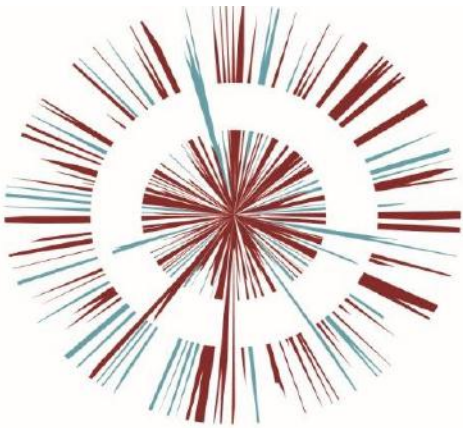




OMEGA ZONE 8, ST HELENS

Omega St Helens Ltd / T J Morris Ltd



Construction Environmental
Management Plan – INFRA
INFRA DOC. 1.

**CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
FOR
OMEGA WEST, ZONE 8, INFRASTRUCTURE WORKS**

The Infrastructure Works are to be constructed in accordance with the Masterplan / Parameters Plan which will form part of the proposed Hybrid Planning Application.

NAME		POSITION	APPROVED (signature required)	DATE
		Operations Manager		
		SHEQ Manager		
		Contracts Manager		
		Site Manager		
		Site Engineer		
Revision	Comments			Date
0	First Draft			11 March 2020

THE MEMBERS OF THE PROJECT MANAGEMENT TEAM HAVE BEEN FULLY BRIEFED IN THE CONTENT OF THIS DOCUMENT, IN ORDER TO EXECUTE THEIR RESPECTIVE ROLES AND RESPONSIBILITIES IN DELIVERY OF THIS CONSTRUCTION MANAGEMENT PLAN IN A SAFE MANNER.

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1.0 MODIFICATIONS AND REVISIONS

Any modifications and revisions to this document will be recorded in Table 1. Any significant changes to the management of the project will be communicated as necessary to the client, principal designer and all other designers, contractors and sub-contractors.

I. AMENDMENTS/ADDITIONS TO HEALTH & SAFETY AND ENVIRONMENTAL PLAN

Item Description of Alteration	Date	Signed

II. PLAN REVIEWS

Records of any Safety, Health & Environmental Audits should be noted within this section along with details of any corrective action, applicable to this document, required.

Item Description of Alteration	Date	Signed

Safety, Health & Environmental Audits will be carried out Monthly. These audits include inspection of file system (SHEQ system).

2.0 RESPONSIBILITIES WITHIN THE PROJECT TEAM

Under the CDM Regulations 2015, this document forms the Construction Management Plan. The plan, hereinafter referred to as the 'CEMP', defines the means by which work is planned, managed and monitored throughout the course of the project. The CEMP ensures that Health, Safety and Environmental (SHE) standards are incorporated into the arrangements made.

Please read with the site staff structure and the roles and responsibilities for **your** position as designated or agreed. Agree your specific role on this project with the Contracts Manager

Specific Procedures and Responsibilities

Procedure	Description of Task	Documents Generated	Who
I9	Operational Control	I9.R1.4 - Construction Environmental Management Plan	SQ/CM
I1	Legal & Other Requirements	I1.R1 - Legislation Index	SQ/CM
I7	Communication	I7.R1b - Site External Communication Register	CM/SM
I11	Emergency Planning	I11.R1 - Emergency Procedures R2.C11 – Emergency Contacts	CM/SM
I14	Legal Compliance	R1.C1 – Legal Requirements	SQ/CM
I15	Non-Conformance Control	I15.R4– Non-Conformance & Corrective Action Record	SC/CM/SM
I16	Control of Records	See tables within section 16 and section 23 of this document	SM/E
I17	Internal Audits	R2.C17 – Internal SHE Audit Record R3.C17 – Site Review/Inspection	SQ SM
H1	Hazard Identification, Risk Assessment & Determining Controls	Items listed within H1.R1 - Risk Assessment Index and H1.R2 - COSHH Assessment Index	SQ/CM/SM/ E
E1	Environment Aspects and Risk Assessment	R1.E1 – Significant Aspects and Impacts Summary R2.E1 – Aspect Significance Assessment (Pollution) R3.E1 – Aspect Significance Assessment (Resources) R4.E1 – Significant Aspects Impact Control Sheet	SC/CM/SM
H&S and Environmental Standard	Site Specific Health & Safety and Environmental Information for Site Workers/Visitors	Method Statements, Induction & Daily Activity Briefings	SM

SQ - SHEQ MANAGER/SHEQ ASSISTANT CM - CONTRACTS MANAGER SM - SITE MANAGER E - ENGINEER

3.0 AUTHORISATION AND ISSUE RECORD

- The following Construction Environmental Management Plan (CEMP) has been prepared by Omega Warrington Ltd (OWL) in accordance with the integrated Safety, Health & Environmental Management System (SHEMS) Procedure I9 – Operational Control. I authorise the use of this plan as the main control element of the SHEMS on the above contract. This should be read with the 'Electronic' access to the Documented Occupational Health & Safety / Environment Management System and Manual.
- This CEMP is to be issued to the Project Management Team, listed on the cover page of this document, who shall agree to comply with its contents at site level and maintain the necessary documentation listed within it. The working copy of the plan is to be held on site and updated when applicable.
- It is a requirement that all supervisory staff; are aware of the contents of this CEMP and the working procedures to be followed. This is achieved by the Project Management Team signing the cover sheet and other supervisory staff not that are not listed signing the below briefing register.

Name of Recipient	Job Title	Signature	Date

The Project/Site Manager & Contracts Manager, supported by the Operations Manager and SHEQ Team, are the key persons within this system and shall be responsible for the following;

- All work will be undertaken in accordance with the Company Health & Safety and Environmental Policies, the Safety, Health & Environmental Plan and Site Rules, taking particular notice of the hazards associated with working on site.
- Method of work undertaken on the project matches the client and regulatory authorities' requirements and minimises the effect of our works on the environment.
- Verification that approved working procedures and regular inspections are implemented and all personnel are compliant.
- Ensuring that all personnel on the project are aware of their responsibilities within the SHEMS, arranging training where necessary (via the SHEQ Manager).
- Holding the current version of the SHEMS and advising the project team of the relevant procedures and records to be kept.

This Construction Environmental Management Plan (CEMP) for the scheme sets out measures to be implemented by to minimise and mitigate the development and construction impacts on the environment, the development site and the surrounding area. The primary objective of this CEMP is to set out requirements for control of the construction process, site operation controls related to these conditions and the environmental control measures, including monitoring to be undertaken during construction.

