This is the publicly accessible procedure portion.

1-1 PURPOSE & SCOPE

Scope
This procedure covers the evaluation, ongoing impacts assessment, notification and engagement in the event of a major, unplanned power loss at the campus resulting in the requirement that a significant number of standby diesel generators are required to run on the site. ***This procedure is separate to any H&S related emergency operating procedures (EOP) and risk assessments for on-site staff.*** *The AQ procedure also contains useful* ***assessment tools should a planned maintenance event similarly require a significant number of standby diesel generators to operate****. Key information for the outage is provided at the beginning of the form to best enable coordination and assessment. It is possible that the protocol could be initiated by external bodies like the EA or local authority before the action plan itself has been enacted locally.*

1-2 SITE INFORMATION

Permit Number	EPR/EP3507SL
Address	Docklands Technical Centres Coriander Avenue, London, E14 2AA 1 Paul Julius Close, Blackwall Way, Poplar, London, E14 2EH
Grid coordinates (x, y)	Coriander Avenue: 538775, 181080 1 Paul Julius Close: 538635, 180610

1-3 HEADLINE SCALE OF STANDBY ON SITE

MW Electrical	~109 MWe
Permitted MW thermal	~278 MWth
Installed number of standby engines	28 installed / 31 Permitted (41 installed when West 2 completed)
Resilience provision for the engines	N+1 per data hall
Site location	Urban, campus, in central London.
Stack Arrangement (indicative or average height + characteristic)	North Building: 39.1m East Building: 27.3m West Building: 28.5m North 2 Building: 62.0m South Building: 20.0m West 2 Building: 65.0m All stacks are vertical, except 4 existing stacks in West Building that discharge horizontal. The stacks extend above the roof of the associated datacentre building for North, North 2 and West 2 and extend above the roof of the generator buildings for East and West. In South, the generators are located on the roof of the building and the vertical stacks terminate at the same height as the louvre.
Primary Grid connection description	The campus is connected to the following sub-stations: North Building: West Ferry Circus; Glaucus St, West Ham 2; East Building: West Ham 3 and 4; North 2 Building: West Ham/Brunswick Wharf - N10 and N11 North, S10 and S11 South West Building: West Ham/Brunswick Wharf - NO7 North, SO6 and SO7 South; South Building: Blackwall Way - SBO11 and 12, MVSW 21, 22, 23 and 24 West 2 Building: Two 132kV feeds to the site from the National Grid, either of which can serve the 'customer load'
Minimum distance to other large data centres or aggregated standby which could share the same Primary Grid connection.	Global Switch London East is approximately 20m west of West Building and 40m south of West 2 Building.
Standby Cluster? – estimated number of any off-site standby engines within 500m radius that would likely operate in a national black-start scenario	Global Switch London North – 32 MWth input Global Switch London East – 159 MWth input
Nearest sensitive/residential receptor (distance from generators)	From Coriander Avenue site: • Orchard Wharf Residential (60m east)

	• Travelodge hotel (30m east) From 1 Paul Julius Close site: • Radisson Blu Edwardian hotel (75m west) • Wingfield Court (110m east) • Proposed development (adjacent to east boundary)
Local Authority AQ management Zone	Yes – within the Tower Hamlets Air Quality Management Area (AQMA). The site is also within the Blackwall A13 East India Dock Road/Aspen Way/Blackwall Tunnel Air Quality Focus Area (AQFA).

1-4 HIERARCHY OF ENGINE NUMBERS AND ASSOCIATED OUTAGE DURATIONS OF CONCERN

Criteria	Outage Scenarios	Indicative MWth (number of gens)	Maximum 1-hour concentration (µg/m^3)	Run duration (risk of exceedance of AQ Limit Value >5%)	Run duration (risk of exceedances of AEGL-1 >5%)	Outage duration to notify as soon as possible the EA and/or local authority if event is likely to exceed[(a)]
1	Whole Site loss of power	240.8 (38)	3097	>33 hours	>1 hours	1 hour
2	Whole North Building loss of power	21.6 (5)	400	>1452 hours	Unlimited	24 hours
3	Whole East Building loss of power	17.7 (4)	2908	>37 hours	>1 hours	1 hour
4	Whole North 2 Building loss of power	44.3 (7)	1021	>184 hours	>150 hours	24 hours
5	Whole West Building loss of power	40.8 (7)	1986	>125 hours	>6 hours	6 hours
6	Whole South Building loss of power	26.4 (3)	899	>99 hours	Unlimited	24 hours
7	Whole West 2 Building loss of power	90.1(12)	222	Unlimited	Unlimited	24 hours

Table note: (a) Permit requirement is to notify EA within 24-hours of SBG emergency operation.

1-5 EXTRACTS AND REVIEW OF AIR QUALITY MODEL FOR NO_2

Criteria	Predicted Environmental Concentration NO_2		
A	Conservative peak NO_2 under worst scenario	3097	µg/m^3
B	Indicative or likely typical during prolonged outage	377.5	µg/m^3
C	Guidance distance that could be affected	See figures in Appendix A	
	Headline realistic figures (for A max above)		
D	Site load on full outage	~241	MWth
E	Fuel rate per hour (for A max above)	20.9	t/hr
F	Average NOx emission rate per generator (first hour with emissions time weighted for SCR 'warm up' in South and West 2 building)	11.1	kg/hr
	Average NOx emission rate per generator (every subsequent hour with South and West 2 building SCR fully operational)	9.0	kg/hr
G	Total NOx emission rate on full site outage (for A max above – first hour with emissions time weighted for SCR 'warm up' in South and West 2 building)	422.8	kg/hr
	Total NOx emission rate on full site outage (for A max above – every subsequent hour with South and West 2 building SCR fully operational)	342.4	kg/hr
	Key Risk Factors identified		
	Times of day	Morning 06:00 – 10:00, evening 17:00 – 19:00, and late evening/early morning 00:00 – 01:00.	
	Seasonal	No clear seasonal patterns, all seasons present a potential risk. Albeit people are more likely to be outside and have windows open during summer months.	
	Wind speed range of concern and direction	Generally lower wind speeds	South-west to West-northwest (i.e. 210 to

		<5m/s	280 degrees)
	Area prone to poor AQ alerts	Yes, within the AQMA and AQFA.	
	Local Authority known cluster	Yes, part of a cluster	

