

Construction Environmental Management Plan			
Life and Mind Building (LaMB) – University of Oxford			
Company	Wates Construction Ltd		
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Contents

1.0	Introduction
2.0	Regulatory Framework and Planning Conditions
3.0	.....	Site Location & Project Description
4.0	.....	Construction Programme
5.0	.....	Roles & Responsibilities
6.0	.....	Information for contractors and visitors
7.0	.....	Sustainability Strategy
8.0	.....	Ecology
9.0	.....	Air Quality
10.0	.....	Construction Site Waste
11.0	.....	Heritage
12.0	.....	Water Consumption
13.0	.....	Pollution Prevention & Hazardous Materials Storage
14.0	.....	Soil and Geology
15.0	.....	Construction Lighting
16.0	.....	Noise and Vibration
17.0	.....	Housekeeping and Security
18.0	.....	Incident Response
19.0	.....	Internal Communication and Training
20.0	.....	External Communication
21.0	.....	Other Comments

1.0 Introduction

- 1.1 The aim of this Construction Environmental Management Plan (CEMP) is to set out the responsibilities and requirements with regard to legal and regulatory compliance and the implementation of Environmental Management Systems and Mitigation measures.
- 1.2 This CEMP details procedures and plans for the avoidance, minimisation and mitigation of potential environmental impacts as a result of the construction phase of works in accordance with the mitigation hierarchy.
- 1.3 These plans constitute a framework of measures, targets and monitoring strategies for the environmental management of the project's construction phase.
- 1.4 All of these plans and procedures are bespoke to the project and exist within a dynamic system of management which will be reviewed and edited throughout the progression of the project.
- 1.5 The development of the document has been developed with the aim of managing environmental impact of any construction activities in accordance with the Mitigation Hierarchy. As such it should be regarded as a guidance document subject to change and review as environmental risks and potential impacts change during project progression.
- 1.6 For the purposes of this CEMP the definition of "Working Area" was defined as "any area that will require either temporary or permanent works to facilitate the progression of the development's construction phase." This includes areas required for access, temporary construction works and temporary storage areas.

2.0 Regulatory Framework and Planning Conditions

- 2.1 The proposed project is to create a science research and teaching facility for the University of Oxford at Souths Parks Road Oxford.
- 2.2 The Construction Environmental Management Plan (CEMP) is required to encompass environmental controls when required with due consideration to relevant environmental legislation and local requirements.
- 2.3 The CEMP provides the framework for which commitments made in the Planning Application documents or any requirements of planning conditions can be realised. The CEMP outlines the contractor's approach to environmental management throughout the construction phases with the primary aim of reducing any adverse impacts from construction on local sensitive receptors and managing the sustainability impacts of the project's development.

- 2.4 The planning permission conditions with environmental implications applicable to the Life and Mind Science Building development will be reflected as best practice in our general environmental management principles and guidance.

3.0 Site Location & Project Description

- 3.1 This CEMP has been produced in support of the Planning Application Life and Mind Project.
- 3.2 The site is located at 9, South Parks Road, Oxford, OX1 3RF and occupies the footprint of the existing Tinbergen Building which sits on the corner of South Parks Road and St Cross Road, within the Oxford City planning authority.
- 3.3 The existing site is currently being demolished to enable the construction of the new Life and Mind Building.
- 3.4 The new building abuts the existing occupied Chemistry Teaching Block (CLT) at the south side of the site which is to be retained.



