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Project Environmental Management Plan
Saint Giles Circus

Revision Control Schedule

Skanska Buildings London & South East

Rev	Date	Description	Prepared By	Checked By	Approved By
01	05/08/2015	First revision	J Delahunty/ E Stewart	S Mungovan	P Roberts
02	19/01/2016	Update	E Stewart		

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Company	Name	Signature	Date

Holders: Paul Roberts
Location: 23 Denmark Street, London, WC2H 8NH
Date of issue: See table above

This Project Environmental Management Plan will be reviewed at least every six months, at the start of major works packages, or as more information and detail becomes available as construction progresses. The project team will keep a controlled copy that will be amended in accordance with document control

procedures, by a person nominated by the Project Director, usually the Company Environment Advisor. Only the controlled copy can be guaranteed to be the most up to date. Non-controlled copies of the management plan will be issued to Skanska's on-site management team and suppliers.

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1.0 Summary of Environmental Plan Requirements

Noise	Hours of work: • Monday to Friday 08:00 AM to 18:00 PM; Saturday 08:00 AM to 13:00 PM. Out-of-hours work must be approved in advance by London Borough of Camden Method Statements must detail the type of plant and equipment used. The site will enforce good practice measures to reduce noise at source.
Fuels & Oils	Fuels and oils must be used and stored in accordance with legislation.
Plant Nappies	Plant Nappies are required for all static plant.
Spill Kits	Trade contractors must provide spill kits if fuel/ plant is stored on site and operatives must be trained to use them. Spillages must be addressed immediately and reported to Skanska.
Surface Water	Water discharges must be approved in advance by Skanska. Pollution and silt control measures must be included in method statements involving dewatering or disposal of water.
Waste	Waste carrier and Waste Management Licences/Exemptions must be provided to Skanska prior to waste removal from site. Waste minimisation opportunities should be highlighted with Skanska. Waste must be segregated into the designated bins provided. Waste removals, recycling rates and duty of care certification must be reported to Skanska every month.
Packaging	Trade Contractors should use reusable packaging wherever possible. Trade contractors must remove all their packaging from site (pallets) unless otherwise agreed.
Hazardous Waste	Trade Contractors must identify, manage, and dispose of hazardous wastes. The segregation and management of hazardous wastes must be agreed with Skanska prior to commencing works. Duty of Care documentation must be provided to Skanska.
Litter/housekeeping	Litter must not be dropped on site or in surrounding areas. Work areas must be kept clean & tidy at all times.
Contamination	Polluting materials or substances must not be disposed to ground or drainage.
Dust	Dusty activities must be controlled or damped down. No dry sweeping is permitted.
Trees	Trees within the site boundary must not be removed without prior approval from Skanska.
Traffic	Traffic Plan access routes must be used. Deliveries must be booked with the Logistics Contractor in advance. Trade Contractors must assess wheel wash facilities and agree location and operation with Skanska. Monthly vehicle mileage figures must be reported.
Timber	Only FSC/ PEFC certified timber must be used. Trade contractors must provide chain of custody certificates and timber delivery notes on a monthly basis.
Material Selection	Materials on the Skanska Prohibited List must not be used. Materials on the Skanska Restricted Substance List must be agreed with Skanska prior to use. Sourcing of materials should be in line with Skanska UK's Sustainable procurement document
Environmental Incidents	The Environmental Incident Response Procedure must be followed under abnormal/ emergency situations such as extreme rainfall or winds, or fires on site.

Project Environmental Coordinator	Company Environmental Advisor
Jo Delahunty	Eleanor Stewart (07823 355 818)

2·0 Introduction

The Skanska Environmental Management System (EMS) is accredited to ISO 14001:2004. The EMS objectives are:

- to minimise, as far as reasonably practicable, adverse effects on the environment;
- to promote good standards of environmental awareness;
- to develop environmental awareness and responsibilities amongst site personnel at all levels;
- to maintain a safe and healthy working environment for the workforce;
- to prevent nuisance to the community and avoid damage to the environment;
- to implement a policy of potential reuse of all waste with disposal off site being a last resort; and
- to enable full compliance to be maintained with all relevant legislation.

This Project Environmental Management Plan (PEMP) aims to reduce the negative environmental impacts of the project in accordance with Skanska's business policies and 'Our Way of Working' (OWOW). The project team and all suppliers and consultants will comply with this PEMP and the Skanska EMS. This will promote a culture of environmental responsibility, self-regulation and encourage sustainability.

This PEMP describes the environmental risks associated with the project. All suppliers or consultants to the project must provide evidence to show how they will control any environmental risks that may arise from their works, e.g. within a method statement.

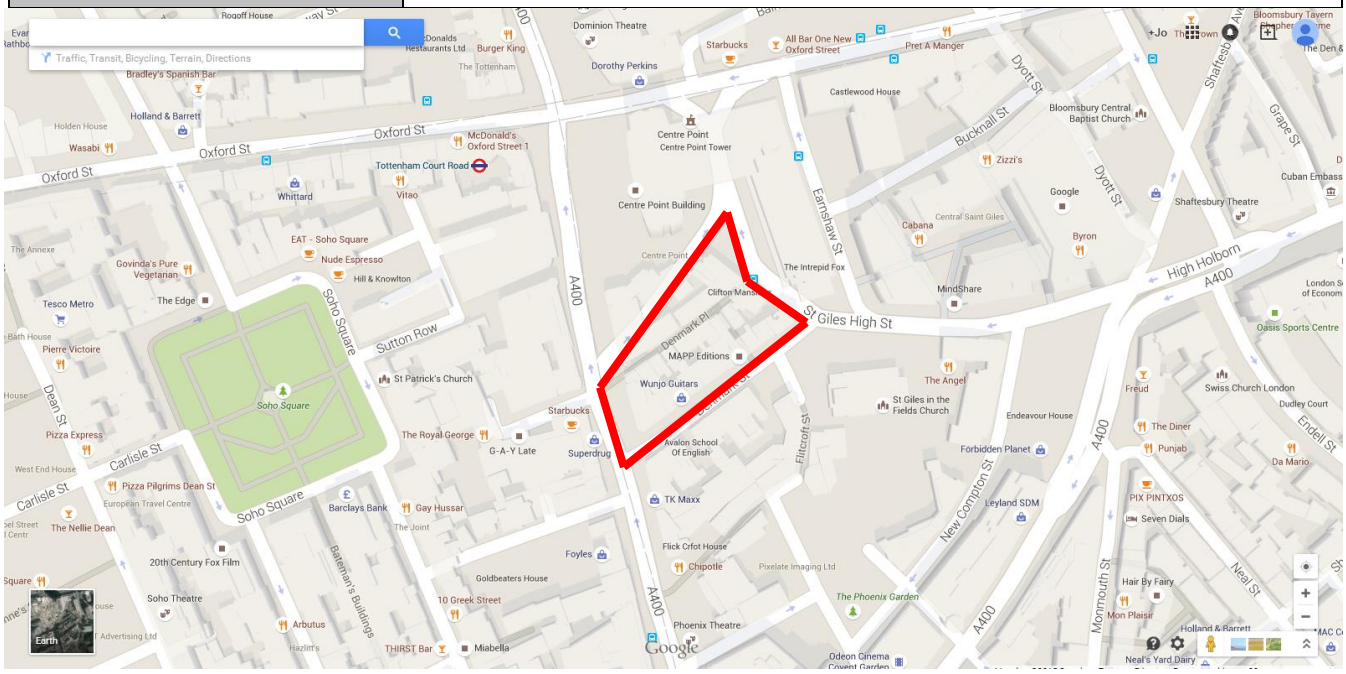
This PEMP describes the management controls to minimise environmental impacts and comply with all relevant environmental legislation and obligations. The controls will ensure that environmental management is addressed and incorporated in all decision-making.

This PEMP will extend through the entire life of the contract providing a transparent and verifiable audit trail for sustainable strategies and solutions.