This CEMP includes but not be limited to:

Item	Reference in CEMP
Details of phasing	4.0 Description of Project
A dust management plan which includes details of the proposed dust monitoring programmes, both before and during construction, with proposed locations and duration of monitoring	8.1 Environmental Monitoring & Awareness
Reasonable Avoidance Measures for protected species including bats and common toads	8.2 Ecological Features & Protection
A methodology for the soft felling of trees T62 and T65;	8.2 Ecological Features & Protection
Construction traffic routes, which shall include a primary traffic route	7.2. Traffic Management, Logistics & Security
The location and numbers of parking spaces for contractors;	Section 15, Figure 15.1 - Compound Location & Logistics
Temporary roads/areas of hard standing;	Section 15, Figure 15.1 - Compound Location & Logistics
A schedule for large vehicles delivering/exporting materials to and from site;	7.2. Traffic Management, Logistics & Security
A scheme of street sweeping/street cleansing	7.2. Traffic Management, Logistics & Security
Contact details of the principal contractor	TBA
Confirmation that the principles of Best Practicable Means for the control of noise and vibration will be employed, as defined within the Control of Pollution Act 1975;	8.1 Environmental Monitoring & Awareness
Confirmation that the good practice noise mitigation measures detailed within BS5228-1: 2009+A1:2014 shall be employed; and	8.1 Environmental Monitoring & Awareness

4.0 DESCRIPTION OF PROJECT

Site and Surrounding Area:

- The Site is located approximately 6.5km to the south east of St Helens town centre and 5.5km to the north west of Warrington town centre. The Site is located within the administrative boundary of St Helens, and adjoins the administrative boundary of Warrington Borough Council (WBC) to the east.
- The Site comprises an area of land approximately 35ha in size, of arable land with adjoining agricultural and industrial land uses. The Development is situated immediately west of the Omega Business Park and Lingley Mere Business Park. The Omega Business Park houses a variety of large-scale warehousing and industrial businesses, whereas the Lingley Mere Business Park comprises a mixture of office buildings and small local businesses.
- The Site is bound by the M62 between Junction 7 and 8 to the north, with arable land located beyond and to the south and west with scattered areas of deciduous woodland.
- An unnamed watercourse, which is a designated Main River1 with associated areas of flood zone 2, forms the western boundary of the Development. The unnamed watercourse flows through Booth's Wood and the outline application area in the southern end of the application site, continuing south for 330m before merging with the Whittle Brook (designated Main River). It should be noted that landowners are considered riparian owners of adjacent watercourses and are therefore responsible for maintenance (up to the midpoint of the watercourse).
- There are several residential areas surrounding the Site, including Lingley Green (370 m south east), Clock Face (1 km north west), Bold Health (1.5 km south-west) and Westbrook (1.8 km east).

Infrastructure Works:

- Mobilise, Site Set up and Install level control
- Surveying & Engineering control
- Construction of the access junction and internal road network that will serve the Development from the existing termination point of Catalina Approach to the boundary.



- This road network will provide access to the Development via a circulatory roundabout junction at Catalina Approach, and will provide a footway, cycleway provision and soft verges as well as the future access point for the outline component;
- Construction of pedestrian and cyclist shared path route linking Omega South and Omega West to the existing pedestrian M62 overbridge to the west;
- Installation of Surface water drainage and attenuation in the form of a series of attenuation ponds to be situated within the wider landscape areas to the north and west of the Site.
- Construction of foul pumping station (located in Omega West) and a rising main from this pumping station to connect with the existing foul drainage system located in Catalina Approach;
- Removal of the earthwork embankment from the southern approach to the farm access bridge crossing over the M62 motorway, and carry out any works required to close off and make safe the bridge structure;
- Construction of temporary haul road from Catalina Approach to the property;
- Diversion of the existing overhead electricity network cables;
- Installation of services for gas, domestic cold water, fire mains water, HV electricity and telecommunications;
- Civils works required for the Utility Services installations will include Installation of Ducts, Excavation and Backfilling of Trenches for Services Cables and Pipes, Construction of SPEN Substation and Gas Meter Housings, Water Meter & Valve Chambers and Ground Formation / Levelling to the Final Finished Ground Levels along the length of the 132KV Line Diversion Routes; and
- Structural landscaping



- Once the works are awarded, the main contractor will produce a Construction Materials Management Plan which will identify where materials may be reused on site, recycled on site, removed from site for reuse of recycling and, if all else fails, dispose from site as a waste. Where materials are disposed as waste, these are sent to licenced facilities under a Duty of Care Consignment Note. If materials can be reused, whether on site or elsewhere, are very familiar with the use of CL:AIRE DoWCoP. This requires the use of a Materials Management Plan with the intention of reusing materials and providing sustainable solutions to construction projects.
- Upon contract award the main contractor will commence the preparatory work required to mobilise to site. This will include completing the F10 Notification to HSE, preparation of the Construction Phase Plan, Induction, RAMS (Risk Assessments and Method Statement), Project Environmental Plan (This CEMP), and Project Quality Plan. This mobilisation period is set to 1 week. Upon completion of the documentation, these will be submitted to the Client team for appraisal.
- The site team will then arrive on site. The supervisor will ensure all personnel are inducted prior to any works commencing. The necessary fencing at the site access point will be delivered to, as well as the welfare units. These will be lifted into position with the onboard HIAB crane, under the main contractor 'Permit to Lift' system.
- During this time, the dust and vibration monitoring equipment will be installed, prior to any site works commencing. A wheel washing facility will also be mobilised to site in the form of a mobile jet wash.
- The earthworks machines will be brought to site and, prior to commencing the site strip works, ensure that the area is sufficiently prepared to receive the tipper trucks and allow adequate turning area. With the site now fully prepared the infrastructure works can commence.

Construction Works:

Infrastructure works are expected to commence in September 2020, with the majority of works completed by April 2021, however some works on/for utility services are expected to continue to September 2022. This amounts to a construction period of 70 weeks for infrastructure works.

The below provides an overview of the anticipated enabling and construction works for the Development, with the Development anticipated to follow standard construction techniques:

- Construction compound establishment;
- Hoarding or safety fencing would be erected around the boundary of construction areas, with fencing to protect sensitive features (e.g. vegetation to be retained, heritage assets, watercourse buffers);
- Enabling works to utilities will be carried out and this will involve capping-off or removal of redundant utilities, diversions, new supplies and connections as agreed with statutory undertakers;
- To achieve the required Site levels there will be some general civil engineering groundwork activities including soil stripping, vegetation and tree removal, excavation, grading and preparation of surfaces, and the placement/compaction of fill undertaken to achieve desired ground levels;
- During engineering groundwork activities for the Site, infrastructure and services, including (but not limited to) electrical, telecommunications, potable water and drainage infrastructure, will be installed;
- Internal Access Roads / pedestrian and cyclist shared path – works would involve the construction of the road surface (known as the ‘pavement’) over an earthwork foundation (known as the ‘formation layer’) over the area allocated for the internal road network, access junction and pedestrian and cyclist shared path. The installation of kerbing and paved areas e.g. footways, road restraint systems (such as vehicle and pedestrian safety barriers), road markings (e.g. white lining) and road signs would also be undertaken during construction of the pavement and formation layer;
- External Works and Landscaping – Areas of landscaping and open space would be prepared to establish the green spaces within the Site. This would include soil preparation, tree and vegetation planting, seeding and the sustainable drainage systems.

