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THE HOPE LEASE LIMITED

KOKO, CAMDEN

AIR QUALITY AND DUST MANAGEMENT PLAN

APRIL 2018

FINAL REPORT

2167W-SEC-00001-02

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FINAL REPORT

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REVIEW AND AUTHORISATION			
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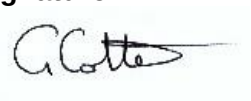
Reviewed By Gill Cotter	**Position** Environmental Consultant	**Signature** 	**Date** 09/02/2018
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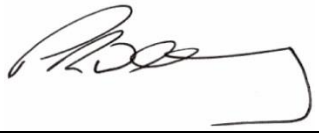
Approved By Patrick Williams	**Position** Director	**Signature** 	**Date** 06/04/2018

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01	Draft	Draft for client comment and discussion	13/02/2018
02	Final	Final for client submission	06/04/2018

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1. INTRODUCTION

1.1 Background

1.1.1 Southdowns Environmental Consultants Ltd (Southdowns) was instructed by TowerEight LLP (TowerEight) on behalf of The Hope Lease Limited to produce an Air Quality and Dust Management Plan (AQDMP) for the demolition and construction phases of the redevelopment of 1A Camden High Street (KOKO night club), 65 Bayham Place, 1 Bayham Street and 74 Crowndale Road (The Hope and Anchor Public House), within the administrative boundary of the London Borough of Camden (LBC). Planning permission has been granted with conditions, with information on the monitoring regime required under planning condition 12:

"Air quality monitoring should be implemented on site. No development shall take place until full details of the air quality monitors have been submitted to and approved by the local planning authority in writing. Such details shall include the location, number and specification of the monitors, including evidence of the fact that they have been installed in line with guidance outlined in the GLA's Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance and have been in place 3 months prior to the proposed implementation date. The monitors shall be retained and maintained on site for the duration of the development in accordance with the details thus approved. "

1.1.2 This AQDMP has been prepared to assist TowerEight with the management of dust and emissions from site, including the discharge of planning condition 12, and to ensure that the principles of best practicable means (BPM) and best practice are adhered to. This AQDMP also forms a record of the dust mitigation and management to be adopted during the construction works at KOKO.

1.1.3 This document has been prepared in accordance with the principles and requirements of the Greater London Authority's '*The Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance'* (GLA SPG) [1] and the Institute of Air Quality Management's *'Guidance on the Assessment of Dust from Demolition and Construction'* [2].

1.1.4 This document will be communicated to TowerEight and relevant subcontractors and will be reviewed periodically for continuing suitability.

1.2 Plan Structure

1.2.1 Details of the site and the proposed scheme are described in Section 1 of this plan. The dust and emission control measures are listed in Section 2 and the management and monitoring protocol is detailed in Section 3. Non-Road Mobile Machinery and vehicle emission mitigation is discussed in Section 4.

1.3 Site Description

1.3.1 The redevelopment worksite is located within LBC, on the corner of Eversholt Street and Crowndale Road. The scheme consists of the demolition of 65 Bayham Place and 1 Bayham Street (retention of façade); rebuilding to provide a private members' club with an extension to the rear and basement; retention and refurbishment of the ground floor of the Hope & Anchor Public House; 1st and 2nd floor demolition and replacement to provide a restaurant and bar. A fourth-floor extension will also be installed to provide a terrace restaurant and bar.

1.3.2 The site is bounded by Crowndale Road to the south, Bayham Street to the east, Bayham Place to the north and commercial offices adjoining the western end of the north façade. To the south, across Crowndale Road, there are three-storey terraced residential properties as well as The Crowndale Club night club. To the north across Bayham Place are three-storey terraced residential properties with a mix of commercial and residential properties to the east across Bayham Street. To the west across Eversholt Street and Camden High Street are both commercial and residential four-storey properties.

1.4 Sensitive Receptors

1.4.1 Sensitive receptors are identified as locations where people or wildlife may be adversely affected by changes in air quality or dust soiling as a result of development. High sensitivity receptors can include residential receptors, medium sensitivity receptors workplaces and low sensitivity receptors amenity areas, such as parks.

1.4.2 The closest sensitive receptors to the site are located 10 m to the north (Bayham Place), 15 m to the west (Bayham Street). There are two residential buildings, comprising more than 10 residential receptors with a high sensitivity to air quality effects, within 20 m of the site boundary. These receptors have been identified using a combination of investigations on Google Street View and viewing other mapping of the site. High sensitivity receptors within 20 m of the site boundary are shown in Figure A1, Appendix A.

1.5 Description of Works

1.5.1 Demolition and construction contractors are yet to be appointed, hence site layout plans and traffic management plans are yet to be finalised. An outline Demolition Management Plan has been produced by TowerEight to provide broad information of likely site practices.

Access and Haul Routes

1.5.2 There are currently three potential entrances to the site, on Bayham Street, Bayham Place and Crowndale Road (B512). Crowndale Road (B512) is one-way westbound towards site therefore vehicular access is anticipated to be from Bayham Street which is also one-way southbound. Bayham Place is accessible via Bayham Street. Throughout the construction programme there will be a maximum of ten outward heavy-duty vehicle (HDV) movements from site each day.

1.5.3 Subject to the proposed Draft Construction Management Plan and agreement with Camden Council, a loading area will be agreed on Bayham Street. Deliveries and collections will be restricted to between 9:15 hrs and 16:00 hrs. Designated banksmen / traffic marshals will be positioned at ground floor level to guide vehicles into place.

Hours of Work

1.5.4 Normal working hours for the KOKO development construction worksite will be as follows:

- Monday – Friday: 08:00 - 18:00 hrs; and
- Saturday: 08:00 - 13:00 hrs.

1.5.5 There will normally be no construction activity undertaken outside of these construction hours on Sundays, Public Holidays or Bank Holidays.