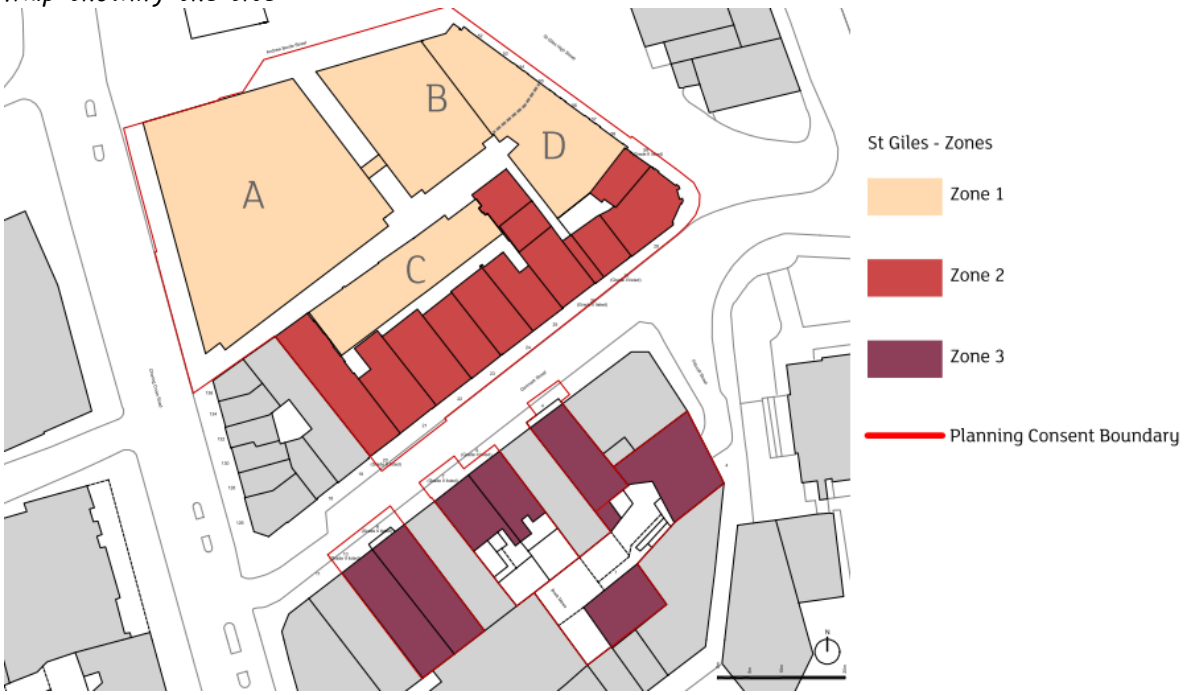
3·0 Project details

Site Address:	St Giles High Street, Denmark Place , Charing Cross Street and Andrew Borde Street, London, WC2H 8NP	
Project number:	2090	
Project Directors:	Paul Roberts	
Construction start/ finish date:	August 2016	December 2018
Project description:	The Design Development, Management and Construction of Saint Giles Circus. The development comprises the demolition of Denmark Place properties and retention of the façade on St Giles High Street, and new build elements and refurbishment. The development is split into Zones 1-3 with Skanska working on Zones 1 and 2. The site occupies an irregular quadrilateral of land boarded by Denmark Street, Charing Cross Road, Andrew Borde Road and St Giles High Street. The site is adjacent to the new (not yet completed) Tottenham Court Road Crossrail station, and the Centre Point redevelopment, adjacent to the intersection of Oxford Street, Tottenham Court Road and Charing Cross Road. Zone 1 comprises new build construction with retained façade of York Mansions along St Giles High Street and relocation of façade on 1-3 Denmark Place. It includes a 4 level basement for an event space, offices, retail, residential, and a hotel. Zone 2 comprises mostly refurbishment of non-listed properties north of Denmark Street, including retained facades to be repaired and new roof extensions	

	and conversion to office, retail and residential



Map showing the site



Plan showing the buildings on site

3·1 Contract requirements

- BREEAM 2011 Bespoke Very Good (Zone1 non-residential), BREEAM 2012 Domestic Refurbishment Very Good (Denmark Street residential), Code for Sustainable Homes Level 4 (Building D)
- Buro Happold is employed by the Client to complete the BREEAM assessment for the project.
- A monthly residents newsletter must be produced for local residents.
- Attendance at meetings at the request of Camden Council with representatives of local residents' groups.
- Provide an information and reporting telephone 'Hot Line' staffed at all times during working hours.
- 20% local labour, 10% local procurement, and 36 apprentices as detailed in the Section 106 (see Employment, Skills and Supply Plan for further details)

3·2 Environmental regulators

Skanska regularly maintains a Legal Register of all legal and other legislative requirements applicable to the environmental aspects of company activities. Each item of legislation has a short description and an explanation of its relevance to our work, and is referenced AP1, WM1, etc. These references link relevant legislation to the Project Environmental Aspects Register (PEAR, section 4.1, OWOW form EHS 030-F01).

Regulator	Responsibility	Contact details
London Borough of Camden	Environmental Health Department – Noise Team	**Paul.Newman@camden.gov.uk** 020 7974 4444
	Section 106 – Local Labour and procurement	Genny.fernandes@camden.gov.uk Anita.Khan@camden.gov.uk
Environment Agency	General enquiries Environmental Incidents (24 hours) London Environment Team Major Projects Officer	03708 506 506 0800 80 70 60 (only to be called in emergencies when the Skanska Environment Team are not available)
Thames Water	Trade Water/Groundwater discharges	Discharge: 0203 577 9200 Emergencies: 0800 714 614
Natural England	Heritage buildings	0300 060 3900

3·3 Neighbouring stakeholders

Stakeholders include:

- Residential neighbours on Denmark Street, Sheldon Mansions & Centre Point House
- Retail on Denmark Street and adjacent streets (mainly music shops which are a part of the project)
- The Smithy
- TFL
- Crossrail
- UKPRN Works

This list will develop throughout the project and will inform the nuisance monitoring strategy to reassure community stakeholders on the impacts of project works.

4·0 Environmental risks and opportunities

The control and management of environmental risks and impacts are critical to the smooth delivery of the project. The PEAR identifies significant environmental risks and impacts (section 4.1). The project team will manage these risks using environmental management controls (section 5.0).

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4.1 Project Environmental Aspects Register and Risks and Opportunities

Environmental Aspects and Impacts register

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Project Name: St Giles Circus **Document ref:** **Revison:** 2

Completed by: Eleanor Stewart **Job title:** Environmental Advisor **Qualification:** CEnv/MIEMA **Signature:** E.Stewart **Date:** 19/01/2016

Approved by: **Job title:** **Qualification:** **Signature:** **Date:**

Activity / Impacts (on)	Bidding	Design	Procurement	Vehicle movements	Use of welfare/canteen	Material storage	Waste Management	Use of plant and equipment	Temporary works	Excavation	Piling / foundations	Concrete	Steel frame	Façade restoration	Cladding	Roof works	Mechanical installation	Electrical installation	Internal finishes	Commissioning	Use of energy in the scheme	Use of water in the scheme	Generation of waste from	Fitout of the scheme	Refurbishment/ demolition	Control or influence?	Applicable legislation or consent required	Relevant Skanska procedure	Controls to put in place	Residual risk
	Pre-construction phase			Construction phase																	Operational phase									
Air Pollution / Dust	6	6	4	6	4	1	12	12	1	12	12	12	1	12	1	1	9	1	1	1	1	1	1	9	1	Control	OR10, AP5, AP1, AP2	EHS031	See PEMP section 6.1	4
Archaeology	2	6	1	1	1	1	1	1	1	12	12	6	1	4	1	1	1	1	1	1	1	1	1	1	1	Influence	DC4	EHS032	See PEMP section 6.2	1
Contaminated Land	6	2	1	3	3	3	3	3	1	25	25	12	1	2	1	1	1	1	1	1	1	1	1	1	1	Control	LM1, WM5	EHS035	See PEMP section 6.4	2
Ecology & wildlife	1	2	1	1	1	1	1	1	1	1	1	1	6	9	1	6	1	1	1	1	1	1	1	1	3	Control	DC5	EHS036	See PEMP section 6.5	1
Energy Use	6	12	12	6	9	1	4	12	1	9	9	9	1	2	9	9	9	9	1	9	15	2	1	12	15	Influence	EC16, EC19,	EHS033	See PEMP section 6.6	6
Listed Buildings	6	9	1	1	1	1	1	1	1	12	12	12	12	12	1	1	1	1	1	1	1	1	1	12	9	Control	DC4	EHS032	See PEMP section 6.7	1
Noise	6	6	1	6	4	2	6	9	4	6	6	6	12	9	4	4	2	2	1	1	1	1	1	6	15	Control	AP7, AP8, AP16	EHS039	See PEMP section 6.9	2
Traffic	6	6	4	8	4	1	4	4	1	6	6	6	2	9	4	2	2	2	2	1	1	1	6	6	10	Control	LM4, LM8, AP9	EHS034	See PEMP section 6.11	3
Trees	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Control	DC8	EHS036	See PEMP section 6.12	1
Use of materials	6	12	12	1	9	9	9	4	6	9	9	9	9	1	9	9	6	6	9	1	1	1	15	12	15	Influence	AP2, AP10, IHS9, W2, W3, P1, P5	EHS038	See PEMP section 6.8/6.10	6
Vibration	4	2	1	2	1	1	2	2	2	9	9	6	6	2	1	1	1	1	1	1	1	1	1	2	15	Control	AP7, AP8, AP16	EHS039	See PEMP section 6.13	1
Waste generation	6	9	12	2	9	15	15	9	10	25	15	15	4	6	15	15	15	15	15	4	1	1	12	12	15	Influence	WM4, WM5, WM8, WM9, WM10, WM15, WM28,	EHS040	See PEMP section 6.14	8
Water Pollution / Discharges	6	6	1	3	3	8	8	8	2	12	12	12	4	12	2	4	4	4	4	12	1	4	1	6	12	Control	AP9, W1, W2, W3, W5, W7, W8, W9	EHS041	See PEMP section 6.15	3
Water Use	6	12	9	1	4	1	2	4	1	1	12	12	4	12	1	1	4	1	4	15	1	10	1	6	12	Control	W6	EHS041	See PEMP section 6.16	3
BREEAM Rating	6	15	15	5	2	1	15	1	1	12	12	12	12	1	12	12	12	12	12	15	1	1	1	1	1	Influence	BREEAM 2011NC Excellent	None	See PEMP section 6.3 and Tracker Plus	6

