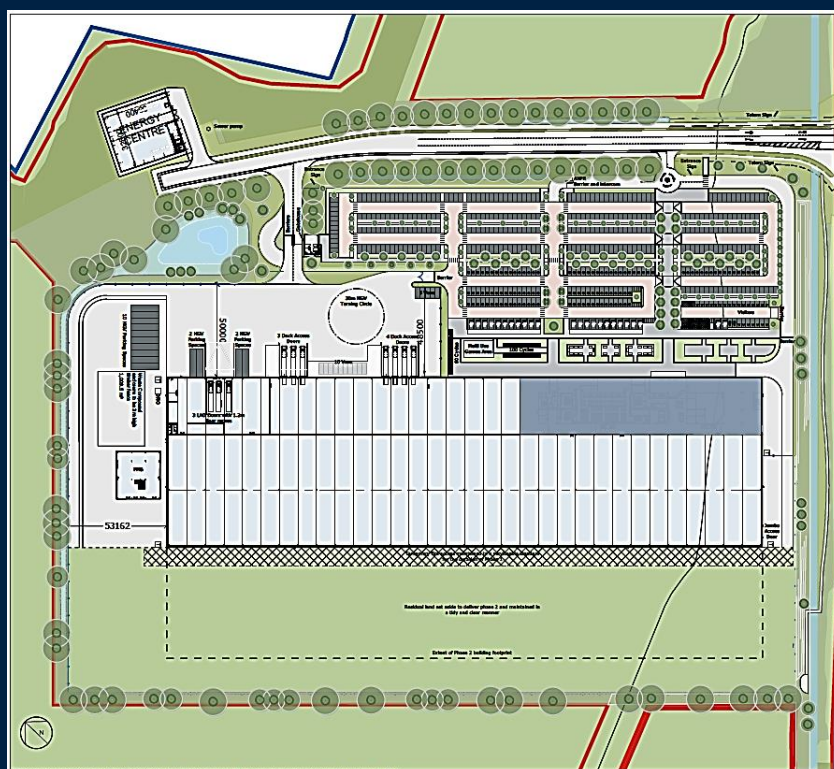


Construction Environmental Management Plan

Symmetry Park, Oxford North





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Issue date:	07 th January 2022
Revision:	V4
File reference:	Symmetry Park Oxford North

1.1. Project Description

- A site of 19.35 hectares;
- Demolition of agricultural buildings;
- New signal-controlled access from the A41;
- Employment floorspace (Use Class B2);
- Loading bays, service yard, waste management area;
- Facilities management building;
- Security gatehouse;
- A building for use as an energy centre;
- Parking for electric cars, accessible parking, bicycles, cars and motorcycles;
- Landscaping including landscape mounds;
- Re-alignment of Wendlebury Brook within the Proposed Development area; and,
- Sustainable drainage.

The extent of the application site area includes the land needed to undertake construction, the re-alignment of the Wendlebury Brook, and landscaping including landscape mounds. Development would also require the removal of the existing agricultural buildings located within the north-east part of the Site.

The proposal will be delivered in 2 phases: Phase 1 due to become operational in 2024 and, Phase 2 due to become operational in 2030, subject to projected demand.

1.2. Assessment of Existing Conditions

A full road condition survey assessment of the existing road network in close proximity to the site shall be undertaken, if required, by the site management team prior to the commencement of works. The survey will include photographic and written evidence of the findings.

The report will be issued to the project team for review and comment. We will ensure that the existing highway network is protected using barriers, signs and by instructing the delivery and collection vehicles to proceed with caution, and where necessary guide them on to site by means of a banksman.

1.3. Control Measures

1.3.1. Site Clearance;

We will look to undertake any vegetation clearance outside of the bird nesting period, March to September, inclusive. Where this is not possible, the ecological clerk of works (ECoW) will check all areas subject to works to ensure that no nesting birds are present before the works commence.

If a bird nest is identified, a buffer zone will be established around the nest. A minimum buffer will be 5m from the nest. No works will be permitted within this buffer zone until all young have fledged, as confirmed by the ECoW.