Source: OpenStreetMap with WCL annotations

- 3.5 The site is bound to the North by South Parks Road, immediately South by CLT block and Balliol College recreational ground beyond; to the East by St Cross Road and New College recreational ground beyond. The existing Science Campus buildings and temporary accommodation block for the Zoology department lies to the West. The following buildings are the identified neighbours and a brief description of the activities within them:

Building name	Activities
Biomedical Services Building	Provides education and training for researchers working with animals. Undertakes research on mice. Use of MRI scanners known to be vibration sensitive. Ultrasound may be a concern to the animal welfare.
Zoology - modular buildings	Currently decamped from Tinbergen. Research on Flatworms in water tanks, desktop microscopes and weighing balances in use.
Peter Medawar Building – Pathogen research	Inter-disciplinary research group investigating pathogen diversity. Extensive use of DNA sequencing, optical microscopy, cellular analysis and measurement. A detailed report identifying noise and vibration sensitive equipment and processes has been provided and is referenced later in this report.
William Dunn - Pathology	Teaching and research department looking at molecular and cellular mechanisms of human health. Sleep department use of mice may be impacted and known to have electron microscopy suite in basement of OMPI (Oxford Molecular Pathology Institute) building which will be vibration sensitive.
Plant Sciences	Research in the biochemistry and systems biology of plant growth. Cell and developmental biology aiming to understand underlying plant cell functions and regulatory pathways. Research into the biodiversity and origin of plant species and their interactions. Ramboll have undertaken a significant vibration survey of this building report ref: LAMB-RAM-ZZ-XX-RP-YV-0002 – Vibration measurements in the existing Facilities, Oct 2019.
Linacre College	Understood to be mainly residential accommodation.
Chemistry Teaching labs	
Pharmacology	

3.6 There are no hospitals, schools or emergency service facilities located within 200m of the development boundary.

3.7 We anticipate site working hours to be
 - 08:00 to 18:00 hours Monday to Friday
 - 08:00 to 13:00 hours Saturday

Deliveries to site may be restricted to site at peak times from 07.30 to 9.30 and 16.30 to 18.30.

All works will be undertaken within the agreed hours stated within the planning approval.

Unless in the event of unforeseen or exceptional circumstances such as:

- Health and safety issues which require continuation of the works
- Works being carried out within the existing building envelope.
- Completion of operations that would otherwise cause greater interference to the environment or members of the public if not completed.
- Completion of concrete pours due to unforeseen overruns such as batching plant delays or traffic delays
- Delivery of abnormal loads i.e. large police advised loads requiring specific transport notification
- Operations that need to be undertaken outside of standard working hours which include tower crane erection and removal will be agreed in advance with Oxford City Council.

3.8 In order to maintain these working hours, contractor(s) will require a period of 30 minutes before and at the end of the working shift to start up and close-down the works activities.

3.9 During the construction period it may be necessary in exceptional circumstances to work outside the prescribed hours. Should this occur, the duration of works will be subject to consultation with Oxford City Council

4.0 Construction Programme

4.1 The detailed Construction Programme will be made available for review in the site office.

4.2 The overall construction period from commencing the Main works to completion and project handover is anticipated to be in the region of 135 weeks. The table below summarises the construction sequence and approximate dates and durations for each section of work (excluding sequence overlap).

Construction Stage	Duration	Anticipated Start	Anticipated Finish
Site set – up and enabling work	4 weeks	Jun 2021	July 2021
Piling platform and sheet pile wall	11 weeks	July 2021	Oct 2021
Sub - structure to ground floor	21 weeks	Oct 2021	Feb 2022
Super- structure	35 weeks	Dec 2021	Aug 2022
External envelope	38 weeks	May 2020	Dec 2022
Internal fit out	74 weeks	April 2022	Aug 2023
Testing and commissioning	26 weeks	Jul 2023	Dec 2023

4.3 A full copy of the construction programme will be available from the Construction Manager.

5.0 Roles & Responsibilities

5.1 The Construction Manager is responsible for:

- Ensuring that the CEMP is developed & held on site and that it is implemented throughout all phases of the project. Ensuring the CEMP details are updated as and when relevant information is provided by the stakeholders associated with each section of the CEMP; e.g. further consent conditions, pre-construction surveys, etc.
- Maintaining the CEMP and ensuring that all contractors and visitors comply with it.
- Ensuring that environmental issues identified within the Pre-Construction Information and the pre-construction site surveys and relevant information gathered from agencies, local councils etc are addressed.
- Producing environmental project specific controls for all significant risks identified and implementing control measures to minimise the risk of damage to the environment.
- Communicating the CEMP and other related document to employees, contractors and client representatives.
- Ensure the site and all stored materials and chemicals are safe and secure.