Acceptable | Further Review | Unacceptable Risk

Risk Ratings

5	10	15	20	25
4	8	12	16	20
3	6	9	12	15
2	4	6	8	10
1	2	3	4	5
1	2	3	4	5

Severity

1	No action required
2	Little effect
3	Significant effect
4	Extremely serious
5	Catastrophic

Likelihood

1	Very unlikely
2	Unlikely
3	Likely
4	Very likely
5	Almost certain

Environment Agency Pollution Prevention Guidance

CIRIA Environment Guidance

The assessment must take into account:-

- *Abnormal conditions*
- *Shut-down / Start-up conditions*
- *Emergency conditions*
- *The impact of the environment on activities*
- *Interested parties*
- *A life-cycle perspective*

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Environmental Risk and Opportunities

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Project name: St Giles Circus **Document ref:** **Revison:** 2

Completed by: Eleanor Stewart **Job title:** Environmental Advisor **Qualification:** CEnv/MIEMA **Signature:** E.Stewart **Date:** 19/01/2016

Approved by: **Job title:** **Qualification:** **Signature:** **Date:**

Activity / Risk / Opportunity	Bidding	Design	Procurement	Vehicle movements	Use of welfae/canteen	Material storage	Waste Management	Use of plant and equipment	Temporary works	Excavation	Piling / foundations	Concrete	Steel frame	Façade restoration	Cladding	Roof works	Mechanical installation	Electrical installation	Internal finishes	Commissioning	Use of energy in the scheme	Use of water in the scheme	Generation of waste from operation	Fitout of the scheme	Refurbishment/ demolition	Control or influence?	Risk or Opportunity details	Relevant Skanska Procedure
	Construction phase *(Enter work activities here)*																				Operational phase *(Enter work activities here)*							
Responsible sourcing	15	15	15	1	4	1	4	4	4	1	9	9	9	9	9	9	9	9	9	1	1	1	4	1	1	Influence	Specified materials may not be available with responsible sourcing certification	Sustainable procurement policy
Achieving BREEAM/Code rating	15	15	15	2	2	1	15	1	1	9	9	9	9	9	9	9	9	9	9	9	9	9	1	1	1	Influence	Risk of incorrect materials and high levels of waste generation affecting BREEAM	BREEAM
Enhance biodiversity	6	12	12	1	1	1	1	1	1	1	1	1	1	1	1	10	1	1	1	1	1	1	1	1	1	Control	Installation of landscaping	BREEAM
Achieving BREEAM/Code rating	15	15	15	2	2	1	15	1	1	9	9	9	9	9	9	9	9	9	9	9	9	9	1	1	1	Influence	Opportunity to demonstrate performance to client	BREEAM
Produce case studies for residential	9	12	12	1	1	1	12	1	1	1	1	1	1	1	1	1	12	12	12	12	9	9	1	1	1	Control	Produce environmental case studies for future residential fitout projects	N/A

Negligible **Further Review** **Game changing**

Risk and Opportunity Ratings

5	10	15	20	25	
4	8	12	16	20	
3	6	9	12	15	
2	4	6	8	10	
1	2	3	4	5	
1	2	3	4	5	

Impact		Likelihood	
1	No impact	1	Very unlikely
2	Little impact	2	Unlikely
3	Significant impact	3	Likely
4	Extreme impact	4	Very likely
5	Game changing	5	Almost certain

5·0 Environmental management controls

Project environmental management controls will manage and mitigate the impacts as listed in the PEAR. They are developed in accordance with:

- The Camden Council 'Code of Construction Practice' (April 2008);
- The Mayor of London's supplementary planning guidance 'The Control of Dust and Emissions during Construction and Demolition' (July 2014); and
- Pollution prevention guidelines (PPG).

PPG provide advice and guidance on statutory responsibility and good environmental practice and are frequently referred to in environmental procedures.

Reference	Title
PPG1	General Guide to the Prevention of Pollution
PPG2	Above Ground Oil Storage Tanks
PPG5	Works In, Near or Liable to Affect Watercourses
PPG6	Working at Construction and Demolition Sites
PPG7	Refuelling facilities
PPG8	Safe Storage and Disposal of used Oils
PPG10	Highway Depots
PPG13	Vehicle washing and cleaning
PPG18	Managing fire water and major spillages
PPG20	Dewatering of Underground Ducts and Chambers
PPG21	Pollution Incident response Planning
PPG22	Dealing with Spillages on Highways
PPG26	Pollution Prevention Storage and Handling of Drums & Intermediate Bulk Containers
PPG27	Underground storage tanks

The PEAR assumes normal operating conditions; abnormal/ emergency conditions that may increase environmental impacts are considered in the relevant management controls.

5·1 EHS 031: Air pollution & dust

The entire administrative area of Camden has been designated as an Air Quality Management Area (AQMA) owing to potential for exceedences of the National Air Quality Strategy objective for nitrogen dioxide (NO_2) and particulate matter (PM_{10}). Camden's Clean Air Action Plan 2013-2015 also identifies PM2.5 as a pollutant of interest.

Dust generation during works will be minimised by:

- Using low emission plant, fitted with catalysts, diesel particulate filters or similar devices
- Maintaining plant, with regular servicing of plant and NRMM in accordance with the manufacturers recommendations
- Avoiding the use of diesel or petrol powered generators in preference of mains or battery powered plant
- NRMM shall use ultra-low sulphur diesel and be fitted with catalysts, diesel particulate filters or similar.
- All construction vehicles will comply with the Euro 4 emissions standard and where possible use low emission fuels and alternative technology
- Plant and vehicles and loading bays will be located away from the closest sensitive receptors where possible
- Hoarding will be cleaned using wet methods
- Demolition will be controlled by wrapping and dust suppression

- Hardstanding will be used for vehicles and cleaned using a road sweeper, and a wheel wash will be installed if necessary
- Haul roads and public highways will be checked for signs of dust or mud during inspections
- Maximum speed limit of 5mph to be enforced on site and haul roads
- Any skips or vehicles carrying friable material will be sheeted
- Stockpiles will be minimised on site. Where they exist, these will be monitored by the environmental coordinator and covered or damped down to reduce dust. They will be stored away from the site boundary
- Toolbox Talks and training will be carried out to minimise dust

Method statements should include a map identifying dust-generating activities and plant associated with emissions of PM10 as well as timeframes and measures to reduce dust.

All plant and equipment, including any which may be on hire, will be well maintained, properly silenced and used in accordance with the manufacturers' instructions and BS 5228. All eligible non-road mobile machinery (NRMM) will be inventoried and maintained to comply with emissions standards to be implemented by the Greater London Authority from 1st September 2015. Permits and notifications for mobile crushing plant will be checked prior to operation, and best available techniques will be used in accordance with Process Guidance note PG 3/16 (04)12.

Should extreme winds occur on site, the Project Environmental Coordinator will identify stockpiles and/ or open containers of loose materials or waste. Anything likely to blow off site will be covered and secured.