1-6 RESPONSIBILITIES

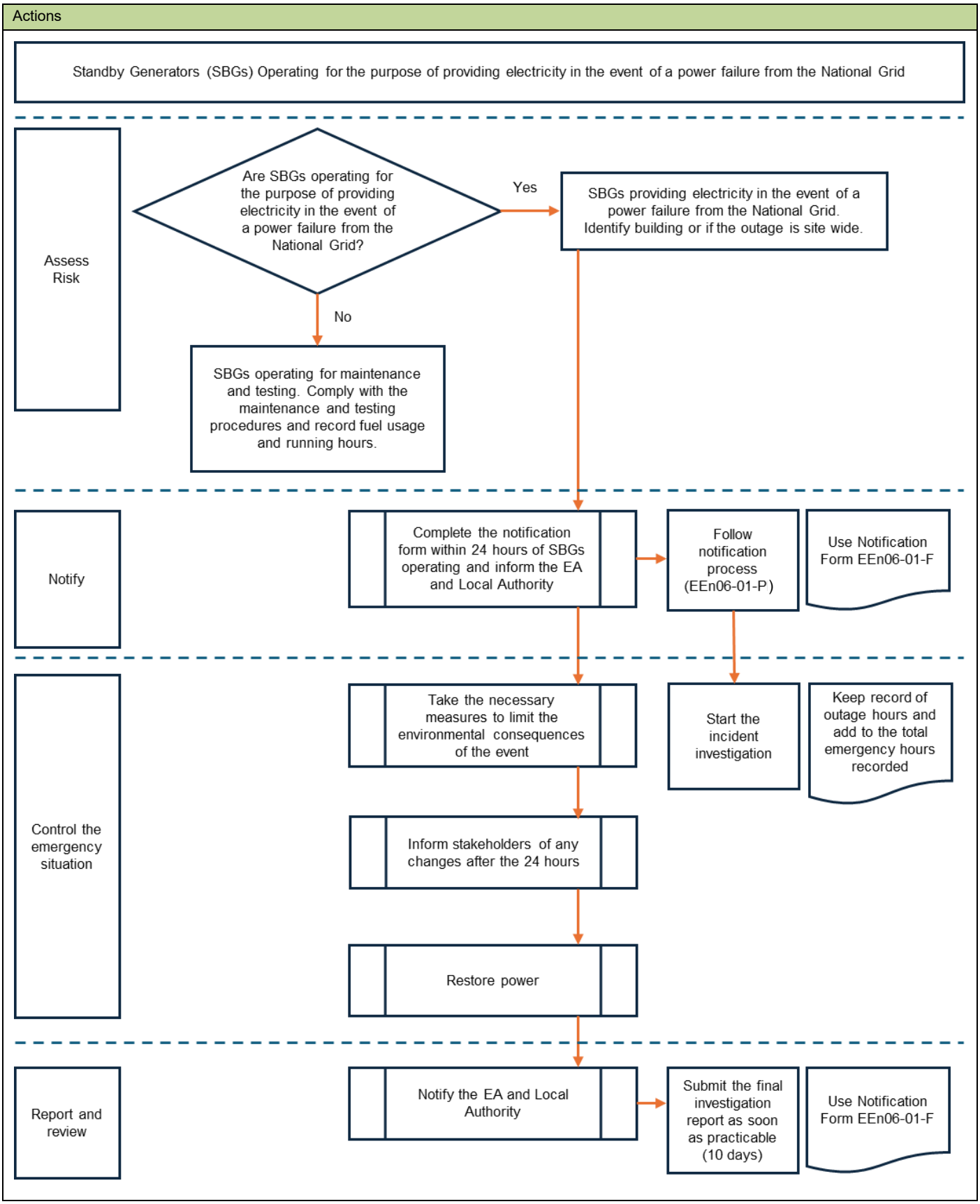
Name	Company	Description
Howard Tee	Environment Agency	Regulatory Authority
Environmental Protection	London Borough of Tower Hamlets	Local Authority

1-7 RELATED DOCUMENTATION

Document	Title	Notes
Permit EPR/EP3507SL	Docklands Technical Centre, Permit number EPR/EP3507SL	Details specific Permit procedures
Air Emissions Risk Assessment	Telehouse Docklands Data Centre	416.04438.00031 Version No: 3.0, December 2021
Air Emissions Risk Assessment	Environmental Permit Variation Application Docklands Campus	410.064698.00031 Version No: v3.0, October 2024
Air Emissions Risk Assessment	Environmental Permit Variation Application Docklands Technical Centres	410.066261.00001 Version No: v1.0, March 2026

1-8 PROCEDURES

1-8-1 THE FOLLOWING STEPS ARE TO BE FOLLOWED IN THE EVENT OF A POWER FAILURE EITHER ON-SITE LOCALLY OR UK POWER NETWORKS.



This is the publicly accessible procedure portion.

Initial assessment:

1. Has an external body advised you of complaints or concerns – use their information as appropriate i.e. feedback that a cluster is operating in a black start scenario
2. Start the incident diary – note start time of outage
3. Determine likely duration of outage initially (check with UK Power Networks/DNO, normal repair times for works internally and externally, how critical is the fault)
4. What fraction of the site standby (Table 1-4 Hierarchy of engine numbers and associated Outage Durations of concern) is operating on load? Determine whether the whole site or just one building is impacted.
5. Assess Wind direction and weather forecast (see Section 1-12 local weather forecast and windrose)
6. Are there any local real-time AQ monitoring readings (see Section 1-9 Nearest ambient air quality monitoring station)
7. Modify your assessment of **outage hours** to consider realistic **exposure hours** for the receptors using Section 1-5 (and Appendix A figures) if required:
    a. Are receptors exposed indoors for part or all of the outage
    b. Outdoors and/or very sensitive
    c. Will receptors be mobile and change during the event (diurnal cycle of work, travel, home etc)

Notifications – Potential polluting event to air quality

8. Report your outage if the required hours (Outage Impacts Risk Assessment to EA based on hours in Section 1-4) are met, **initially to the EA National Customer Help Line** and then ideally to the EA permitting officer.
    a. EA helpline email address (Incident_Communication_Service@environment-agency.gov.uk) with associated details – permit number, location, your risks – important script to the email is that stated in Section 1-14:
        i. In summary *"This is a self-reported potentially polluting event to air quality caused by an EA permitted installation. We are a large Data centre needing to run a significant number of standby diesel engines that may lead to ambient air quality breaches. We have initiated the agreed air quality action plan"*
        ii. *Ask for a reference and provided updates to this*
        iii. *Confirm that the outage has ceased*
    b. Depending on your AQMP notification, the EA may declare the outage an Incident requiring attendance at the site by EA staff.
9. Also report to the Local Authority your Outage Impacts Risk Assessment in similar fashion
    a. Depending on your AQMP notification, the local authority may declare the outage an Incident requiring an attendance at the site.

External authorities' further decisions

10. If assessed as applicable the Environment Agency and Local Authority will decide if the event is so extreme that the emergency services should also be informed.
11. The Environment Agency, Local Authority or Emergency Services will provide advice directly to receptors to reduce their exposure
    a. Move and/or stay indoors
    b. Close windows
    c. Lower physical exertions
12. Update on changing circumstances (receptor risk – e.g. school closed anyway, traffic significantly reduced than normal)

