from site and the steps taken in this plan should be followed.**

## What to do in the event of each warning

### 1. Flood Alert:

- a. **Staff need to ensure that, in the event it is not, all material is stored according to the storage plan**
- b. All wet cells stored in a leak proof container to reduce the likelihood of cross-contamination with the flood water.
- c. All plant and machinery that can be moved should be moved/ stored to a position on site that is above the expected flood level.
- d. Interceptors for the acid tank should be pumped into the sealed tanks and left empty.
- e. All systems for electronic IT equipment should be backed up on storage devices.
- f. Prepare a flood kit with essential items.
- g. Monitor local water levels and the flood forecast on the Government's website.
- h. Put all flood prevention equipment in place.

### 2. Flood Warning:

- a. **Staff need to ensure that, in the event it is not, all material is stored according to the storage plan**
- b. All wet cells stored in a leak proof container to reduce the likelihood of cross-contamination with the flood water.
- c. All plant and machinery that can be moved should be moved/ stored to a position on site that is above the expected flood level.
- d. Interceptors for the acid tank should be pumped into the sealed tanks and left empty.
- e. Where safe to do so, all electrical equipment should be stored in watertight containers.
- f. All systems should be backed up on to a storage device.
- g. **Move all staff and customers to a safe place.**
- h. **Turn off electricity and the water supply to the site if it is safe to do so.**
- i. Put all flood prevention equipment in place.

### 3. Sever Flood Warning:

- a. **Turn off all power to the site, if it is safe to do so.**
- b. Close the warehouse doors within the confines of the buildings.
- c. If time and if safe to do so, carry out a quick inspection to ensure all materials are stored in the correct areas and in the correct way.
- d. Where material is in transit, it should be placed in the emergency storage area as shown on the site plan.





# City Batteries Ltd

Albion Yard, Manor Road, Erith. DA8 2AD

- e. If there is no time, personnel should all make their way to the fire evacuation point at the entrance to the site) and leave everything.
  - f. **All staff and visitors should stay in a safe place with a means of escape.**
  - g. Co-operate with the emergency services.
  - h. **Call 999 if any staff and/ or visitors are in immediate danger.**
  - i. Follow the emergency evacuation procedure where necessary.
4. Warnings no longer in force:
- a. This means that no further flooding is expected in the area.
  - b. If flooding has occurred, make sure it has receded to a safe level on site and only enter once the emergency services and the Environment Agency have advised that it is safe to do so.
  - c. Do not touch any machinery or plant after flooding. The company will, through employing the relevant people, ensure that the site and all machinery/ plant is safe to use and that the site is free from any cross-contamination **before staff and visitors are invited back on to site.**