- Wates signage indicating where and whom visitors should report to are clearly displayed, the site is kept in a tidy and orderly fashion. Waste will be managed in conjunction with the Wates group procedure.
- Controlled access arrangements as so those entering site may avoid hazards.
- Emergency egress arrangement so those leaving site in the event of a pollution or spillage incident may do so safely.
- There are First Aid Facilities and appropriately trained First Aid staffs, spill kits are available and appropriately trained staff.

Ensure all those that work on site:

- Have Wates Site Induction including briefing on environmental issues pertinent to the project and relevant toolbox talks.
- Understand and obey the Site Rules.
- Are made aware of the Emergency egress arrangements, Muster points, First Aid facilities and First Aiders, spill and clean up procedures.
- Read and understand the site hazard board.
- Have current certification for activities as required.
- Are aware of all environmental matters which arise on site.

Ensure the activities on site:

- When necessary are carried out under Client Operational Safety Rules.
- Have task specific risk assessments and method statements (RAMS) in place identifying any environmental issue which may be applicable.
- Are carried out in accordance with the requirements of any associated RAMS.

5.2 Contractors and visitors to the project will be responsible for:

- Ensuring that the control measures identified from environmental surveys are implemented as they are relevant to their work / visit.
- Ensuring that the project management team are notified of any nonconformance of control measures or environmental incident where the environment has been put at risk.
- Reporting relevant details and providing evidence pertaining to environmental aspects within which their operations are influential, as necessary or requested by the Principle Contractor.

5.3 The site Safety, Health & Environment Advisor (SHE Advisor) is responsible for:

5.3.1 Ensuring work is carried out:

- In a safe manner.
- In accordance with any manufacturers' instructions etc., good standards of workmanship.
- Ensure site staff are working in accordance with agreed Risk Assessments and Method Statements (RAMS) particularly where activities have the potential to cause environmental harm.
- Health and safety advisor to complete the site waste management plan and ensure it is followed.
- Ensuring that the CEMP is implemented throughout all phases of the project.

- 5.3.2 Monitoring SHE issues by:
- Carrying out regular checks on site to ensure the site is secure and tidy.
 - Monthly audits.
 - Consulting workers on the effectiveness of measures to reduce risk to the environmental, reviewing and improving conditions or methods/procedures where appropriate.
 - Keeping records of and reporting any incidents and close calls (near misses).

5.4 The Environmental Manager shall be responsible for:

5.4.1 Ensuring that the CEMP is developed & held on site and that it is implemented throughout all phases of the project. Ensuring the CEMP details are updated as and when relevant information is provided by the stakeholders associated with each section of the CEMP; e.g. further consent conditions, pre-construction surveys, etc.

5.4.2 Maintaining the CEMP and ensuring that all contractors and visitors comply with it.

5.4.3 Ensuring that work is carried out:

- In accordance with legislation & consents, objectives, targets and the Construction Environmental Management Plan with regards to any environmental activities on site.
- Ensure site staff operates in accordance with agreed Risk Assessments and Method Statement (RAMS) and in accordance with the Wates induction and toolbox talk training with regards to environmental risk.

5.5.4 Monitor/Report Environmental Issues by:

- Carrying out weekly checks and “toolbox talks” carried out and recorded as necessary
- Carrying out Monthly Audits of Environmental Data and Statistics
- Ensuring compliance with Environmental legislation & consents, objectives, targets and the Construction Environmental Management Plan.
- Carrying out Inspections, Audits and Non – conformance reports.
- Responsible for delivering environmental training.
- Environmental Advisor to liaise with Health and Safety advisor to complete the site waste management plan and ensure it is followed.
- Environmental performance data reporting.
- Ensure work is carried out in accordance with the Environmental Statement.
- Compliance with environmental legislation, consents, objectives, targets and other environmental commitments.