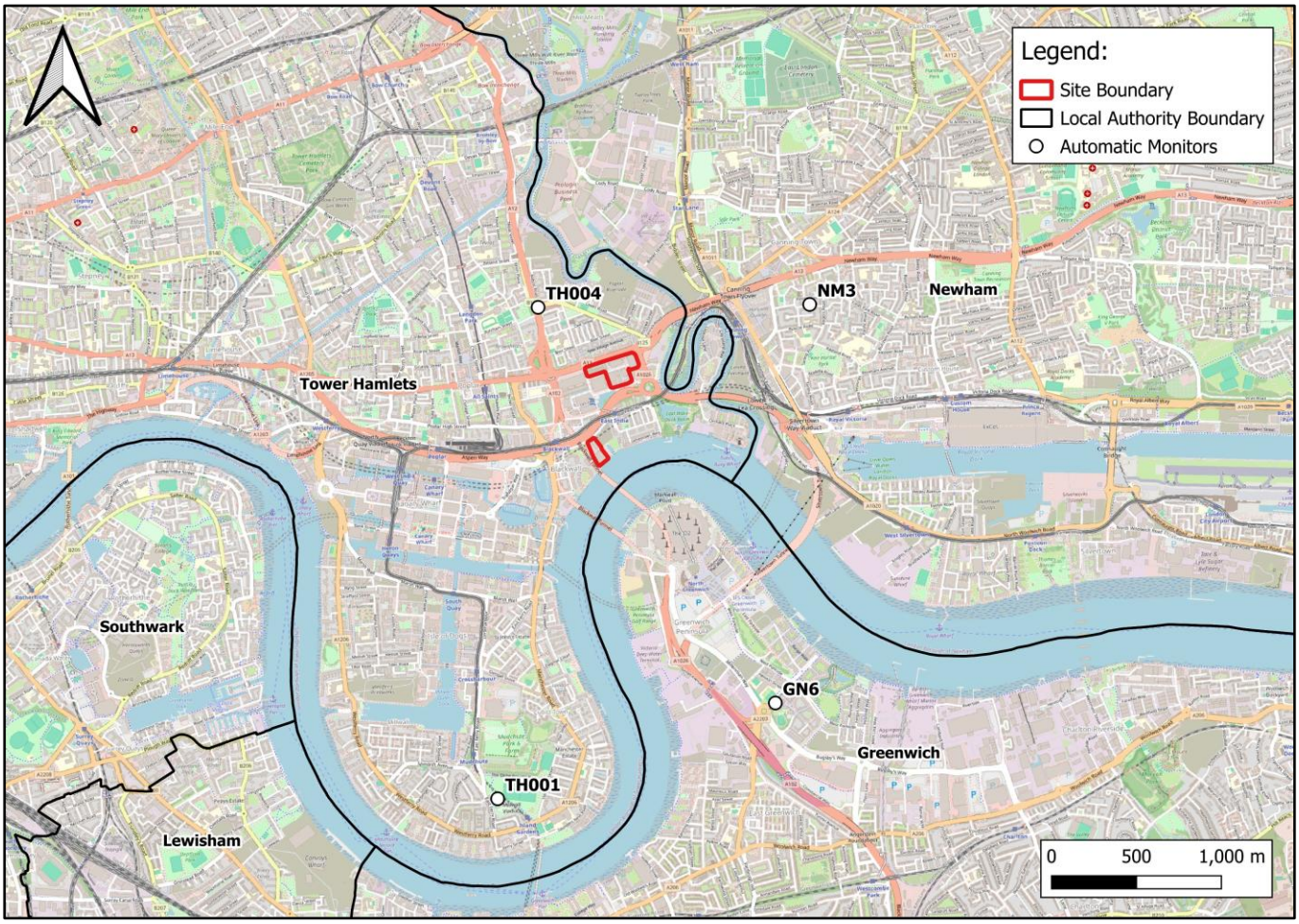
Operator Further Actions

13. Review and update EA as appropriate on changing circumstances (receptor risk – school is closed anyway, traffic significantly reduced than normal)
14. Review whether site has the ability to change the impact of the outage load and hence diesel emissions e.g. by reducing load – re-assess and provide update to EA.

This is the publicly accessible procedure portion.

1-9 NEAREST AMBIENT AIR QUALITY MONITORING STATIONS

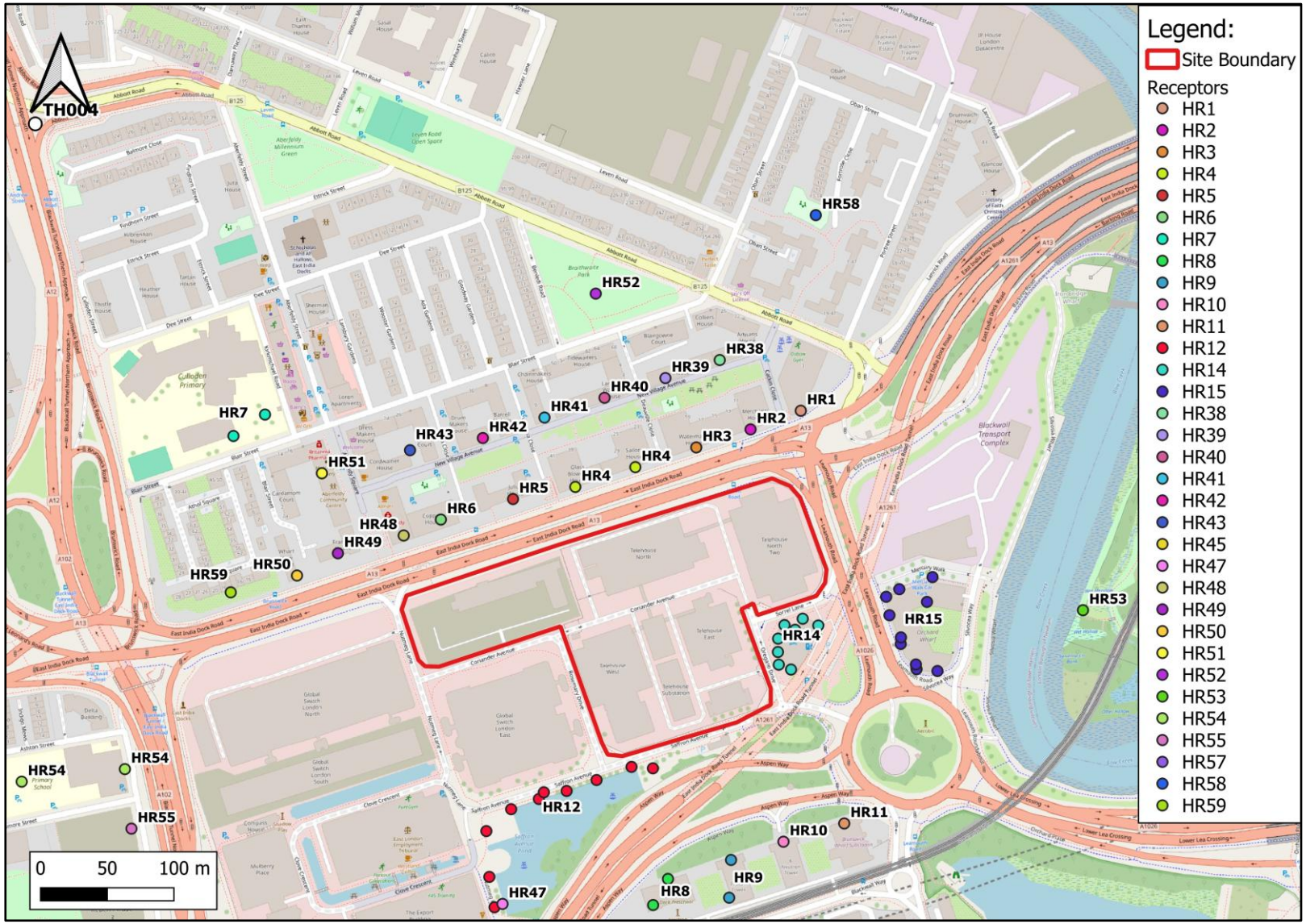
ID	Relevant for wind directions from	Site Type	Local Authority	Link to Real-time Data
TH001	NE	Background	Tower Hamlets	Link
TH004	S to SE	Roadside	Tower Hamlets	Link
GN6	N	Roadside	Greenwich	Link
NM3	NE to E	Urban Background	Newham	Link



This is the publicly accessible procedure portion.

1-10 RECEPTOR PLAN AND SURVEILLANCE ROUTES

North:



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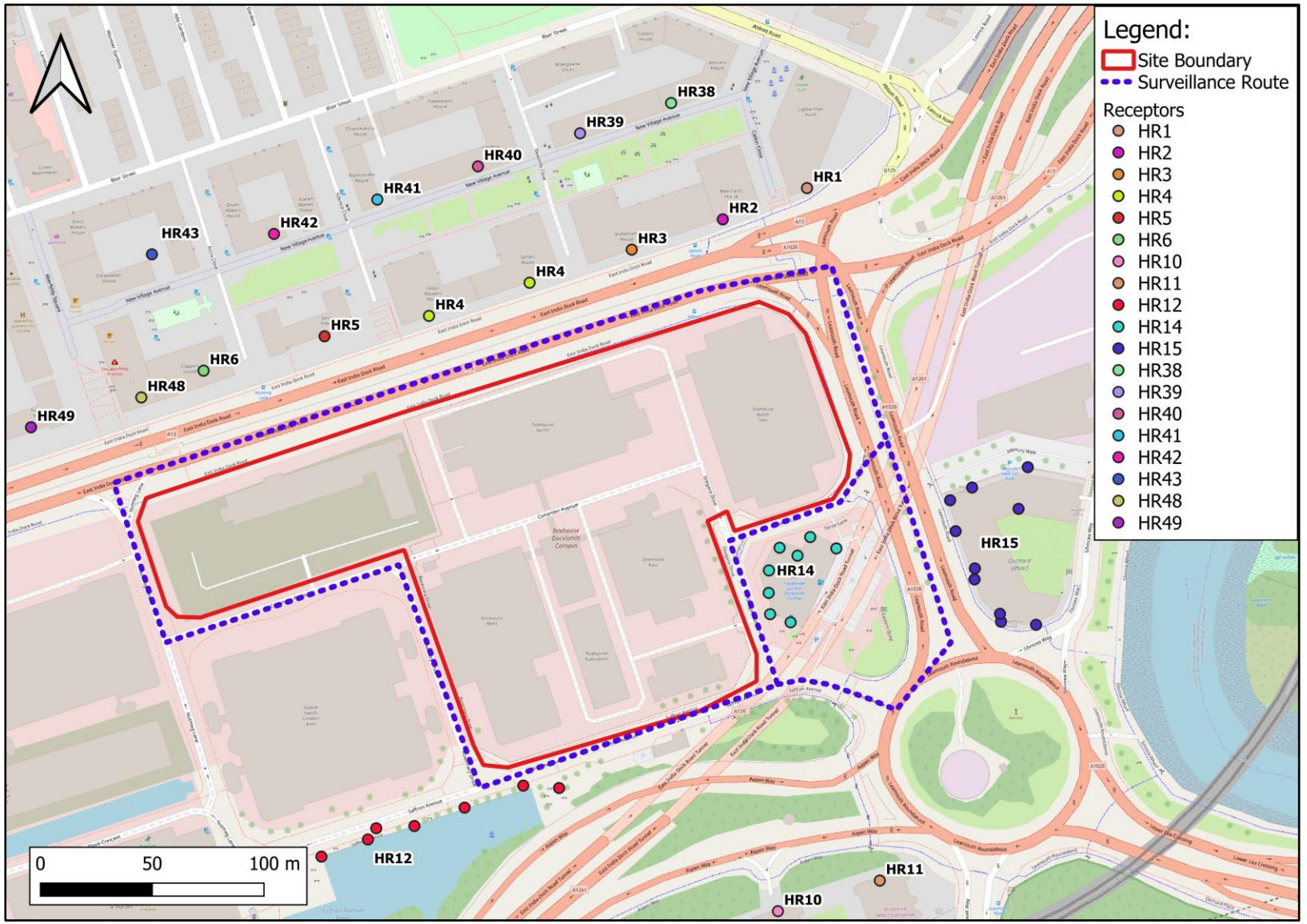

South:


HR56
HR13
HR45
HR25
HR24
HR32
HR35
HR34
HR31
HR26
HR46
HR26
HR36
HR33
HR27
HR30
HR22
HR44
HR23
HR37
HR28
HR29
HR57
HR19
HR16
HR17
HR21
HR20
HR18
HR20
0
50
100 m
Legend:
Site Boundary
Receptors
HR13
HR16
HR17
HR18
HR19
HR20
HR21
HR22
HR23
HR24
HR25
HR26
HR27
HR28
HR29
HR30
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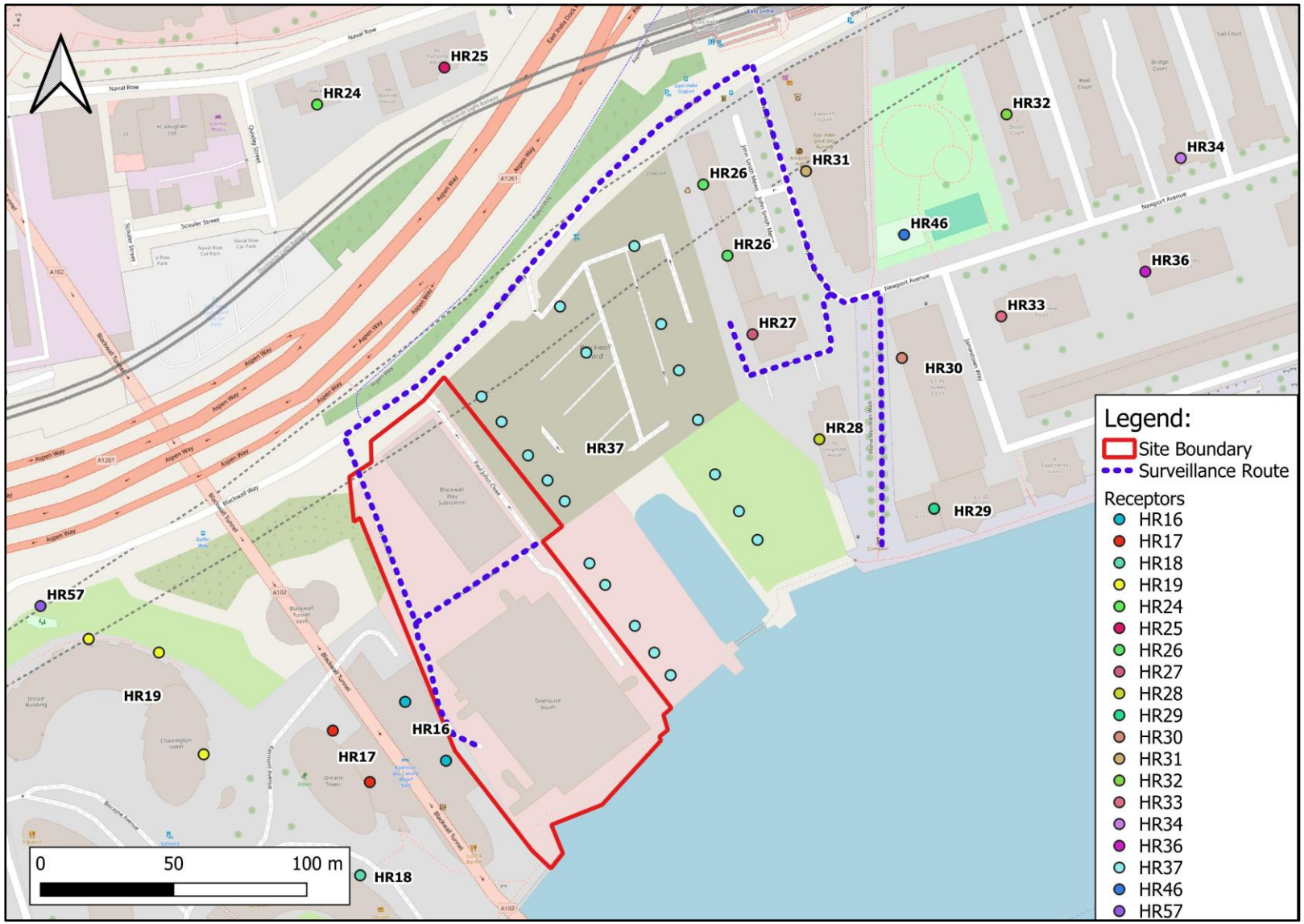
HR56
HR57

This is the publicly accessible procedure portion.



Notes:

- The surveillance paths are indicative and should be modified depending on weather conditions (wind direction) and site operations.
- For South Building, the eastern edges of the site may be considered depending on the stage of construction of the Hadley Application and/or access and safety issues associated with the construction.