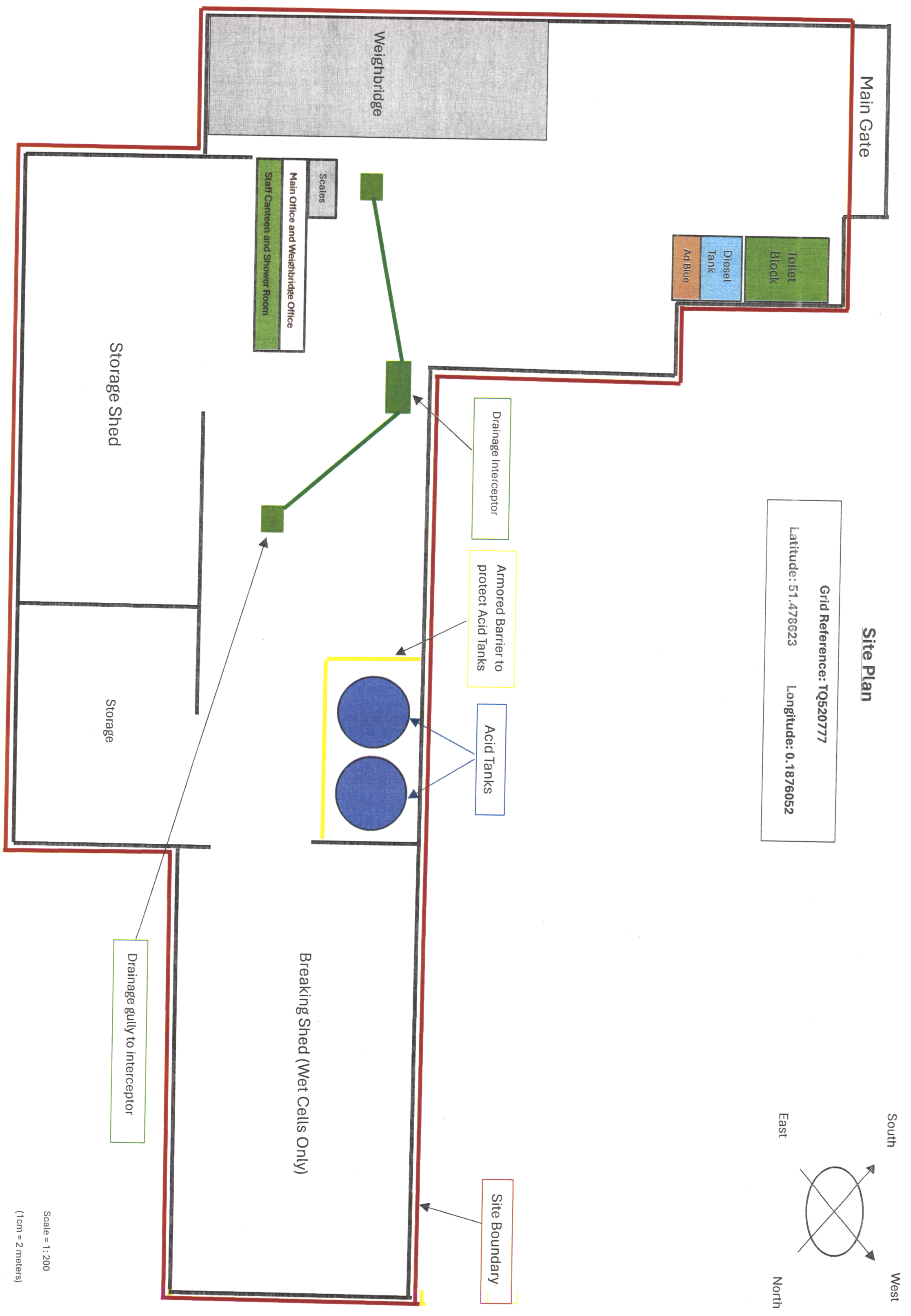


Appendix 1





# Appendix 2