Risk Assessments with an associated Method Statement will be produced for all the above activities prior to the commencement of any element of the works.

The Duty Holders under the CDM Regulations for this project are as detailed below;

Duty Holders:

Client	Omega Warrington Limited - c/o Miller Developments Miller House 2 Lochside View Edinburgh Park Edinburgh EH12 9DH Scotland Contact: Colin Graham ✉: Colin.Graham@millerdevelopments.co.uk	Principal Contractor	TBA
Consultants	p3 Consulting 53 Bothwell St Glasgow G2 6TS ☎: 07768 584543 Contact: Joseph Dobson ✉: jd@p3-consulting.co.uk	Ecologist	The Ecology Practice Willowgate Welsh Newton Common Herefordshire NP25 5RT ☎: 07867 580491 Contact: Andrew Arnott ✉: andrew.arnott@ecologypractice.co.uk
Structural Designers	Hannan Associates MEP Beta House, Alphagate Dr Manchester Rd Denton M34 3SH ☎: 07803 120964 Contact: Terry Fildes ✉: terry.fildes@hannan-uk.com	Designers	WSP Group Ltd The Victoria 150 -182 The Quays Manchester M50 3SP ☎: 0161 886 2466 Contact: Sandy Griffin ✉: alexander.griffin@wspgroup.com
Local Authority (1)	St Helens Council 3 rd Floor Wesley House Corporation St, St Helens WA10 1HF ☎: 01744 676789 Contact: TBA ✉: contactcentre@sthelens.gov.uk	Local Authority (2)	Warrington Borough Council New Town House Buttermarket Street Warrington WA1 2NH ☎: 01925 443322 Contact: TBA ✉: contact@warrington.gov.uk

5.0 HEALTH & SAFETY PRINCIPLES & OBJECTIVES

- The principles and objectives of Occupational Health & Safety, as well as Environmental are set down in the Omega Warrington Ltd (OWL) Safety, Health & Environmental Management System Manual.
- OWL invites the involvement of all employees and sub-contractors with an 'open door' policy. OWL always seeks to improve communication and openness to make improvements throughout the business, in particular to our Occupational Health & Safety Management System ISO 45001 and to our Safe Systems of Work (SSoW).

6.0 ENVIRONMENTAL PRINCIPLES & OBJECTIVES

- By considering the environmental concerns, as described within this Construction Management Plan, tender documentation and our Environmental Management System ISO 14001, the project team can limit the effect of the works on the environment and local ecology. OWL cares about the environment. We recognise that concern for our natural surroundings should be an integral part of how we manage the business. The protection of key elements of our environment is also important for human health & wellbeing.
- OWL uses its **knowledge & experience** to select from its wide range of plant and vehicles the most appropriate way in carrying out work to minimise its environmental footprint, encouraging use of energy efficient technologies & better behaviour, to reduce noise levels, air pollution and exhaust gas emissions by all of us being better in what we do & how we do it, understanding the impact of our actions on our environment & taking more care. **We aim to make the Company environmentally sustainable with better behaviour.**
- OWL focuses on the elimination of waste material by **NOT** creating it in the first place and will re-use material whenever possible without treatment. But if treatment is required then the material will be recovered / recycled, then re-used to **eliminate or minimise** any residual waste with sustainability at the heart of our activities minimising our **environmental footprint**

Thinking can make a difference
Caring for a better Environment with better behaviour



7.0 RESTRICTIONS WHICH MAY AFFECT THE WORKS

7.1. Highways England Considerations

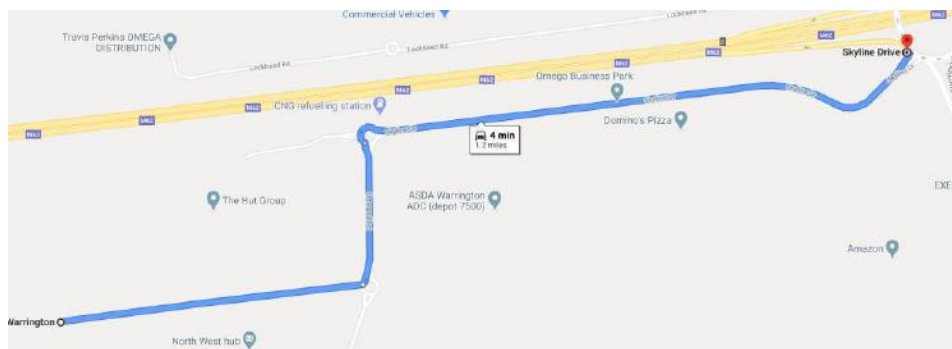
Due to the close proximity of the M62 in relation to the proposed infrastructure works consideration must be given to all works and how they may impact on the Highways England's network. All documents produced MUST demonstrate that the works have been risk assessed and that adequate measures are in place at all times to protect both Highways England's users and assets. Scope & method of work typical considerations to be given;

- Access/Egress
- Working Area and Highways England Constraints
- Deliveries & Storage of Materials
- Dust Control & Mitigation Measures
- Potential Screening for Debris
- Site Boundary & Fencing Interface

7.2. Traffic Management, Logistics & Security

The majority of vehicles will access the Site from the east the existing Omega South internal road known as Catalina Way, which connects to Skyline Drive (A5280) which then provides a direct link to Junction 8 of the M62. Most vehicles entering and leaving the Site will be HGVs but there will also be vans and cars. The figure below shows the proposed offsite vehicular routing for construction traffic during development to the Site. Figure 15.1 shows the location of the 8m wide tarmac haul road that will be constructed as part of the Development which will be used to access the Site whilst the new Junction and road with Catalina Way is constructed.

All construction traffic must exit Catalina Approach by turning left only and head towards junction 8 of the M62.