1-11 RECEPTOR LIST

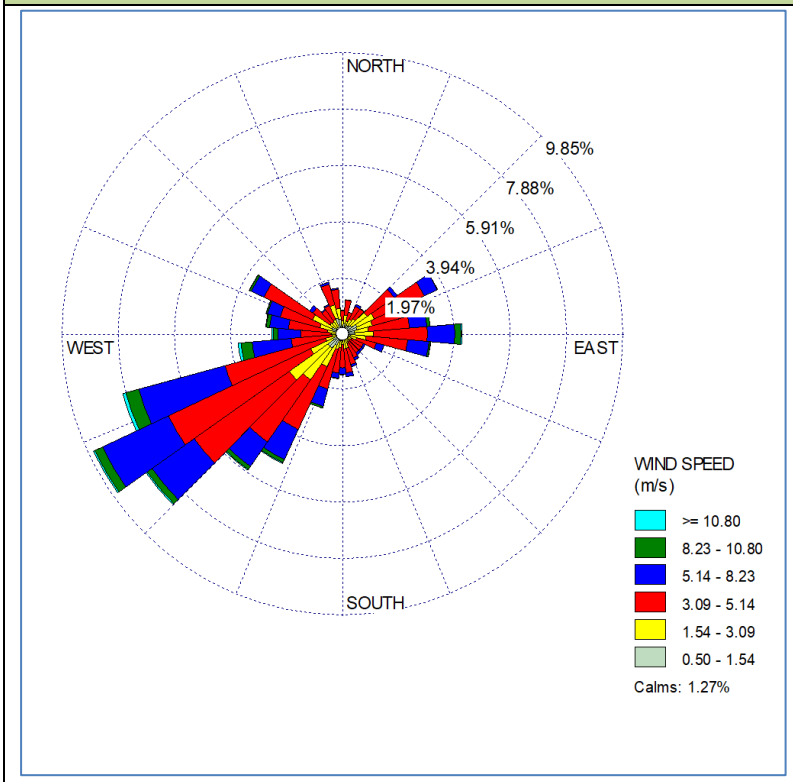
Ref (see map)	Description	Type of Receptor	Potential Exposure at Multistorey Buildings?
HR1	Aberfeldy E14	Residential	Yes
HR2	Waterman's House	Residential	Yes
HR3	Sailors House	Residential	Yes
HR4	Glass Blower's House	Residential	Yes
HR5	Julius House	Residential	Yes
HR6	Jones House	Residential	Yes
HR7	Culloden School	School	Yes
HR8	Elektron Tower	Residential	Yes
HR9	Proton Tower	Residential	Yes
HR10	Neutron Tower	Residential	Yes
HR11	Switch Tower	Residential	Yes
HR12	Saffron Avenue (amenity space)	Amenity space	No
HR13	Train Station	Station	No
HR14	Travel Lodge (new)	Hotel	Yes
HR15	Orchard Wharf (new)	Residential	Yes
HR16	Radisson Blu Hotel, London Canary Wharf	Hotel	Yes
HR17	Ontario Tower	Residential	Yes
HR18	New Providence Wharf	Residential	Yes
HR19	Charrington Tower	Residential	Yes
HR20	Michigan Building	Residential	Yes
HR21	Streamlight Tower	Residential	Yes
HR22	Royal Captain Court	Residential	Yes
HR23	Prestons Road	Residential	Yes
HR24	Naval House	Residential	Yes
HR25	Pumping House	Residential	Yes
HR26	Newport Avenue	Residential	Yes
HR27	Wingfield Court	Residential	Yes
HR28	Longitude House	Residential	Yes
HR29	Wotton Court	Residential	Yes
HR30	Studley Court	Residential	Yes
HR31	Explorers Court	Residential	Yes
HR32	Sexton Court	Residential	Yes
HR33	Bartholomew Court	Residential	Yes
HR34	Bridge Court	Residential	Yes
HR35	Settlers Court	Residential	Yes
HR36	Adventurers Court	Residential	Yes
HR37	Hadley Application	Residential (under construction)	Yes
HR38	Artisans House	Residential	Yes
HR39	Traders House	Residential	Yes
HR40	Landing Waters House	Residential	Yes
HR41	Chain Makers House	Residential	Yes
HR42	Drum Makers House	Residential	Yes
HR43	Accra Close	Residential	Yes
HR44	DLR Station Blackwall	Station	No
HR45	DLR Station East India	Station	No

This is the publicly accessible procedure portion.

Ref (see map)	Description	Type of Receptor	Potential Exposure at Multistorey Buildings?
HR46	Virginia Quay Park	Park	No
HR47	Outdoor Eating	Amenity space	No
HR48	Flour Millers House	Residential	Yes
HR49	Franklin House	Residential	Yes
HR50	Wharf View Court	Residential	Yes
HR51	Aberfeldy Street	Residential	No
HR52	Braithwaite Park	Park	No
HR53	Bow Creek Ecology Park	Park	No
HR54	Woolmore Primary School	School	Yes
HR55	Robin Hood Lane	Residential	No
HR56	Robin Hood Gardens	Park	No
HR57	Jessop Building Playpark	Park	No
HR58	Fortrose Close Park	Park	No
HR59	Athol Square	Residential	No

1-12 LOCAL WEATHER FORECAST AND WINDROSE

Preferred Weather source
Blackwall, Greater London - BBC Weather
Wind rose for the site (from AQ model)



This is the publicly accessible procedure portion.

1-13 PUBLIC ACCESS CONTACTS

Index	Operator Contact		
1	Telehouse public contact and call centre	+44 207 512 0080	Phone
		webenquiries@uk.telehouse.net	E-mail
	External Contacts		
2	EA incident hotline	0800 80 70 60	Phone
		Incident_Communication_Service@environment-agency.gov.uk	E-mail
3	Tower Hamlets Council – Environmental Protection Department	020 7364 5008	Phone
		Environmental.Protection@towerhamlets.gov.uk	E-mail
4	Local Emergency services – Fire Brigade	020 8555 1200	Non-999 contact number
5	Local Emergency services – Police	101	Non-999 contact number
List of public receptors who need to be contacted directly is held separately under GDPR			

This is the publicly accessible procedure portion.

1-14 REPORTING FORMAT FOR EA, LOCAL AUTHORITY ETC (SCRIPT)

Script for 'Data Centre Service Desk' to Environment Agency 'Customer Hotline' Incident Communication Service
Incident_Communication_Service@environment-agency.gov.uk Complete Red Text and cut and paste into e-mail

Information on Incident	Details
Type of Incident	**This is a self-reported potentially polluting event to air quality caused by an EA permitted installation**
Permit reference	EPR/EP3507SL
Location:	Docklands Technical Centres Coriander Avenue, London, E14 2AA 1 Paul Julius Close, Blackwall Way, Poplar, London, E14 2EH
Time and date of the outage:	<dd/mm/yy hh:mm>
Initial Understanding of the Incident:	We are a large data centre needing to run a significant number of standby diesel engines due to a likely prolonged power outage. This has the potential to lead to ambient air quality breaches especially if power loss exceeds 18 hours duration.
Potential Duration & Scale	
We have assessed the current outage scenario as	<use table 1.4 to inform this section with regard to magnitude of risk>
and could be running for the following number of hours as a result of the power loss on site	<hours>
Number of standby generators operating after 30minutes	<n>
Number of standby generators actually or predicted to be operating after 2 hours	<n>
Initial Actions being taken:	We have initiated the agreed air quality management action plan (AQMP). For information, this will be logged in your document management system (DMS) under the Permit reference. The AQMP includes the requirement to make this notification as soon as practical.
Other steps taken include:	<other steps taken include>
Our local EA Site permit contact is:	<enter name from contact sheet>
Updates	<reference>:
	Confirm that the outage has ceased
Visual Impact (fumes etc):	Yes/No
Commenced AQ assessment of impacts at potential receptors	Yes/No commenced at hh:mm
AQMesh Readings are available	No
Wind and weather conditions locally are?	Provide information (refer Section 1-12)
Contact Details:	
For urgent enquiries, please call	Complete as appropriate for Duty Manager
If you're unable to get in touch, please email our service desk and request that we return your call urgently, providing details of the information you require.	webenquiries@uk.telehouse.net / +44 207 512 0080

This is the publicly accessible procedure portion.

