CWL01 & 02, Newport, Wales

Outline Environment Management Plan

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Microsoft Cloud Operations + Innovation

Issue and revision record

Rev.	Date	Originator	Checker	Approver	Description
01					SDD phase
02					Design and permitting stage
03					Further permitting stage developments
04					Handover to construction
05					Handover to operations

Contents

1. Objectives of the Management Plan

Microsoft understands the importance of applying international and local best practice risk management for environmental and social aspects for the build programme of our datacentres. To ensure timely and successful delivery, we must foster trust, respect with local communities and regulatory bodies. Microsoft expect the AE, EC and GCs approach reflect this by ensuring strict compliance with local and national regulations, authority and regulatory guidelines, environmental assessments (statutory and non-statutory), permits and any other risk control documents associated with the development. The AE, EC and GC is expected to identify opportunities to find innovative approaches to improving our performance and not just rest at compliance; Microsoft aims to be best in class at everything it does; our datacentres are a visible representation of this.

1.1. Purpose of the document

The Outline Environment Management Plan (OEMP) document is the tool that Microsoft uses to capture and track project environmental and social risks, aspects and impacts associated with the project. Risk owners and timelines for management and close out will be identified. The OEMP is a 'living document' and will be updated throughout the course of the developments life.

Responsibility for ensuring this document is up to date lies with the EC and Microsoft Construction Environment Manager. Ownership lies with the Environment Permitting Manager.

The document has identified an outline level of mitigation and environmental issues associated with the following phases:

- Demolition (where applicable)
- Prior to construction (e.g. advanced works, site preparation, vegetation clearance);
- During construction (e.g. works); and
- Operation.

The OEMP will be issued to the General Contractor (GC) to provide the basis for the Construction Environmental Management Plan (CEMP). The proposed CEMP should be submitted as part of the RFP phase, and finalised as the technical assessments and permit documents are made available. Site set up should be influenced by this document, the site environment constraints map and Landscape and Ecological Management Plan (LEMP). The GCs final accepted CEMP will be submitted to Microsoft a minimum of 20 days prior to any activities on site

2. Environment management framework

2.1. SDD and design phase

The OEMP should be used as a single vehicle for identifying all site restrictions, avoidance and mitigation measures, next steps and considerations for the AE and GC teams. The document should refer to out to separate management plans where needed and gather all information needed for the Microsoft Environment Permitting and Construction Environment Managers to fully understand the project requirements at any given stage.

2.2. Construction phase

Both the OEMP and GCs CEMP should be considered 'living' documents with periodical and as-required reviews. Measures identified in both documents should be considered mandatory and best practice on-site and embedded within the site's policies and procedures. The CEMP should describe how environmental requirements will be managed for the project and specifies controls that will be implemented on-site, including:

- Mitigation measures to control and minimise the environmental impacts of the construction work;
- Local and national applicable legislative requirements
- Local authority or regulatory guidelines applicable to the site during construction and operation
- Contain the risks identified within the Environmental Management System.
- Any licenses/permits that are in place and their conditions (including post planning conditions) to demonstrate compliance with all relevant legal, regulatory, and corporate requirements.
- Best practice measures and pollution prevention plan to ensure that good construction practices are adopted throughout the construction phase; and
- A framework for handling complaints and mitigating impacts that may be unforeseen or that are not identified until construction is underway.

The GC will be required to ensure that all environmental risks associated with the project are captured, owners are identified and appropriate management plans are in place prior to construction commencement. A culture of ownership and avoidance of harm to the environment is expected from all parties involved with the development, leading to strict compliance with environmental legal requirements.

2.3. Microsoft Construction impact goals

In 2020, Microsoft made a bold set of commitments in relation to our carbon, water, waste and ecosystems impacts as shown below.

To ensure our partner organisations are aligned and enabling these commitments, the GC is expected to show how their company ethos and site practices implemented.

2.4. Operational phase

Microsoft will actively promote the implementation of the Environmental Management System (EMS) during the operation phase of the development. An EMS is a framework designed to help monitor, control, and continuously improve environmental performance. By implementing an EMS, Microsoft will consider all environmental issues that are relevant to its operations.

2.5. Environmental culture

The GC will actively promote a robust environmentally aware culture during the construction of the development. All environment documentation, including this OEMP, Risk Assessments and Method Statements will align with Microsoft company-policy and on-site best practice.

The GC is expected to have an ISO 14001 Environmental Management certified system or equivalent. Regular toolbox talks, trainings, reminders of best practice should be embedded into the rhythm of business on the site. Site inductions are expected to contain key environment risks and avoidance measures and serve as a reminder that all site staff have a responsibility towards the environment. GC management are responsible for reinforcing environmental awareness and ensuring it is appropriately managed and visibly and verbally supported for the duration of the project.

2.6. Project Objective and Targets

The GC will draw up a schedule of environmental objectives and any subsequent actions required to enable the project's delivery. Objectives would include realistic actions and targets to ensure the following are addressed:

- reduction of the site's energy requirements;
- effective engagement with internal, external and statutory stakeholders;
- minimisation of the risks to the water environment;
- waste and materials would be managed in adherence with the avoid, reduce and reuse principle;
- environmental training requirements are identified and implemented;
- permit requirements are complied with;
- management of third parties on-site;
- environmental incident/near miss reporting
- no reduction in air quality including dust and vehicle and equipment emissions;
- noise levels would not exceed those agreed by the authorities; and
- best practice pollution prevention methods are implemented.

The schedule would be committed to by the GC and collated into Key Performance Indicators (KPIs) within the CEMP.

3. Project context and description

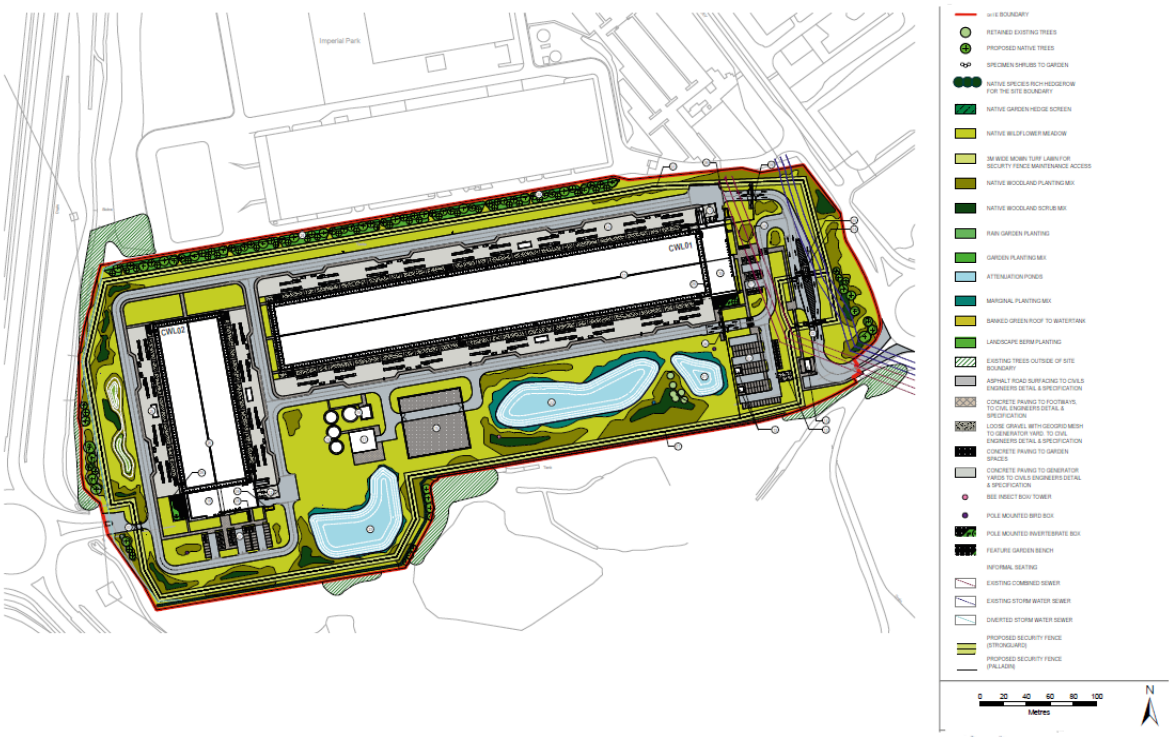
Introduction

This proposed scheme is for a Data Centre development on the site of the former Quinn Radiator Manufacturing Plant at Duffryn Lane, Coedkernew Newport for Microsoft Data Center operations. Microsoft has the ambition to establish an Availability Zone with several Data Centres in South Wales; the proposed development on the Quinn site is part of realising this ambition.

The site is currently occupied by a large industrial building; and a number of support buildings for storage, technical functions, and office (approximate area 76,000 m2). Five units are currently for the uses of B2 (General Industrial) and B8 (Storage and Distribution), with an office space ancillary to the factory which is established as a B1 (Business) use. The existing site has a range of elevations up to a maximum of 11.43m ridge height and incorporates the provision for 336 car parking spaces across three car parks with an additional lorry parking area. The site also benefits from fences around its boundary and two security gates at its accesses. The site has an existing 24-hour security team in place monitoring the site and restricting unauthorised access. Portions of the site are in a state of disrepair due to lack of maintenance and depreciation of construction materials.

For the proposed scheme, the existing structures will be demolished and two Data Centres, along with support structures for daily operations, will be built in its place (approximate area 38,000 m2). In addition to a reduction in built surface area, the proposed scheme also includes a reduction in impermeable paved areas, and the inclusion of additional storm water retention.

Figure 3 - 1 Proposed Development



Project Location

The circa 40.79 acres (16.5ha) site of the former Quinn Radiator Factory sits within the Imperial Park business park situated on the outskirts of Newport and comprises manufacturing, distribution and warehousing facilities and offices. The site lies within a wider strategic employment area that includes Airbus, R&D centres and Gocompare.com.

The site is bound by industrial development to the north and east within Imperial Park. The western boundary is bounded by a dual-carriageway linking to the A48 and a small residential area further afield. Access on the west side of the site is via this unnamed dual carriageway and access on the eastern side is via Dyffryn Lane off the Celtic Way roundabout. The site is well located in terms of access to the M4 which enables travel to Newport, Cardiff, Swansea and Bristol.

South of the site is undeveloped land. The Nant-y-Moor Reen is situated on the western boundary and an element of the western part of the site is known to have flooded in the past. There is a pumping station on the site.