1.6 Roles and Responsibilities

1.6.1 The appropriate resources will be supplied to cover the requirements of the AQDMP and to ensure that the requirements are communicated effectively and acted upon in an appropriate manner. Key roles and responsibilities relating to air quality are detailed in Table 1.1.

1.6.2 The Site Manager will be confirmed upon the appointment of the demolition contractor.

Role	Responsibilities
Site Manager	Ensure that the mitigation and monitoring requirements laid out in the AQDMP are carried out during works on site.
	Ensure that staff are aware of the requirements of the AQDMP and have access to the document. Regular training of staff should be implemented.
	Undertake and record dust inspections of the site as required by the AQDMP.
	Ensure that site documentation (including method statements and risk assessments) includes dust mitigation.

	Act on complaints and dust alerts as detailed in the AQDMP.
	Maintain up-to-date site log of air quality events and complaints.
	Investigate the cause of air quality events and apply additional mitigation are required.
	Act as the key point of contact for queries and complaints regarding air quality emissions from site.
All Site Personnel	Carry out the works in line with the AQDMP requirements.
	Report observations of dust events or deviations from the AQDMP procedures.
	Attend environmental management training.

TABLE 1.1: ROLES AND RESPONSIBILITIES OF SITE STAFF

2. DUST AND EMISSIONS CONTROL MEASURES

2.1 Construction Works

2.1.1 The construction information presented in this document has been derived from information provided by TowerEight. A provisional construction programme is provided in Appendix B.

Demolition Phase

2.1.2 Initial works will begin in June 2018, with the demolition of 1 Bayham Street, 65 Bayham Place and the adjacent Hope & Anchor Public House at 74 Crowndale Road. The single storey façade between ground and 1st floor and the façade to the upper levels along Crowndale Road and Bayham Street are to be retained. The basement retaining walls and pavement vaults / vaulted arches are also to be retained. All floors, walls and roofs of 65 Bayham Place are to be demolished. Demolition is anticipated to take approximately 3 months.

Construction Phase

2.1.3 After demolition is complete, plywood site hoarding will be erected at a height of 2.4 m around the site perimeter and will be retained throughout the construction works.

2.1.4 Construction activity is due to start in September 2018, lasting approximately 9 months. Shell and core works will commence after demolition. This will include the removal of any M&E equipment associated with KOKO and the re-build of the internals of the Hope and Anchor and extension over Bayham Place. This will also include the construction of the sky-terrace over KOKO.

2.1.5 The mansard roof extension to 74 Crowndale Road will take place, along with the creation of terraces, at 3rd and 4th floor level. The glazed canopy at Camden High Street will be constructed and the elevation at Crowndale Road the erection of 4th floor glazed extension above the roof of KOKO which will provide a restaurant and bar to the private members club.

2.1.6 The fit-out works will then take an additional 3 months, with expected completion in September 2019.

2.1.7 Control measures identified in Section 2.4 will be implemented to mitigate any air quality impact of site activities.

2.2 Dust and Emission Effects

2.2.1 Construction activities have the potential to generate fugitive dust and fine particulates (including PM_{10} and $PM_{2.5}$), with nitrogen dioxide (NO_2) emissions from construction road traffic and Non-Road Mobile Machinery (NRMM) also contributing to poor air quality.

2.2.2 PM_{10} and $PM_{2.5}$ are respirable and can be drawn deep into the lungs and cause health problems. The fraction of dust that is larger than 10 µm is filtered by the nose and throat. PM_{10} and $PM_{2.5}$ can cause respiratory and cardiovascular illness and even death. NO_2 inflames the lining of the lung and can lead to shortness of breath and coughing and can reduce immunity to lung infections like bronchitis.

2.2.3 Nuisance from dust soiling, although less severe in impact, can also result from construction works. Dust soiling occurs when dust suspended in the air settles on a surface; this can

cause annoyance if cars, windows and street furniture are soiled, and have potentially negative implications for businesses such as car show rooms.

2.2.4 The potential for sensitive receptors to be affected by construction works is dependent on the scale of the operations, where within the development site the dusty activity takes place, the nature of the activity and controls, and meteorological conditions during the works.

2.3 Dust Risk Assessment

2.3.1 In line with the best-practice guidance provided in the GLA SPG, RSK carried out a dust risk assessment within the air quality assessment [3] produced for this project in October 2017, and concluded that the dust risk from construction activities is as shown in Table 2.1. This assessment concluded that activities associated with the proposed development constitute a 'Medium Risk' site for demolition, construction and earthworks activities, and 'Low Risk' for trackout.

Potential Impact	Dust Risk Impact			
	Demolition	Earthworks	Construction	Trackout
Dust soiling	Medium Risk	Medium Risk	Medium Risk	Low Risk
Human health	Medium Risk	Medium Risk	Medium Risk	Low Risk
Ecological	Negligible	Negligible	Negligible	Negligible

TABLE 2.1: DUST RISK (TAKEN FROM RSK AIR QUALITY ASSESSMENT)

2.3.2 The GLA guidance states that an air quality and dust management plan should be produced which specifies appropriate mitigation for implementation on construction sites, based on the highest level of risk identified above ('Medium Risk'). This document is intended to confirm the dust and air quality emission control measures to be implemented, confirm that NRMM standards will be met, and to confirm monitoring methods and complaint response procedures. The GLA guidance and BRE's Pollution Control Guide [4] have been used to determine suitable mitigation measures for the site.

2.4 Mitigation Measures

2.4.1 Measures to be implemented on the proposed development site are as follows:

Management Category	Mitigation Measure	
1. Site Management	1.1	The name and contact details of the individual accountable for air quality emissions and dust generated from the site will be displayed on the site boundary, along with the head or regional office contact information.
	1.2	Review and update of this dust management document at least every six months or if dust issues emerge.
	1.3	A stakeholder communications plan (including community engagement) will be developed and implemented prior to work beginning on site.