6.0 Information for contractors & visitors

6.1 All contractors and visitors to the site will be made aware of the Environmental Policy and the controls applicable to their presence and activities on site including but not limited to:

- 6.1.1 Method Statements
- 6.1.2 Risk Assessments
- 6.1.3 Site inductions containing environmental briefings
- 6.1.4 Toolbox Talks

- 6.2 The Project Manager will be responsible for monitoring communications between all relevant parties to the project ensuring that all environmental matters to the project are discussed and managed and observation of the communications will be documented in the weekly site meetings and sent by e-mail. In addition, a copy of all correspondence will be held in this file.
- 6.3 Relevant Site layout and locations / plans / CDM drawing detailing the location and construction of the site compound, storage locations and car parking are to be displayed on an information board at the site entrance.

7.0 Sustainability Strategy

- 7.1 Environmental considerations are assessed in the project Life & Mind Building Sustainability Strategy Report which contains a Sustainability Implementation Plan. We will implement a tracker schedule to monitor compliance during the Construction Phase.

8.0 Ecology

- 8.1 The baseline ecological survey did not identify any habitats within the Site considered as being of local, regional or national ecological value and overall the Site was considered to be of negligible ecological value.
- 8.2 Nesting bird surveys will be carried out regularly during the nesting season to ensure the prevention of harm or disturbance to birds and disruption to site operations.
- 8.3 Efforts will be made to ensure wildlife in the area is unable to enter the site during operations to prevent harm to wild individuals.
- 8.4 Efforts to promote biodiversity during the project's duration will be made

9.0 Air Quality

- 9.1 Measures to implement dust suppression will be undertaken in order to limit the effects of excessive dust.
- 9.2 Air Quality monitoring will be implemented if deemed necessary along the boundaries of site in order to ensure that dust particles in the air are kept to safe and acceptable levels; Levels to be agreed with Oxford City Council.

10.0 Construction Site Waste

- 10.1 Waste has been identified as a key area of environmental risk within the construction industry and the LaMB Project.
- 10.2 Waste on site will be managed by licensed subcontractors and carrier companies aiming to segregate waste streams wherever possible and ensure secure storage wherever possible.
- 10.3 Where practicable waste will be segregated at site. An external consolidation centre will be in use for improved management and segregation of waste.
- 10.4 Reviews will be carried out at regular intervals across the project in order to optimise waste management and design out waste from the project's operations wherever possible.
- 10.5 A Construction Phase site waste management plan will be developed

11.0 Heritage

- 11.1 We understand at this stage there is no requirement for Archaeological investigations or monitoring of the works. If required, we will liaise with Oxfordshire Council to agree an appropriate scope and co-ordinate with our works as appropriate.

12.0 Water Consumption

- 12.1 Water consumption will be monitored monthly and reported against to track resource efficiency.
- 12.2 Checks will be made across the project for leaks and other wastages of water to prevent unnecessary wastage of resources.
- 12.3 Water reduction methods will be identified, considered and implemented where appropriate across the project.

13.0 Pollution Prevention & Hazardous Material Storage

- 13.1 Pollution incidents are a potential risk for the project where COSHH materials, oils and fuels will be implemented or stored.
- 13.2 Sufficiently secured and adequately bunded storage will be provided for these materials and fuels to ensure minimal risk of a spill and pollution incident.
- 13.3 In preparation for the potential of a spill incident spill kits will be provided across site and distributed to areas of likely risk, around COSHH Materials stores, near COSHH bins and wherever plant is operating or being stored.
- 13.4 Spill response training will be carried out regularly for site operatives for whom it is relevant to ensure that in the event of a spill incident there is adequate knowledge for proper response and remediation.
- 13.5 A designated location for the storage of fuels and refuelling of operational plant and machines will be identified in the interest of limiting the potential spread of high-risk areas. This refuelling station will have marshals trained adequately in the handling of fuels and in spill response with adequate spill kits provided in case of incident.