Figure 3 - 2 Location and address of the Proposed Development

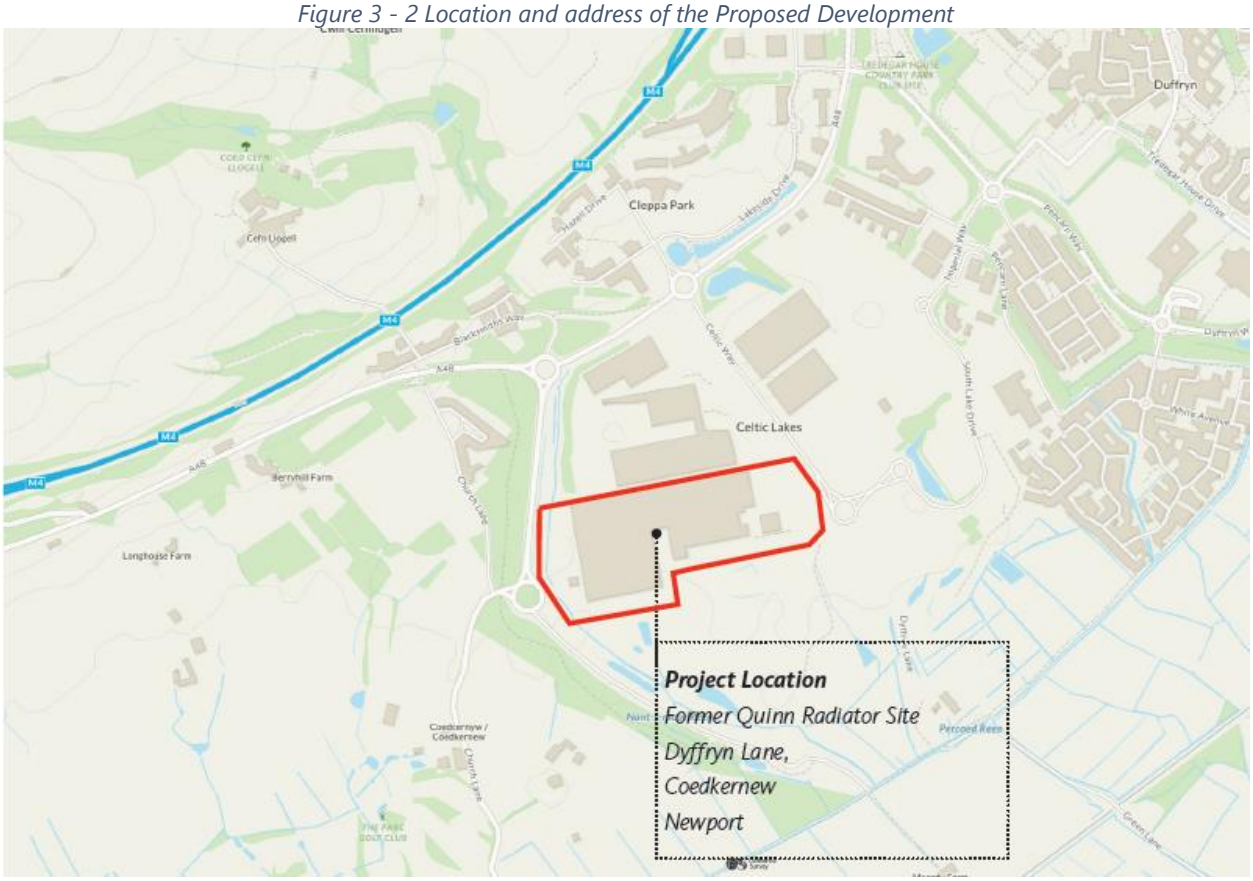
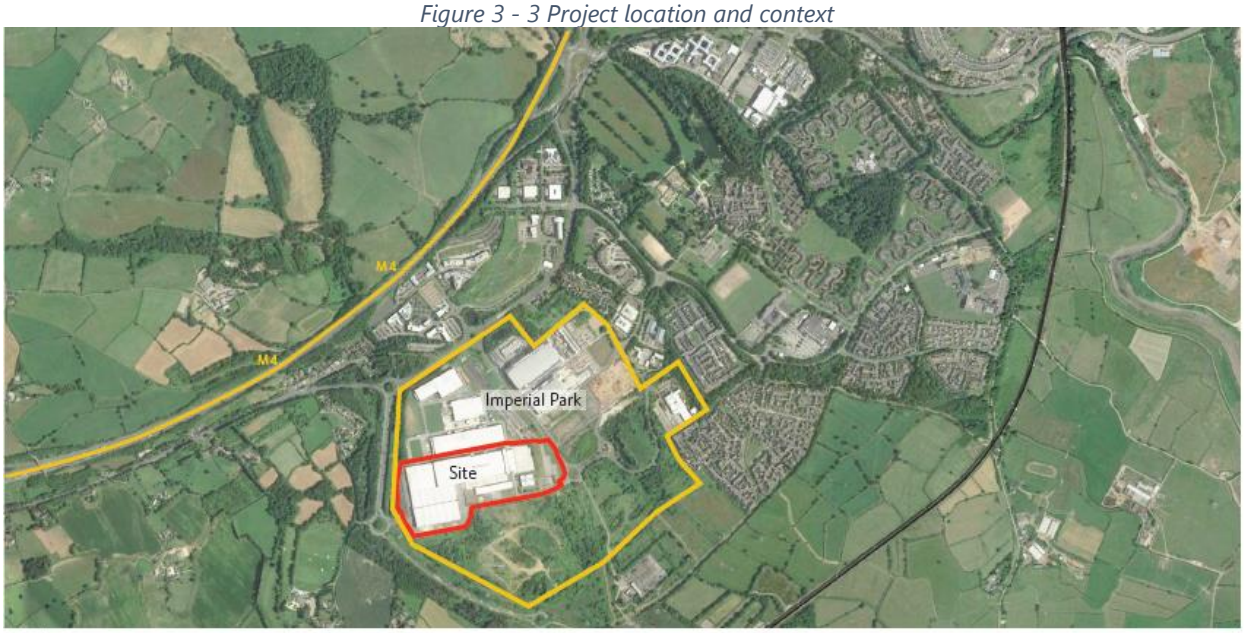


Figure 3 - 3 Project location and context



Wider Context

Intermediate Context

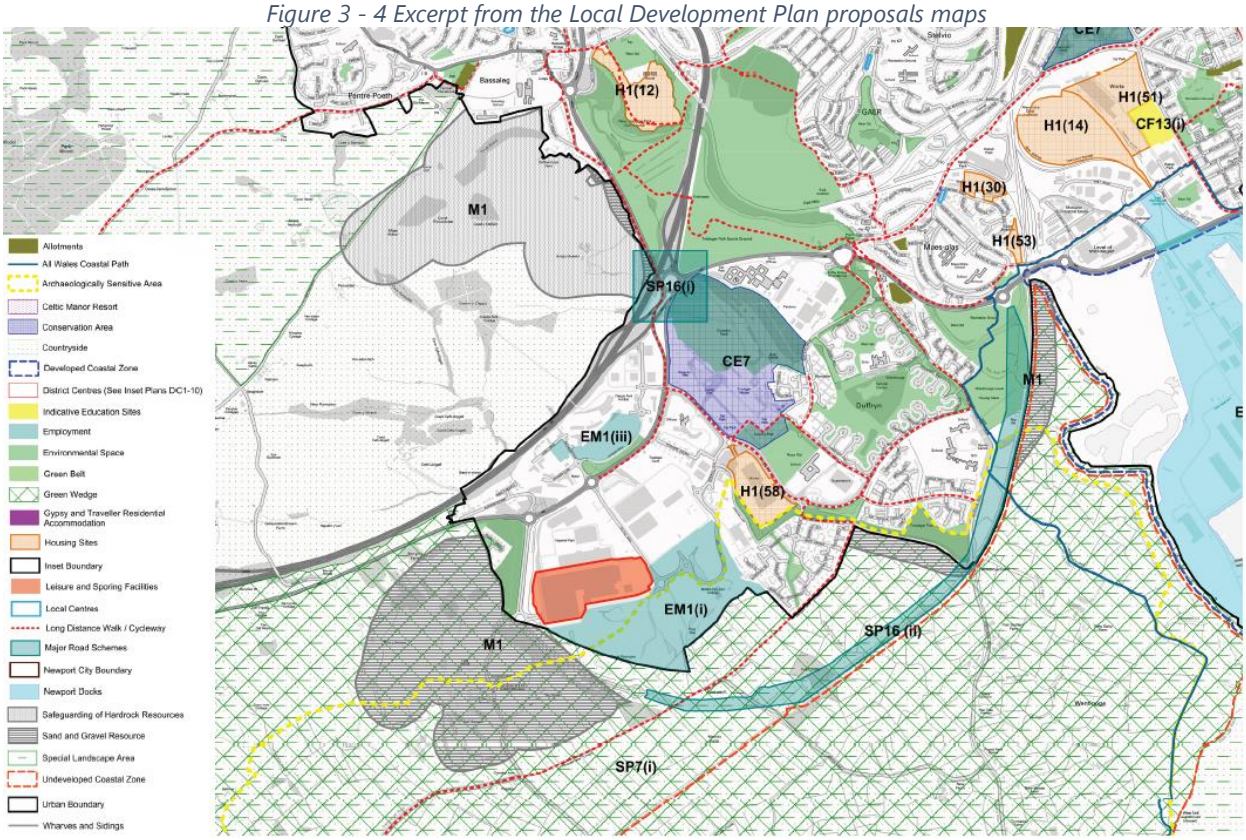
Project Overview

Constraints

The Newport Local Development Plan (2015) provides a development plan for Newport and is the basis for planning within the council's administrative area.

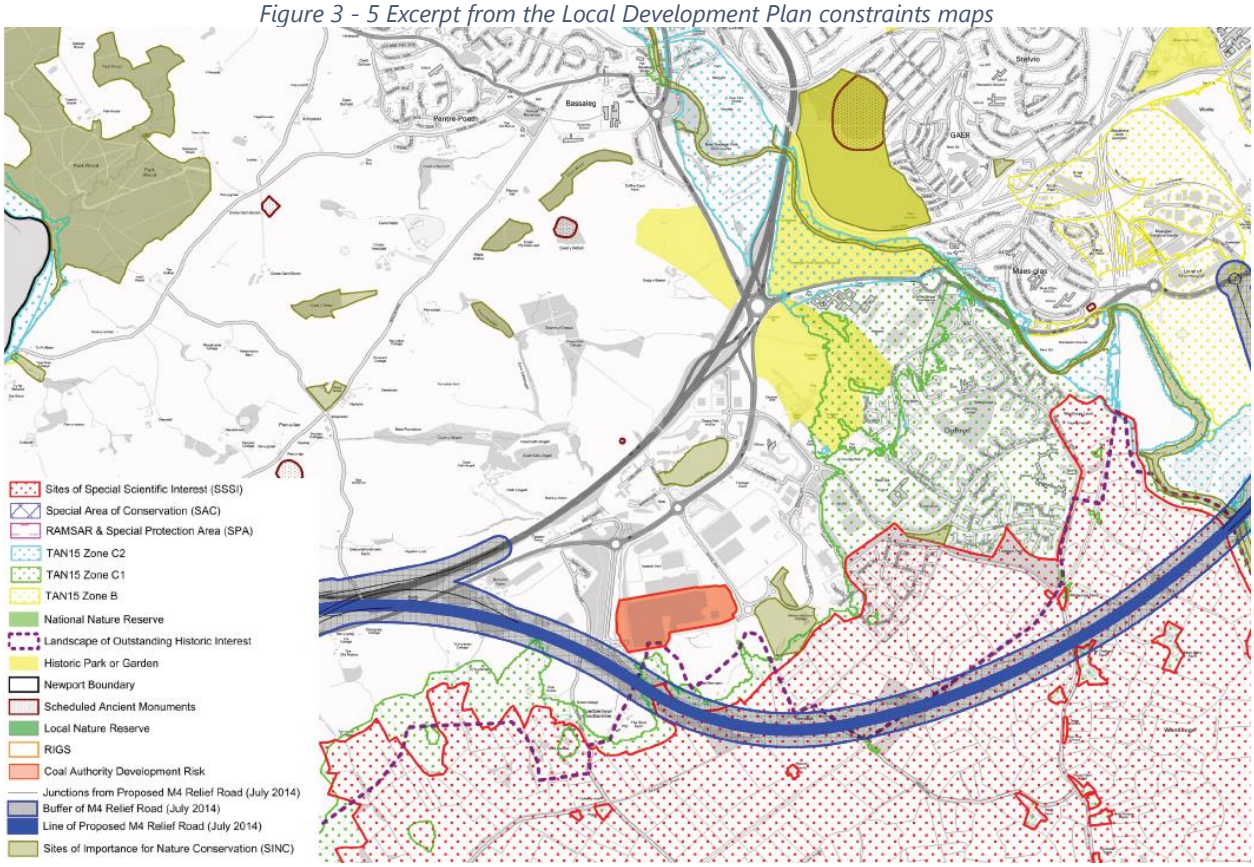
The proposals maps show that the site is located within the defined settlement boundary of Newport and is immediately north of the 95 acre Duffryn B1, B2 and B8 employment allocation. (policy EM1(i)). The area directly to the west is designated in the LDP as Countryside and Green Wedge (SP7(i)). Overlay zones directly to the south indicate "Archaeologically Sensitive Area" and a "Special Landscape Area".

Figure 3 - 4 Excerpt from the Local Development Plan proposals maps



The constraints maps confirms that a corridor of land to the south of the site is safeguarded in the adopted LDP under Policy SP16 "Major Road Schemes" for the M4 Relief Road plans, which implementation was abandoned in 2021. Additionally, the site is in proximity to the Gwent Levels Sites of Special Scientific Interest (SSSI) and a "Landscape of Outstanding Historic Interest".

Figure 3 - 5 Excerpt from the Local Development Plan constraints maps



Environmental Receptors

Ecology

The proposal for a new data centre complex on the former Quinn Radiators Factory provides an opportunity to achieve biodiversity enhancement on an industrial plot.

A Preliminary Ecological Appraisal (PEA) of the Site was undertaken in June 2021 with an Ecological Impact Assessment completed in October 2023. Following the recommendations in the initial Extended Phase 1 Habitat survey, great crested newt (GCN) surveys were undertaken in 2021 on five ponds within 250 m of the site and no GCNs were found to be present in any of the ponds. The site was also categorised as being of low value for foraging and commuting bats. An extended Phase 1 habitat survey was undertaken in May 2023, to confirm that no significant changes in habitat had occurred since the initial assessment and report. Bat transect surveys and static bat loggers were undertaken in Spring, Summer and Autumn.

The site is not considered to be of ecological interest owing to its developed, fragmented, and amenity character. No priority habitats were recorded. None of the trees or buildings are considered to have potential to support roosting bats. The potential for protected and priority species was limited to commuting bats, small numbers of widespread reptiles, and common nesting birds.

The Gwent Levels Site of Special Scientific Interest (SSSI) is located 180 m to the south of the Site. In addition, seven Sites of Importance for Nature Conservation (SINCs) are located within 2 km (see Figure 3-5). No direct

adverse impacts to statutory or non-statutory designated sites are expected providing pollution prevention measures outlined in a scheme Construction Environmental Management Plan (CEMP) are employed during demolition, pre-commencement and construction. Potential indirect adverse impacts to habitats associated with nature conservation designated sites via air emissions will be addressed in an Air Quality Impact Assessment report.

No adverse impacts to protected or priority species are expected providing precautionary measures outlined in a scheme CEMP are employed. A precautionary working method statement will be provided to the GC which will include the presence of an Ecological Clerk of Works (ECoW) during pre-commencement and construction. A sensitive lighting strategy will be produced to ensure light spill to the south and south-east of the site is minimised, thereby avoiding potential disturbance to commuting bats.