	1.4	All residents within 50 m of the site will be notified of the demolition and construction works prior to works beginning on site. Sufficient notice (at least two weeks) will be provided to ensure that any concerns can be dealt with before works commence. Notification will be undertaken via flyers through letterboxes and notices displayed around the site, which will provide information on the planned scope of works, works programme detailing expected disruptions and direction to the Planning Portal and planning reference number. The information provided will aim to reassure residents that the works will be carefully planned, managed and supervised to ensure the project will not affect them adversely. Liaison will continue throughout the life of the project to keep adjoining owners and occupiers updated with the current project status and any change in circumstances.
	1.5	A site log book will be maintained to record complaints and the outcome of site inspections, and be made available to LBC on request.
	1.6	All complaints relating to dust and air quality emissions from the site will be recorded and responded to within one-week.
	1.7	Daily visual on- and off-site inspections within 50 m of the site will be carried out by the Site Manager to monitor compliance with air quality and dust control procedures. All inspection results will be recorded in the site log. The haul route will also be inspected for 50 m along the public highway and the outcome of the inspection included in the log.
	1.8	The frequency of visual on- and off-site inspections will be increased to hourly when activities with a high potential for dust release are taking place or during prolonged dry or windy weather conditions, with the outcome of each inspection included in the log.
	1.9	Any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site (such as windy or dry conditions, visible dust plumes etc.) will be recorded in the site log by the Site Manager. Actions taken to resolve these emissions (whether through ceasing activities or adapting dust suppression methods) will also be recorded in the log. All site staff will be encouraged to report any air quality related issues that they witness on or around the site to the Site Manager.
	1.10	Training on how to control pollution emissions will be provided as part of the site induction to all personnel expected to be present on site. This will include reference to the benefits of reducing pollution, minimising disruption from complaints, methods on minimising pollution, what should be done if emissions breach site thresholds and individual responsibilities of staff.

2. Site Preparation and Maintenance	2.1	Wherever possible, dust-generating materials will be located as far from any sensitive receptors. It is proposed to locate materials on the southern side of the site, away from sensitivity receptors, if practical.
	2.2	Plywood hoarding 2.4 m in height will be erected around the full site boundary once the buildings have been demolished.
	2.3	Scaffolding will be installed around the building perimeter during demolition and construction, with 'monarflex' screening to minimise dust flux.
	2.4	Site infrastructure (fencing, barriers and scaffolding) will be kept clean using wet methods.
	2.5	Stockpiles will be covered to prevent wind-whipping, and materials will be removed from site as soon as practicable.
	2.6	Existing drainage on the site be sealed and outfall terminated, prior to works commencing on site.
	2.7	Run-off of water or mud from the site will be avoided through not over-watering and using fine misting sprays.
3. Monitoring	3.1	The monitoring regime and locations will be agreed with LBC prior to works commencing on site.
	3.2	Real-time airborne particulate monitoring (along with wind speed and direction) will be conducted with two monitoring units placed as far as possible along a transect of the prevailing wind (south-westerly). AQ1 will be located at the north-east boundary, parallel to Bayham Street and AQ2 on the south-west boundary, parallel to Crowndale Road. Monthly monitoring reports will be produced to summarise particulate concentrations and any exceedances of a Site Action Level (SAL) of 192 µg/m³ for Osiris units (or 250 µg/m³ for units where an adjustment of the SAL is not necessary). Monitoring will cover the demolition and construction periods. The data from the monitors will be made available to LBC on request. Full monitoring procedures are detailed in Section 3 of this plan.
4. Operating Vehicle/ Machinery and Sustainable Travel	4.1	All on-road vehicles will comply with the requirements of the London Low Emission Zone.
	4.2	All vehicle engines will be switched off when stationary.
	4.3	Petrol or diesel-powered equipment will only be used if mains or battery powered equipment is not available.
	4.4	Construction site workers will use sustainable means (public transport, cycling and walking) to travel to site. The site is in a controlled parking zone and there will be no parking of contractors' vehicles on site or in the street except for deliveries.

	4.5	A Construction Logistics Plan will be produced to manage the delivery of goods and materials.
	4.6	All Non-Road Mobile Machinery (NRMM) will meet Stage IIIB of the EU Directive 97/68/EC as a minimum. This applies to NRMM of net power between 37kW and 560kW. Where compliance with GLA requirements is not achievable or practical, an exemption will be sought from the GLA prior to arrival of the equipment on site.
	4.7	Use of NRMM under 37kW will be kept as far away from sensitive receptors as practicable. Retrofitting NRMM under 37kW with after treatment devices will be explored were possible.
5. Operations	5.1	Appropriate dust suppression techniques will be implemented during cutting, grinding or sawing activities on the site.
	5.2	An adequate water supply will be provided on the site for effective dust suppression.
	5.3	Chutes, conveyors and skips will be covered.
	5.4	Drop heights from all loading and handling equipment will be minimised and fine water sprays used on such equipment wherever appropriate.
	5.5	Equipment will be made readily available on site to clean any dry spillages, and spillages will be cleaned up as soon as reasonably practicable after the event using wet cleaning methods.
6. Waste Management	6.1	Waste materials will be recycled and reused as much as is practicable.
	6.2	No bonfires and burning of waste materials will take place on site.
	6.3	Waste materials will be removed from site as soon as possible.
7. Demolition	7.1	Any biological debris will be bagged and removed, or damped down before demolition.
	7.2	Water suppression will be used during demolition operations.
	7.3	Any mobile crushing and screening taking place on the site will follow the Process Guidance Note 3/16(12) and associated mitigation [5]. Visible dust emissions will not be allowed to cross the site boundary.
8. Earthworks	8.1	Stockpiles will be covered when not in use.
	8.2	Secure covers will only be removed in small areas during work and not all at once.
9. Construction	9.1	Scabbling (roughening of concrete surfaces) will be avoided.