To ensure that the proposed development of the site does not cause any harm to reptiles which may be present, vegetation clearance should be staged over a phased period. The cuttings will be removed from site on the same day they are generated, to avoid creating areas of refuge for wildlife. Any trees with high potential for roosting bats or confirmed bat roosts will be subject to further surveys prior to felling and a Natural England licence may be required for any confirmed roosts.

All contractors working on the site will be given a toolbox talk about protected species and habitats that they may encounter within the site. In the event that any protected species are found during construction works, all works will stop immediately and advice sought from an ECoW immediately on how to proceed.

These measures will then be implemented and adhered to on site.

1.3.2. Dust and Emissions;

Dust will be controlled by means of extraction, containment, dampening down, suppression etc. to prevent the migration of dust during the works.

Light water misting systems will be utilised to contain the dust at source. This will include when transferring or placing aggregates and the like. Debris netting will be erected to the boundary fence, as required, to contain dust and debris.

The weather conditions will be constantly monitored to allow control measures to be planned in advance, as dry weather may cause dusty conditions and wet weather create the possibility of mud.

Plant will be maintained in good order. All contractors must ensure, that the equipment issued to their operatives or used by their operatives, has the ability for extraction/containment to be used.

Plant operators must ensure, that the placing of aggregates is done in a controlled manner to minimise dust distribution. This means placing and spreading the materials using the bucket at low level.

All Non-Road Mobile Vehicles used on site must be in good working order, serviced regularly and monitored by the operator, to ensure that they remain in good working order. Any vehicles that are noted in poor order will not be allowed to be operated on site.

In addition to the plant itself, the conditions of the site must be monitored to ensure that the air quality is not affected by the construction activities. This could include dust created during the tracking and movement of plant, during the earthworks and “track” out (vehicles leaving the site).

1.3.3. Accidental Spillages;

Refuelling of plant or equipment shall be carried away from water courses or drainage points and on a hard standing with drip drays underneath.

Sand bags will be placed around areas such as gullies and drains to protect them and prevent any ingress should a spill occur. Spills will be cleaned up immediately with a spill kit and the waste material disposed of accordingly via a licensed waste contractor. Any spills that may affect the environment will be reported to the local EA, for advice, instructions and control support.

All fuel and generators will be stored on a suitable drip tray with a capacity equal to 110% of the capacity of the fuel tank that supplies the equipment. All operators must make sure that the equipment they use does not leak oil. This will be done through the weekly plant inspections

The contractors will empty drip trays regularly to make sure that they retain the capacity to contain any spills.

All plant will be maintained in good order and where possible, will use biodegradable lubricant and biodegradable hydraulic oil in plant when working in or near watercourses. Biodegradable oils are less toxic than most of the synthetic oil but should still be stored and used to the same standards as other oils and prevented from entering the water environment.

1.3.4. Lighting for night works;

Night working may be required during the construction period, to aid and assist with the completion of the project within the allocated time scales. This may be for activities such as concrete works.

Only the minimum amount of light needed for safety will be used and turned off when night works are not being carried out.

We will minimise light spill by eliminating any bare bulbs and upward pointing light fixtures. The spread of light will be kept near to or below the horizontal plane, by using as steep a downward angle as possible and/or shield hood.

We will look to use light sources that emit minimal ultra-violet light and avoid the white and blue wavelengths of the light spectrum. This is to avoid attracting insects and thus potentially reducing numbers in adjacent areas, which bats may use for foraging

We will avoid using reflective surfaces under lights or light reflecting off windows (e.g. onto potential bat flight lines); Artificial lighting will not directly illuminate hedge rows & tree lines and indirect light spill will be avoided through positioning of lighting away from vegetation, or inclusion of baffles to direct lighting away from vegetation and onto the working area.

1.3.5. Vibration;

Plant and equipment will be inspected and in good order with equipment with reduced vibration levels being chosen when ordering plant and equipment.

Plant and equipment will be maintained in good order and fitted with dampeners where possible to reduce the effects of vibration.