Post-construction, local fauna can benefit from the implementation of new native habitat features, including native species-rich hedgerows, waterbodies, scattered native trees, and wildflower meadows, complemented by artificial wildlife boxes.

Noise

The Proposed Development would generate noise emissions from the following activities:

- Demolition of existing buildings.
- Construction of Data Centre complex.
- Operational noise sources such as back-up generators, ventilation, air conditioning and cooling plant.

The closest residential properties to the site are situated to the west, on Church Lane and Church Crescent at a distance of approximately 280 m from the closest noise producing element on the site. To the east of the site lies the town of Duffryn, with the closest residential properties on its western outskirts situated at a distance of approximately 450 m to the proposed Development. To the South, there is open land with dense vegetation, which appears to be unofficially used by the public (including the use of motorbikes). However, there are a number of more isolated properties are situated to the south, with the closest (on a private road off Church Lane), including The Stud Farm, approximately 300 m from the site.

The site is adjacent to several commercial/industrial premises, including:

- Vantage Data centre, which is currently in operation with expansions proposed, approximately 230 m to the north-east of the closest noise producing element on the site;
- IQE – a supplier of semiconductor products, approximately 140 m to the north-east of the closest noise producing element on the site;
- NHS building (storage/pharmacy building), located along the northern boundary of the site and approximately 50 m from the closest noise producing element on the site;
- Other commercial business in the wider business park;
- Parc Golf Club approximately 290 m to the south-west of the closest noise producing element on the site; and
- Hotels and restaurants to the north.

A number of industrial/commercial premises, such as, the IQE industrial unit, and NHS building, are situated close to the site which may contain offices. As the buildings nearby are linked to relatively noisy industrial or commercial uses, they are expected to be of lower noise sensitivity.

Noise monitoring was undertaken in August 2023 to understand the background noise levels around the Site.

Figure 3 - 6 Noise sensitive receptors and noise monitoring locations

Mitigation measures for noise impact are imbedded in the design of the Proposed Development. During demolition and construction, the GC is expected to follow good practice as advocated in BS 5228-1 & 2 to ensure construction activities do not give rise to excessive noise or vibration. Other mitigation measures will be outlined in the CEMP.

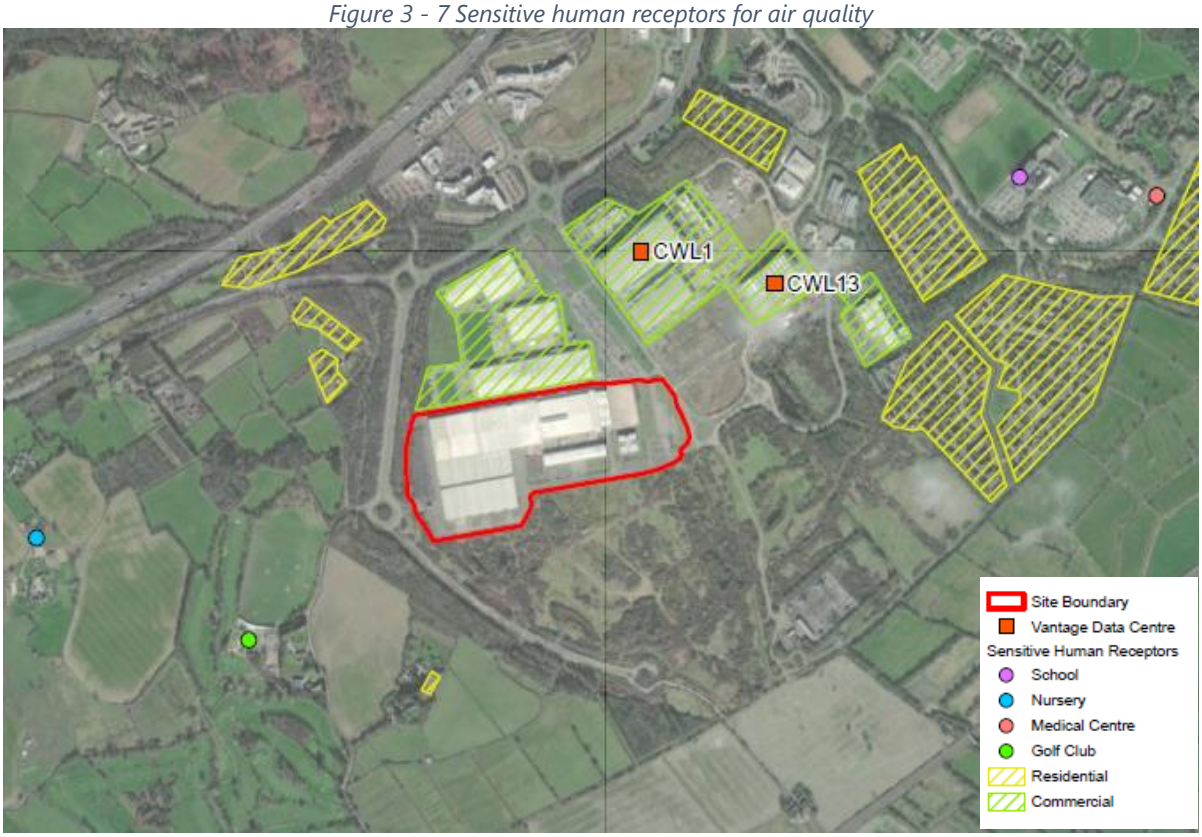
Air Quality

The Proposed Development requires the use of diesel engine generators in the event of mains grid power loss. These emergency generators require routine testing to ensure their functionality during an outage. Diesel generators have inherently high emissions of oxides of nitrogen, and to a lesser extent, particulate matter.

The Proposed Development is located close to relevant human and ecological receptors. Human receptors are any off-site location where people may be exposed to air pollutants during testing or emergency operation (Figure 3-7). These are same as those listed above for noise receptors and include (but is not limited to): Vantage Data Centre, and an NHS building adjacent to the site as well asl the Parc Golf Club and other

commercial businesses in the wider business park and, hotels and restaurants to the north. Ecological receptors are sensitive habitats or species in surrounding the site that may be exposed to air pollution due to the Proposed Development. Ecological receptors are: the LG Duffryn Sites 1 & 2, Sites of Importance for Nature Conservation, approximately 65 m from the site; the Gwent Levels Site of Special Scientific Interest (SSSI), approximately 180 m from the edge the site: and, the Severn Estuary Special Area of Conservation, Special Protected Area and Site of Special Scientific Interest, amongst approximately 3km from the site (Figure 3-5).

Figure 3 - 7 Sensitive human receptors for air quality



In common with the large majority of UK protected habitats, the baseline at some of these receptors is already in excess of the Critical Loads that are set for the protection of the sensitive species within these sites. This means that there is minimal headroom for acceptable additional impact associated with the operation of the Data Centre. An air quality impact assessment will be undertaken to ascertain baseline information which will be gathered from publicly available data including from local council monitoring campaigns and DEFRA mapping and from diffusion tube monitoring.

In addition to potential air quality impacts from diesel generators, dust relating to demolition, earthworks, construction, and traffic also need to be considered. The site is located just off the A48 and the change in daily traffic numbers as a result of project construction and operation will determine whether emissions from traffic will cause any significant effects. Mitigation measures for all potential additional sources of air quality impacts will be outlined in the GC CEMP.

Heritage

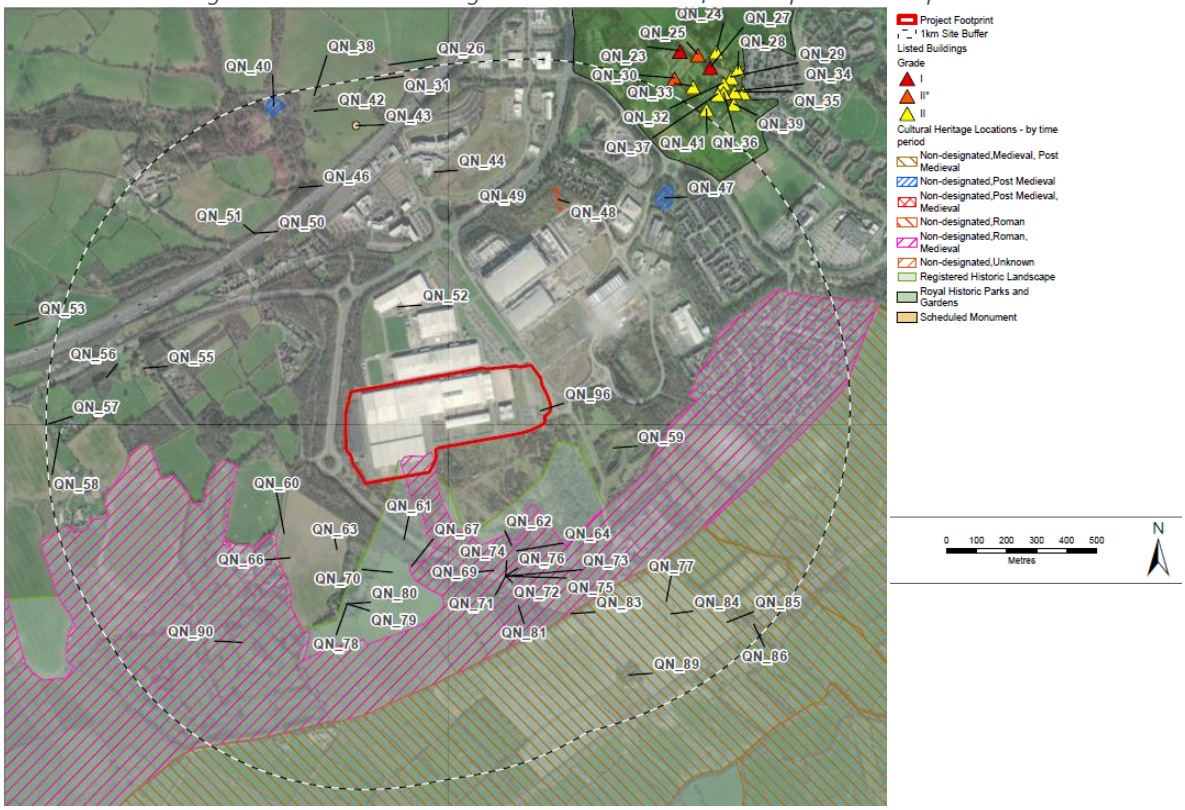
The site lies within a landscape of generally high archaeological potential and partly within the northern boundary of The Gwent Levels Historic Landscape of Outstanding Historic Interest. The Glamorgan Gwent Archaeological Trust Historic Environment Record (HER) lists 31 undesignated heritage assets within 1 km of the site, many of which were identified during previous archaeological work in advance of development. site's fen edge location is ideally suited for prehistoric settlement and there is evidence for Bronze Age, Iron Age and Roman settlement within 500m of the proposed development.

Within the site itself there has been significant below ground disturbance associated with industrial development. Previous investigations at the site in the 1990s failed to identify any archaeological remains. Recent ground investigation works have, however, identified alluvial and peat deposits. These deposits are themselves of palaeoenvironmental interest and may contain significant archaeological remains. The presence of thick alluvial deposits within the site means that there remains some potential for buried archaeological remains within the area.

A review of designated assets in the area shows (Figure 3-8):

- One scheduled monument is located within 1 km of the Site, the Gwen y Gleppa Burial Chamber (MM022) - a Neolithic chambered tomb;
- The Tredegar House Conservation Area lies 800 m north east of the Site; and
- There are no listed buildings within 1 km of the Site, the closest is the cluster of listed buildings associated with Tredegar House, which lie between 1 and 1.2 km away from the site.

Figure 3 - 8 Cultural heritage assets within 1km of the Proposed Development



The Proposed Development can have number of impacts on cultural heritage assets. These are direct impacts during construction including the removal of part of or the whole of buried archaeological deposits and/or indirect impacts during construction which can take the form of visual, auditory or atmospheric (dust) intrusion.

The Archaeological Desk Based Assessment has identified one potential significant effect upon the Gwent Levels Historic Landscape of Outstanding Historic Interest (QN_65). This potential impact pertains to potential direct physical removal of buried deposits during groundworks associated to the former location of the Nant-y-Moor Reen that runs through the centre west part of the site.

Due to the unknown depth and state of preservation of any remains that may be present, the most appropriate way to assess potential impacts on them is through a staged archaeological investigation. This involves the submission of a written scheme of archaeological investigation (WSI) which describes the different stages of the work.

In consultation with archaeological advisors to Newport City Council at the Glamorgan-Gwent Archaeological Trust (GGAT), the WSI will set out the sequence of this phased investigation. In this particular case, a geoarchaeological assessment and deposit model is likely to form the initial stage of investigation.

Further mitigation will be set out in the CEMP, including undertaking a watching brief in areas of higher sensitivity during any below ground works.

Contamination

An initial ground investigation was undertaken by Geotechnic Limited in 2021. This was updated by a supplementary geotechnical and geo-environmental ground investigation in 2023.