1-15 DOCUMENT INFORMATION

EOP/SOP Ref	Procedure Name			
EEn06-02-P	Telehouse Air Quality Management Action Plan (AQMP)			
System / Equipment:	**Location / Area**	**Rev**	**Status**	**Next review date**
Standby Generators	Docklands Technical Centres, London	3	Current	01/04/2027

1-16 CHANGE HISTORY

DATE	DESCRIPTION OF CHANGES	SECTIONS / PAGES UPDATED	AUTHOR	REVIEWED BY	DATE
Sept 2022	Document creation	n/a	TIE	EA	Dec 2022
April 2025	Revision of the AQMP to cover both Telehouse North and South, in accordance with IC6 of EPR/EP3507SL.	Amendments throughout. Sections 1-2 to 1-5, 1-7 to 1-17 and Appendix A Figures.	TIE	ZK	April 2025
March 2026	Revision to include West 2	Amendments throughout. Sections 1-2 to 1-5, 1-7 to 1-17 and Appendix A Figures.	TIE	ZK	April 2026

This is the GDPR, private procedure part.

1-17 SPECIFIC PRIVATE CONTACTS (GDPR CONSIDERATIONS)

Use this separate annex to retain private contacts that should **not** be provided for public access in the event of a prolonged outage.

Index	Operator Contact		
1	Telehouse Site contact	Zarreen Mokaddam	Name
		docklandscomplianceemail@uk.telehouse.net	Email address
	External Contacts		
2	Environment Agency	Howard Tee	Name
		020 8474 7319 / 07876 397771	Phone / Mobile
		howard.tee@environment-agency.gov.uk	Email
	Private Sensitive receptors to be directly contact		
3	Travelodge London Docklands Central	08719 846593	Phone
4	Radisson Blu Hotel, London Canary Wharf East	020 7987 2050	Phone
5	Global Switch London East / North	020 7473 9000	Phone
6	London Campus, University of the West of Scotland	0141 848 3047	Phone

APPENDIX A – CONTOUR PLOTS

Figure 1: Criteria 1 Whole Site Loss of Power (33 hours operation)

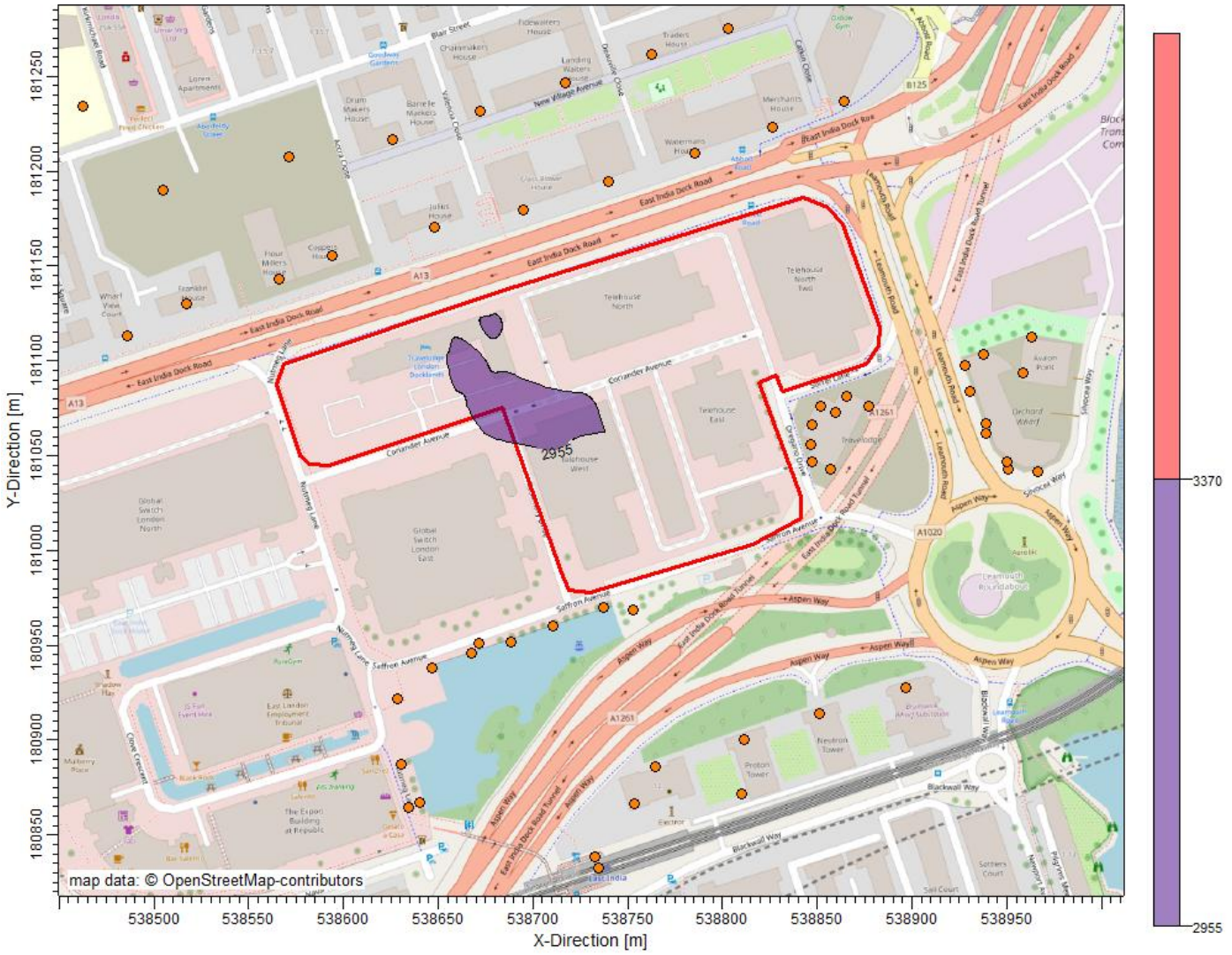


Figure note:

<2955 exceedances represent a <1% probability of exceeding the AQAL

<3370 exceedances represent a <5% probability of exceeding the AQAL

>3370 exceedances represent a >5% probability of exceeding the AQAL

Figure 2: Criteria 2 North Building Loss of Power (1452 hours operation)