	9.2	Sand and other aggregates will be stored in bunded area and not allowed to dry out.
	9.3	Bulk cement and other fine powder materials are to be delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
	9.4	Smaller bags of fine powders will be sealed after use and stored appropriately to prevent dust emissions.
10. Trackout	10.1	Delivery vehicles will be securely covered to prevent escape of dust and materials onto the public highway.
	10.2	If any construction material is deposited onto the public highway during delivery or collection, then these areas will be kept clean via the use of a water hose and manually swept.
	10.3	All inspections of vehicle routes and any subsequent action will be recorded in the site log book.
	10.4	Dry sweeping of large areas will be avoided.

2.5 Weather

2.5.1 If the above mitigation measures are followed, it is anticipated that local receptors will experience at worst, temporary and intermittent 'slight adverse' dust impacts associated with the demolition and construction of the proposed development. These events are most likely during exceptional weather events, for example when it is dry and windy and during these periods. During prolonged dry and windy conditions, further mitigation measures may be required.

3. MANAGEMENT AND MONITORING PROCEDURE

3.1 Purpose

3.1.1 This section details the approach to be taken by the site operators to ensure that air quality and dust emissions are controlled, monitored and any problems or complaints are dealt with in a satisfactory manner. The IAQM's *Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites* [6] recommends that all construction sites should include some form of monitoring, commensurate to the level of risk.

3.1.2 The proposed development site has a 'Medium Risk' for dust soiling effects and 'Medium Risk' for health effects, therefore visual inspections and real-time particulate monitoring are considered appropriate for the type and level of risk at this site.

3.2 Monitoring: Visual Inspections

3.2.1 Daily visual inspections, both on- and off-site and 50 m along haul routes onto the public highway, will be undertaken to ensure that the measures are effective at minimising off-site dust soiling. Surfaces which may display signs of dust soiling are buildings, cars, window sills, lamp posts and other street furniture. All inspection results will be recorded in the site log.

3.2.2 These inspections will take into account the level of dust soiling; if excessive soiling is apparent, the need for personal monitoring against occupational standards will be considered, to monitor the exposure of workers to dust.

3.2.3 If significant visible dust soiling is observed along the haul route, the frequency of cleaning mitigation measures (such as wet brushing and road sweeping) will be increased to daily. If settled dust or dust plumes from the site are observed off-site, a check of site activities will be undertaken to determine the likely source, and whether dust emissions are still being produced on site. If this is found to be the case, dusty activities will be halted until corrective actions are be taken to prevent or minimise dust emissions. All observations will be recorded in the site log book.

3.2.4 If dust soiling is observed on a regular basis (three consecutive days), the cause of the soiling will be investigated. If the soiling is determined to be coming from the site, then mitigation measures within the AQC will be reassessed and updated accordingly to prevent further exceedances.

3.2.5 The results of these inspections will be recorded in the site log and sent to LBC on request.

3.2.6 If a dust incident is noticed by site personnel during the soiling inspections of surrounding areas undertaken as part of the AQDMP. If it is determined that the incident is attributable to the worksite and requires further controls (within industry best practice limits) these will be implemented by the contractor and a report (Appendix C) will be produced for inclusion in the log. A copy of the complaint log will be made available to LBC on request.

3.3 Monitoring: Real-time Particulate Monitoring

Duration and Location

3.3.1 Baseline particulate (PM_{10} and $PM_{2.5}$) monitoring commenced on the 27th February 2018 and will be conducted for 3 months prior to the commencement of the demolition phase. Monitoring will continue from the commencement of the demolition phase for the duration of the construction period.

3.3.2 Two real-time particulate monitoring units have been positioned on site, located on the roof of The Hope and Anchor Public House. Once the hoarding has been erected after demolition, one monitor (AQ1) will be positioned at the north-east boundary, parallel to Bayham Street and the other monitor (AQ2) on the south-west boundary, parallel to Crowndale Road. Figure A3, Appendix A shows the monitoring locations, and the photographs in Appendix D show the units positioned on site.

3.3.3 Review of the locations will be undertaken throughout the duration of the project in response to periods of intense construction work or following receipt of concerns raised by nearby sensitive receptors.

QA/QC

3.3.4 Osiris airborne particulate monitoring units are being used at this site. These monitors automatically measure particulates in real-time and can simultaneously monitor the concentrations of total suspended particles (TSP), PM_{10} and $PM_{2.5}$.

3.3.5 Maintenance will be undertaken as per the manufacturer's guidelines, with the filters changed and flow rate calibrated at least every 3 months, and annual laboratory calibration against a reference instrument in accordance with the requirements of the Osiris MCERTS certification required every 12 months.

3.3.6 A real-time web-based system will automatically download the data from the units, and monitoring data will be remotely accessible to enable on-demand interrogation. The Osiris units will be checked twice daily on this system to ensure that the power supply is functioning and the units are performing correctly, this will be carried out on site by the Site Manager, or remotely by an Air Quality Specialist. Any photographic records taken will be kept, recorded and maintained alongside monitoring records.

Alerts

3.3.7 A PM_{10} Site Action Level (SAL) of 192 µg/m³ (15-minute mean, adjusted from GLA's recommendation of 250 µg/m³ to take into account the fact that Osiris units do not measure the volatile fraction of PM_{10}) will be implemented, as recommended in the IAQM monitoring guidance document. An early warning alert of 144 µg/m³ (15-minute mean, 75% of the SAL) will be put in place to allow the Site Manager to initiate a check on site activities and to help the site management team in preventing a full exceedance of the SAL.

3.3.8 Instant email alerts will be sent to the Site Manager and relevant site personnel when the early-warning alert or SAL are exceeded. System checks will be completed on the first working day of the week to ensure the monitors are functioning correctly and logging data. Where any equipment fault is detected, corrective actions will be identified and implemented, and data verification conducted where appropriate.