Environmental monitoring will be coordinated with the site-wide environmental monitoring plan. The section 106 agreement requires the use of 3 continuous, unattended PM10 monitors on site, located in a transect along the prevailing wind direction and adjacent to the nearest sensitive receptor, one co-located with an anemometer. A trigger level of 200µg/m^3 (15min average) will be used and an email/SMS will be sent to the site team. An email specifying the details of the alert will be sent to the Council's EHO as soon as practicable following and breach. An electronic report shall be submitted to the Council's EHO every 3 months detailing: 24 hour average PM10 concentrations, date and time of any breaches (15min), with the mean concentration, prevailing wind direction and details of the cause and mitigation measures. Monitoring equipment used during the construction phase will be calibrated according to manufacturers' instructions and inspected each month. Monitoring locations, action levels and results from regular surveys will be kept in the project environmental monitoring files. If the action value is breached, an environmental near miss will be recorded and site activities and method statements will be reviewed to determine whether further mitigation is possible. The outcome of the investigation will be recorded with the Near Miss. The Project Environmental Coordinator will be informed if levels are higher than expected for a significant period of time.

5·2 EHS 032: Archaeology

A Written Scheme of Investigation for Archaeological Excavation was prepared by MOLA in May 2014. This identifies that in addition to the Grade II listed properties (addressed in section 5.7) the whole site lies within the London Suburbs Archaeological Priority Area. The principal archaeological interest on the site is the potential for the survival of medieval and post-medieval remains, particularly in areas which have remained unbasemented. This is identified as a medium to high potential.

Archaeological Areas 1 and 2 will be excavated during the first phase of development by H Smith following all approved demolition to ground level, but in advance of the main construction works by Skanska which include the construction of a new basement in the northern part of the site north of Denmark Street.

Following controlled archaeological excavation of Areas 1 and 2, the basement level demolition will be undertaken and construction work undertaken for the formation of the main basement in this area. A watching brief will be maintained during the ground reduction for the new basement in areas outside excavation Areas 1 and 2 where deep cut archaeological features may survive below existing basements.

5·3 BREEAM rating (design and procurement)

The following issues will be considered in conjunction with Design & Procurement procedures:

- Buildings and infrastructure shall be designed to reduce life-cycle costs and environmental impacts;
- Ecological habitat and biodiversity shall be incorporated into the design;
- Waste shall be minimised through the design process and also allow for the segregation of operational waste;
- Buildings and infrastructure shall where possible be designed and built using processes that limit dust, water and noise pollution, and the amount of waste produced;
- Hazardous materials shall be designed out and avoided wherever possible;
- Design for an energy efficient building and energy efficient services including heating, cooling, lighting, and ventilation.

All potential trade contractors and suppliers of materials will have their environmental management performance and/or the environmental risks of their materials assessed prior to appointment. During procurement the following will be considered:

- Use of suppliers / contractors with certified Environmental Management Systems e.g. ISO14001 or EMAS;
- Use of local suppliers and contractors to minimise transport distances;
- Building life-cycle costs & maintenance;
- Minimising energy and water consumption (re: Air tightness, insulation, heating, cooling, lighting, ICT, ventilation, water recycling);
- Avoid the use of hazardous materials for construction (e.g. avoid materials with a high Global Warming Potential (GWP >5), avoid ozone depleting substances such as CFC's & HCFC's, avoid products containing Volatile Organic Compounds (VOC's);
- Ensure materials comply with the Skanska Prohibited and Restricted Substances list. The following substances may not be used in any element of the building or equipment: Acrylamide (containing more than 0.5%), Asbestos, CFCs, Halon, and PCBs.
- Incorporate reused timber or FSC/PEFC certified timber. Chain of Custody and FSC/PEFC certification must be verified before any appointments are made.
- Incorporate materials with a high recycled content (>25%). Supplier/manufacturer confirmation of recycled content is required.
- Minimising construction waste, design for deconstruction and segregation of operational waste. The use of reusable packaging and waste minimisation solutions must be discussed with all suppliers and contractors. All trade contractors must provide a Waste Management Plan, comply with the site's waste management procedures and actively work to minimise waste.
- No changes shall be made to specified materials without reviewing BREEAM requirements.

All parties shall be a part of improving environmental performance.

5·4 EHS 035: Contaminated Land

A Ground Investigation Report was undertaken in July 2008 by Stats. A further investigation was undertaken in May 2014 by LBH Wembley Geotechnical & Environmental. A further Site Investigation Report was produced by Concept in March 2015.

The results of the chemical laboratory analysis were extracted from these reports and inputted into HazWasteOnline where each sample was classified against the WM3 criteria to determine whether it would meet the hazardous or non-hazardous waste description. Several of the samples were classed as Hazardous. The HazWasteOnline Classification Report contains further details.

Areas of known contamination will be chemically tested prior to enabling, piling and sub-structure works, or any other works that may create pollutant pathways. Environmental measurements must meet the Monitoring Certification Scheme (MCERTS, PDF) performance standard. Determinand suites will be agreed in advance based on historic investigations. Sampling must be completed by competent personnel at a frequency

appropriate to the extent and depth of the works. Samples must have their hazardous properties classified in accordance with 'Technical Guidance WM3: Waste Classification - Guidance on the classification and assessment of waste' (1st edition 2015, PDF). Contaminant hotspots must be marked-up on site drawings and excluded out on site. Appropriate treatment/ removal from site, or reuse in the development (where possible), will be completed subject to waste acceptance criteria (WAC) and the CL:AIRE Development Industry Code of Practice. All records will be retained as verification that the developed site will be suitable and safe for future site users and the wider environment.

Local drains and watercourses must be protected to prevent contaminated material/ run-off from entering. Excavations must be dewatered using a discharge scheme approved by Skanska. Stockpiles of contaminated material must be kept with a stable slope, on a level impermeable surface, in a bunded area, at least 10 metres from a watercourse, and covered to prevent pollution as water run-off or dust. All measures must be inspected and implemented in advance where high winds or rain are expected.

Enabling, piling and sub-structure works, or any other works that may create pollutant pathways or in areas not believed to be contaminated, will maintain a watching brief by competent personnel. Their attendance and observations will be retained in a suitable site record as verification for the developed site. Contaminated land may be indicated by areas of: -

- Discoloured soil (e.g. chemical residues);
- Fibrous texture to the soil (e.g. asbestos);
- Presence of foreign objects (e.g. chemical/oil containers);
- Evidence of previously worked soil;
- Evidence of underground structures, tanks etc;
- Waste pits;
- Old drain runs, tanks, flues, etc;
- Evidence of liquids or solid wastes.
- Odour.

Work will be stopped immediately if any or all the above are discovered. The potentially contaminated material will be left in situ, the extent of contamination will be estimated and access to the area will be prevented. The material will be investigated as described in the above paragraph.

5·5 EHS 036: Ecology and wildlife

An Ecology Report was completed in February 2012 and an updated letter provided in September 2014 by PJC Arboricultural and Ecological Consultancy. The site is of low ecological value, supporting 100% hardstanding. As a result of the redevelopment of the site through the use of green and brown roofs, there will be a local level enhancement provided. The use of green and brown roofs within the scheme will allow there to be an increase in the species number within the site. It is considered that the redevelopment of the site will increase the nature conservation value of the site and provide some local level benefit.

All buildings to be demolished shall be inspected by specialist ecologists for evidence of bat roosts prior to demolition. If the inspections indicate the presence of a roost, a licence is needed from Natural England to destroy the roost.

All buildings, trees and shrubs shall be inspected for nesting birds prior to carrying out any works that may affect the nest site. Where the presence of a nest is suspected, the Environmental Advisor shall be informed and specialist ecologists brought onto site if necessary.

If a protected species (including bats and **any** nesting birds) or a suspected protected species is discovered after works have begun, the work should be stopped, the area cordoned off and access restricted. The Environmental Advisor shall be informed.

5·6 EHS 033: Energy use

The use of energy shall be minimised as far as possible during the works. Site offices should incorporate energy saving features such as increased insulation, PIR sensors on lighting and timers to switch off equipment out of hours or when not in use. Site lighting should be switched off at night and checks made to ensure that all plant and equipment is switched off. Energy and fuel consumption from site, welfare and offices will be reported to Skanska every month.

5·7 EHS 032: Listed buildings

There are several Grade II Listed buildings on site as follows;

- Nos. 20, 26, 27 Denmark Street
- No. 59 St Giles High Street

Map from Historic England:

The properties on Denmark Street also border the Denmark Street Conservation Area. Grade ll listed properties at 20, 26, 27 and 59 Denmark Street are to be refurbished to a degree to be confirmed by the client.

An existing listed façade is present at the Southern end of Building B (1-3 Denmark Place). It is a planning 4.10.26 requirement for the listed façade to be retained.