To prevent any risk to the general public or potential trespassers, the site will be secured with adequate fencing and prevention of easy access to site. The site will be secured and have a security presence on site during non-operational times. Security will be provided by the main contractor, where all who attend site must report to and sign in when accessing and egressing site. All areas of site must be secured at the end of each shift with excavations and/or other risks of slips, trips and falls adequately protected. Any scaffolds will be secured at the end of each shift and all plant will be isolated with shutters placed, where fitted. A security guard will be present on site during non-working times. Security checks of the perimeter will be undertaken at the end of each shift and security will undertake regular checks during non-working hours.

All persons are required to sign in at the infrastructure compound. (The Traffic Management is shown within section 15). The site is fenced off with robust heras fencing/hoarding and statutory warning notices fixed to the fencing at appropriate points. The site access will be kept clean at all times and gates closed when access is not required. Should it be required a Road Brush will be in attendance to ensure that any debris on the roads is kept to usual highway standards.

A wheel wash may be also be required at the site access point and should be located within the site, this will be a 'Pressure Washer' type and will be monitored to ensure site going vehicle wheels are sufficiently cleaned prior to leaving site. The condition of the water will be monitored to ensure site going vehicle wheel are optimally cleaned prior to leaving site.

The access point will be via existing gates which will be kept shut and locked at all times when not in use. The gates are set back a minimum of 10m from the adopted highway to prevent construction vehicles from overhanging onto the carriageway. Furthermore, the construction accesses are capable of accommodating two-way traffic flow.

Further Traffic Management, Logistics & Security control measures:

- All personnel and deliveries will be made aware of these arrangements and site rules both prior to arriving on site and within the site induction.
- The gates will be kept locked between 0800 –1745 Monday to Friday and at all times during non-working hours. To gain access during these times contact will be made with the main contractor staff. Contact numbers for all the main contractor staff will display at this site entrance.
- The gates will be immediately locked after access by the main contractor staff.
- No noisy works (audible beyond the site boundary) will occur before 08.00hrs or after 18.00hrs Monday to Friday, or before 08.30hrs on a Saturday up to 13.30hrs (or 14.00hrs)".
- Parking and unloading on Omega surrounding roads is prohibited at all times. At no point will construction vehicles and construction staff be parked on the adopted highway. All loading and unloading will occur on-site and not on the adopted highway. Furthermore, reversing onto the adopted highway will not be permitted. Vehicles will enter and exit the site in forward gear at all times.
- Reversing manoeuvres on site will be avoided with one-way systems established where possible. Where unavoidable, and necessary, a banks man will be used to control vehicle and delivery movements (Unloading & Loading). Materials will be delivered ahead of works commencement. All materials are to be stored in a compound and managed by the main contractor.
- A gateman will be present on site to ensure the safe access and egress of the tipper trucks and the safe operation (reversing) on site. If necessary, the gateman will wash down the trucks with the mobile jet wash, ensuring no mud or other materials are carried out onto the highway. The gateman will ensure that the gates are closed at all times, only allowing trucks to access/egress when necessary.

- A sweeper will be deployed along the surrounding Omega Roads throughout the works to ensure the highway cleanliness is maintained. The supervisor will ensure that the site remains tidy at all times. The excavator will ensure that all batter slopes are maintained at the angle of safe repose and that all slopes are tidied/sealed at the end of each shift. The excavator will ensure that the area, in particular, access around site is maintained to a high/safe standard.
- The main contractor site supervisor will be the person on site responsible for the safe and timely delivery of the works. The supervisor will ensure that dust and vibration are kept to a minimum, traffic disruption does not occur and that there are sufficient tipper trucks on the project to meet the required programme.
- Trucks will be phased such that they are approx. 10 mins apart. This will allow for trucks not to stack at the site entrance. The main contractor should adopt the following; whilst a truck is being loaded the next truck is approaching site and, once the loaded truck exits site, the next truck is accessing the tipping location. This separation will ensure that there is no stacking and that the gateman can allow one truck to leave and the next to come into site. The gates can then be closed for approx. 10 mins to allow the entering truck to turnaround and be loaded for the same process to follow. This will ensure that there is no 'bunching up'.
- Wherever possible, in accordance with the programme and lead in times, orders for 'Civils Materials' will be placed for 'just in time' delivery. Suitably prepared storage areas are available for items stored on site and the materials are correctly stacked to minimise damage, double handling, loss or risk of injury.
- All visitors and personnel visiting the site must initially report to the contractor's site office for initial site safety induction and working procedures.
- Directional signage will be implemented to ensure that construction traffic utilises designated routes to minimise the effect on the surrounding road network. Locations for temporary signage for the approved route will be discussed with the St Helens Highway Network Traffic Management Team and will include input/agreement with WBC.
- HGV movements will be restricted as far as reasonably possible so as to avoid peak traffic flow periods (i.e. from 08:00-09:00am and 17:00-18:00pm).
- All construction traffic entering and leaving the Site will be closely controlled and during delivery times, banksmen will be positioned at the existing gatehouse to control and record entry and exit movements. Deliveries will be on a 'just-in-time' basis.
- There will be no operatives or visitor parking on the surrounding highways. Access gates to the construction Site will be kept locked. Access and egress from the Site for operatives and deliveries / collections will be controlled by a banksman. The gates will be immediately locked after access and egress by a banksman. Contact numbers for access will be displayed at the Site entrance.
- For security purposes, a member of staff will record the vehicle details and direct deliveries to report to the reception office where appropriate personnel will direct the driver to deliver the material in a specific area of the Site.

7.3. Plant & Delivery Movements

Due care and attention must be paid to operated plant movements on site. Personnel should not enter into the working area of any machine without following the 'SAY HELLO, WAVE GOODBYE' rule. The site speed limit is 10mph and all plant & vehicle must obey this. Private vehicles will not be permitted for use around site. Delivery of materials must be coordinated accordingly and are required to sign in at the contractor's compound.

All plant and site vehicles must have a fully functional flashing orange beacon and dipped headlights in use when using the site roads. All vehicles will ensure that any load is fully secured prior to setting off and only used for their designed purpose. All reversing manoeuvres will be avoided wherever possible. Where unavoidable, and necessary, a banks man will be used to control vehicle movements. All interfaces, either within the scheme, local highways authority or police must be co-ordinated through the main contractor/WSP/OWL management team.

7.4. Pedestrian Segregation

Wherever possible and generally from welfare areas to the workface, a dedicated pedestrian route will be demarcated by the main contractor. The purpose of the Traffic Management Plan is to define traffic routes, but to also define pedestrian routes and ensure that pedestrians are segregated from moving plant & vehicles. The plan is to be displayed within the main contractor Site Office & Welfare and will be further developed as the works progress.