3.3.9 The Site Manager will be responsible for investigating and logging action taken in the event of PM_{10} concentrations exceeding the site thresholds. If the SAL is exceeded during two consecutive 15-minute intervals, the following steps will be undertaken:

- The Site Manager will, as quickly as practicable, investigate activities on the site to ascertain whether any visible dust is emanating from the site and identify activities occurring without adequate dust control measures implemented. Site records for past activities will be reviewed where necessary. Weather conditions as well as wind direction and strength will also be noted.

- Any identified causes will be rectified, where practicable. Actions will be recorded in the site logbook, which will be made available to LBC on request.

- If no source of the dust event is identified, other project sites and local authority monitoring sites will be contacted to investigate whether there is an increase in particulate concentrations in the wider area.

- If the cause of the alert is not related to site operations, the outcome of any investigation will be recorded in the site logbook, which will be made available to LBC on request.

- If necessary, following exceedances of the site alert level, toolbox talks will be delivered to the site team to inform of causes of dust emissions, receptor locations and/or control measures that can be employed.

3.4 Reporting

3.4.1 Monitoring data from the Osiris units will be downloaded automatically onto the web-based system for the duration of the works, and reported on a monthly basis (within 4 weeks of month-end) following verification by the contractor's Air Quality Specialist. The reports will be issued to the officer responsible for air quality at LBC on request.

3.4.2 The monthly reports will include mean concentrations, alert level exceedances and data capture rates for each month, and will provide explanations for any exceedances and data loss.

3.5 Complaints Procedure

3.5.1 The Site Manager will immediately investigate all dust complaints that are attributed to the worksite. All complaints received will be recorded in the complaint log, investigated and corrective actions implemented and feedback given to the complainant. If it is determined that the complaint is valid or the incident is attributed to the worksite, then further controls (within industry best practice limits) will be implemented and a report (Appendix C) will be produced for inclusion in the log.

3.5.2 Site staff will maintain a log of any complaints received, subsequent actions taken to investigate the complaint and any actions which have been put in place to rectify the situation (if found to be necessary). The incident and complaint reporting template in Appendix C, will be used to record complaints and exceedances of the SAL and actions taken.

4. VEHICLE AND NRMM EMISSIONS

4.1.1 All on-road vehicles will comply with the requirements of the London Low Emission Zone. Subcontractors will be required to comply with the use of Ultra-Low Emission Vehicles (ULEV) (e.g. non-diesel) where practicable. Use of ULEV will be reviewed in each iteration of the AQDMP with a view to implementing this measure if it is practical to do so.

4.1.2 Mains and battery powered equipment will be used and petrol or diesel-powered equipment will only be used if mains or battery powered equipment is not available. Generators will not be used on site, since a mains power supply will be available throughout the construction period.

4.1.3 Construction site workers will use sustainable means (public transport, cycling, walking, and car-sharing) to travel to site. The site is in a controlled parking zone and there will be no parking of contractors' vehicles on site or in the street except for deliveries. A Construction Logistics Plan will be produced to manage the delivery of goods and materials throughout the project duration.

4.1.4 All Non-Road Mobile Machinery (NRMM) will meet Stage IIIB of the EU Directive 97/68/EC as a minimum. This applies to NRMM of net power between 37kW and 560kW. Where compliance with GLA requirements is not achievable or practical, an exemption will be sought from the GLA prior to arrival of the equipment on site. An inventory of all NRMM must be registered on the NRMM register https://nrmm.london/user-nrmm/register. All NRMM will be regularly serviced and service logs kept on site for inspection.

4.1.5 NRMM under 37kW will be avoided through the use of mains power on site. In the event that NRMM is used, it will be kept as far away from sensitive receptors as practicable and retrofitting NRMM under 37kW with after treatment devices will be explored were practicable. Where retrofitting is undertaken, NRMM will be fitted with an after-treatment device (DPF) stated on the approved list managed by the Energy Saving Trust.

4.1.6 Concrete-batching and mobile crushing plant are not anticipated to be utilised on site, therefore no activity-specific mitigation is recommended for these activities. Introduction of either of these activities on site will necessitate an update of the AQDMP to include specific mitigation.

5. REFERENCES

1. Greater London Authority. 2014. The Control of Dust and Emissions During Construction and Demolition: Supplementary Planning Guidance.

2. Institute of Air Quality Management (IAQM). 2014. Guidance on the Assessment of Dust from Demolition and Construction.

3. RSK Environment Ltd (RSK). KOKO, 65 Bayham Place, 1 Bayham Street and the Hope and Anchor Public House, Camden. Air Quality Assessment. October 2017.

4. Kukadia, V., Upton, S., Grimwood, C. and Yu, C. 2003. Controlling particles, vapour and noise pollution from construction sites. Pollution Control Guide. Building Research Establishment.