To minimise the possible effects of vibration to the surrounding environment and businesses, we will look at the timing of the works to programme it outside of peak or busy periods, along with other measures such as creating a slit trench to disrupt the vibration waves through the ground.

In advance of vibratory works taking place, we will also advise any businesses that may be affected as advance notice is known to minimise the potential disruption caused.

1.3.6. Noise;

Consideration will be given to local businesses and residents in relation to the starting up of machinery and noise levels. Noise levels will be monitored during the works to ensure that the new development does not cause a nuisance to the local businesses or residents.

Noise assessments will be undertaken by the Project Manager, using a handheld noise meter a RS PRO Digital Sound Level Meter 8kHz, as the works progress. The manager will take readings at different locations and times throughout the project and during different phases of the works.

This will obtain real life noise levels and would include all noise sources such as horns, reversing sirens, rattling of excavator buckets, impact noises, etc.

Where noise levels are above the recommended noise levels from construction activities, the works will cease until further mitigating measures are implemented. I.e. this includes use of noise screens, low noise level plant and equipment, set working hours outside of surrounding business sensitive works.

Site working hours for noisy activities will be; Mon-Fri 7.30-6.00, Saturdays 7.30 – 1.00. No works Sundays or bank holidays, unless agreed with the local authority. Quiet works, which are not audible at the boundary may commence outside of these hours.

1.3.7. Identification of 'Biodiversity Protection Zones';

To avoid damage / disturbance of 'Biodiversity Protection Zones' we shall set Protection Zones (PZ) with an appropriate buffer, which will be established during the construction phase.

This will be implemented at the start of the project, to ensure the protection zone is in place and is maintained throughout.

We will install markers using orange netting and pins, as well as pig tail pins with Red / White warning tape, showing the buffer zone.

This information regarding the buffer zone will be addressed in the induction, to ensure all operatives are aware of the required control measures.

Any works in close proximity to the buffer zone will require a detailed Risk Assessment. This must detail type of equipment to be used, watching brief during the works positioning of plant to prevent damage to the buffer zone, area of hand works only. These will be reviewed and approved by the site management team, ahead of the works commencing.

Notice signs will also be erected to stop encroachment into areas of retained habitat. Root protection zones will be set up around any retained trees.

Excavations created as part of the works may cause animals such as small mammals to become trapped.

We will look to close off or backfill all excavations as the works progress or as soon as possible.

Where this is not possible, they will be securely covered or a means of escape for any animals that may become trapped will be provided, such as a wooden board.

All excavations will be checked for the presence of animals each morning and immediately prior to backfilling.

Toolbox talks will be given to all contractors working on the development will be given. These will cover any potential protected species and habitats that they may encounter within the site and what to do should any be discovered during the works.

1.3.8. Vehicle Movements

Car parking will be within the confines of the Construction Design and Management (CDM) area at all times and vehicles will be parked in a safe manner. Vehicle movements and haulage routes will be agreed with the highway's authorities.

We will ensure that the on-site compound and allocated car parking spaces is sized efficiently to ensure it allows for peaks of vehicle numbers. No on street parking will be allowed. Provisions will be provided to ensure that vehicles can be loaded and unloaded off the public highway. Where possible, the site labour force will be encouraged to use sustainable modes of transport.

All materials will be stored within the construction area, away from fence lines and boundaries.

The storage areas will be defined at the induction process, so all parties are aware of their allocated storage areas. These will be subject to change, as the works progress.

Where possible we shall utilise one-way systems, especially in storage areas and/or install a turning circle so that vehicles can turn without reversing

We shall plan the storage areas to minimise delivery vehicles crossing the construction site area.

All materials will be stored in a safe and secure manner at all times, to leave access for emergency vehicles.

All contractors will be responsible to secure their materials to prevent theft and damage.

The quantity and volume of traffic will be controlled through the early placing of early orders and ensuring that where multiple loads are required there are set times given for vehicle movements to allow an even spread of traffic. Deliveries to the site will be between the site working hours of 8.00am to 17.30pm. We will aim to have deliveries arrive outside of peak periods such as rush hour traffic.