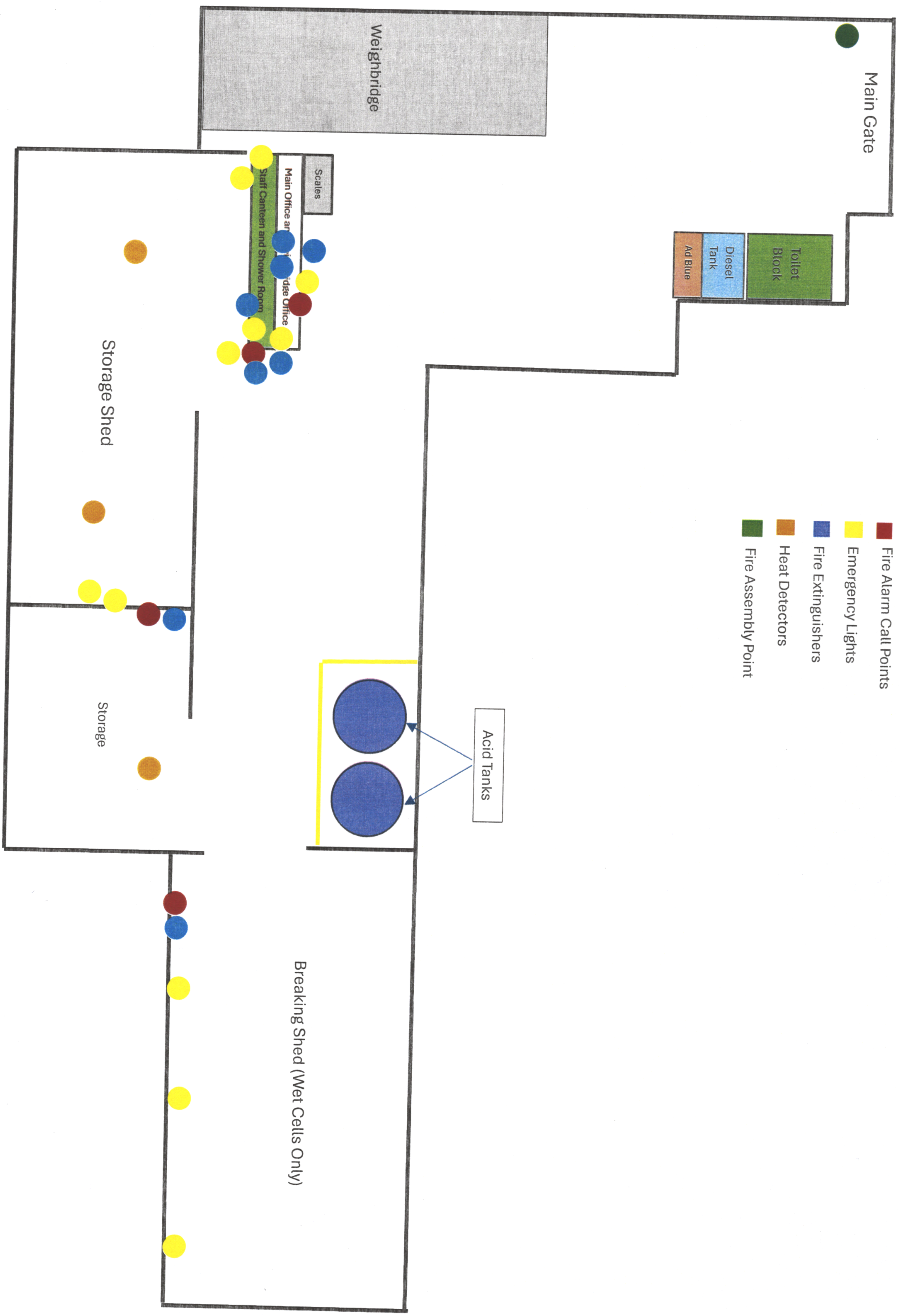
Scale = 1:200

(1cm = 2 meters)