The relevant Listed Building Consents will be sought for these works.

5·8 EHS 038: Materials

Storage requirements must be discussed and agreed with Skanska and the Logistics Contractor in advance. Deliveries will be planned to minimise excess storage of materials on site. Materials will be stored with good access to minimise the risk of damage by plant or pedestrian traffic, theft or vandalism, or by weathering. The storage area will be kept clear and all waste packaging and redundant material will be removed.

Timber supplies for the design specification will be procured in accordance with the Skanska Timber Policy. Trade contractors will provide chain of custody certificates to Skanska before ordering any timber for the project. Skanska will maintain a Chain of Custody Register. Trade contractors will inspect timber consignments on delivery to ensure that the products received are FSC or PEFC certified and that the chain of custody has not been broken. Any non-compliant consignments must be quarantined on site and returned

to the supplier by the trade contractor. All timber delivery notes must be checked to ensure that the correct descriptions, timber volumes and chain of custody claims have been documented. Skanska will keep all timber delivery notes for five years after the end of the project.

Appropriate storage arrangements will be made for fuel, oils and chemicals, and suitable spill control equipment will be provided. All chemical and liquid containers on site shall be correctly labelled, fit for purpose, protected against unauthorised use and securely stored to prevent them being damaged or accidentally spilt. A dedicated person will be responsible for checking that these facilities are in place and are maintained, and if necessary seeing that the appropriate emergency actions are taken.

Oils and oil-type substances:

- All bunds will be sufficient to contain 110% of the maximum contents of any oil container of 200 Litres or more.
- All tanks, drums or other containers will be strong enough to hold the oil without leaking or bursting.
- All oil containers will be positioned away from any vehicle traffic to avoid damage from collision.
- Bunds or drip trays will be provided to catch any oil leaking from containers or ancillary pipe-work and equipment.
- Bunds or drip trays will be regularly inspected and emptied.
- Where more than one container is stored, the bund will be capable of storing 110% of the largest tank or 25% of the total storage capacity, whichever is the greater.
- Bund base and walls will be impermeable to water and oil and checked regularly for leaks.
- Valves, filters, sight gauges, vent pipes or other ancillary equipment will be kept within the bund when not in use.
- All valves / hoses will be turned off and securely locked when not in use;
- Above-ground oil stores or filling locations will not be located within 10 metres of a watercourse or 50 metres of a well or borehole.
- Drip trays will be used and spill kits and drain covers kept in close proximity
- Drip trays will be protected to avoid any water entering them. If full of water, drip trays will be emptied in a suitable manner as agreed with the Project Environmental Coordinator.

Fuel

- There will be a designated fuelling area where the risk of contamination to watercourses (including mains and foul sewers) can be minimised.
- Fuelling will be undertaken by a nominated person and bowsers will be kept locked when not in use
- Plant nappies will be used and spill kits and drain covers kept in close proximity.

Cement & Concrete

- Concrete will not be washed out on site wherever feasible. Skanska prefers to only work with concrete suppliers who have integrated wash-out facilities in their fleet, or who operate a policy of brushing excess concrete back into the vehicle for return to their batching plant.
- If concrete must be washed out on site, designated controlled areas will be used for minimal cleaning of chutes only. A plastic-lined skip or bunded area will be used to contain and separate the wastes and liquids.
- Water from concrete or cement washing-out will not be allowed to enter any drains.
- Cleaning and washout water disposal methods will be agreed with the Project Environmental Co-ordinator before concrete/cement arrives on site

Oil, Chemical and Product Inventory

- An inventory of all chemicals on site will be held in the site COSHH file, which is managed by the Health & Safety Advisor and/ or their appointed project COSHH Coordinator.

- All hazardous materials that are brought onto site will be accompanied by a Material Safety Data Sheet and a spill kit.

All operatives must make themselves aware of the project environmental incident response plan (Appendix 13.3). Where relevant, Trade Contractors shall prepare their own Incident Response Plan to cover pollution risks associated with planned activities. Suitable equipment shall also be provided and operative trained in its use.

5·9 EHS 039: Noise

3D noise modelling will be undertaken prior to commencement of the main construction works to determine the likely noise levels resulting from works on site.

Noise from operations and all other sources shall be kept to a minimum at all times. The following general controls shall be applied on site to minimise the effects on local residents:

- No shouting;
- No stereos/radios;
- Do not leave plant idling – switch off engines;
- Do not leave plant running over night without permission from Skanska;
- Use construction methods that create minimal noise;
- Keep all plant well maintained and fit with silencers where possible;
- Use silencers, vibration dampers, barriers, screening, and careful location of plant to minimise noise levels at the site boundary;
- Education, monitoring and discipline of the workforce; and
- Limiting the hours of noise generation.

All plant and equipment, including any which may be on hire, will be well maintained, properly silenced and used in accordance with the manufacturers' instructions and BS 5228.

The site will comply with the hours of work agreed with London Borough of Camden:

- Monday to Friday 08.00 AM to 18.00 PM; and
- Saturday 08.00 AM to 13.00 PM.

Variations to the above hours of work are subject to approval by LBC. Concerned stakeholders shall be informed of any periods of excessive or unusual noise outside operational hours.

Environmental monitoring will be coordinated with the site-wide environmental monitoring plan. Monitoring equipment used during the construction phase will be calibrated according to manufacturers' instructions and inspected each month. Monitoring locations, action levels and results from regular surveys will be kept in the project environmental monitoring files. If the first action value is breached, an environmental incident will be recorded and site activities and method statements will be reviewed to determine whether further mitigation is possible. If the second action level is breached, an environmental incident will be recorded and site activities will be suspended until the source has been mitigated and best practical means have been investigated. The outcome of the investigation will be recorded in the environmental incident report and passed to the Company Environmental Advisor for review. The Project Environmental Coordinator will be informed if levels are higher than expected for a significant period of time. Action levels will be determined based on the results of the 3D noise modelling and best practice guidance.

5·10 PRO-P07 Timber sourcing

Timber supplies for the design specification will be procured in accordance with the Skanska's procurement policies. All timber products purchased for either temporary or permanent inclusion in the works shall be

certified as legally and sustainably sourced, as defined by the UK Government Central Point of Expertise on Timber (CPET).

Trade contractors will provide chain of custody certificates to Skanska before ordering any timber for the project. Skanska will maintain a Chain of Custody Register. Trade contractors will inspect timber consignments on delivery to ensure that the products received are certified and that the chain of custody has not been broken. Any non-compliant consignments must be quarantined on site and returned to the supplier by the trade contractor. All timber delivery notes must be checked to ensure that the correct descriptions, timber volumes and chain of custody claims have been documented. Exceptions may be made in the case of timber for temporary works to encourage timber reuse, provided that trade contractors can demonstrate controls at their premises. Skanska will keep all timber delivery notes for five years after the end of the project.

5·11 EHS 034: Traffic and community Issues

Suppliers and Skanska will ensure that site-related traffic and deliveries do not block local roads. Parking is strictly limited to designated parking areas. Disciplinary action will be taken against anyone found to be parking on local roads without prior authorisation. Public transport should be used to access the site. A Logistics and Traffic Management Plan describes how the movement of vehicles, segregation of pedestrians, loading and unloading of materials, distribution of materials around site and access to and from the site will be managed. The plan complies with the Health & Safety Executive publication: HSG 144 Safe Use of Vehicles on Construction Sites.

The project will be registered with the Considerate Constructors Scheme (CCS) and will be monitored against a Code of Considerate Practice. The Code is designed to encourage best practice beyond statutory requirements and is concerned with impacts on the general public, the workforce and the environment.

Prior to any works starting, we will inform occupiers of all properties which may be affected by noise, dust or vibration arising from construction works of the nature of the works, proposed hours of work and their expected duration. Regular community newsletters will be issued and meetings will be held with any concerned stakeholders as required.

The behaviour and language of all those on site shall reflect the sensitivity of the site and show consideration and respect for all our site neighbours. Disciplinary action will be taken against anyone found to be behaving inappropriately.

Barriers to reduce any negative visual impact of the site for the site neighbours will be suitably placed along the site perimeter. Screening will be regularly inspected for damage and maintained in good order. Lighting will enable efficient and safe working conditions but also prevent/ minimise light spillage into neighbouring buildings.

The Project Manager will establish and coordinate commendations & complaints procedures with the client and associated development phases. Skanska will contribute to community consultations and forums as required by the client. Any environmental complaints forwarded to the project Environmental Coordinator will be investigated and resolved as soon as possible. Any lessons learnt will be shared with the project team to prevent the same problem happening in future.