A wheel cleaning facility will be set up to control and prevent mud being drawn out on to the road. This will consist of a jet wash which will be used to remove dirt and debris from the wheels and bodies of the site vehicles, as required. This will be done before they exit the works area. All materials that are washed off will be contained on site for disposal.

All drivers will be responsible to ensure that their vehicles are clean and hazard free before leaving site and this will be checked and monitored by the contractor supervisor and gateman, where provided.

Any vehicle that is not clean, will not be allowed to exit the site. Road sweepers will be called off as required by the Project Manager to clean the access roads. These will be readily available to address any mud as soon as it arises.

Monitoring of the weather conditions against the site-based activities will help the manager plan for operations that may create mud, i.e. Groundworks. Manual clearing of mud will also be carried out as required by means of broom, shovels etc.

1.3.9. Protections measures to avoid or reduce impacts during construction (may be provided as a set of method statements);

The measures will be as per the Risk assessment controls, which will detail the requirements for all contractors to adhere too.

The controls will be conveyed during the induction and a copy of the CEMP will be issued to the contractors working on the project.

1.3.10. Details of measures to protect the watercourse from the impact of construction works;

We will plan ahead for intense and also prolonged wet weather and consider all relevant pollution mitigation measures including, minimising the amount of time stripped ground and soil stockpiles are exposed. We shall only remove vegetation from the area that needs to be exposed in the near future.

We will create run-off lagoons, as required and allow suspended solids to settle before disposal off site. Settled solids are removed regularly and appropriately disposed of. Run-off is to be collected in an impermeable sump. Contaminated water tankered off site for authorised disposal.

We will prevent water from entering excavations, or the canal water course by using cut-off ditches and using pump sumps in excavations, to draw the water away from the area.

Where run off water is contaminated with silt or other pollutants, such as oil this water, this must not be pumped or allowed to flow (directly or indirectly) into the water environment without treatment.

Plant and wheel washing will be carried out in a designated area of hard standing at least 10 metres from any watercourse or surface water drain

Refuelling of plant or equipment shall be carried away from water courses or drainage points and on a hard standing with drip drays underneath.

Sand bags will be placed around areas such as gullies and drains to protect them and prevent any ingress should a spill occur.

Spills will be cleaned up immediately with a spill kit and the waste material disposed of accordingly via a licensed waste contractor.

Any spills that may affect the local water course will be reported to the local EA and water trust, for advice and control.

All fuel and generators will be stored on a suitable drip tray with a capacity equal to 110% of the capacity of the fuel tank that supplies the equipment. You must make sure that the equipment you use does not leak oil.

We will empty drip trays regularly to make sure that they can contain any spills.

All plant will be maintained in good order and where possible, will use biodegradable lubricant and biodegradable hydraulic oil in plant when working in or near watercourses.

Biodegradable oils are less toxic than most of the synthetic oil but should still be stored and used to the same standards as other oils and prevented from entering the water environment.

1.3.11. The times during construction when specialist ecologists need to be present on site to oversee works;

The ECoW will be present during the Vegetation clearance and the clearance of bird nesting habitat. We shall also request their services, should we encounter any Protected Species. They can advise on any measures required, to ensure protected species are managed safely, during the construction works

1.3.12. Responsible persons and lines of communication;

Management of the Implementation of the installation of physical protection measures during construction;

- Construction Manager: - TBC

Training for Construction Personnel in relation to the CEMP control measures

- Construction Manager: - TBC

Implementation of safe working practices during construction;

- Construction Manager: - TBC
- Contracts Manager: - TBC
- Environmental, Health and Safety Manager: - TBC
- Environmental, Health and Safety Advisor: - TBC