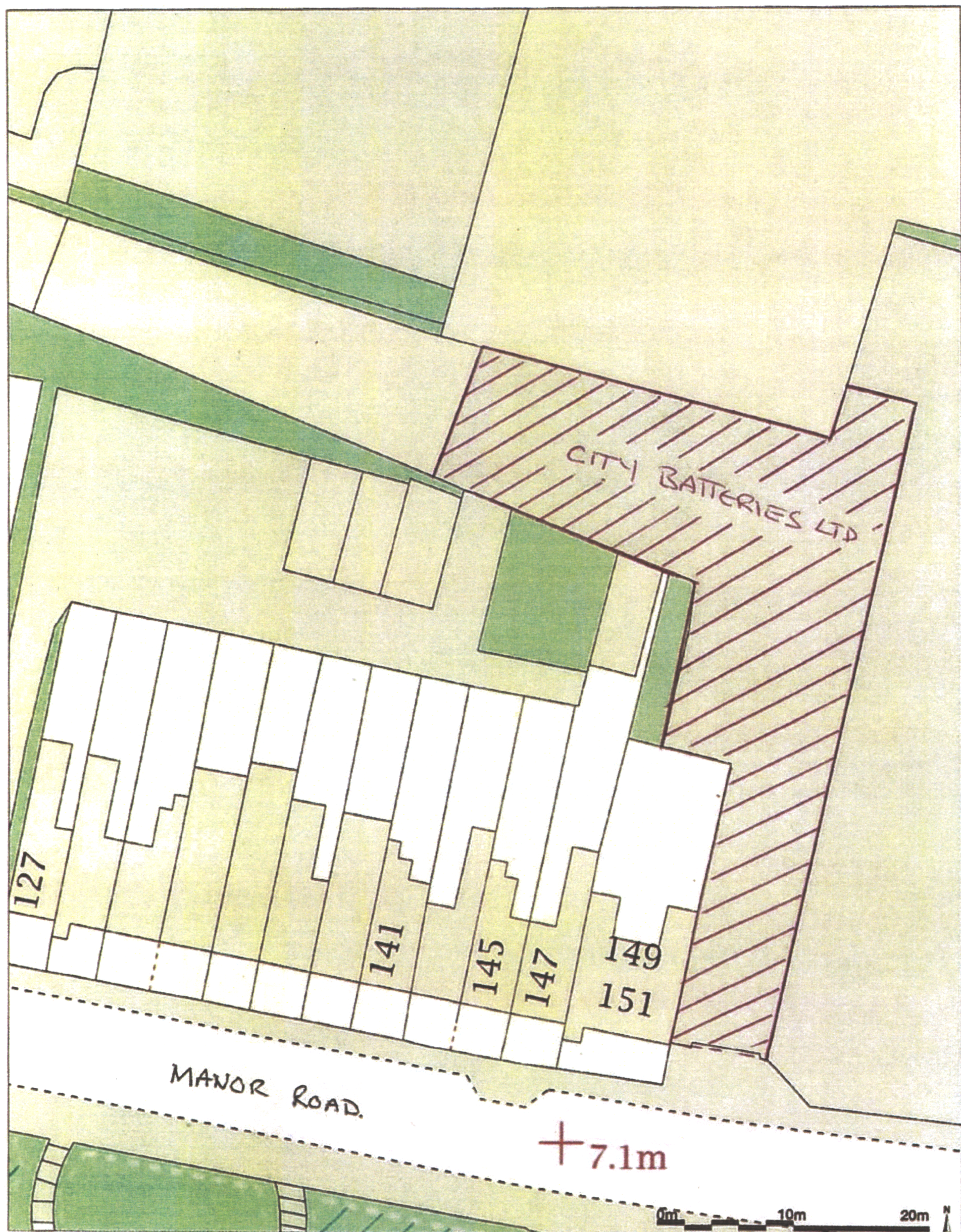
# Appendix 3

## Site Safety Call Points Plan





# Appendix 4







**City Batteries Ltd**  
Albion Yard, Manor Road, Erith. DA8 2AD

<b>Risk Assessment for: Flood Risk</b>				<b>Risk Assessment number: CBL - FRA1</b>				
<b>Created by:</b> Andrew Milner		<b>Location:</b> Albion Yard, Manor Road, Erith		<b>Date:</b> 02/01/2025				
<p>The Site is located close to the River Thames. The flood defences in the area have been increased over the years with no recorded flooding in the area for in excess of 35 years. The site is enclosed by a 6 foot wall to the south and North with brick built warehousing to the East, this creates a barrier for any rising flood water from the river. All staff are trained in emergency procedures including what to do in the event of a flood. The site only accepts Lead acid batteries and non-ferrous metals that are stored in accordance with our permit and within the confines of the warehouse. Drained acid from the batteries and any water used is collected and stored in banded tanks to be transported off site for treatment. The natural lay of the land and surrounding buildings creates a natural barrier against rising water in the event of a severe flood.</p>								
Hazards Identified <small>Hazards that can be reasonably expected whilst completing the task in hand e.g slips trips, vehicle movements etc.</small>	Who might be harmed and how?	Control Measures in place <small>List of controls already in place including physical safeguards, training and PPE.</small>	Risk Level (likelihood x Severity)			Action by who	Action by when	Action complete on
			High	Med	Low			
Fast rising flood water	City Batteries' Staff, Visitors and members of the public	All staff have been trained in the evacuation procedure. City batteries are enrolled in the government's flood warning system. During periods of extreme weather river and tidal waters will be checked regularly			1 x 4			



Polluted Water	City Batteries' Staff, Visitors and members of the public	All staff have been trained in the evacuation procedure. City batteries are enrolled in the government's flood warning system. During periods of extreme weather river and tidal waters will be checked regularly. The Mains sewer is located 2 meters above the working area. storage tanks are fully sealed and are regularly emptied.				1 x 3			
Trip Hazards	City Batteries' Staff, Visitors and members of the public	Practice good housekeeping. All walkways are regularly checked to ensure they are free from trip hazards, especially with regards to walkways and stairways. All staff undertake regular good housekeeping training which is recorded on the company's staff training matrix.				2 x 1 = (3)			
Electrical shocks	City Batteries' Employees	Electrical hard wiring is fully tested. In the event of flooding, all electrical equipment to be turned off and, in the event safe to do so, to be moved to a level above the flood level.				2 x 2 = (4)			