5·12 EHS 034: Trees

On the corner of Charing Cross Road and Denmark Street there are several London Plane trees. These trees, which form an avenue along the Charing Cross Road, are significant in terms of local landscape and visual impact. These are outside the scope of the current works, however if required, these should be protected using tree protection measures following BS 5837.

5·13 EHS 039: Vibration

Vibration will be minimised as far as practicable through the selection of plant, equipment and methodology. Vibration control measures may include:

- Evaluate the potential for vibration and thereby damage;
- Monitor conditions before works start;
- Inform neighbours;
- Minimise effects during works
- Monitor vibration levels during the works;
- Monitor conditions after works are completed
- Adequate maintenance of plant and equipment

Vibration monitoring (if required) will be coordinated with the site-wide environmental monitoring plan. Monitoring equipment used during the construction phase will be calibrated according to manufacturers' instructions and inspected each month. Monitoring locations, action levels and results from regular surveys will be kept in the project environmental monitoring files. If the first action value is breached, an environmental incident will be recorded and site activities and method statements will be reviewed to determine whether further mitigation is possible. If the second action level is breached, an environmental incident will be recorded and site activities will be suspended until the source has been mitigated and best practical means have been investigated. The outcome of the investigation will be recorded in the environmental incident report and passed to the Company Environmental Advisor for review. The Project Environmental Coordinator will be informed if levels are higher than expected for a significant period of time.

5·14 EHS 040: Waste

The Project Site Waste Management Plan aims to minimise waste being generated and disposed of by:

- Considering the Waste Hierarchy;
- Using re-usable packaging;
- Ensuring suitable storage of materials;
- Re-using materials both on and off site; and
- Segregating waste materials on site for recycling.

All waste shall be disposed of in accordance with the Duty of Care and all other relevant environmental legislation and technical guidance. Waste classifications will be completed as required to determine whether waste is hazardous or not (waste acceptance criteria (WAC) testing will NOT be used for this purpose). Once classified, any hazardous wastes will be segregated on site and disposed of accordingly. Skanska reserve the right to prevent wastes leaving site until all necessary documentation has been approved.

A Waste Duty of Care Register will be maintained to demonstrate that all waste disposal routes are legitimate. The register may be kept by the project or as a central register for the company. Periodic audits will be undertaken to ensure compliance with Duty of Care. Skanska will retain all waste transfer notes for two years after the end of the project, and all hazardous waste consignment notes for three years after the end of the project.

All Trade Contractors should implement waste minimisation measures, segregate wastes to maximise re-use and recycling opportunities, and manage their wastes in accordance with relevant legislation. Skanska prefers to only work with waste management contractors certified to PAS 402 for waste performance reporting, or those who are actively working to achieve this standard.

5·15 EHS 041: Water pollution/ discharges

All site discharge(s) will be in accordance with the relevant consent. Regular testing of the discharge will be carried out in accordance with the consent conditions. Non-compliant discharges will be stopped immediately

and mitigation techniques or alternative disposal methods will be deployed until the discharge becomes compliant again.

All discharges of water to either foul or surface water drains require prior authorisation from the Project Environmental Coordinator and must be covered by either a Thames Water Groundwater or Trade Effluent discharge consent. Discoloured or contaminated water will be prevented from entering surface water drains by taking all reasonable precautions. Contamination includes, but is not limited to:

- oily residues;
- chemicals and paints;
- concrete washout water;
- muddy or silty water; and
- flushing out pipe work during commissioning

Soil stockpiles will be roll sealed and suitable management techniques will be employed to prevent silty water run-off. Wastewater from a wheel wash will not be allowed to enter any site drains that are connected to the foul or surface water drainage systems.

Dewatering will be avoided by preventing water from entering excavations via runoff or rainfall, and/ or creating a stoned sump area in excavations. If dewatering is required, silt content will be minimised by allowing a period of time for settlement. Options for de-watering are:

1. Pump to public combined foul sewer under consent from the Sewage Undertaker;
2. Pump to tanker by contractor with valid waste carrier licence;

Should extreme rainfall or a fire occur on site, it is anticipated that run-off or fire-water will collect in the basement. The Environmental Coordinator will be informed and the conditions of the discharge consent will be observed. Wastewater will be pumped out of the basement and disposed of by a licensed contractor if necessary.

5·16 EHS 041: Water use

The use of water shall be minimised as far as possible during the works. Water hoses will be fitted with control nozzles and switched off when not in use. Hoses and pipes will be regularly inspected to check for leaks. Water consumption from site, welfare and offices will be reported to Skanska every month. The possibility of re-using site run-off for site activities such as damping down will be investigated.

6.0 Environmental objectives and targets

Skanska's Environmental Strategy is supported by company-wide objectives and targets that go beyond legislative compliance. These targets must be met by all projects and key performance indicators (KPI) will be monitored through internal audits. A project-level management programme also ensures progress toward these objectives by outlining actions and responsibilities.

Environmental Targets 2015						
Commitment	**Objective**	**Targets**	**Indicators**	**Action**	**Responsibility**	**Timescale (Approx.)**
Zero Environment Incidents	Minimise negative impacts on the local environment	Zero environmental incidents	Number of significant environmental incidents and classification of significance (EIFR)	• Ensure continued compliance at site level.	Project Manager	Quarterly report
Environmental competent workforce	Competent workforce	100% of staff to receive appropriate environmental training as a three year rolling target	% attendance of training matrix and training plan	• Make staff available for training	Project Director	Ongoing
Journey to Deep Green	14% Deep Green by 2015	Map projects against Colour Palette	Quarterly review and reporting against SEP requirements (Environmental Metrics)	• Map project against colour palette	Environmental Advisor	Quarterly
Energy	To maximise energy efficiency in construction	80% of new projects using Smart metering for electricity 100% of new projects to investigate using energy procured under a green tariff 100% projects to undertake electricity S Curve	Feedback from contract commercial teams during project start up	• Undertake electricity s-curve • Discuss the installation of smart meters with the Project Director during site set up phase • Discuss the use of a green tariff with the Construction Manager/Project Manager during site set up	Environmental Advisor Project Director Project Manager/ Construction Manager	Monthly Project commencement
Water	To minimise potable water consumption during construction	80% of new projects using Smart metering for water 100% projects to undertake water S Curve	Feedback from contract commercial teams during project start up	• Undertake water s-curve Discuss installation of smart meters	Environmental Advisor Project Director Project Manager/ Construction Manager	Monthly Project commencement
Materials	To develop a sustainable supply chain	To measure responsible sourcing credentials of OU specific materials Report number of Green Solutions from LSE supply chain.	Materials to be measured on BREEAM calculator (2011 scheme versions) and percentage reported per project	• To ensure completion of calculation per project during the procurement process	Project Director Environmental Advisor	Quarterly review

Waste	Minimisation of waste at source and maximise recycling	98% waste diverted from landfill. % of projects mapping resource efficiency target (6.5t/100m2)	% waste reported in Waste Management System Waste S Curve	• Monitor waste generation • Engage with preferred Waste Management suppliers to maximise recycling potential	Project Director Environmental Advisor	Monthly
Community engagement	Maximise local procurement, employment and engagement with communities within which projects are based.	100% new projects to have socio – economic plans	Report from project team that agreed socio economic plan in place as part of project start up.	• Socio economic plan	Project Directors Community Advisor	Ongoing
Volunteering	Number of volunteer days/hours	50% LSE staff to avail of Lend a Hand day.	Report on the number of LSE staff taking their "Lend and Hand Day" or other volunteering hours via central CCI team	• Promote the scheme via intranet and OU publicity	Project Directors Sustainability Manager	Ongoing

7.0 Trade contractor requirements

Trade contractors are contractually obliged to comply with this PEMP. It will be included in documentation sent to all trade contractors tendering for packages so that its requirements are communicated at the earliest stage. Skanska procurement processes include due diligence on prospective contractors environmental policies, practices and management systems.

Trade contractors must provide an overview of their environmental controls and a nominated site contact for environmental issues before commencing work on site. Environmental issues should be included as an agenda item in trade contractor meetings.

Trade contractors must control any regulatory risks arising from their works on this project by complying with all relevant legislation.

Trade contractors must control any environmental risks arising from their works on this project by:

- considering the waste hierarchy during procurement, use and disposal of material;
- considering environmental impacts within work method statements and risk assessments;
- sourcing local staff and supplies from the London Borough of Camden;
- providing environmental training for staff depending on the nature of site activities;
- closing any actions arising from environmental inspections or audits within one week; and
- Providing suitable spill response equipment to cover planned works and address foreseeable risks.