14.0 Soil & Geology

- 14.1 Earthworks and excavation are a large aspect of the project. Soil waste will be managed by approved and licenced waste carriers and destinations with reuse of the soil being implemented wherever possible.
- 14.2 The site geotechnical report identifies water levels above the excavation formation level. Construction methods have been selected to avoid contamination of the below ground water:
- Perimeter sheet piles will be installed to a depth at which they will be embedded into the clay and will form a “Cut-off” water retaining box.
 - Water within the “box” will be pumped out to “dewater” the site prior to main excavation works to water level commencing.
 - Consent will be put in place to discharge the pumped water. Water quality will be checked, and settlement tanks will be used to remove any silt.

15.0 Construction Lighting

- 15.1 Lighting will be implemented across the site to ensure the safety of employees during operations, particularly during the winter months and in areas of limited natural light.
- 15.2 Where possible lighting will be designed to be energy efficient and used only when required with all lights requested to be LED's and split circuit lighting to allow for control of light requirement by location.
- 15.3 Censored security lighting will be implemented for safety and security around site with overriding switches for security to control localised area lighting as necessary.
- 15.4 Where possible lighting will be directed into the site boundary to prevent nuisance for neighbours of the site and wildlife in the surrounding area.

16.0 Noise & Vibration

- 16.1 Noise and vibration nuisance are potential issues for local building users, members of the public and structures within the vicinity of site.
- 16.2 Noise Management will be carried out in accordance with BS5228-1:2009.
- 16.3 Baseline assessment, trigger levels and monitoring methodology has been established during the demolition phase (and set out in Ramboll Report Life And Mind Building (Tinbergen Demolition) Noise & Vibration Monitoring Specification 20/4/2020. We propose to continue on this basis though the main construction phase and will maintain monitoring on site as required during substructure, structural frame and building envelope operations (as appropriate).
- 16.4 Construction methods will take consideration to minimise noise and vibration will include :
 - Injected “silent” sheet piling in lieu of bored secant piles for the basement perimeter wall.
 - Off-site manufactured “unitised” cladding systems for office areas.
 - Large section precast units for the flex-block with pre-installed windows
 - Precast walls and columns where practicable
 - Prefabricated services & plant rooms where practicable

17.0 Housekeeping & Security

- 17.1 Security will be implemented on site using Biosite access systems along with the implementation of video cameras and security guards at site entrances. Sufficient hoarding will be provided for the prevention of access to the project.

18.0 Incident Response

- 18.1 All environmental incidents should be reported directly to the Wates Project Manager and reported on the Airswab incident reporting system as soon as reasonably practical.
- 18.2 An environmental incident can be:
 - 18.2.1 A fuel or chemical spillage to ground, into drains or a watercourse
 - 18.2.2 Damage to the habitat of protected species or nesting birds
 - 18.2.3 Damage to protected species either plants or animals
 - 18.2.4 Damage to protected features such as Trees subject to TPO's

- 18.2.5 Incidents involving waste such as fly-tipping or the illegal transfer of waste
- 18.3 Wates emergency response plan to be completed by environment manager, SHE adviser and Construction Manager in collaboration.
 - 18.4 As a minimum, contractors will be required to complete a risk assessment in order to assess requirements for spillage equipment and pollution prevention storage. Any equipment should be clearly labelled, readily available and the locations and operations should be detailed in an environmental toolbox talk to contractors.
 - 18.5 The Wates Stop/Go app will be used by all project staff to help identify examples of both good and bad environmental practice. Stops for bad practice will be investigated and addressed whilst Go's for good practice will be promoted and communicated.
 - 18.6 Where necessary in the event of a pollution incident the Environment Agency (EA) will be contacted and Wates and client Environmental Project Manager will be notified. The EA Pollution Hotline Number is 0800 807060.
 - 18.7 Wates Airsweb reporting policy and procedures shall always be complied with for investigations of incidents as necessary.
 - 18.8 If a workplace hazard is spotted a "close-call" must be raised to prevent any incidents or activity that could be potentially harmful to the environment or the community.
 - 18.9 If an incident or event is likely to give rise to public concern and adverse media attention OR involves significant spills, leaks or toxic substances or pollution then relevant incident investigation should be carried out in accordance with Group Airsweb reporting procedures.