On the basis of the expected geology and the findings of the exploratory holes the various strata proved in the investigation was classified into the following divisions:

- Topsoil
- Made Ground (incl. asphalt (Tarmacadam) and concrete)
- Alluvium (incl. organic clay and peat)
- River Terrace Deposits - Cohesive
- River Terrace Deposits - Granular
- St. Maughan's Formation (Upper Clay Layer)
- St. Maughan's Formation (Mudstone / Siltstone)

The depth to first groundwater strike in each of the boreholes ranged from 3.00m to 16.00m below ground level, equating to elevations between 7.86m OD and -5.82m OD. The highest standing water level in the boreholes recorded after 20 minutes standing or overnight were measured at 1.39m below ground level (9.60m OD).

During demolition and construction there is potential for existing contamination to be mobilised. The potential risk to identified ecological receptors from existing or future contaminant sources present at the site via migration in groundwater or surface water runoff has been identified. Ecological receptors include Gwent Levels St Brides SSSI and LG Duffryn Sites 1 & 2 SINC, all located within 200m of the site and anticipated to be

positioned downgradient. They are linked to the Nant-y-moor reen that is located immediately adjacent to the western site boundary.

Based on the understanding of the site and its surroundings, the risk to identified receptors from existing potential contaminants arising from historical activities is generally considered to be low. This would be reassessed on receipt of additional investigation data.

Where potential impacts from current potential contaminants are identified, mitigation measures either have been, or will be, considered. This includes anticipated measures to be contained within a CEMP to mitigate against potential impacts arising during construction of the proposed development.

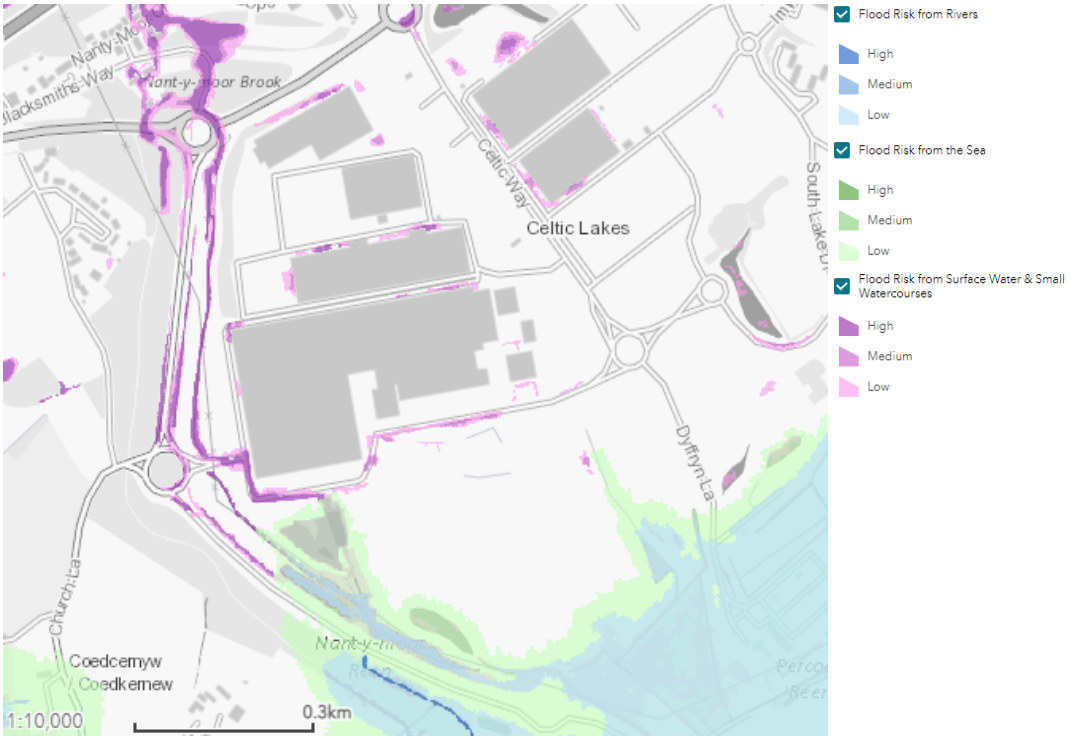
Once operational, control measures will be implemented to mitigate against the risks of accidental discharge or leakage of chemicals held on site to underlying soils, groundwater, and surface water.

Flood Risk & Drainage

The Natural Resources Wales (NRW) flood risk map (Figure 3-8) indicates that the site may be partially affected by flooding from surface water and small watercourses, particularly along the western and south western boundaries where the Nant-y-Moor Reen is located. In these areas there is up to a high risk of flooding which means that each year, this area has a chance of flooding of greater than 1 in 30 (3.3%). As these areas are located around the border of the site these are unlikely to affect the Proposed Development, but mitigation measures in the CEMP will be required to ensure no impact to the water courses.

The proposed site is partially located in Zone B of NRW Development Advice Map (DAM). Zone B is defined as areas of the floodplain that are known to have flooded before, as evidenced by sedimentary deposits.

Figure 3 - 9 NRW flood risk map of the site and surrounding areas



This site is a brownfield site and has an operational below ground drainage system that discharges surface water from roof and hardstanding areas via a pipe network into the pond/ditch watercourse network at the south of the site. This discharge is unrestricted with limited treatment applied to the surface water with a petrol interceptor identified on site. The foul water discharges to the public combined water sewer located at the east of the site and discharges to the sewer via a pump station.

The Proposed Development will keep the existing discharge to the southern pond/ditches but limit the discharge to that of greenfield runoff rate. This will be achieved with a flow control device which will limit the site's discharge to 46.5l/s with surface water to be attenuated on site within on-site ponds for all storms up to a 1 in 100 year plus 40% for climate change.

The Gwent Levels: St Brides SSSI located 180 m south of the Proposed Development is designated for its reen and ditch habitat. The reens and ditches are host to a wide range of aquatic plants, including many rare or scarce species, that in turn support a wide variety of other wildlife. Pollution mitigation measures in the CEMP will ensure that the demolition and construction phases of the Proposed Development do not lead to impacts on the SSSI.

SuDS treatment will be applied to all surface water from the site by having to pass through ponds located around the site. This will provide treatment through settling and biological uptake. There will be additional treatment to all road and yard areas via swales and petrol interceptors with fuelling areas to use forecourt separators as a precaution to intercept larger potential fuel/oil spills.

The proposed drainage strategy provides a significant betterment over the existing drainage discharge in both limiting the outfall from the site along with the quality of water discharged via a SuDS treatment train that is suitable for the level of contamination.

4. Environmental Responsibilities

It is the responsibility of everyone on-site to ensure the environment is protected for the duration of the project. To manage this effectively, there will be key individuals who are assigned specific responsibilities to ensure that all persons employed on the Project know the responsibilities expected of them.

These responsibilities shall be communicated to personnel through site inductions, training sessions and toolbox talks. Responsibilities of individuals will also be identified through Risk Assessments and Method Statements (RAMS) for specific works.

Table 2 details environmental responsibilities for the GC's construction personnel. The GC's Project Manager will be supported by and liaise with the GC environment manager, in the proper planning, management and coordination of works in order to ensure that the conditions of any regulatory or permitting associated with the project are implemented, and other environmental risks are properly controlled. To ensure that environmental standards are maintained throughout the construction of the project, the GC is also responsible for ensuring that all sub-contractors are aware of their role and responsibilities with respect to environmental performance and the sanctions to be imposed for non-compliance.

This OEMP identifies the key roles for the construction works. The final CEMP will set out detailed roles and responsibilities (including named individuals) and an organogram of the team structure.

Position	Environmental Responsibility
Environment Consultant for SDD and design	• Capture all risks and management steps identified during SDD • Ensure all mitigation and avoidance is embedded into the design and included in the relevant OEMP tables • Mitigation plans to be drafted or their need identified for future stages • Where risks or tasks are completed these should be marked as closed and generally the document should be kept up to date • Ensure that sufficient environment info is made available on time for GC RFP stage • Ensure that the above documents are handed over in a timely manner to the CEM
Microsoft Environment permitting lead	• Appointment of the Construction Environment Manager (CEM) in a timely manner • Ensure the OEMP is available to the relevant parties and regular workshops are held to action and close out tasks at appropriate times • Ongoing support is provided to the CEM to ensure they full understand their role and the site needs
Microsoft Construction Environment Manager	• reviewing and accepting the final CEMP and identifying the need for any improvements; • identifying and accepting the environmental competence of all contractors and sub-contractors to be employed for the project works; • reviewing and accepting construction method statements with regard to environmental aspects prior to works commencing; and • monitoring the implementation of the CEMP throughout the construction of the project. • Monitoring design developments for environmental related changes
Microsoft DCD Project Lead	• Supporting, including and championing good environmental management at all times • Ensuring the GC Environment team are suitably staffed • Ensuring the correct parties are held accountable for environmental compliance and issues are escalated as needed

GC Project Manager	• overarching responsibility for the implementation of environmental requirements associated with the design and construction of the project; • supporting the GC's environmental manager in preparing the CEMP, construction method statements, work instructions and other procedures; • identifying the competencies of all staff and ensuring delivery of training (including environmental training) to the project team; • working with the GC environment manager to improve method statements for environmental aspects prior to works starting; • monitoring of the programme for the environmental works, and the timely provision of status reports by the GC environment manager as necessary; and • providing advice and liaising with construction teams to ensure that environmental risks are identified and appropriate controls developed on-site.
Construction-site Manager	• Overarching responsibility for ensuring all staff are aware of and follow the requirements of the CEMP; • ensure environmental site inspections are undertaken; • monitoring construction activities to ensure that identified and appropriate control measures are effective and ensuring compliance with the final CEMP • assisting or leading in incident investigations and reporting; • assisting or leading in the preparation and implementation of environmental permits, licenses and consents as required; and • assisting or leading in the development of toolbox talks.
GC Environment Manager	• ensure environmental site inspections are undertaken; • respond to environmental incidents; • briefing site personnel and subcontractors on the latest environmental and sustainability issues; • completing daily logs; • maintaining the waste register, ensuring correct waste management procedures are being implemented. • Drafting and implementing the CEMP • responsible for on-site implementation and supervision of environmental requirements associated with the construction of the Project; • implementation and operation of environmental controls on-site; • reporting on environmental performance and compliance to Microsoft • responsible for day-to-day implementation and monitoring of environmental requirements associated with the construction of the Project;

	• reporting on environmental performance and compliance to the GC Site Manager; • developing the CEMP with the Construction Manager, and contributing to construction method statements, work instructions and other specialist procedures; • supporting the Construction Manager in identifying environmental competence requirements for all staff and ensuring delivery of environmental training to the team; • monitoring construction activities to ensure that identified and appropriate control measures are effective and ensuring compliance with the final CEMP • assisting or leading in incident investigations and reporting; • assisting or leading in the preparation and implementation of environmental permits, licenses and consents as required; and • assisting or leading in the development of toolbox talks.
All other construction personal	• to receive general environmental awareness training, and undertake work in accordance with Method Statement Briefings and toolbox talks; and • general duty of care towards the environment and an awareness of their responsibilities in accordance with the CEMP and associated plans, policies, etc.

4.1. Sub-contractors and Suppliers

The project is expected to require additional sub-contractors and suppliers. Sub- contractors are to be appointed in accordance with the GC procedures, which include environmental criteria.

The GC is responsible for overseeing the environmental compliance of all sub- contractors and suppliers. The CEMP will be issued to all sub-contractors and suppliers to ensure they are fully aware of the site controls and responsibilities.

Sub-contractors are required to work in accordance with the CEMP, using it to prepare their own RAMS. Relevant parts of the plan shall be disseminated though site inductions and referenced in the associated RAMS. All subcontractor RAMS will be approved by the GC.

Subconctractors will be requested to attend toolbox talks as are relevant to their work tasks and areas.

5. Environmental technical reports, permits, documents

This section details the list of environmental documents and permits that should be stored on sharepoint and locally. It should always be referred to in the OEMP and CEMP.

Document/Permit name & reference	Type	Status	Responsibility
Preliminary Ecological Appraisal and Ecological Impact Assessment	Document	Ongoing	ERM
Scheme of Ecological mitigation / compensation and enhancements	Document	Ongoing	ERM
GCN Report	Document	Completed	BGS
Bat Survey Report	Document	Ongoing	ERM
Precautionary Method Statement – Reptiles	Document	Completed	ERM
Precautionary Method Statement – Breeding Birds	Document	Ongoing	ERM
Lighting Assessment and Strategy	Document	Ongoing	RED
Preliminary Noise Assessment	Document	Completed	Sharps Redmore
Noise and Vibration Impact Assessment	Document	Completed	ERM
Air Quality Assessment	Document	Ongoing	ERM
Air Quality Management Plan	Document	Ongoing	ERM
Arboriculture Impact Assessment	Document	Ongoing	SEED Arboriculture
Tree Protection Plan	Document	Ongoing	SEED Arboriculture

Soft and Hard landscaping proposals	Document	Ongoing	Gensler
Planting Schedule including details of 5 year maintenance and management	Document	Ongoing	Gensler
Heritage Desk Based Assessment	Document	Completed	ERM
Written Scheme of Investigation for Archaeology	Document	Ongoing	ERM
Soil Resource Plan	Document	Ongoing	Pinnacle
Initial Ground Investigation	Document	Completed	Geotechnics
Supplementary Ground Investigation - Factual and Interpretative Report	Document	Completed	Geotechnics
Bespoke Environmental Permit (Diesel Generators)	Permit	Ongoing	ERM
Greenhouse Gas Permit	Permit	Ongoing	ERM
H5 Site Condition Report	Permit	Ongoing	ERM
Environmental Management System	Document	Ongoing	Microsoft
Dust Management Plan	Document	Ongoing	General Contractor
Waste Management Plan	Document	Ongoing	General Contractor
Construction Environment Management Plan (CEMP)	Document	Ongoing	General Contractor
Environmental Management System	Document	Ongoing	Microsoft

6. Risk aspect and impact table

All activities on-site throughout the construction period will be controlled, as far as reasonably practical, to avoid, reduce or minimise environmental impacts. Accordingly, measures listed within the OEMP risk controls tables (Appendix A) are to be incorporated into the CEMP and built upon to ensure strict compliance. It is the GCs responsibility to ensure that all other environmental risks associated with construction are captured and managed in their CEMP.