7.5. Underground Services

There are utility services as well as sewers present on site. No excavations shall take place until a Permit to Dig has been issued to the excavator driver, banksman and/or ganger. The Site Engineer will CAT scan the works area prior to issuing a Permit to Dig and will confirm the whereabouts of any known services. Wherever necessary, trial holes will be excavated by hand to prove service locations. Should any services be disturbed by the works then works must cease and the area made safe (see 10.0 Emergency Procedures): Details of control measures will be as advised in HSE Guidance Note HSG46; 'Avoiding Danger from Underground Services'.

7.6. Overhead Services

There are overhead, high voltage cables (suspended on large pylons) located on site. All backacters will be fitted with restrictor systems to prevent the dipper arm being permitted to exceed a height within 6m of the cables. A 'goalpost' array will be set up either side of the overheads to pre warn all plant operators of the presence of overhead services. Details of control measures will be as advised in HSE Guidance Note GS6.

7.7. Manual Handling

This is a significant risk on all sites and all personnel will be trained in sound manual handling techniques. Wherever possible the need for manual handling will be designed out of the works and eliminated through alternative. If the risk cannot be eliminated then the task must be fully risk assessed in line with the HSE Publication INDG383 'Manual Handling Assessment Charts'.

7.8. Dust

Dust control, mitigation and monitoring measures will be put in place for the duration of the works on site. The main contractor will be employing dust suppression and sweeping of selected roads on site, as and when considered necessary. Proposed Mitigation Measures - The generation of dust on site will be minimised, particularly during the drier weather and controlled by use of dampening down using water bowsters. A tractor and bowser will be used to damp down all haul routes and any other areas with the potential to generate dust. Again, the site supervisory team will monitor dust generation closely, by including measures where possible; such as keeping site vehicles & ADTs speed down and tipping excavator buckets from a low height to lessen airborne dust spread.

Where necessary, FFP3 masks will be used and all personnel trained in face fit techniques for the particular mask in use. Wherever possible the use of respiratory protective equipment (RPE) will be the last control after all the above techniques have been adopted. Dust mitigation measures will be closely monitored by the site supervisory team and the dedicated environmental improvement team. A daily inspection will be undertaken and logged on the form 'Daily Dust Inspection Checklist' (doc ref R3.C17a). When using abrasive wheels for cutting, all cut off saws to be equipped with water bottles to suppress dust. Wherever small tools are used which may cause dust, methods to control the dust must be employed.

7.9. Noise and Vibration

Any work which may involve excessive noise or vibration must be fully risk assessed and monitored with specific controls measures put in place. Any activities that cause noise will require noise assessments, taking in to account the level of noise and the exposure of personnel to that noise. Control measures will then be implemented to prevent potential damage to hearing. The same applies to vibration, where any personnel are likely to be exposed to vibration; the activity will be fully assessed. The use of all vibratory hand tools will be closely monitored and personnel will complete a 'Daily HAVS' form. All plant to be used on site will be fitted with suspended seats and the maintenance of any hauls roads and or other operating surfaces will be carried out to prevent the risk of Whole Body Vibration. Also to be considered is that vehicle travel speeds (Max 10mph) are appropriate to the site and running surface.

7.10. Hazardous Substances

There may be a need to use substances which pose risk to health. All such substances; such as diesel, greases, oils, UV radiation from the sun etc. shall be assessed for workplace exposure limits and any specific control measures which should be adopted when using such products. Biological hazards include tetanus (from soil), legionella from stagnant water and Leptospirosis (Weil's disease) from an organism that can be present in the urine of rats and cattle which can contaminate water and thus present a possibility for infection of humans. Infection can enter the bloodstream through cuts, abrasions etc. and possibly through the lining of the mouth, eyes and other bodily orifices. Biological hazards and the importance of good personal hygiene will be highlighted in the Site induction. Litter and food waste will be disposed of appropriately to minimise the attraction of vermin. Chemical hazards primarily include containers and other articles left over from the Site's former uses, plus any plant or other fixed items that may contain chemical substances (e.g. oil in transformers).

No personnel are to handle such items unless a COSHH assessment has been carried out informing the correct means of handling, transport and storage of the material / substance. These COSHH assessments will identify all relevant PPE and any other details highlighted from the Material Safety Data Sheets which is relevant to the proposed application of the product. Assessments will be carried out in line with the HSE Publication 'Working with Substances Hazardous to Health' INDG 136.

Stagnant water favours Legionella growth. To reduce the risk typically within the temporary welfare facilities, all dead legs/dead ends in pipe-work will be removed, infrequently used outlets will be flushed out (including taps) at least weekly with inspection checks recorded on the "Welfare Inspection Form P9.R7.1". Cold-water storage tanks will also be cleaned periodically, whilst also being covered from direct sun light i.e. to ensure cold water is stored and distributed below 20°C.

As the works also continue through the remainder of the summer months there is a significant risk of all site personnel being exposed to UV radiation from the sun. All personnel will be trained and made aware of sun protection via toolbox talk safety briefings (as when applicable), in line with the HSE Publication 'Health risks from working in the sun' INDG 147. Some Site work will be undertaken during summer weather. All site personnel will be encouraged to wear long sleeves when not wearing overalls, and to use sun screening creams. Site personnel will also be encouraged to take their breaks in the shelter.

It should also be noted due to the project being such an open site, fly tipping may be present prior to works commencing. All site personnel should be aware of any other hazards such as drug paraphernalia.

7.11. Excavations

Excavations will be carried out in a safe manner ensuring that a Permit to Dig is in place prior to breaking ground. The sides will be excavated to a safe angle of repose and battered or benched as necessary. Any excavations of significant depth will either be backfilled immediately or adequately fenced and signed. Personnel will not enter any excavation unless unavoidable and fully risk assessed prior to entry. All earthworks, as with any other activity which involves breaking the ground, will require a 'Permit to Dig'. Following the removal of any unforeseen slabs or other structures within the area will be levelled off and profiled to levels shown on the design drawings for this site.

All practicable steps will be taken to prevent danger to any person during excavation work. Excavations will, unless for a specific reason, be backfilled as soon as possible. Where backfill is not immediately possible, the excavation(s) will be supported or battered to prevent collapse (where space allows) and / or fenced off. Battering the excavation sides to a safe angle of repose may also make the excavation safer. In granular soils, the angle of slope should be less than the natural angle of repose of the material being excavated. In wet ground a considerably flatter slope will be required. No one is to enter an excavation unless it is deemed safe to do so e.g. if the excavation is large with battered or stepped sides, and only following inspection by a competent person in accordance with Regulation 22, 24 & 31 of CDM 2015. A system of regular inspections shall be established for producing open excavations and details will be recorded on the Excavation Inspection Form I9.R7.2 i.e. Check the excavation each day before work starts and after any event that may affect its stability – e.g. a fall of material or poor weather. A competent person who fully understands the dangers and necessary precautions should inspect the excavation at the start of each shift. Excavations should also be inspected after any event that may have affected their strength or stability, or

after a fall of rock or earth. A record of the inspections will be required and any faults that are found should be corrected immediately.