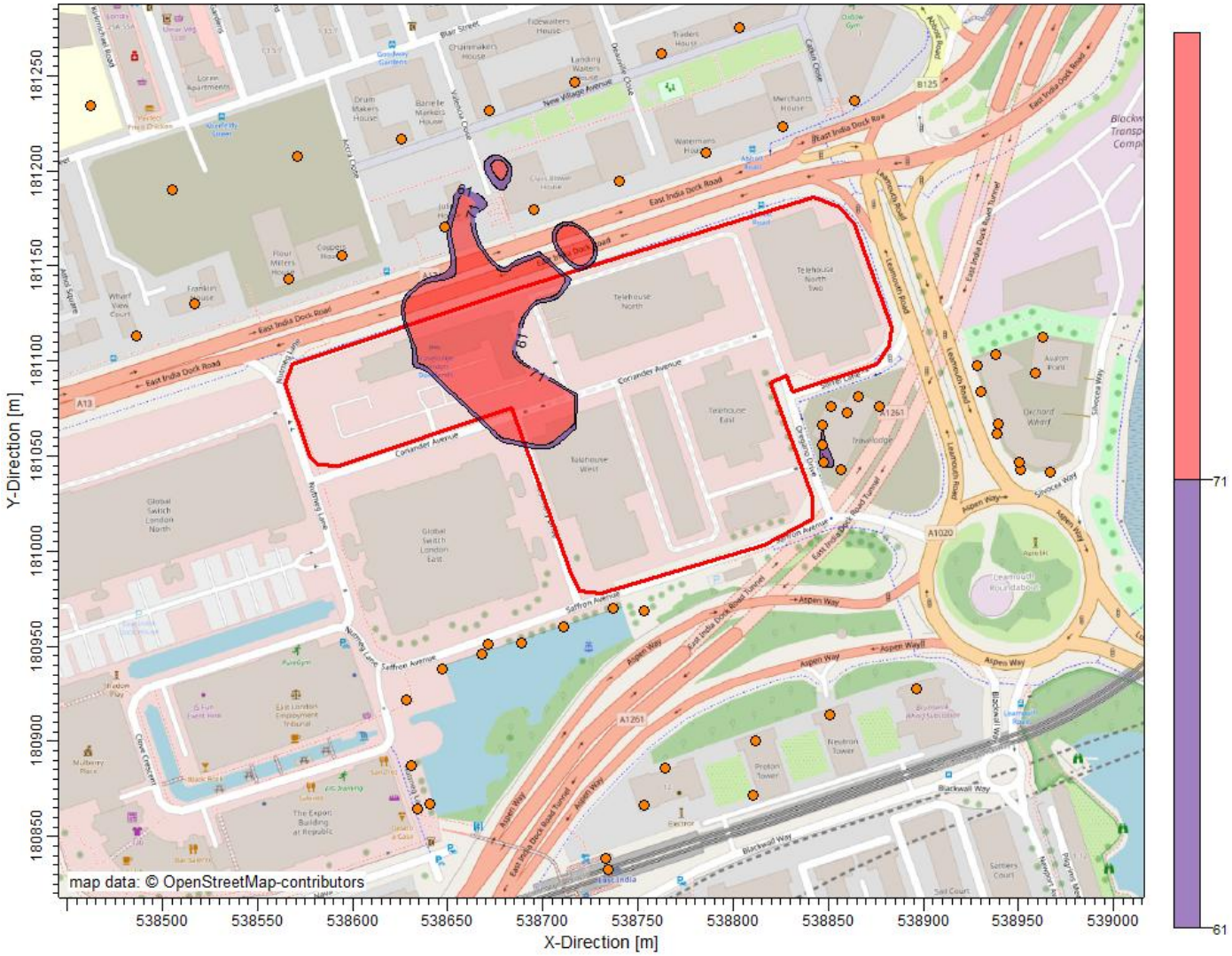


Figure note:

<61 exceedances represent a <1% probability of exceeding the AQAL

<71 exceedances represent a <5% probability of exceeding the AQAL

>71 exceedances represent a >5% probability of exceeding the AQAL

Figure 3: Criteria 3 East Building Loss of Power (37 hours operation)

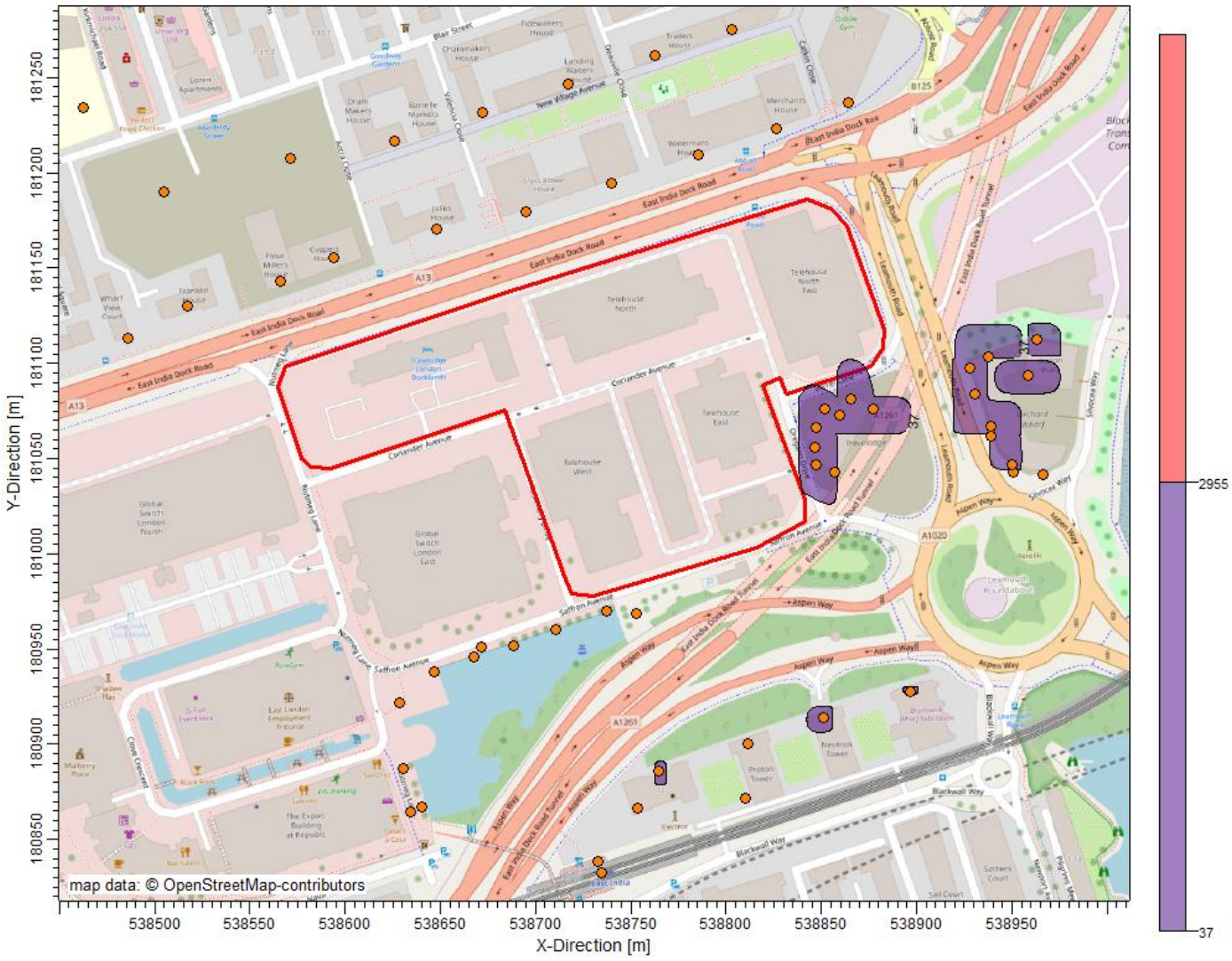


Figure note:

<2580 exceedances represent a <1% probability of exceeding the AQAL

<2955 exceedances represent a <5% probability of exceeding the AQAL

>2955 exceedances represent a >5% probability of exceeding the AQAL

This is the publicly accessible procedure portion.