On completion of each measure a completion record should be maintained for auditing purposes review of the CEMP will be carried out at each project phase and where identified, improvements will be made to increase the documents efficiency and relevance.

Appendix A OEMP risk controls tables

Ref.	Receptor	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	Responsible Party	Opened by	Actioned by	Closed by
NOTE - Actions are noted under the first instance in the spreadsheet. While actions may relate to multitple objectives they will not be repeated.								
1.1	Air Quality	To mitigate against dust effects at receptors and ensure dust suppression procedures are in place	There is the potential for dust emissions to arise during the construction phase of the development. The Main Contractor will develop a Construction Environmental Management Plan, and a Dust Management Plan to ensure that construction dust does not pose a significant risk to nearby residential properties and ecological receptors and to ensure construction works are carried out in accordance with best practice mitigation measures. The Main Contractor and its civils contractors will apply the principles of industry best practice to ensure that the potential for dust emissions is minimised and does not pose a risk to neighbouring properties or environmental receptors. ACTIONS Best practice guidance includes as appropriate: - display the name and contact details of person(s) accountable for air quality and dust issues on the proposed development site boundary. - display head or regional office contact information on the site boundaries. - dust monitoring point(s) located along the boundary of the site, to be agreed with the local authority. - erect solid screens or barriers along site boundary and around dusty operations. - machinery and dust-causing activities should be located away from sensitive receptors where possible. - well-maintained, low emission machinery will be used, and dust suppression measures employed. - cutting, grinding and sawing activities will be avoided where possible or segregated and shielded to prevent dust dispersal. - crushing operations will use modern enclosed plant complete with dust spray bars mounted above the inlet and outlet conveyors. - storage locations for potentially dusty materials must be located away from the site boundary. - damping down dusty surfaces with water regularly, particularly in dry weather. - ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible) and ensure water suppression is used during demolition and construction operations. - keep site fencing, barriers and scaffolding clean using wet methods. - visual dust checks should be done daily and dampening down of surface done in response to high dust events. - where it is necessary to keep stockpiles of materials on-site during the construction phase, control measures should include not piling higher than 3 meters and tarping piles down if they have not been used for longer than 2 weeks and in adverse weather conditions, cover or seed or fence stockpiles to prevent wind whiping. - materials arising from the work will be used within the redevelopment of the site where possible, reducing the amount of off-site vehicle movements, or removed from site as soon as possible. - controlling the speed of mobile plant crossing un-surfaced areas e.g. controlling site speed to 10kmph. - mechanical road sweeper on public road. - avoid dry sweeping of large areas. - paved roads near to exits should be kept clean and vehicles transporting dusty materials onto and off site should be covered. - vehicles leaving the site should be inspected and cleaned as necessary, and suitable wheel wash equipment should be provided at site entrances and exits. - all site traffic should keep to designated haul routes to reduce the break down and subsequent entrainment of fine material into the atmosphere. - implementation of dust deposition gauges on site boundaries to measure monthly generated dust onsite, visual checks can be used to identify high amounts of dust on a day by day basis, inspections and results to be recorded and made available to NCC when asked. and - increase the frequency of site inspections by those accountable for dust and air quality emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.	Construction Environmental Management Plan - mitigation measures to include dust prevention and monitoring as per best practice. Dust Management Plan Weekly site audits Daily dust checking around site, monthly dust monitoring report	General Contractor Microsoft	Pre-commencement, Demolition, Construction		
1.2	Air Quality	To avoid and limit impacts to air quality from particulate emissions from plant or vehicles	Air pollution may arise from the use of heavy plant and machinery or from road vehicles, particularly HGVs. ACTIONS - ensure all on-road vehicles comply with the requirements of relevant country's or cities' Low Emission Zone laws. - ensure all non-road mobile machinery (NRMM) comply with the standards set by the relevant legal authority and using IAQM Guidance on the assessment of dust from demolition and construction. - modern, well-maintained plant and equipment is used. - ensure all vehicles switch off engines when stationary – no idling vehicles. - switch off machinery when not in use of when waiting to enter site. - ensure vehicles and plant are not overloaded to prevent labouring. - large exhausts not to discharge at ground levels during operation. - produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials using a just in time system. - promote sustainable travel with the implementation of charging points for electric vehicles and bikes. - implement a Travel Plan that encourages sustainable travel (public transport, cycling, walking, car-sharing)	Mitigation measures to be detailed in the CEMP	General Contractor, Microsoft	Pre-commencement, Demolition, Construction		
1.3	Air Quality	To avoid impacts to air quality from emissions from other activites	ACTIONS - no fires permitted on site for the burning of waste materials, all waste materials must be disposed of using a licenced contractor with proof of disposal. - hot works permit procedure adopted to minimize risk of fire during construction (including fire watchers, extinguishers, fire marshals and a permit system). and - all fuels, oils, and other Volatile Organic Compounds (VOC's) will be stored in secure, sealed, labelled containers. - ensure equipment is readily available on-site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. - consideration will be made to using prefabricated materials where possible so that localised air pollution is minimised. - mains electricity supply will be used in preference to generators where practicable.	Mitigation measures to be detailed in the CEMP	General Contractor	Pre-commencement, Demolition, Construction		
1.4	Air Quality	To ensure good community and stakeholder engagement.	ACTIONS - develop and implement a stakeholder communications plan that includes community engagement before work commences on-site. and - record any complaints and exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation and to hold good relationships with site neighbours.	Stakeholder management plan to be implented	Microsoft	Pre-commencement, Demolition, Construction		
1.5	Archeaology and cultural heritage	To avoid unnecessary impacts upon buried archaeological and geoarchaeological remains	ACTIONS - consultation with Glamorgan-Gwent Archaeological Trust (GGAT). - a Written Scheme of Investigation to be produced, approved by GGAT. A programme of archaeological investigation before and during construction is required. An archaeological and geoarchaeological evaluation, including the potential for geoarchaeological test pitting and trenching would be undertaken. - mitigation following archaeological evaluation trenching to include archaeological monitoring during enabling works and construction in order to record any archaeological remains that might survive at shallow depths beneath the made ground. Mitigation to be devised in conjunction with GGAT. - all excavation or below grounds works within areas of high archaeological potential to be undertaken with a Watching Brief from a suitably qualified person. - if items of archaeological importance are found onsite such as bone, pottery, housing, graves or any other evidence of an undiscovered archaeological site work must be halted immediately in the surrounding area and issue raised with Microsoft and archaeological consultant. - all staff on site to be informed of potential archaeology and to be prepared to stop works should remains be found.	Production of a WSI Appointment of an archaeological sub- contractor to undertake the agreed works Agreement with the Local Authority Archaeological Advisor Implement programme of archaeological investigation, including Geoarchaeological test pitting and trenching	General Contractor, Microsoft, EC	Pre-construction Construction		
2.1	Arboriculture	To minimise the impact to trees	The site has been assessed by a qualified arboriculturist and an Arboriculture Impact Assessment and Tree Protection Plan have been produced. Trees to be protected have been indicated on this plan. ACTIONS - the contractor will adhere to the measure identified in the Tree Protection Plan. - protect trees in or next to the working area from nuisance (noise and light pollution). - Removed topsoil should be stripped, stockpiled, and reused in accordance with BS3882:2015 Specification for topsoil. - Excavation within the Root Protection Zone (RPA) should be hand dug for the first 1m depth and special care taken within the top 600mm of soil where most of the roots are likely to be present. - Any roots <25mm diameter which are exposed by the excavation are to be pruned properly in accordance with good practice using secateurs or a sharp saw. - No roots >25mm are to be pruned or severed without prior agreement with an arboriculturist. - Exposed roots should be covered with moist hessian until they are reburied. - No digging or movement of heavy plant should be allowed within 1m of the trunk of any tree. - Adequate ground protection should be provided to reduce compaction within RPAs. - Any works relating to installation of services will be undertaken in accordance with the BS 3998 (1989) Recommendations for tree work In accordance with good arboriculture practice the following generic site controls should be followed: - No actions to be undertaken that are likely to cause localized waterlogging. - No permanent alteration of ground levels within the RPA of retained trees. - No construction of hard surfaces within RPA of retained trees. - No boards, hoarding, cables, notices or fencing to be attached to trees. - No fires are to be lit within 10m of tree canopies. and - No handling, discharge, or spillage of any chemical substance, including cement washings and vehicle washings within 10m. - A 15m buffer zone has been implemented around woodland.	Mitigation measures should be included in the CEMP Mitigation measures in the Tree Protection Plan	General Contractor	Construction		
3.1	Ecology	To minimize risk of water pollution on habitats during construction	ACTIONS Guidance for consultants and contractors (C532) will be followed on-site. This includes but is not limited to managing effluent from vehicles, managing concrete washout, avoiding spillages and monitoring - See Surface Water control measures for further details.	Mitigation measures should be included in the CEMP Daily site audits	General Contractor	Construction		
3.2	Ecology	To minimize impacts of light pollution on habitats during construction	ACTIONS To minimize light impact, work should not be carried out at night. If works need to be undertaken at night, a lighting scheme will be designed to avoid then minimize light spillage toward the designated sites. Lights must only point to the interior of the site as to minimize any light that would make its way offsite. Lights must be turned off at night unless security risks arise.	Mitigation measures should be included in the CEMP Daily site audits	General Contractor	Construction		