No vehicle movements will be permitted close to open excavations except for a) excavators conducting excavation, and b) dumper trucks tipping backfill material, in which case measures shall be taken to prevent over-running such as; substantial barriers, edge protection immediately next to the supported excavation side at points where people/plant are liable to fall in. Areas of ground that suffer from water logging, boggy or potential erosion will be highlighted to all persons likely to be affected prior to any works commencing. Efforts will be made to ensure that work activities and vehicle movements are planned and adjusted according to conditions expected to be encountered. This is particularly important and needs particular attention before the use of excavators or other large plant and vehicles.

7.12. Confined Space Working

During the drainage construction, it is likely that the works will involve confined space working conditions. This will require specific control measures and safety equipment as well as having specially trained personnel. All confined space working will be controlled by a permit to work system and those specific control measures identified within the safe system of works. The RAMS will define and identify when a work area is deemed a confined space. This is likely to be all manholes and pipes deeper than 2.5m. Plans and equipment will be in place for emergency and escape for the retrieval of any personnel in the confined space.

The Safe System of work will be as follows for entering any confined space;

- Check equipment for defects and is fit for purpose
- Confined space permit will be issued by site management team (No entry until approval given)
- MH lid will be lifted off & vented for a minimum of 10mins (When applicable i.e. connecting into an existing MH)
- Gas detector will be lowered into the confined space and readings recorded on permit
- Once the readings have been recorded and once safe to do so, permit will be amended for entry.
- Full confined space entry kit & rescue system will be used for entry.
- Atmosphere will be continually monitored once within the confined space. Any change in the atmosphere, operative is to leave MH IMMEDIATELY and supervisors notified.
- Top man to remain present at all times
- Above will be repeated until works within the confined space are completed.

7.13. Lifting Operations

There will be the requirement to use excavators for lifting purposes, typically moving non operated equipment and drainage installation. These works will be controlled by suitably competent slinger/banks men and with an approved lifting plan. No lifting will be permitted without a suitable approved plan. Lifting operations will be limited to routine, non-complex lifts using excavators in a controlled manner utilising suitably tested and inspected lifting gear. A register of lifting equipment will be kept and works carried out in Line with the Lifting Operations and Lifting Equipment Regulations. Reference should be also be made to OWL P9.G1 - Lifting Procedure and Schedule of Common Lifts'. The process map within these lifting procedures aims to identify the relevant steps to be taken when planning a lift and whether the Lifting Operations Assessment Form Part 1 or Part 2 are required to be completed.

Specific lift plans for compound set up and demobilisation works will be sought by the suppliers (i.e. Hiab lifts), as well as any other potential supplier/sub-contractor lifting.

7.14. Temporary Works

There is a limited amount of temporary works required on this project, as part of the infrastructure works. These are identified below;

- **Excavations** - Earthworks excavations will be based on the reduced level dig to achieve the final grade levels and do not require any significant depth excavations which will require support. Excavations will be cut with the batter at an angle of safe repose initially, roughly to the design grade and then graded to final slope. Temporary batter slopes will be cut no steeper than 1:1.
- **Drainage** - During excavation works, especially drainage trenches, manhole excavations and the demolition, a temporary works (TW) system will be required to ensure the stability of the surrounding ground. Fencing, haul roads & bridges will also be included within the TW system (i.e. Inspection regime & TW register). All temporary works will be fully designed and verified prior to installation or dismantle and will be inspected daily to check their integrity.
- **Stockpiles** - Where materials are to be stockpiled, these will be shaped to the angle of safe repose as detailed in the RAMS or Task Sheet. No end tipping is permitted without stop blocks/bunds and loading must be undertaken with care. When loading with an excavator positioned at the top of the stockpiles, the machine shall remain at a safe distance from the edge, and never cut a vertical batter. No stockpiles will be greater than 5m in height above existing ground levels. Tipping should always be undertaken on even ground.
- **Haul Roads** - Haul roads should be constructed in such a way that they remain at the same level as the surrounding ground, therefore posing no risk of height difference. Where a haul road is higher than the surrounding ground, berms or other means of stopping vehicles from over running the edge must be constructed. These should be to a height equal to or greater than the largest wheel radius of vehicles using the road – 800mm would suffice on this project.
- **Maintenance Works** - No maintenance works will be permitted without prior notification to the Site Management teams. All works must be covered by a suitable and sufficient risk assessment with an 'on the job' risk assessment also in place. COSHH assessments must also be available, upon request, for all substances being used. Fitters must take reasonable care to ensure that the plant and/or area where they are working is kept clean and hazard free. All substances used and waste materials generated must be removed from site by the fitter.

A Temporary Works Co-ordinator will be assigned by the main contractor.

7.15. Open Holes

There is the potential for open holes and manholes around the site. All personnel will be made aware of the risk of possible open manholes and efforts will be made to locate any holes prior to the commencement of any works.

7.16. Working Near Water

Where works are to take place near water (Typically attenuation ponds and swales), the safe method of working (RAMS) will consider the proximity of the water body, providing life rings or other suitable, life-saving, emergency equipment relevant to the working area. Suitable emergency arrangements will be developed for this element of the works (contained within the RAMS) and brought to attention of all personnel on site. Drills will be undertaken when appropriate to ensure that the emergency arrangements are adequate and understood. All works will be constructed in a manner that will reduce the presence of water using sump holes and pumps.

7.17. Fuel Storage

Refuelling / Fuel Storage - will be stored on site in limited quantities in a COSHH store which will be bunded, with a collection tray for spill prevention and control. Refuelling operations will be undertaken by daily visits from a mobile bowser and will take place in designated areas not closer than 10m to the nearest watercourse, where drip trays will be utilised to catch any potential spillages. Further mitigate any potential contamination to ground or watercourses, the bowser is equipped with a quick release fuel nozzle and all operated plant will be equipped with spill kits to tackle any spillages which may occur (no matter how minor). All site fitters will be inducted to site rules.

7.18. Contaminated Ground

All personnel will be vigilant when undertaking any works of the presence of contaminated materials, adopting sound hygiene practices and stopping work if any suspicious substances are found. All known hotspots of contamination will be cordoned off prior to works commencing and dealt with at the earliest opportunity. All works involving asbestos containing materials will be carried out in accordance with HSG 247, 'Asbestos: the licensed contractors' guide' HSE Publication.

7.19. Other Contaminants

If any suspicious materials are encountered on site, then works will cease immediately, the area be cordoned off and the site management team informed. A specialist sub-contractor will then be mobilised to assess and deal with the risk. The main contractor site team will then be informed when it is safe to recommence works and if any working practices need amending.