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APPENDIX A: FIGURES

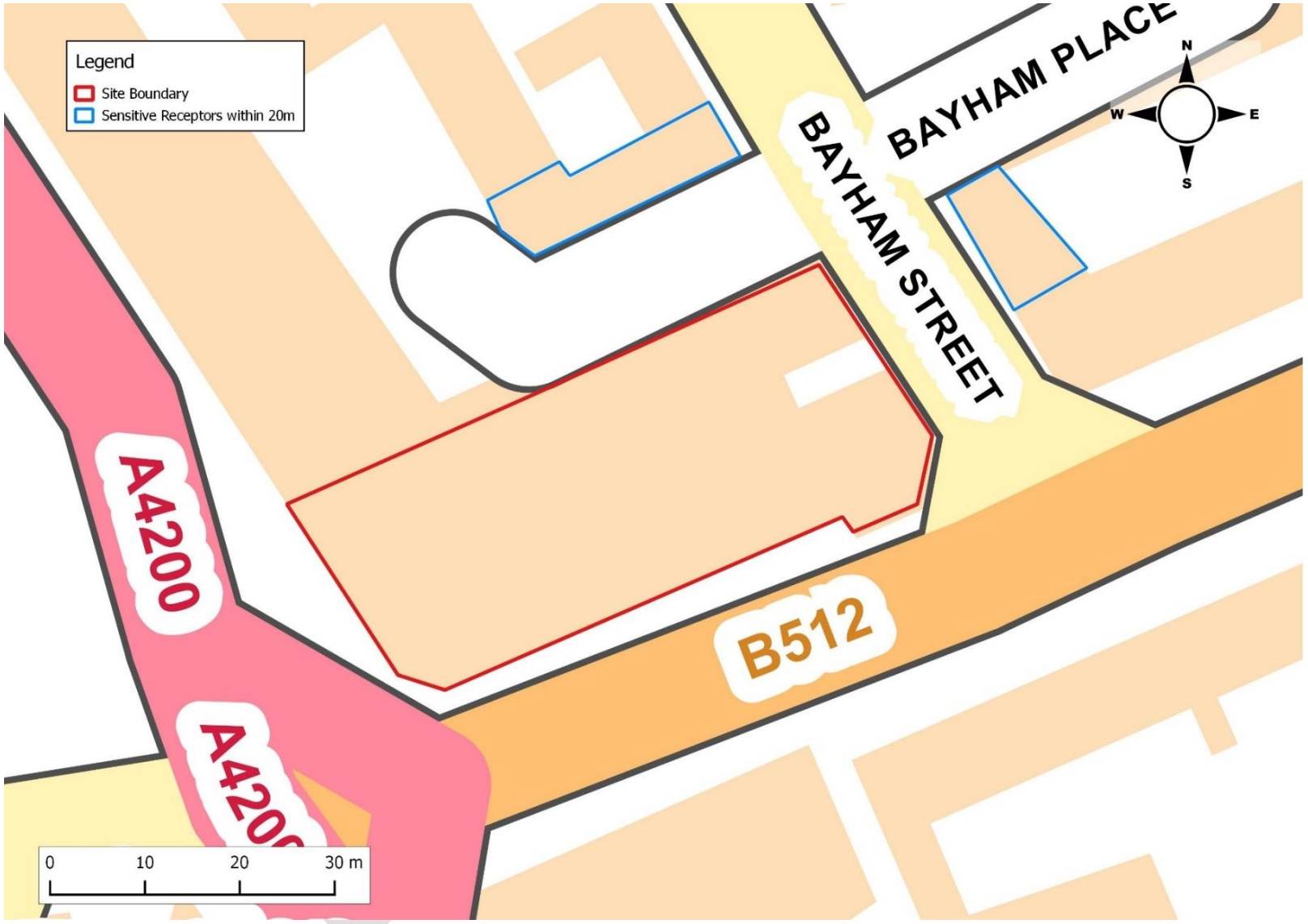


Figure A1: **SITE LOCATION AND DUST SENSITIVE RECEPTORS**

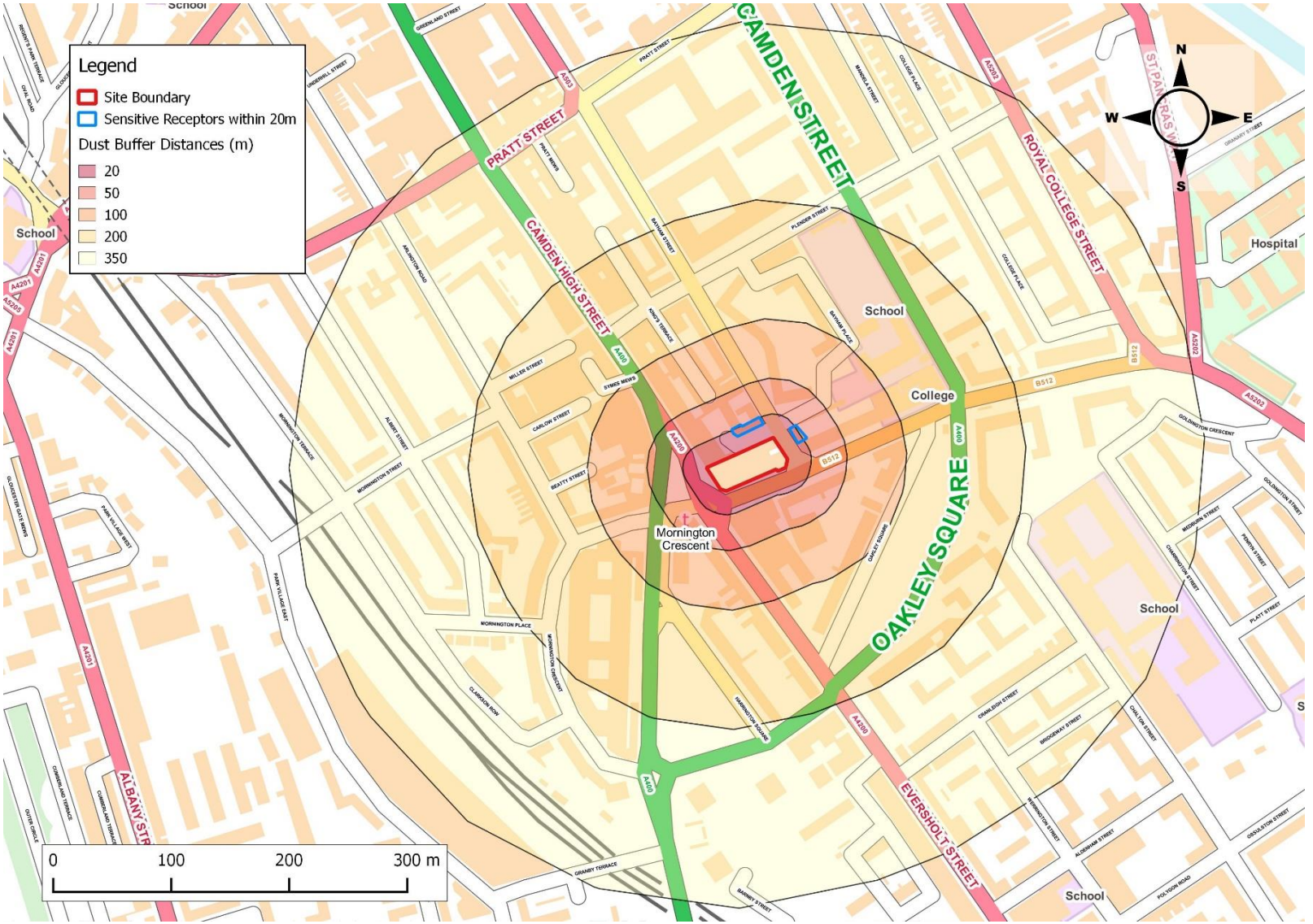


Figure A2: **DUST DISTANCE BUFFERS**

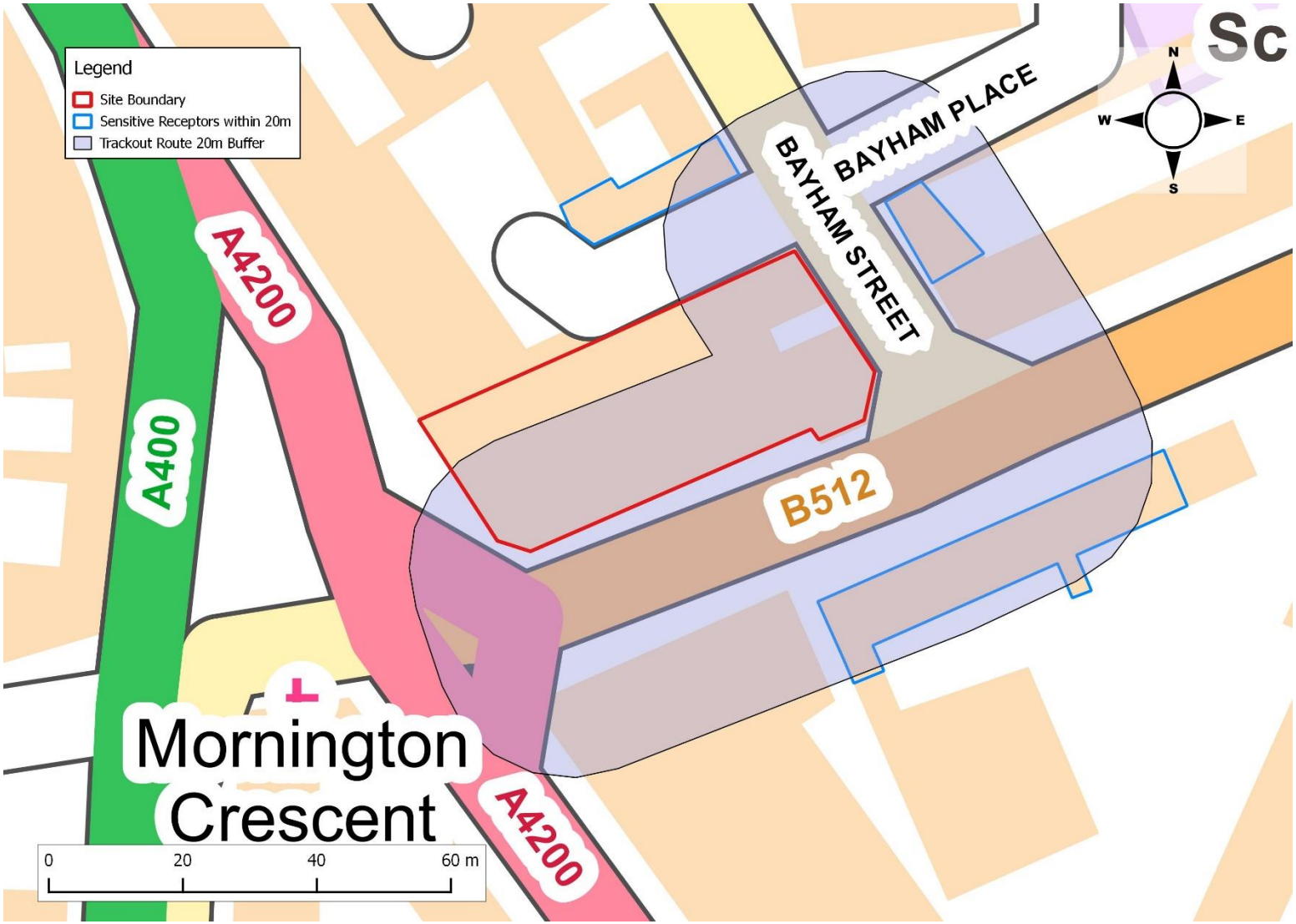


Figure A3: **TRACKOUT BUFFERS**

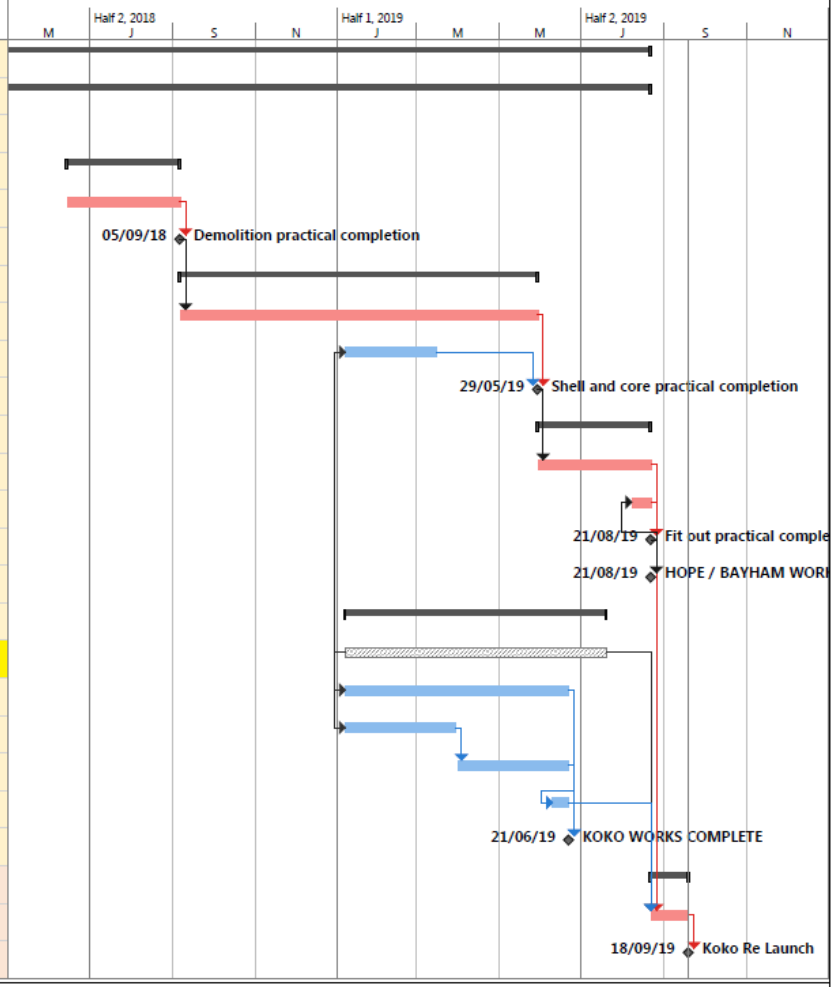
Figure A4: **LOCATION PLAN OF AIR QUALITY MONITORS**

APPENDIX B: PROVISIONAL CONSTRUCTION PROGRAMME

Koko + Hope & Anchor
Option B Master Programme
STAGE 3 - DRAFT ISSUE

TowerEight
Project and Cost Management

ID	Task Name	Duration	% Compl	Start	Finish
1	**CONSTRUCTION**	**115.6 wks**	**0%**	**Mon 08/05/17**	**Wed 21/08/19**
2	**HOPE / BAYHAM**	**115.6 wks**	**0%**	**Mon 08/05/17**	**Wed 21/08/19**
3	F10 Notification	0 days	0%	Mon 08/05/17	Mon 08/05/17
4	**Demolition**	**12 wks**	**0%**	**Thu 14/06/18**	**Wed 05/09/18**
5	Demolition works	3 mons	0%	Thu 14/06/18	Wed 05/09/18
6	Demolition practical completion	0 days	0%	Wed 05/09/18	Wed 05/09/18