3.3	Ecology	To minimize impacts of noise on habitats during construction	ACTIONS - Avoidance of unnecessary revving of engines and switch off equipment when not required. - Minimize the duration of loud working practice such as the use of percussive breaking equipment. - Vehicles and equipment would be properly maintained to meet the manufactures' noise rating levels and audited by the General Contractor appropriately. - Defective machinery is to be repaired or replaced as soon as possible. - Using reverse warning systems incorporating broad band noise where practicable. - Using enclosures for noisy plant such as pumps or generators where feasible. - Minimizing the drop height of materials. - Limiting the use of particularly noisy plant or vehicles where practicable. - Plant and vehicles would operate with noise control hoods closed. - Regular noise monitoring to assess impact on sensitive areas and to aid in conformity to regulations imposed.	Mitigation measures should be included in the CEMP Noise auditing of equipment Noise mitigation to be detailed in design (e.g. cladding)	General Contractor, Microsoft	Construction		
3.4	Ecology	To minimize impacts of dust and general nuisance on habitats during construction	ACTIONS - Minimize dust generating activities, e.g., no bonfires, and use water as dust suppressant where applicable. - Minimize the duration of loud working practice such as the use of percussive breaking equipment. - Locate machinery and dust causing activities away from sensitive receptors, taking account of the prevailing wind. - Erect effective barriers around dusty activities. - Covering open top delivery vehicles entering and leaving site. - Wash/ clean all vehicles effectively before leaving the site. - Keep stockpiles for the shortest possible time, and do not allow site runoff of water or mud. - Switch off vehicle engines and plant motors when not in use. and - Maintain a low-speed limit on-site to prevent the generation of dust by fast moving vehicles.	Mitigation measures should be included in the CEMP Daily site audits	General Contractor, Microsoft	Construction		
3.5	Ecology	To minimise the loss of habitats and promote the creation of new habitats	Detailed Landscape Plans have been created showing areas of habitat loss, vegetation removal and areas of landscape planting. The General Contractor is to adhere to these plans. ACTIONS - A suitably qualified person will be on site for all vegetation clearance and ensure only vegetation detailed in plans shall be removed. - Where habitats will be temporarily lost, these will be re-landscaped and re-instated where possible in accordance with the landscape plans and planting schedule. - Habitats to be retained will be fenced off and machinery, human movement and un-intentional encroachment will be avoided. - Topsoil with the retained seed bank will be stored separately from the sub-soils so that it can be used during habitat re- instatement at the end of the project development. - The planting schedule will promoted native species. - Biodiversity Net Gain will be implemented on site and documented in a report. At least 10% net gain is to be achieved. - A management strategy will be devised to ensure the planting strategy is maintained.	Successfully implement the Landscape Masterplan and Planting Schedule Achievement of at least 10% Biodoversity Net Gain	General Contractor, Microsoft	Design, Pre-Construction, Construction		
3.6	Ecology	To minimize construction impact on mammals	Ecological surveys have been undertaken on site. While it has been deemed poor habitat for protected mammals there are still possibilities of them occurring on site. ACTIONS - Toolbox talks for all site staff on what to look out for particularly for hazel dormice, hedgehogs and badgers. - Trenches and excavations should be covered at night or a mammal ladder (a plank wide enough for mammals) should be installed in each excavation/trench to allow mammals to escape and they should be inspected before the start of the work each morning. - If the works are completed in winter and hibernating wild mammals are found, these should be carefully removed and re-located to an area of suitable habitat that is not due to be impacted as part of the works. A relevant specialist ecologist should be consulted prior to any re-location of species. - Report any disturbance or unexpected discovery of protected or invasive species in line with the Emergency Response Plan and in Compliance with Client procedures.	Mitigation measures should be included in the CEMP and a Toolbox Talk undertaken Daily site audits	General Contractor	Construction		
3.7	Ecology	To minimise impact on bats (foraging and commuting)	Ecology surveys on site have noted the vegetation corridor on the western boundary is used for foraging and commuting bats. The following standards and guidance should be adhered to: Bats and Lighting in the UK – Bat Conservation Trust. BS 12464 Part 2 Lighting of Workplaces: Outdoor Work Places. Lighting Guidance 6 – Chartered Institution of Building Services Engineers. ACTIONS - Vegetation clearance should be undertaken in the winter months when bats are less active and therefore not using the western boundary vegetation for foraging or commuting. - Construction activities should be restricted to daylights hours to avoid the use of lighting on site which would cause a disturbance to bats. Where this is not possible light should be kept to a minimum and light spillage between dusk and dawn toward any remaining vegetation should be avoided. - Where lighting is required, the following practices should be used to ensure the creation of a sensitive lighting strategy: + All luminaires should avoid UV, metal halide, fluorescent sources. + LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition, and dimming capability, or use low or high-pressure sodium lamps, with the use of glass glazing preferred where possible. + A warm white spectrum (ideally <2700 Kelvin) should be adopted to reduce blue light component. + Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. + Luminaries should be fitted as low as practicably can be done as to reduce light spill as much as practicably possible. + In the case where lighting is required for security reasons, the use of lights with motion detectors or the use of Intelligent Video Analytics (IVA), which uses infra-red to detect movement, should also be considered. + Minimization of the upward spill of lights with the use of directional luminaries, shields, louvres, and baffles. This will direct light to where it is required, and prevent unnecessary light spill into the surrounding environment, reducing the impact on commuting corridors and foraging areas. + Column heights should be carefully considered to minimise light spill. + Only luminaires with an upward light ratio of 0% and with good optical control should be used. + Luminaires should always be mounted on a horizontal plane facing the ground to prevent unintentional upward tilt.	Mitigation measures should be included in the CEMP Daily site audits	General Contractor, Microsoft	Detailed Design Construction		
3.8	Ecology	To minimise impact on reptiles	ACTIONS All vegetation clearance in areas indicated as suitable habitat for reptiles will be undertaken under a precautional method statement: - The Ecological Clerk of Works (ECoW) will carry out a fingertip hand search of the area of clearance prior to any vegetation removal. Once the ecologist has completed this check, clearance can commence as set out below. - Vegetation removal will start from the centre of each area working towards the perimeter to allow any amphibians or reptiles that may be present to disperse. Clearance will be undertaken using hand operated tools only (e.g. hand operated strimmer with a lower noise rating). - A two-stage cut will need to take place of tall ruderal, tall herb, grassland and scrub habitats to encourage the more mobile species of reptile such as common lizard, to disperse to the surrounding suitable habitat. The first cut will reduce the vegetation sward height to c. 150mm, followed by a second cut 24 hours later that will reduce the sward height again, to ground level and enable any reptiles (should they be present) opportunities to disperse into neighbouring connected habitat. - Whilst vegetation clearance in ongoing, the ECoW will observe the sward from a safe vantage point in front of the contractors to scan the habitat for signs of resting or foraging herptiles. In the event that herptiles are observed, the ECoW will signal to the contractor to stop work. Vegetation in the surrounding area will be removed using hand tools and the reptile will be left to disperse into other suitable habitat out with the work area. Works may continue at that location when the reptile has moved off site. - All arisings will be removed from the development site and the area will be cleared so it is unsuitable for sheltering herptiles.	Precautionary working mehtod statement to be implemented	General Contractor, EC	Pre-construction, Demolition, Construction		
3.9	Ecology	To minimise impact on breeding birds	ACTIONS During breeding bird season, all vegetation clearance noted as suitable habitat for breeding birds, and the demolition of buildings which may contain breeding birds, will be undertaken under a precautionary working method statement. This is to include supervision of and ECoW to undertake breeding bird checks in areas to be removed or demolished no more than 24 hours ahead of the scheduled activity.	Precautionary working mehtod statement to be implemented	General Contractor, EC	Pre-construction, Demolition, Construction		
3.10	Ecology	To ensure the spread of invasive species is prevented during operation	The site would be regularly inspected for invasive species and should any be discovered an invasive species specialist should be consulted. An invasive species management plan should be created for future implementation.	Successful implementation of the Landscape and Environment Masterplan Plan Mitigation measures should be included in the Handover EMP	General Contractor, Microsoft	Pre-construction, Construction, Operation and Demolition		
3.11	Ecology	To ensure all staff on site are aware of their ecological requirements and responsibilities	The provision of toolbox talks and site inductions to all site workers with respect to the Important Ecological Features on site. The toolbox talks would be given by the Ecological Clerk of Works (ECoW) for the proposed development.	Toolbox talk attendance records Ecological Consultation	General Contractor, Microsoft	Construction		
3.12	Ecology	To protect species and habitats onsite	Prior to construction an Ecological assessment must be carried out by an external ecologist who can assess all ecological risks onsite. The ecologist should be consulted as to how the site can mitigate effects on native species and habitats, and how to reinstate the habitats that may be lost during construction.	Ecological Consultation	General Contractor, Microsoft	Pre-construction		
4.1	Land quality	To assess ground condition and ensure any presence of contamination is identified and remediated appropriately.	Ground Investigation has been done on the site of the Proposed Development. These reports should be made available to the General Contractor. ACTIONS - The GC will monitor excavated soils and material and check regularly for any contaminants. - If contaminated land is discovered during the works, the local works in the vicinity will be suspended. If the contamination is limited in extent, then suspected contaminated material (based on visual / olfactory observations) will be excavated and placed in a quarantine area for further waste classification under supervision of a contaminated land specialist. If contamination appears to be extensive, works will be suspended until the contamination can be categorized and risks are assessed by a contaminated land specialist. The Project Manager will seek instructions as to whether remedial works are needed. - Works will only recommence once the soils and water have been suitably assessed and working controls are revaluated to ensure human health and the environment are protected. The following controls will be implemented: + The contaminated spoil/waste will be stored in a way that contains the contamination e.g., in a bunded area and stored away from drains and surface waters. + If dewatering from contaminated areas is required, measures will be agreed with the relevant Environment Agency and consents/ agreements obtained as required. + Contaminated material is not to be mixed with uncontaminated material during the site works. + Arrange for removal and disposal of asbestos/ asbestos contaminated material by a specialist contractor. + Dispose of contaminated soil as Hazardous Waste if necessary. + The General Contractor will take on the responsibility for the Duty of Care with excavated materials and ensure that an appropriately licensed carrier disposes of the waste at a licensed facility. - If extensive remediation is required a full remediation plan will be detailed and implemented following discussions with the relevant authority. Daily inspections should be undertaken to ensure that contamination types have not changed and that working controls are satisfactory. A contaminated land watching brief will be undertaken during Initial stages of a reduced excavation and once the anticipated extent of contamination is reached to ensure that controls are suitably applied.	Mitigation measures to be included in the CEMP Toolbox Talk undertaken If required, implementation of remediation strategy	General Contractor	Pre-construction Construction		

4.2	Land quality	To prevent contamination during construction	ACTIONS - Fuel and other IBC storage are to be stored in designated areas with potentially contaminating substances stored on drip trays or in double skinned bunded tanks, bunds should be able to hold 110% of the volume of the fuelled or chemical containers within. - Spill kits are to available and easily accessed across site along with strong Prescence in sensitive or high-risk areas. - Re-fuelling will be via a mobile double-bunded bowser equipped with a spill kit and bunding. No refuelling will take place within 15m of a watercourse. A absorbent pad or spill nappy must be placed below the point of refuelling and a funnel or long nozzle must be used to prevent spillage. - Storage areas for surplus excavated materials from site grading or excavation works that demonstrate visual or olfactory evidence of contamination will be stored in covered skips, or on a sheeted stockpile placed on hard standing or impermeable sheeting pending its removal or treatment. and - Implementation of good construction-site control measures to reduce dust such as damping down, dust deposition gauges and wheel washes. - Smoking areas should be placed on hard standing ground and not granular substrate. Granular substrate poses high risk of becoming contaminated if impacted by litter from smoking areas.	Mitigation measures should be included in the CEMP and SWMP Daily site audits	General Contractor	Construction		
4.3	Land quality	To mitigate the potential for contamination to soil and groundwater during the earthworks	ACTIONS - Excavations are to be inspected for signs of contaminated material such as odours, colourful sheens, litter, foreign aggregates, fibres, or residues. - Stockpiling of contaminated materials should be avoided where possible. - Excavated materials will be appropriately stockpiled and segregated based on contamination/hazardous status, including positioning away from drains, watercourses, or boreholes. - Contaminated stockpiles must be lined underneath to prevent leachate getting into the groundwater, and in sealed skips. - Emergency procedures are to be implemented in the event of accidental spillages and discovery of unexpected contamination. - All fill materials brought on to site will be validated to ensure suitability for use as recommended by a contaminated land specialist. - Where material is excavated and reused on-site this will be undertaken in accordance with the CL:AIRE DoW: Development Industry Code of Practice including the preparation of suitable risk assessments and a materials management plan to track the Action (including any monitoring required) source, storage and final use of materials. - The Materials management plans and risk assessments should be in place prior to excavation works.	Mitigation measures should be included in the CEMP Daily site audits	General Contractor	Construction		
4.4	Land quality	To identify groundwater contamination	During the works there is potential to encounter contamination within the ground and within groundwater. All staff are responsible for identifying signs of contaminated land such as: - Discoloured soil. - Fibres in the soil. - Presence of old chemical or fuel containers. - Evidence of previous soil workings. - Evidence of underground structures, tanks, pipe work, drains. - Soakaways. - Waste pits. - Unusual smells.	Mitigation measures should be included in the CEMP Training of staff on the identification of groundwater contamination	General Contractor	Construction		
4.5	Land quality	To mitigate risk to human health	ACTIONS - All construction-site workers must be adequately trained to recognise and appropriately respond to potential land quality issues. - Use of appropriate construction-site personal protective equipment (PPE) (e.g., high visibility clothing, safety boots, hard hat, safety glasses, cut resistant gloves). - Robust emergency procedures (e.g., with respect to UXO, previously unidentified contamination or structures), which are periodically tested and reviewed. In the event of previously unidentified conditions being encountered (e.g., underground storage tanks, drums), works would be suspended, the work area evacuated, and specialist advice obtained. Where appropriate, risk assessments would be undertaken, and additional control measures implemented prior to any works recommencing. - The area of works will be well delineated and kept secure to prevent trespass.	Mitigation measures should be included in the CEMP Daily site audits	General Contractor, Microsoft	Construction		
4.6	Land quality	To address the risk of UXOs	The General Contractor will undertake appropriate unexploded ordinances (UXO) mitigation such as desk studies, toolbox talks, watching briefs, and magnetometer surveys of all intrusive works. If UXOs are encountered during works all works must be halted immediately, all workers are to leave site and governmental bomb disposal units will be contacted.	Mitigation measures should be included in the CEMP Toolbox Talk undertaken Further desk studies. Works undertaken under supervision by suitably qualified UXO specialist. Magnetometer surveys	General Contractor, Microsoft	Construction		
4.7	Land quality	Environmental monitoring	ACTIONS On-site watching brief during potentially high-risk activities and on call watching brief for all other activities. Specialist watching brief may include: UXO. contaminated land, asbestos, health and safety/occupational health, ecological (for invasive species, such as Japanese knotweed) and dust and air/vapour monitoring. Where appropriate, this would include a combination of on-site and boundary monitoring, which would either provide real-time measurements or collect samples for subsequent analysis.	Mitigation measures should be included in the CEMP Monitoring Works undertaken under supervision by suitably qualified land quality specialist	General Contractor, Microsoft	Construction		
5.1	Landscape and visual	To minimise the visual impact to sensitive species and local populations	ACTIONS - The project will take measures to control the visual impact of the works, where reasonably practicable. - Hoarding will be placed around the site boundary to reduce visual intrusion, assist in noise attenuation, and ensure public safety. - Site information and contact details will be displayed in compliance with the clients requirements - Ensure temporary accomodation facilities will be white. - Where reasonably practicable, new permanent structures will be positioned to reduce impact to the local area and will be finished in a manner in keeping with the surrounding area. - Ensure that lighting needed for overnight security is directed away from sensitive areas such as the river, where directed light could affect bat flight paths.	Mitigation measues to be detailed in the CEMP Implemation of a Landscape Plan and Planting Schedule	General Contractor, Microsoft	Design, Construction		
5.2	Landscape and visual	To upkeep the visual amenity of the surrounding area	ACTIONS All reasonably practicable measures to control the visual impact of the works and to preserve and reinstate any damage to landscape will be taken, including: - Considerate positioning of new structures. - Selection of most appropriate materials and sympathetic construction practices. - Avoidance of unnecessary tree and vegetation removal. - Additional planting and landscaping. - Good housekeeping arrangements, keeping all sites in a tidy manner and prevent release of litter and mud accumulation on public roads. - Use of hoardings or seeded bunding where appropriate. - Restrictions on lighting to prevent intrusion. - On completion, all construction materials will be removed and the sites left in a tidy manner, to the satisfaction of the client.	Mitigation measues to be detailed in the CEMP Implemation of a Landscape Plan and Planting Schedule	General Contractor, Microsoft	Design, Construction		
6.1	Odour	To mitigate construction odour	Ensuring that rigorous odour management procedures are identified and implemented via an Odour Management Plan. Odour control systems operational prior to commissioning new assets. Odour mitigation measures must be designed into the CEMPs of relevant projects. ACTIONS - Operational and Constructional water treatment facilities onsite must be well managed to prevent foul odours arising. If a complaint is made against the site, steps must be taken as soon as feasibly possible to mitigate foul odour generation. - Toilet facilities onsite must be managed well and regularly emptied and replaced. Toilets and hand washing basins must be discharged to foul sewerage and not into surface water or regular drainage. If there are blockages in the sewerage drainage network onsite these must be fixed as soon as possible to prevent backup. - Canteen waste facilities must be well managed, and a backup of canteen waste should not be allowed to occur. These canteen bins must also be monitored as so they are not overflowing. - Odours should be imperceptible to neighbouring areas of the site.	Mitigation measures should be included in the CEMP Successful implementation of the Odour Management Plan	General Contractor, Microsoft	Construction, Operation, Demolition		
7.1	Flood risk and drainage	To assess flood risk and prevent an increase in flood risk	The site is located adjacent to the Nant-y-moor reen. The NRW flood risk maps show that the western and south western boundary have a risk of flooding due to surface water and rivers. ACTIONS The following site controls will be implemented for the duration of the works to ensure that there is no risk of an increase of flooding to the site and surroundings: - On-site personnel to check for flood warnings prior to carrying out works. - Ensure that materials and equipment that would be sensitive to flooding is secured or raised to an appropriate flood level. - All construction plant and equipment will be able to be quickly removed from the site should a flood event be forecasted or is to occur during the works. - Spoil piles are not to be kept in areas at risk of flood. - The General Contractor will prepare a flood response plan/flood warning and evacuation plan. - During the works, measure will be undertaken to ensure that the activities on-site do not increase the risk of surface flooding by blockage due to stockpiled materials or increase pollution/ siltation to any nearby water courses. - Silt run off mitigation will be implemented on-site.	Mitigation measures should be included in the CEMP Daily site audits	General Contractor	Construction		