Figure 4: Criteria 5 North 2 Building Loss of Power (184 hours operation)

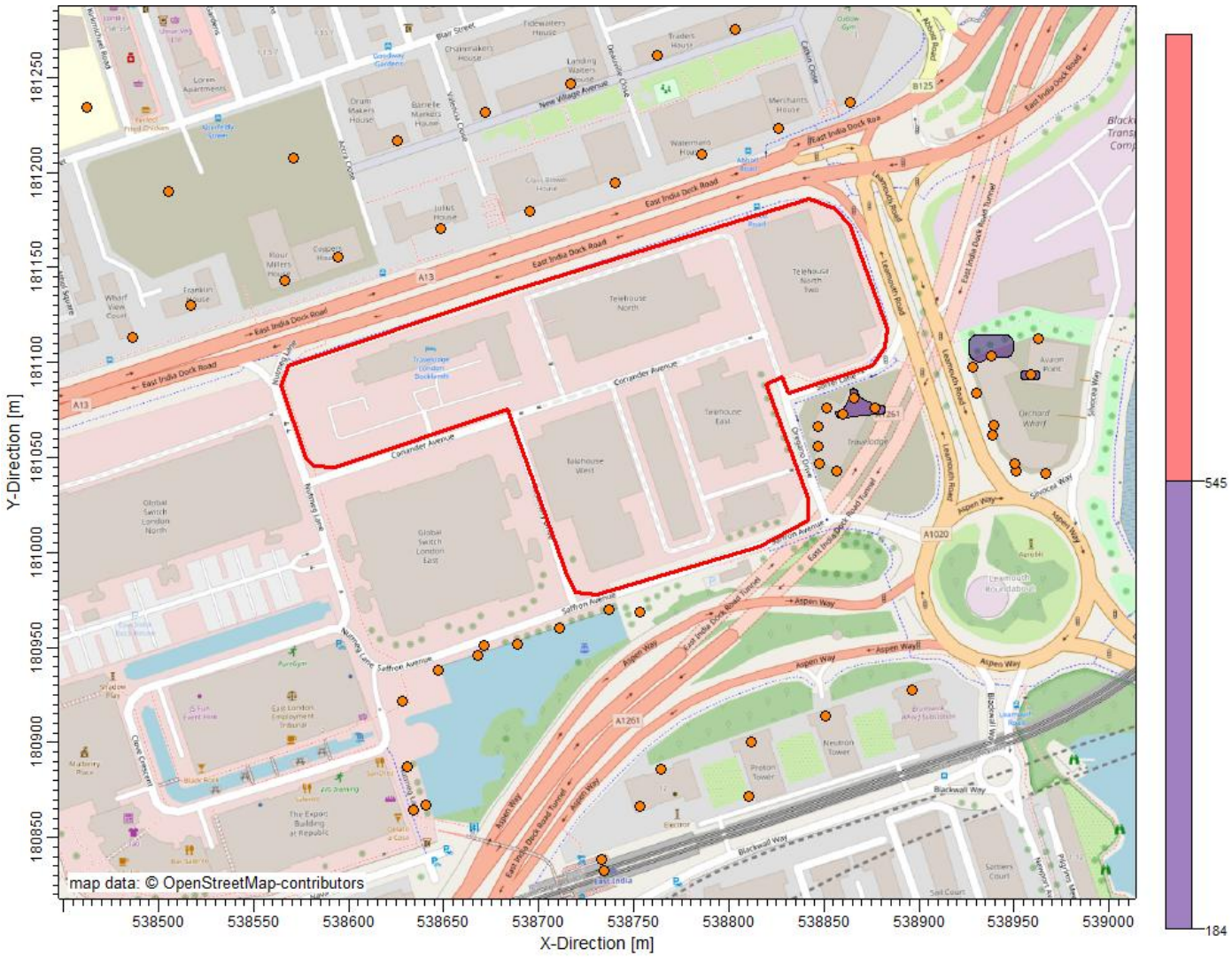


Figure note:

<465 exceedances represent a <1% probability of exceeding the AQAL

<545 exceedances represent a <5% probability of exceeding the AQAL

>545 exceedances represent a >5% probability of exceeding the AQAL

This is the publicly accessible procedure portion.

Figure 5: Criteria 5 West Building Loss of Power (125 hours operation)

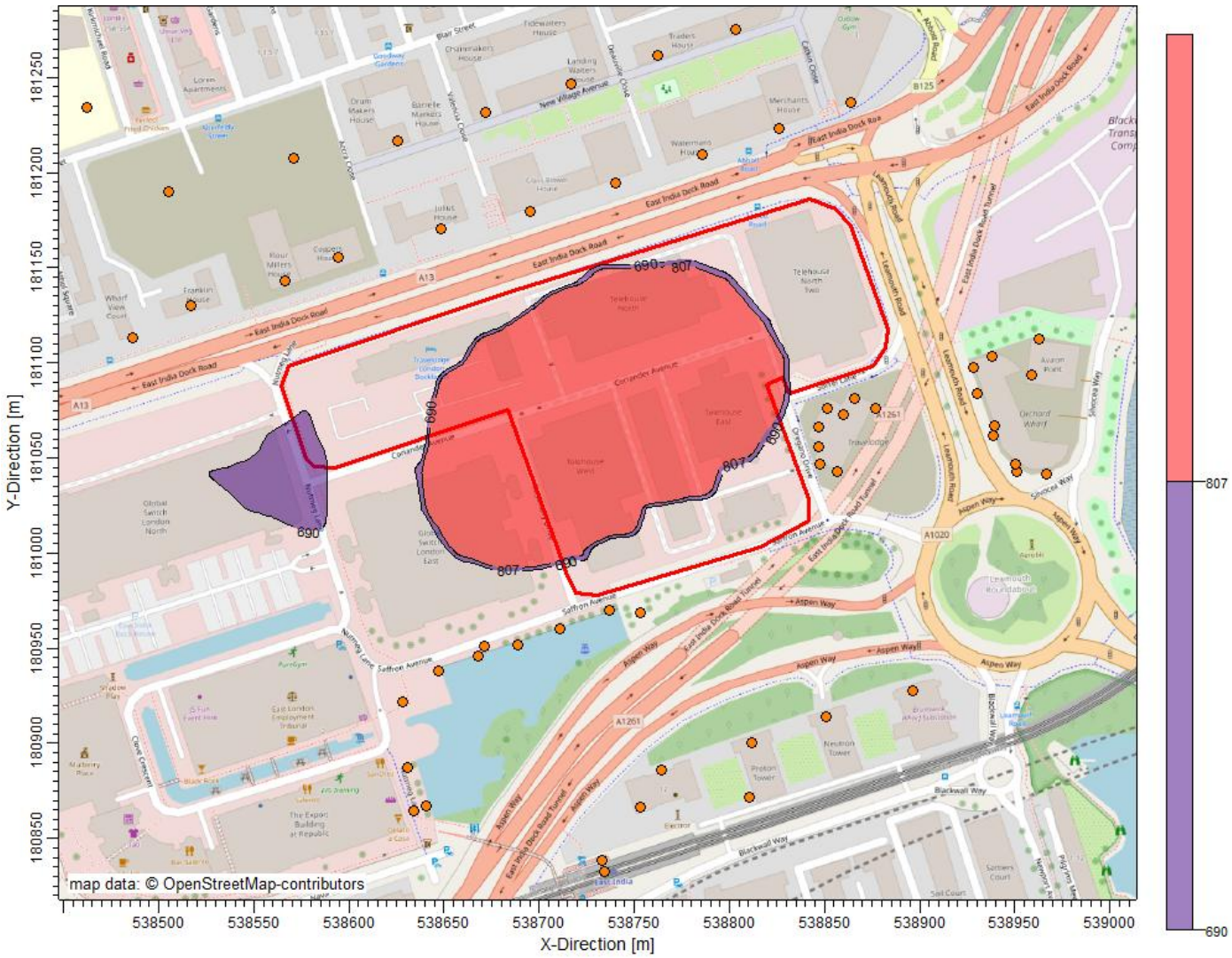


Figure note:

<690 exceedances represent a <1% probability of exceeding the AQAL

<807 exceedances represent a <5% probability of exceeding the AQAL

>807 exceedances represent a >5% probability of exceeding the AQAL

This is the publicly accessible procedure portion.

Criteria 6 – South Building

At 99 hours of operation:

Note, figures not produced for South building as the exceedances are fixed at specific locations at varied heights and therefore figures of contours could not be generated.

<882 exceedances represent a <1% probability of exceeding the AQAL

<1027 exceedances represent a <5% probability of exceeding the AQAL

>1027 exceedances represent a >5% probability of exceeding the AQAL

The highest risk of exceedances is at receptor HR37.

Criteria 7 – West 2 Building

No risk of exceedances of the AQAL. therefore figures of contours could not be generated