19.0 Internal Communication & Training

- 19.01 The CEMP will be distributed to the project team, including subcontractors, to ensure that the environmental requirements are communicated effectively. Key activities and environmentally sensitive operations will also be briefed to staff & subcontractors. Project, client and company environmental policies shall be displayed on site.
- 19.02 A schedule of meetings will be developed to include weekly safety, health and environment meetings. At these meetings any issues or incidents will be raised and communicated with the client, along with proposed remedial and mitigation actions and additional controls as required. An environmental register must be signed and updated to confirm toolbox talks, training and weekly meetings by the environmental team.
- 19.03 During the construction phase, internal communication will include reporting on the following: Inspections, audits and non-conformance, environmental performance data including any incidents, near misses and progress on reaching targets. Group SHEQ-S and the account director will be informed of any visits by external bodies and the outcome or feedback of any such events.
- 19.04 Site staff will be competent to perform tasks that have potential to cause environmental impact. Competence s defined in terms of appropriate education, training and experience. Where project specific training is required, training will be appropriate to the role and seniority of staff.

19.05 Environmental awareness and training shall be achieved by:

- 19.05.1 All managers and supervisors to be briefed on the CEMP. All sub-staff and operators are to undergo an environmental induction and toolbox talks and the CEMP will be signed and updated on the environmental register.
- 19.05.2 Site inductions, including relevant environmental issues such as waste management, working near watercourses, noise & dust managements and ecological risks
- 19.05.3 Emergency preparedness and response briefings, including communication and reporting of incidents, use of spill kits and other equipment.
- 19.05.4 Method statement and risk assessment briefings including reference to environmental risks
- 19.05.5 Toolbox talks to cover specific task related matters of environmental risk
- 19.05.6 Key project specific environmental issues and briefings

19.06 Meetings provide the project manager and team an opportunity to exchange information and receive immediate feedback

20.0 External Communications

- 20.01 All complaints or information requests will be made aware to the Project Manager and will be logged promptly. A Public Liaison Officer will be appointed from Wates & identified to local residents and the public. They will serve as the first point of contact for members of the public.
- 20.02 Noise may be a key subject of complaint where construction works take place very close to residential and retail areas. Working hours, plant types, construction methods and noise mitigation measures may be subject to section 61 consent under the Control of Pollution Act 1974. This will be applied for via the local authority and a mitigation plan developed leasing with local environmental authorities.
- 20.03 The local authority environmental health team will be first point of contact for residents affected by noise, dust or other nuisance issues with the potential requirement that they be kept informed on progress, programme and upcoming phases of works that may give rise to disturbance in order to develop plans and respond to complaints.
- 20.04 Careful monitoring of complaints received, including recording details of the location of the affected party, time of the disturbance and nature. This is to assist with managing the works to reduce the likelihood of further complaints.

21.0 Other Comments

- 21.01 In addition to the mitigation measures, Wates maintain an Environmental Management System (certified to ISO14001) from which information will be extracted as required to complete method statements upon which operatives will be briefed.
- 21.02 A commitment register for the scheme will be maintained, including the commitments identified within the CEMP. This will include any additional surveys, authorisations, consents, licenses and permissions required by the project in service of the construction operations of the development. The register will be updated with any new issues identified during the pre-construction or construction phase.