7.20. Waste Disposal

It is intended to re-use any hard materials as crushed hardcore, but all other materials will be disposed from site. Wood, glass and general waste will be separated and disposed of to a suitably licensed facility, as will all asbestos containing materials if found.

8.0 ENVIRONMENTAL & ECOLOGICAL MANAGEMENT

There are many environmentally and ecologically sensitive areas on site and this plan is designed to manage the significant aspects of the works on the site to reduce the risk to the local, and further reaching, environment and wildlife.

A CEMP: Biodiversity document (Appendix C) provides details provides details of biodiversity protection measures and how risk to biodiversity is avoided during construction.

Furthermore, the following documents have been appended to this CEMP:

Appendix D – Arboriculture Supervision Method Statement
Appendix E – Ecological Clerk of Works Method Statement
Appendix F - Woodland Clearance Method Statement

8.1. Environmental Monitoring & Awareness

- Environmental considerations will form part of the main contractors initial site induction, where the contents of this management plan will be disseminated to all personnel to ensure the awareness of its contents to all persons on site.
- In order to maintain a high standard of good practice, it has been requested that the works are registered to the Considerate Constructors Scheme (CCS) and adhere to the scheme's code of practice. In accordance with BREEAM requirements, a CCS score between 32 and 40 will be achieved and all sections within the scheme will achieve a score more than or equal to 3. The scheme will be implemented through each sub-contractor.
- Best practicable means (BPM) will be applied during construction works at all times to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors. BPM are defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990 as those measures which are "reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications".
- All works must comply with BS 5228: Noise and Vibration Control and the construction and Open Sites Part 1: Noise and Part 2: Vibration. The primary method for the control of noise will be a Section 61 agreement under the Control of Pollution Act 1974 ("COPA") with St Helens. A Section 61 agreement sets out a dispensation and variation procedure under which consent can be applied for to carry out works which it is considered would exceed the agreed noise limits or must occur at times when such work is otherwise not approved.
- Noise & Vibration, mitigation and monitoring measures: Any work which may involve excessive noise or vibration must be fully risk assessed and specific controls measures put in place. Any activities that cause noise will require noise assessments, taking in to account the level of noise and the exposure of personnel to that noise. Control measures will then be implemented to prevent potential damage to hearing. Industry best practice methodologies will be adopted to mitigate the generation of excessive noise and vibration during the works. All plant and haulage wagons must be less than 4years old ensuring they comply with the standards set out in the current legislation for acceptable noise levels

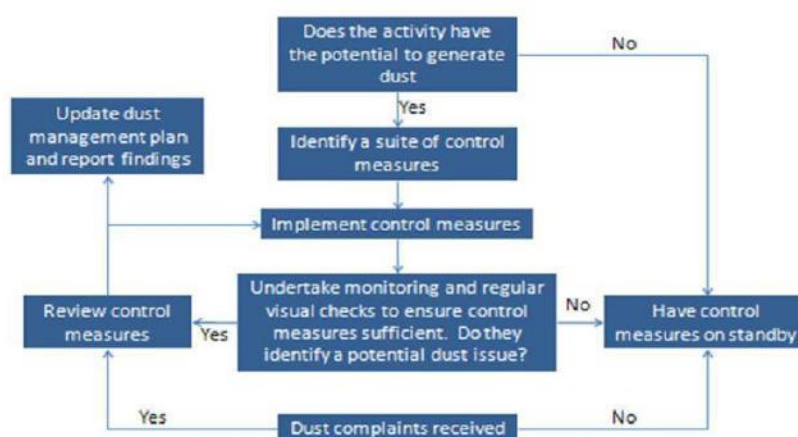
and emissions. It will be stipulated to all hire companies employed that no plant will be more than 4 years old again to ensure they comply with current legislation. No plant or vehicles will be left idling when not in use. Every effort should be made by the main contractor and any appointed sub-contractors to limit noise and ensure that engines are switched off when not in use. All plant will be well maintained to ensure that consumption is as efficient as possible and there will be no over revving ensuring that the plant is working efficiently. Noise and vibration will be further minimised by observing the following conditions;

- Location of nearest receptors to be considered and steps taken to minimise any potential nuisance that may be caused;
- All machinery to be properly maintained and working within manufacturers noise limits;
- Excessive stationary engine usage and idling to be avoided;
- Works requiring vibratory plant (e.g. compaction of fill materials) is not to be undertaken for excessively long periods;
- Impact of excavator bucket on hard surfaces to be avoided or if required minimised;
- Best Practicable Means
 - ❖ Employ plant which complies with the relevant EC/UK noise limits applicable to that equipment or is no noisier than would be expected from the noise levels quoted in BS 5228-1:2009;
 - ❖ Locate all stationary plant so that the noise impact at all occupied buildings is minimised and unless the main contractor can prove that it is impractical, every item of static plant shall be sound attenuated using methods based on the guidance and advice given in BS 5228-1:2009;
 - ❖ Modern, silenced and well-maintained plant will be used at all times, conforming to EU directives;
 - ❖ Equipment will be shut down when not in use;
 - ❖ Engine compartments will be closed when equipment is in use;
 - ❖ Materials will be handled in a manner that minimises noise;
 - ❖ Electrical/battery powered plant will be used where practicable to mechanically powered alternatives. Any mechanically powered plant will be fitted with suitable silencers
 - ❖ Good plant maintenance to ensure any equipment that generates excessive noise due to malfunction is repaired as soon as possible;
 - ❖ Regular integrity checks of any noise mitigation measures fitted to items of plant. Such measures are likely to include silencers and engine covers;
 - ❖ Where repair or replacement is required, the plant will, where possible, be taken out of service until repair or replacement of parts has been undertaken;
 - ❖ High revving of engines will be minimised;
 - ❖ All personnel involved in the works will be fully briefed on the control of noise on site, specifically in relation to limiting the use of raised voices; and,
 - ❖ All working will be directly supervised by an operations manager who will ensure that the controls identified above are rigorously applied.'
- Dust control, mitigation and monitoring measures will be put in place for the duration of the works on site. The main contractor will be employing dust suppression and sweeping of selected roads on site, as and when considered necessary.
 - ❖ Proposed Mitigation Measures - The generation of dust on site will be minimised, particularly during the drier weather and controlled by use of dampening down using water bowsers. A tractor and bowser will be used to

damp down all haul routes and any other areas with the potential to generate dust. Again, the site supervisory team will monitor dust generation closely, by including measures where possible; such as keeping site vehicles & ADTs speed down and tipping excavator buckets from a low height to lessen airborne dust spread.