7	**Shell and core works**	**36 wks**	**0%**	**Thu 06/09/18**	**Wed 29/05/19**
8	Construction	9 mons	0%	Thu 06/09/18	Wed 29/05/19
9	Koko Break In / Auditorium Works (During Closure Period	10 wks	0%	Mon 07/01/19	Fri 15/03/19
10	Shell and core practical completion	0 days	0%	Wed 29/05/19	Wed 29/05/19
11	**Fit out**	**12 wks**	**0%**	**Thu 30/05/19**	**Wed 21/08/19**
12	Fit out works	3 mons	0%	Thu 30/05/19	Wed 21/08/19
13	FFE Installation	2 wks	0%	Thu 08/08/19	Wed 21/08/19
14	Fit out practical completion	0 days	0%	Wed 21/08/19	Wed 21/08/19
15	HOPE / BAYHAM WORKS COMPLETE	0 days	0%	Wed 21/08/19	Wed 21/08/19
16	**KOKO**	**28 wks**	**0%**	**Mon 07/01/19**	**Fri 19/07/19**
17	Koko Venue Closure Period (TBC)	28 wks	0%	Mon 07/01/19	Fri 19/07/19
18	Koko General Refurbishment Works	6 mons	0%	Mon 07/01/19	Fri 21/06/19
19	Koko Terrace Structure and Foundations	3 mons	0%	Mon 07/01/19	Fri 29/03/19
20	Koko Terrace Fit Out	3 mons	0%	Mon 01/04/19	Fri 21/06/19