Trade contractors must support the project-specific objectives and targets in accordance with the specifications issued and the operational requirements listed in this PEMP. The following returns for each complete calendar month should be received by the end of the first full week of each new month:

- Monthly environmental performance (Appendix 13.1);
- Waste recycling performance for each European Waste Catalogue (EWC) waste type;
- A sample of 10% of the waste transfer notes;
- All hazardous waste consignment notes;
- All timber Chain of Custody certificates and timber delivery notes;
- All valid waste carrier licences, scrap metal dealer licences and environmental permits/ waste management licences for all waste disposal routes;
- Attendance forms for environmental toolbox talks;
- All environmental monitoring reports

Trade contractors should seek to improve environmental performance throughout their involvement with the project. Skanska will share and encourage environmental innovation and best practice in collaboration with trade contractors.

8.0 Project monitoring and compliance

Monitoring will establish compliance of project staff and trade contractors within the requirements of the EMS, this PEMP, the client and all statutory obligations.

8.1 Site Inspections

Regular site inspections by all supervisory staff will physically check the site activities, identify environmental risks and ensure implementation of environmental management controls. These will be continual and will not always be recorded.

Each project team member will complete environmental and safety inspections as detailed on the Site Inspection Rota (OWOW form EHS 008-F01). A weekly inspection checklist highlights key environmental aspects to assist the person undertaking the inspection (OWOW form EHS 008-F02).

The Project Environmental Coordinator will complete detailed environmental inspections at least once a month (Appendix 13.2, form EMS-D-0002) and submit to the Company Environmental Advisor for further

analysis. The Company Environmental Advisor will complete a detailed inspection of the site with the Project Environmental Coordinator once every three months. These environmental inspections will also be used to record site-based evidence for BREEAM such as the demonstration of best practice in pollution control or noise mitigation.

8·2 Corrective and Preventative Action

The results of the detailed environmental inspection will be reported to the Construction Supervisor or Project Manager and any person required to carry out corrective actions. Any actions must be completed within a week using corrective and preventive action procedures. Incomplete actions will be carried forward to the next inspection until they are completed. The Project Director shall be notified directly by the Company Environmental Advisor if the deficiency persists, if the issue represents a significant environmental risk, or if there is a potential or actual breach of legislation.

8·3 Environmental Audits

The Company Compliance Manager will complete formal environmental management audits (OWOW form 20.02 MAN-F02) at least every six months. The Company Environmental Advisor and others deemed competent will complete interim audits. Any observations or non-conformances will be completed in advance of the subsequent audit taking place. Training will be provided as appropriate to Skanska staff and trade contractors based on the findings of audits. The Company Environmental Advisor will also audit suppliers and trade contractors on an ad hoc basis.

Client-instigated audits may occur periodically as directed by the client. External audits to support continued ISO 14001 certification may occur annually as directed by the Company-appointed external auditor.

9·0 Emergency preparedness and response

The Project Environmental Incident Response Procedure will be followed in the event of an environmental incident (Appendix 13.3). Details of incident control can be found in the EMS and may be linked with the project Health and Safety, Fire and Emergency Plan.

The PEAR assumes normal operating conditions; abnormal/ emergency conditions that may increase environmental impacts are considered in the relevant management controls.

All environmental incidents and near misses shall be recorded, and for appropriate incidents, an Environmental Immediate Action Notification will be sent to the Company Environmental Advisor for further distribution to the Environmental team.

10·0 Environmental roles and responsibilities

Clear definition and communication of environmental roles and responsibilities are required to facilitate effective environmental management. It is essential that all disciplines and functions work as an integrated team during design and construction to enable compliance with this PEMP, contractual requirements and relevant legislation.

All employees are responsible for supporting the Skanska EMS and environmental policies. Specific roles and responsibilities are defined below.

The **Company Sustainability Manager** is responsible for:

- regularly reviewing the Register of Significant Environmental Impacts;
- ensuring that a register of legal and other requirements applicable to the environmental aspects of our activities or services is maintained;
- maintaining procedures for obtaining legal consents, licences and exemptions such as discharge consents, abstraction licences and waste management licences;
- maintaining procedures for waste management, waste minimisation and sustainability;
- maintaining procedures for pollution prevention;
- maintaining procedures for emergency preparedness and response;
- reviewing and monitoring the Company's performance against agreed targets;
- maintaining a register of Environmental Specialists approved by the Company;
- arranging Environmental Management audits;

- reviewing reportable environmental incidents, establishing causes and implementing actions to prevent recurrence; and
- Ensuring that a register of incidents resulting in the Company accepting formal cautions or having been prosecuted under environmental legislation is maintained.

The **Company Environment Advisor** is responsible for:

- preparing , maintaining and revising this PEMP and the PEAR and any other specific or specialist environmental procedures that are required;
- ensuring that all site-specific licences and legal consents are obtained and that the conditions of such consents are adhered to;
- meeting Company environmental objectives and targets and setting project-specific targets in conjunction with the Project Manager;
- implementing Company Procedures for waste management, waste minimisation, sustainability and emergency preparedness and response;
- agreeing and issuing a Project-specific Site Waste Management Plan (PSWMP) waste segregation policy with the Project Manager;
- ensuring that internal environmental audits are undertaken and reported;
- assessing the environmental performance of subcontractors with the Site supervisor and reporting the results back to the Project Manager;
- producing monthly environmental reports and forwarding them to the Project Manager;
- collecting and collating the Project's environmental performance records, in conjunction with the Project Manager, and sending them to the OU Sustainability Manager;
- where required, appointing an Environmental Scientist, Environmental Technician(s) and Environmental Specialists, including those required to be licensed (eg for removal of wildlife or destruction of wildlife habitat); and
- Collating reportable environmental incident and non-conformance data, establishing cause and implementing actions to prevent recurrence.

The **Project Manager** is responsible for:

- ensuring the implementation of Environmental management on the Project;
- ensuring that the Policy is drawn to the notice of all employees under his control;
- establishing effective lines of communication with all employees under his control;
- ensuring that site-specific training needs are identified and training programmes are effectively undertaken;
- establishing and implementing comprehensive environmental inductions, training, awareness and education programmes for all levels of site staff and operatives;
- promoting the continuous improvement of environmental performance; and
- Monitoring and reviewing the implementation of environmental objectives and targets on the Project.

The **Project Construction Supervisor** is responsible for the day to day implementation on site of the following specific aspects of Environmental management:

- assessing the significant environmental impacts and proposed mitigation measures at site survey meetings;
- establishing site procedures for the disposal of waste and recycling with the Project Environment Advisor and the Purchasing Manager;
- implementing the PSWMP and site waste segregation policy;
- promoting waste minimisation and sustainability;
- collecting and collating data on waste and recycling to assist in setting and monitoring targets for waste reduction;
- implementing emergency preparedness and response procedures;
- carrying out induction, training, awareness/competence assessment of on site operatives;
- reporting non-conformances and implementing corrective and preventative action;
- monitoring, measuring and recording of Project Environmental objectives and targets;
- assessing the environmental performance of subcontractors and confirming with the Project Environment Advisor; and
- Maintaining lines of communication with the site and Project Environment Advisor.

The **Project Quantity Surveyor** is responsible for the Commercial aspects of the work on the Project including:-

- arranging subcontract agreements for each subcontracted element of the works;
- maintaining legal records for all waste removed from site for the required period after the project; and
- Providing information to the Project Manager, Company Environment Advisor & Project Systems Manager to enable KPIs to be completed for subcontractors.

All employees are responsible for implementation of the relevant parts of the Environmental Policy. All employees will:

- familiarise themselves with the Environmental Policy;
- undergo environmental induction and awareness training;
- demonstrate commitment to the implementation of the Environmental Policy;
- co-operate with the Company in fulfilling its legal obligations;
- co-operate with the Company to prevent pollution;
- co-operate with the Company to achieve continual improvement;
- implement the relevant arrangements described in the Environmental Policy;
- conform to the requirements of this PEMP and the SWMP;
- be aware of project-specific objectives and targets; and
- Monitor their workplace for potential threats to the environment and alert their supervisor or manager of any that are observed.