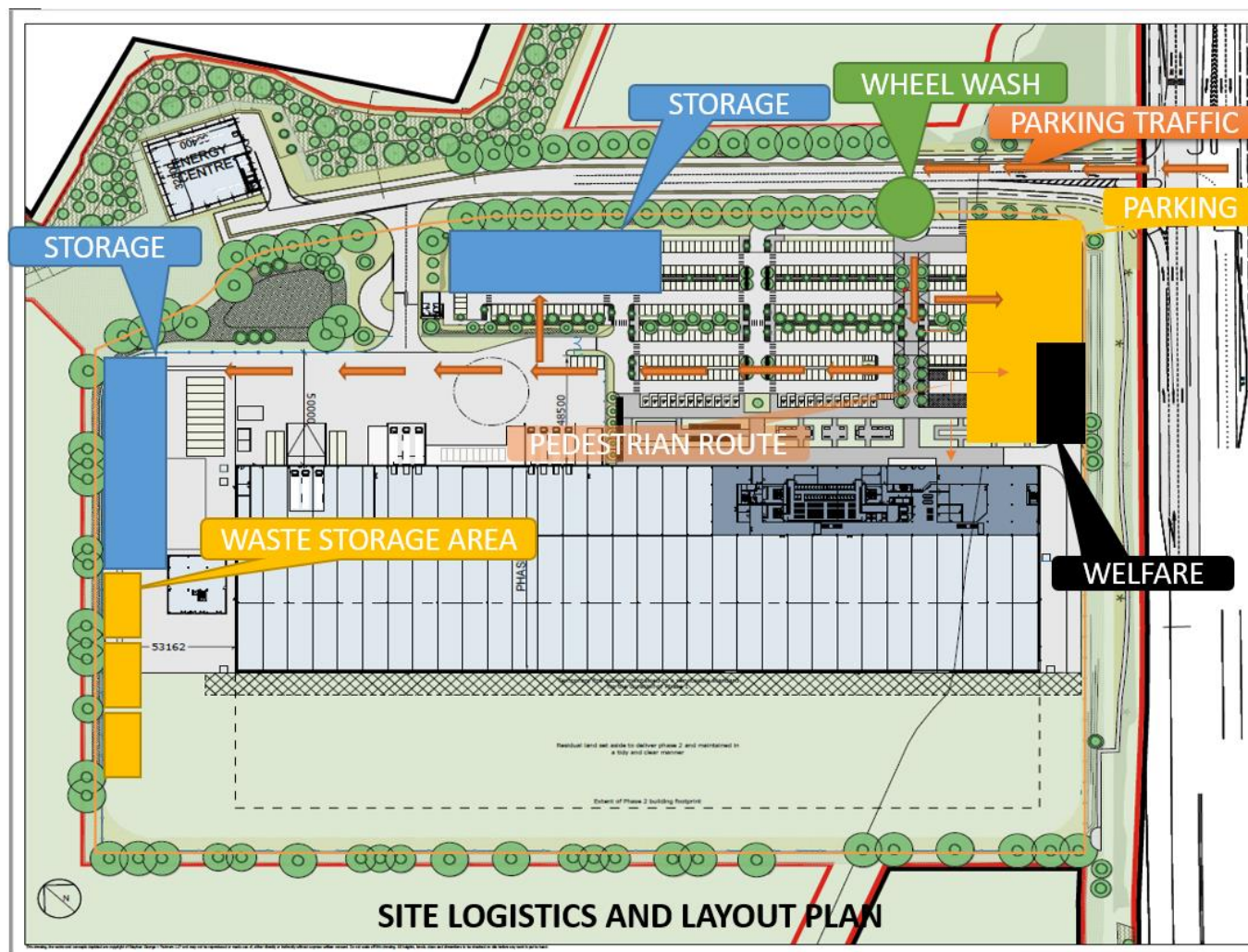
Regular inspection and maintenance of the physical protection measures and monitoring of working practices during construction;

- Construction Project Manager: - TBC
- Senior Contracts Manager: - TBC
- Environmental Health and Safety Manager: - TBC
- Environmental, Health and Safety Advisor: - TBC

All personnel can be contacted via the office number – TBC

Appendix 1: Site Logistics and Layout Plan

SITE LOGISTICS AND LAYOUT PLAN



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