21	FFE Installation	2 wks	0%	Mon 10/06/19	Fri 21/06/19
22	KOKO WORKS COMPLETE	0 days	0%	Fri 21/06/19	Fri 21/06/19
23	**PRE OPENING AND RELAUNCH**	**4 wks**	**0%**	**Thu 22/08/19**	**Wed 18/09/19**
24	Soft Opening Period (TBC)	4 wks	0%	Thu 22/08/19	Wed 18/09/19
25	Koko Re Launch	0 days	0%	Wed 18/09/19	Wed 18/09/19



Koko Construction Milestones 1 Draft for comment

FIGURE B1 : PROVISIONAL CONSTRUCTION PROGRAMME

APPENDIX C: INCIDENT AND COMPLAINT REPORTING TEMPLATE

Site Exceedance, Dust Incident and Complaint Form					
Reference:		**Date:**		**Time:**	
Incident Type (select as appropriate):	DUST EVENT / COMPLAINT				
DUST					
Location:					
PM_{10} Alert Threshold: μgm^{-3} 15 minute	**250 μgm^{-3}**				
Exceedance Level: μgm^{-3} 15 minute	μgm^{-3}				
Visible Sign of Dust?	YES/NO				
DESCRIPTION OF INCIDENT/COMPLAINT:					
ACTION TAKEN:					
Report Filed By:			**Date:**		

APPENDIX D: MONITORING LOCATIONS

FIGURE D1 : MONITORING LOCATION AQ2

FIGURE D1 : MONITORING LOCATION AQ1