10.1 Project environmental roles

Company Environmental Advisor **Name: Eleanor Stewart** **Tel: 07823 355 818** **Role Description:** Leads the development of strategy and implementation of environmental and sustainability issues for the project.	Environmental Coordinator Name**: Jo Delahunty** Tel: **07854 387 793** Role Description**:** Implements the project environmental requirements on-site and supports the Environmental Advisor to achieve best practice.
Environmental Incident Coordinator Name**: Jo Delahunty** Tel: **07854 387 793** Role Description**:** Ensures appropriate spill kits are available on the site and is the focal point of contact should an incident occur.	Waste Records Coordinator Name**: Jo Delahunty** Tel: **07854 387 793** Role Description**:** Ensures all waste is segregated appropriately and is disposed of in line with legislation, the waste hierarchy and best practice.
Biodiversity Coordinator **Name: Jo Delahunty** **Tel: 07854 387 793** Role Description: Ensures that detrimental impacts on site biodiversity are minimized in line with the recommendations of the project SQE (ecologist).	COSHH Coordinator Name**: Jo Delahunty** Tel: **07854 387 793** Appointed as per the Health & Safety Plan. Maintains the COSHH Register and Material Safety Data Sheets.

11·0 Training requirements

All new Skanska employees on the project shall attend ½ day environmental training within 3 months of starting. In addition all Skanska employees shall attend relevant environmental training, as deemed by their role. The Company Sustainability Manager shall organise environmental training and maintain records.

Environmental issues for the attention of trade contractors shall be communicated by a variety of methods, including:

- Environmental, Health & Safety Meetings;
- Environmental, Health and Safety Briefings and Toolbox Talks;
- Site Notice Boards;
- Progress Meetings / Package Managers.

All personnel will receive a site-specific induction. This induction will include environmental control measures and arrangements relevant to the construction project. Attendance will be recorded.

Environmental toolbox talks (TBTs) will be provided throughout the project as required by the nature of activities on site. Training will include as a minimum: protecting ecology; waste minimisation; waste segregation/recycling; storage and use of fuels & oils; use of hazardous materials; use of sustainable timber; minimising water use; energy efficiency; noise & vibration.

12·0 Documentation and record-keeping

This PEMP and the documentation arising from EMS procedures must be clearly and logically referenced and kept in the Project Environmental File(s) or on the project electronic document management system.

13·0 Appendices

13.1 Trade Contractors Monthly Environmental Return

PROJECT:		CONTRACTOR NAME:		REPORTING PERIOD:	
Work Package:		Start & Finish dates on site:			
Skanska Manager:		Name of person completing form:			

FUEL BROUGHT TO SITE	
Petrol [litres]	
Diesel [litres]	
Propane/ LPG [kg]	
Other [SPECIFY]	

TRANSPORT	TOTAL DELIVERIES [No.]	TOTAL DELIVERIES [MILES]	TOTAL WASTE REMOVALS [No.]	TOTAL WASTE REMOVALS [MILES]
Lorry Rigid				
Lorry Articulated				
Van				
Other [SPECIFY]				

TIMBER DELIVERIES - PLEASE ATTACH CHAIN OF CUSTODY CERTIFICATES AND DOCUMENTATION SHOWING FSC/ PEFC CLAIMS

DATE	SUPPLIER	SUB-CONTRACTOR	CERTIFICATION TYPE [SPET CATEGORY]	CHAIN OF CUSTODY NUMBER	ORDER/ INVOICE/ DELIVERY NOTE	DOCUMENTATION REF.	VOLUME [M³]	ASSURED AS GROWN IN BRITAIN	GROWN IN BRITAIN LICENCE NUMBER	TREE SPECIES	DISTRICT & COUNTRY OF ORIGIN	CERTIFIED MIX [X]	PURPOSE

WASTE REMOVAL - PLEASE ATTACH WASTE CARRIER LICENCES, WASTE SITE PERMITS, WASTE TRANSFER NOTES, HAZARDOUS WASTE CONSIGNMENT NOTES, AND EVIDENCE OF RECYCLING RATES

DATE	WASTE CARRIER [LEGAL NAME]	CARRIER LICENCE REGISTRATION	WASTE PERMIT REF	EWC WASTE CODE	WEIGHT [TONNES]	CONTAINER TYPE	NUMBER OF CONTAINERS	VOLUME [M³]	DISPOSAL ROUTE	TRANSFER / CONSIGNMENT REF	WASTE FROM	RECYCLED [X]	REUSED OFF SITE [X]	ENERGY FROM WASTE [X]	INCINERATED [X]	LANDFILLED [X]

13·2 Environmental Inspection Form

SKANSKA <insert project name>

Skandocs number [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

EMS-D-0002 Detailed Environmental Site Inspection Template

Project:	Inspection No:	Date:	By:

General Comments:

Any Environmental Incidents:

Non-Compliant | Attention required | Compliant | Not applicable

No.	Item	Compliance	Comments / Required Actions	Owner	Due Date:	Closed out:
#	*Example only (delete row before use)*		*Terram needs replacing in drains at main site entrance*	*JM*	*18/01/2010*	*24/01/2010*
	External					
1	Have there been any complaints? *(if yes, what are they and have they been logged and actioned?)*					
2	Any visits by regulatory agencies?					
3	Are access & egress routes clean?					
4	Are external drains clear of sediment?					
5	Is the site boundary secure?					
6	Is site hoarding in good condition, free of graffiti? Is signage in good condition?					
7	Is there a spill kit at the site vehicle entrance?					
	Site – Noise, Dust & Vibration					
8	**NOISE** Has there been excessive noise?					

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SKANSKA <insert project name>

Skandocs number [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

No.	Item	Compliance	Comments / Required Actions	Owner	Due Date:	Closed out:
	Has there been any out of hours work?					
9	**DUST** Have we caused dust?					
10	**Vibration** Have we produced vibration?					
	Site – Ground / Water Contamination					
11	Do we have an up to date discharge consent?					
12	Have all internal drains been identified? Are they protected?					
13	Are SPILL KITS evident, clearly labelled and complete?					
14	Is there a designated area for concrete washout?					
15	Is there a designated area for refuelling?					
16	Are all oils & chemicals stored correctly? i.e. bunded or on a drip tray					
17	Are correct methods used for decanting /refuelling?					
18	Are drip trays regularly emptied?					
19	Are there visible signs of spillage?					
20	Are hard standing areas & roads clean? Is there dust, or mud on internal roads?					
	Site - Housekeeping					
21	Is the site tidy?					
22	Are materials stored correctly?					

SKANSKA

<insert project name>

Skandocs number [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

No.	Item	Compliance	Comments / Required Actions	Owner	Due Date:	Closed out:
	Are there damaged materials?					
	Site – Waste / COSHH					
23	Is the site EU Hazardous Waste Registered?					
24	Is waste stored correctly and segregated?					
25	Is COSHH / Hazardous waste disposed of correctly?					
26	Do we have all Duty of Care documentation & Monthly waste Figures?					
	Site - Timber					
27	Does all timber used on site comply with Skanska Timber Policy?					
28	Is the timber check sheet at front entrance up to date?					
	Site - Ecology					
29	Evidence of nesting birds, bat roosts					
	Miscellaneous					
30						

Additional Comments:

Closed by

Print Name: **Signature:** **Date:**

13·3 Environmental Incident Response Procedure

Environmental Incident Occurs

↓

Stop work immediately

↓

Attempt to stop incident from getting worse e.g. right a fuel drum, bund a drain, use a drip tray, stop excavating contaminated material

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Immediately notify the following	Name	Contact number
Project Env. Incident Co-ordinator	Jo Delahunty	07854387793
Project Manager	Neil Keogh	07891212346

Above to contact: ***Project Environmental Advisor, Eleanor Stewart, 07823355818***

↓

Carry out emergency / remedial action

↓

ACTIONS TO BE TAKEN

SPILL	FIRE	CONTAMINATION	DISCHARGE	WILDLIFE
• **Locate spill & try to stop it** • **Contain spill – use spill kit materials (granules, booms etc) sand or drip trays** • **Check spill has not entered drains or watercourses** • **Report location, contents, extent to Skanska management** • **Clear up using spill kits** • **Dispose of spill kits as appropriate (E.g. special waste)**	• **Stop works immediately** • **Follow emergency fire plan** • **Block drains so waste fire water cannot enter drains**	• **Stop excavation/ piling/ ground breaking works immediately** • **Report to Skanska management** • **Fence off area** • **Contact site environmental and health & safety team**	• **Stop works immediately** • **Stop pumps** • **Report to Skanska management** • **Contain the discharge – build a bund etc** • **Install a settlement tank or trap**	• **Stop works Immediately** • **Report to Skanska management details of:** **- What has been disturbed or damaged (plant and animal)** **- Where it occurred** **- How it happened** • **Fence off area** • **Contact environmental team**

ALL INCIDENTS MUST BE RECORDED APPROPRIATLEY