8.1	Noise and vibration	To mitigate the impact of construction noise	The impact on noise sensitive receptors within the vicinity of the scheme can be controlled by the application of the principal of Best Practicable Means. ACTIONS - Quiet plant equipment should be selected for use, where possible. - Ensure equipment is maintained, in good working order, and is used in accordance with the manufacturer's instructions. - Members of the construction team should be trained and advised on quiet working methods. - Equipment should not be left running unnecessarily or idle. - Equipment should be fitted with silencers and mufflers wherever feasible. - Use of plant enclosures whenever feasible. - Careful orientation of plant with directional features as to face it away from sensitive areas or away from sensitive site boundaries. - Materials should be dumped as close to the ground as possible, and equipment or containers should always be lowered from height and never dropped from height. - Materials are to be tied or strapped onto transportation equipment as it is moved around the site. - Inform nearby noise sensitive receptors in advance of construction activities and keep them up to date with progress and changes. - Give nearby noise sensitive receptors a site contact telephone number. the contact should liaise with residents and maintain good rapport. - Working hours should be limited to 8:00-18:00 from Monday to Friday and 08:00-13:00 on Saturday, with no work on Sundays or Bank Holidays. This is to avoid high noise levels during sensitive periods of the day. If work needs to be carried out after these hours a risk assessment is needed and noise generated must be imperceptible to sensitive receptors. - Noise monitoring may be carried out in instances where there is a potential for significant change in noise level and the works will last longer than 30 days. Noise monitoring should also take place if work must be done at night-time or weekends. - The contractor should not unnecessarily use multiple pieces of equipment at the same time, especially where there is the potential for significant effect.	Mitigation measures should be included in the CEMP	General Contractor	Design, Pre-construction, Operation, Construction, Demolition		
9.1	Waste and materials	To reduce the effects of material resource use and waste generated	ACTIONS - The GC will aim to reduce the use of virgin materials and aggregates where possible e.g. through using site-won, recycled, or materials with high recycled content. - Local suppliers should be identified and utilised where possible to reduce fuel requirements and cost of delivery. This also reduces greenhouse gas emissions resulting from transportation. - The waste hierarchy is to be applied, minimising disposal and maximising reuse and recycling wherever feasible. Examples of this include reuse of excavated soils and green waste on-site for landscaping, and recycling of clean, inert material by crushing, blending, and subsequent reuse, where appropriate. - Producing a SWMP and, where appropriate, an MMP to ensure materials are used efficiently and waste managed under best practice. - Liaising with nearby projects to provide and use surplus material, where suitable.	Mitigation measures should be included in the CEMP Producing and implementing a SWMP and a MMP	General Contractor, Microsoft	Detailed design, Construction, Operation, Demolition		
9.2	Waste and materials	To limit the impacts associated with the handling and transportation of materials and waste	ACTIONS - All waste material will be appropriately handled, stored, and transported to limit the potential for pollution and with the appropriate licenses and licensed waste contractors in place. - Removal of excavated material and transportation to the most appropriate waste stream. Soil should be reused where possible and in cases of contamination of soil, it should be disposed of in appropriate waste streams. Sealed skips should be provided by licensed waste contractors for the removal of contaminated soil and a licensed contractor used to treat and dispose of it. - Waste is to be segregated into appropriate waste streams. All skips and bins must be labelled with its waste stream in the local language(s), non-local languages commonly spoken by workers and in English. - Provide several waste containers in a designated impermeable waste storage area and brief staff, contractors, and sub-contractors on requirements. Waste storage areas should be covered when not in use such as at night or the weekend to prevent overspill litter. - Do not mix hazardous and non-hazardous waste. Hazardous waste should not have their sub-streams mixed (e.g. aerosols, paint, batteries). - Ensure hazardous waste is stored in suitable labelled containers away from sensitive receptors and away from risk of damage and site traffic. Liquid hazardous waste should be stored on bunding. - Recycle or reuse all the excavated material and concrete aggregate materials produced during construction phase. - Recycled material will be locally stockpiled. - Stockpiled material should be kept at least 15 meters away from drains and surface waters to ease the sedimentation load.	Mitigation measures should be included in the CEMP and SWMP Daily site audits	General Contractor	Construction		
9.3	Waste and materials	To ensure an appropriately licensed carrier disposes of the waste	ACTIONS - The GC will take on the responsibility for the Duty of Care with excavated materials and ensure that an appropriately licensed carrier disposes of the waste at a licensed facility. - All waste documents, permits and dockets must be kept by all parties engaging with waste contractors as to ensure that waste is being disposed of appropriately and to track the voume of waste being reused and recycled. This includes sub contractors, should it be known that sub-contractors are taking waste offsite, they must be asked to present waste dockets for proof of disposal. - Undertake spot checks to ensure compliance with the duty of care. - The project will nominate a suitably qualified project team member to hold the delegated duty of Waste Manager. They will: + Ensure that waste registers are kept up to date. + Ensure any changes to methods of handling wastes and amendments to destination recycling or landfill sites are legal and audited. + Store copies of waste transfer notes for the duration of the works within the Site Waste Management Plan for the statutory required period.	Mitigation measures should be included in the CEMP and SWMP Successfully implement for MMP	General Contractor, Microsoft	Construction		
9.4	Waste and materials	To show that use of the material will not harm human health or pollute the environment (limiting the use of virgin or new materials)	Materials management plan (MMP) to be implemented for any material to be reused on-site.	Successfully implement for MMP	General Contractor	Construction		
9.5	Waste and materials	To ensure that correct foundation design and construction is followed	The GC to ensure that foundation design and construction methodology in Principal Designer's Method Statements are followed.	Successfully implement Method Statements	General Contractor	Construction		
9.6	Waste and materials	To establish site and storage areas	ACTIONS Establishment of temporary compound areas will consider the following: - Site sensitivity, all environmentally sensitivities such as ecology, population, water quality, groundwater quality, air quality and soil quality must be accounted for in placement of temporary compound areas. - Secure storage of fuels, oils and greases and secondary containment within the bunded COSHH storage cabinet or area. These should be placed at least 15 metres from any water courses onsite. - Management any oils at the site in accordance with the Oil Storage Regulations. All oil storage tanks must be bunded to 110% of the containers volume. - Hazardous waste management area must have hazardous waste management receptacles on bunding to 110% volume of containers that sit upon it. - Foul water disposal, all in one unit to be emptied on a regular basis using appropriate measures or be plumbed into foul sewerage. This must never be discharged to surface waters. - Hydrocarbon interceptor tanks where drainage may include discharges from equipment maintenance, fuelling or storage. - Segregation of office areas from equipment, storage, and other work areas. - Site security.	Mitigation measures should be included in the CEMP	General Contractor	Pre-construction, Construction, Operation, Demolition		
9.7	Waste and materials	To ensure proper use and disposal of concrete and cement	ACTIONS If requiring the use of Concrete, Grout or Cement containing products onsite the following procedures will be implemented: - Washout area with appropriate water treatment of alkaline wash waters within a bunded and sealed area or alternatively a concrete contractor can be isolated with integrated concrete washout facilities. - If batch concreting onsite a suitable treatment plan for concrete wash waters must be implemented to protect surface and groundwaters. It is not environmentally feasible to be batch concreting without washout facilities. - Use of concrete spill prevention when pouring or transferring concrete receptacles with a large steel drip tray and plastic sheeting. - If concrete is spilled it is important that it is removed via manually scooping up, spilled wet concrete is not to be washed off surfaces. - No use of wet concrete/cement in a 15-meter proximity to watercourse. - No pouring of concrete in excessively wet weather.	Mitigation measures should be included in the CEMP, OWMP	General Contractor, Microsoft	Pre-construction, Construction, Operation, Demolition		
9.8	Waste and materials	To dispose asbestos containing materials with lack of risk	If demolishing or removing asbestos containing structures or materials an appropriately licensed contractor must be used who can remove asbestos materials safely. If a structure is found to contain asbestos, work should be halted immediately until a competent and licenced person can deal with asbestos waste in a safe and appropriate manner.	Mitigation measures should be included in the CEMP	General Contractor	Pre-construction, Construction, Demolition		
9.9	Waste and materials	To reduce litter generated onsite	ACTIONS - Litter pickers should be deployed two to three times a week depending on site activity. It is recommended that they are deployed mid-week and Friday as to not let litter blow off site during the weekend. - Overspill litter from waste management areas must be dealt with immediately. - All employees, contractors and sub-contractors should practice good housekeeping of their areas. - All employees, contractors and sub-contractors participate in waste segregation. - Bins, Skips and other waste receptacles are to be clearly labelled with their waste stream in all local languages. - Waste Management and Smoking Areas should be placed on hard standing ground and not granular or loose substate. - Empty chemical containers are not placed back into COSHH storage and instead placed in hazardous waste. - Chemical containers are to be placed back in COSHH storage after use. Chemical containers left outside will be treated as hazardous waste and placed in the hazardous waste stream.	Mitigation measures are to be included in the CEMP	General Contractor, Microsoft	Pre-construction, Construction, Operation, Demolition		
10.1	Sustainability	To ensure the sustainable use of plant	ACTIONS - The GC will ensure that plant and machinery are well maintained and meet the most rigorous standards for emissions. - The preferred fuel for plant in descending order is Hydrogen, Electric, HVO, HVO supplemented Petrol and Diesel and regular Petrol and Diesel. If using regular petrol and diesel machinery onsite permission must be sought from the GC's Environmental Manager and the Microsoft Environmental Manager. - All diesel machinery should be rated as lower emissions and have the ability to be dosed with AdBlue to reduce emissions. - All unbunded fuelled equipment must be kept on top of portable bunding in the form of spill nappies when stationary. - Large hydraulic machinery should have their own internal spill kits from which they will have always available in the case of a large spill.	Mitigation measures should be included in the CEMP	Design Consultant	Detailed Design, Pre-construction ,, Construction, Operation, Demolition		
10.2	Sustainability	To ensure the sustainable transport	- The Proposed Development will have a Transport Statement and Travel Plan (TP). The TP will promote sustainable modes of transport for the construction/demolition and operational workforce and aims to promote the benefits of alternative modes of travel on their health and wellbeing. - Bike stores with charging capabilities for e-bikes which will enable construction works to utilise alternative modes of travel such as walking and cycling.	Mitigation measures should be included in the CEMP Implementation of TP	General Contractor, Microsoft	Pre-construction, Construction, Operation, Demolition		

10.3	Sustainability	To manage health and welling	Wellbeing and health of General Contractor employees contracted under Microsoft is of high importance. ACTIONS - Adequate canteen, toilet and breakroom facilities must be provided to operatives. - Mental health initiatives should be made available to operatives across site. - A Microsoft HR representative should review what the General Contractor's employee wellbeing measures are. - Microsoft's 'Three Zero's policy will be implemented throughout the proposed development to manage any health and wellbeing impacts.	Mitigation measures should be included in the CEMP Daily site audits Employee surveys	General Contractor, Microsoft	Construction, Operation, Demolition		
10.4	Sustainability	To ensure the sustainable use of materials	ACTIONS - The GC is to consider the use of recycled or sustainable materials, and location for sourcing these materials, including the use of sustainable wood from certified sustainable sources (FSC) for use in construction areas and the use of recycled concrete for aggregate. The use of non-recyclable materials should be limited wherever feasibly possible. - On-site crushing and reuse of materials should be incorporated into the project to recycle structural backfill from demolition. A materials inventory of the construction material, equipment, and plant should be created for the purposes of identifying reuse options across the project. - All excavated material on-site to follow the waste hierarchy to use, so that minimal deposition and construction waste will be taken off-site for disposal. A Site Waste Management Plan will: + Identify key roles and responsibility within the project team. + Measures for minimising waste wherever possible. + Locations of waste storage and how waste management areas will be managed as to protect the local environment. The waste management area should be away from sensitive receptors. + Transport and disposal of waste. + Define parameters for how large a spoil pile can get and its safe proximity to surface waters. + Measures for dealing with potentially hazardous waste such as sealed skips or bunded storage. + Monitoring, reporting, and record keeping and training with periodic review.	Mitigation measures should be included in the CEMP Successfully implement for Material Management Plan and a Site Waste Management Plan Creation of a material innventory Daily site audits	General Contractor, Microsoft	Construction		
10.5	Sustainability	To ensure the sustainable use of water	Where possible water used on site should come from collected rainwater. No water treated with chemical should be used where there is the potential for leakage to the environment.	Mitigation measures should be included in the CEMP	General Contractor, Microsoft	Construction, Operational		
11.1	Traffic and Transport	To minimise the impact to site operations and the local community	Full Transport Management Plans will be developed in conjunction with the Client and the Council On site, the following would be implemented: - Switching off vehicle engines when not required. - Parking will be provided on site. - A form of wheel washing will be used when appropriate. - Preparation of access routes. - Preparation of hard standing. - Scheduling of deliveries. - Site speed limits on access roads. - Removing mud from public roads carried on by construction vehicles - using a road sweeper.	Implemation of a Transport Management Plan and Travel Plan.	General Contractor, Microsoft			
11.2	Traffic and Transport	To implement a Transport Management Plan	The General Contractor will produce a site Transport Management Plan (TMP). The overall approach will be: - Designate an area of the site for site-based staff vehicles. - Put procedures in place to prevent delivery vehicles from queuing outside the site boundary. - Make suppliers/subcontractors/delivery drivers aware of traffic restrictions on and around the site. - Inspect, service and carry out maintenance of vehicles regularly for efficient running, including sub-contractors. - Vehicles will be loaded and unloaded off the highway. - Vehicle and pedestrian movements within the site will be in clearly defined and segregated routes. - All pedestrian areas will be fenced off using suitable barriers and demarcated using adequate signage (this should vary in scale depending on the level of risk of the work activities). - Implement a 'just in time' delivery strategy to ensure that most materials are imported to site within a week of their utilisation. - If applicable a carpooling scheme should be set up - Bike to work scheme to be offered by General Contractor and Microsoft to its employees if applicable. - Microsoft employee car parking will be segregated from contractor car parking as to reduce traffic and congestion. - Electric vehicle charging points are to be offered in car parks.	Successfully implemen TMP Mitigation measures should be included in the CEMP	General Contractor	Pre-construction, Construction, Operation		
11.3	Traffic and Transport	Haul Routes	Temporary haul routes may be required to access the proposed area of works. ACTIONS - Select haul routes away from sensitive receptors. - Reduce the length and width of haul roads, but still allowing 2-way traffic, to minimise the area that may produce dust. - Land designated as haul routes will be agreed with Microsoft, be topsoil stripped and benched to a suitable profile to allow flow of traffic across the road. - Temporarily surface heavily used areas. - Designation of the right of way will also be agreed with Microsoft. - Haul routes must lead through a wheel washer at site exits to prevent tracking out of mud.	Successfully implement TMP Mitigation measures should be included in the CEMP	General Contractor	Pre-construction		
11.4	Traffic and Transport	To implement Employee Travel Plan (CETP) and Construction Logistics Plan (CLP)	GC to adhere to the Construction Employee Travel Plan (CETP) and Construction Logistics Plan (CLP) to manage potential transport implications of employee and construction vehicle movements.	Successfully implement CETP and CLP Mitigation measures should be included in the CEMP	General Contractor	Construction		
12.1	Vermin and pest control	To avoid infestation of vermin or pests	ACTIONS - buildings will be boarded ahead of demolition work to ensure birds are unable to get in. - welfare facilities (canteens, mess rooms, drying rooms, locker rooms, toilets, showers etc) to be cleaned daily and maintained in a good condition. - toilets will be located around the site and anyone found urinating or defecating elsewhere will be dismissed from the site immediately. - all food and drink is to be consumed within the mess rooms / canteens or else off the construction site (consumption of food outside of welfare facilities encourages the spread of vermin). - all food and drink will be disposed of in a lidded container and emptied on a weekly basis. and - sightings of rodents will be monitored as the works progress, if required, rodent control measures will be put in place.	Mitigation measures incorporated into CEMP	Contractor			
13.1	Surface Water Quality	General	The General Contractor will refer to, and implement as appropriate, the recommendations of the Construction Industry Research and Information Association (CIRIA) including Control of water pollution from construction-sites - Guidance for consultants and contractors C532. ACTIONS The following site controls will be implemented to mitigate impact upon surface water: - Store fuel, oil and chemicals away from drains and water bodies, and in secondary containment in accordance with appropriate pollution prevention regulations. - Store solvents, chemicals, or paints in accordance with their Control of Substances Hazardous to Health (COSHH) datasheets and oil storage regulations, including drip trays and or plant nappies for equipment. - COSHH stores must have uncompromised bunding which can hold 110% of the chemicals and fuels stored within. - Empty chemical containers are not to be placed in COSHH storage. - All chemical containers within COSHH storage are to have lids. - Chemical containers are not to be re-used. - Spill kits will be provided at vulnerable areas within the proposed area of works. - A map should be present at the site walkway entrance showing locations of all spill kits onsite, this should be updated and changed as the project is built and as the site changes. - As a minimum, spill kits will be located at all refuelling areas, chemical/oil/fuel storage areas, areas containing large amounts of hydraulic machinery, areas that have large hydraulic machines present and areas where work is near surface waters (within 25 meters). - Ensure that the bunded, lined, and sealed wash out area is at least 25m away from drains and surface waters. - Toolbox talks should be done frequently to ensure that operatives do not litter spill kits and that there is an awareness of how to correctly use a spill kit by operatives. - Cement product wash out stations should be in a suitable contained designated area that is impermeable, lined or bunded. - If any concrete, grout, or other cement containing products are used onsite, the site is required to have a washout area, even if all wet cement products are to be delivered via truck. - Ensure emergency procedures are in place, and that all site-based staff are aware of who to contact in the event of a spillage, what to do and from where to get equipment. - Adopt and test an emergency spill response plan/procedure. This should be rehearsed regularly with operatives and emergency person contact should be circulated. - Report environmental damage that cannot be rectified immediately to the relevant environmental regulator and take appropriate steps to remedy the damage caused. - Portable toilets to be located at least 25 meters away from surface waters in case of leakage. Portable toilets must have an appropriately licensed contractor to swap them out once full. Any non-portable toilets onsite must be plumbed into foul sewerage and under no circumstances to be discharged to surface waters or drainage including handwashing stations.	Mitigation measures to be detailed in the CEMP Detailed design of drainage Auditing by General Contractor and Environmental Manager Implementation of toolbox talks	General Contractor	Design, Pre-Construction, Construction, Operation and Demolition		
13.2	Surface Water Quality	Sedimentation Protections	The Gwent Levels: St Brides SSSI is designated for reens and waterways. It is fed into by the Nant-y-moor reen which is located along the western border of the site. Suitable mitigation should be in place to avoid run off into this waterway. ACTIONS - Installation of silt fencing and similar measures where appropriate to protect water quality. These should be installed at the banks of rivers, streams and drainage ditches that connect to surface waters. - Spoil piles should not be allowed to get over a height of 3 metres. - Spoil piles are to be tarped down if not in use for over 2 weeks and in response to incoming high winds, high rainfall, high temperatures, storms or any other extreme weather events. - Spoil piles are not to be placed within 15 meters of the upper banks of surface waters or drainage channels to surface waters. - Prior to surface water discharge, surface water drainage and dewatering of excavations should be passed through sedimentation procedures as to not discharge water with high solids into surface waters.	Mitigation measures are to be included in the CEMP	General Contractor, Microsoft	Detailed Design, Pre-Construction, Construction, Operation and Demolition		

14.1	Prevention, containment and cleaning up spillages	To avoid polluting materials from being spilled or leached into the environment	The Proposed Development is located in close proximity to the Gwent Levels: St Brides SSSI, which is designated for its reen and waterway environment. Adjacent to the site is the Nant-y-moor reen. ACTIONS - All oils and fuels will be stored in compliance with the Control of Pollution (Oil Storage) Regulations 2001. - Fuel shall be stored in dedicated bunded, impervious storage areas, away from drains and watercourses. - Drums over 200 litres shall be stored on drip trays capable of holding 25% of the drum's maximum capacity. - Fuel tanks shall be stored within a bund capable of holding 110% of their capacity. All pipes and gauges shall be within the wall of the bund. - Bowsers shall be double skinned and shall be stored in a bund capable of holding 110% of the volume of the bowser. - Small mobile plant shall be placed on drip trays. - Spill kits will be available at various points around the site and located next to bowsers and drums.	Mitigation measures incorporated into CEMP	General Contractor, Microsoft	Construction, Operation		
14.2	Prevention, containment and cleaning up spillages	To avoid polluting materials (Solids, Silt and Run off) from entering hydrological systems and the local environment. To also avoid potential harm to personel and infrastructure/equiptment.	ACTIONS - Spillages of dry and dusty materials will be avoided by good housekeeping methods including storing under cover and on hard standing. - Skips will be covered where there is a risk of material becoming airborne. - Wheels of site vehicles will be cleaned before they leave site. This will be supplemented by a road brush to clean roads as required - Spill kits will be made available at various points around the site and located next to bowsers and drums - Adjacent ponds to the site will be monitored to check for any changes in water quality. If any significant changes are identified, the cause will be investigated and clean up measures will be implemented. Should a spill occur the following will be implemented: - Work will be stopped immediately. - All possible ignitions will be extinguished if the spilt material is flammable. - The spill will be contained using spill kits. - The source will be identified and sealed as practical. - Granules / pads will be used to mop up as much spill as possible. - The project lead will be informed of the spill. - If the spill enters a watercourse (such as the Nant-y-moor reen) the environment & sustainability manager must be contacted immediately who will contact the Natural Resources Wales. - The granular material and pads and any containment items will be treated as hazardous waste and disposed of accordingly. - An incident report form will be produced and sent to the HS&E department within 24 hours of the incident occurring. If the incident is significant a full investigation will be carried out by the HS&E Advisor and the Environmental Advisor. - A 24-hour spill response service will be provided	Mitigation measures incorporated into CEMP Montly water quality testing Implementation and traning on use of spill kits	General Contractor, Microsoft	Construction, Operation		
15.1	Fire control	To avoid uncontroled fires from occuring on site	The project will ensure that operations are carried out in compliance with the Regulatory Reform (Fire Safety) Order 2005 "Joint Code of Practice on the Protection from Fire on Construction Sites and Buildings Undergoing Renovation". A Site Fire Safety Coordinator will be appointed to ensure adherence to the Site Fire Safety Plan. In addition, they will coordinate the issues below: - General Housekeeping. - Fire extinguishers fire detection and alarms. - Hot Work Permit regime. - Fire escapes and communications (evacuation plans and procedures for calling the fire brigade). - Fire brigade access, facilities, and coordination. - Fire drills and training. - Effective security measures to minimise the risk of arson. - materials storage and waste control regime. An initial fire risk assessment of each area will be undertaken and updated as the risks change. In addition, weekly inspections of all areas will be carried out and the findings recorded on a weekly inspection report. All areas will be kept clean and tidy and stored materials will be properly coordinated and controlled.	Fire Safety Toolbox Talk Appointment of a Fire Safety Coordinator Weekly inspections (to be written up)	General Contractor, Microsoft	Construction, Operation, Demolition		