- ❖ Monitoring Methodology - Dust mitigation measures will be closely monitored by the main contractor site supervisory team and the dedicated environmental improvement team. A daily inspection will be undertaken and logged on the form 'Daily Dust Inspection Checklist' (doc ref R3.C17a).
- ❖ In the event of St Helens Council / Warrington Borough Council receiving any dust complaints (during normal working hours). The findings of the investigation will be communicated to the main contractor for consideration & action. The investigation procedure will include the following tasks:
 - Undertake visual monitoring inspection and identify the site works that were being carried out immediately prior to the dust complaint and during the complaint period;
 - Identify the potential source of dust and determine if the complaint is justifiable;
 - Review the control measures in place;
 - Identify measures to reduce the potential dust generation
 - Report the findings to the site team and implement appropriate further mitigation measures; and
 - Record details in Site Log.

Overview of Dust Management

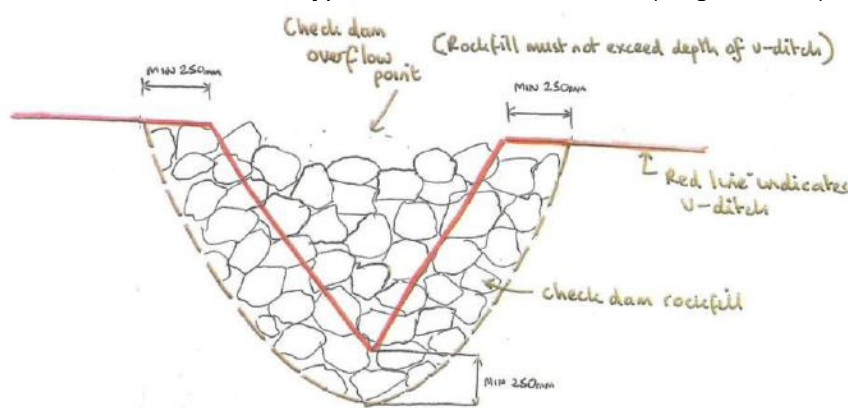


- Water management will be a high priority on this project. Localised bunding and lagoons may be required to prevent surface water adversely affecting the works. It may also be necessary to excavate 'grips' or 'V' ditches to capture water and channel towards a holding area (lagoon), preferably the permanent works swales. It will be necessary to implement silt mitigation measures to filter water prior to its potential release to any nearby watercourse. This will be controlled by the 'Environmental

Improvement Gang' whose task is to ensure that measures are in place in line with the 'OWL Environmental Team Work Shop – Silt Mitigation & Drainage' Before commencing works within a new area the following should be considered:

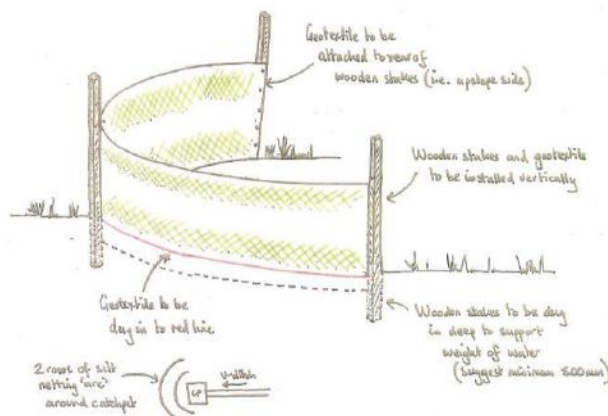
- ❖ Minimise the area of exposed ground – strip vegetation & topsoil only when needed.
- ❖ Minimise the time ground is exposed – less opportunity for water to drain from exposed ground, undertake reinstatement at earliest opportunity.
- ❖ Identify and protect water courses – remember 10m (min) buffer zone,
- ❖ Identify any existing land drains and sources of water that cross the works area – install culverts to allow water to bypass the works area, locate outfalls of land drains and monitor (ongoing), isolate land drains if necessary.
- ❖ Identify low points in works area – keep 'clean' and silt contaminated water separate, access road run off will naturally drain to these locations.
- ❖ Water must be as clean as possible at discharge point, and regularly monitored by the site team
- ❖ Filtering will be achieved using check dams and silt nets. Dug in to ensure integrity
- ❖ Where water has collected in excavations or sump holes and is required to be pumped clear, the water will be recharged to adjacent grassed areas of site in order to prevent its release into any watercourse. If any is suspected to be contaminated (it has oily residues apparent, odour or discolouration) then it must not be pumped until verified.

Best Practice Guide Type 1 - V-ditch check dam (Dug-in detail)

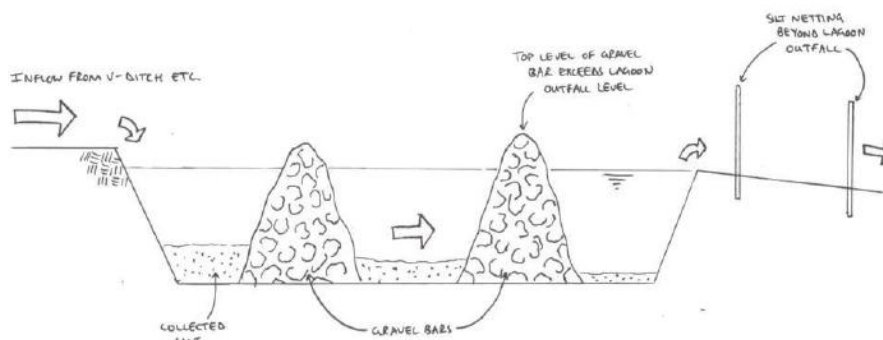


Best Practice Guide Type 2 – Silt Netting

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Best Practice Guide Type 3 – Silt Lagoon



- There is a 'No Dig' construction methodology required for the cycleway / path within the RPA for Booth's Wood. Guidance is offered in the Ecology Practice Arboricultural Assessment and within BS 5837: 2012 Section 7.4. The contents of the Tree Root Protection (TRP) System guidance will be referred to at all times during the cycleway / path within this location.

8.2. Recycling and Waste Disposal

- All materials will be separated/segregated as far as reasonably practicable in order to minimise the quantities of mixed materials. The waste hierarchy will be considered at all times.
- The waste carrier's licenses are to be requested when the carrier has been appointed and checked for compliance. Alternatively, this can be checked via Environmental Agency website by searching for the carrier within their database. In addition to obtaining a copy of the waste carriers upper tier licence for the waste transfer station / land fill station will also be obtained to ensure the end facility is licenced to store / dispose of the waste.
- The site arising materials are detailed in the tender documents and site method statements. The materials have been identified as soils (suitable fills & unsuitable fills),

vegetation (from confidence scrape) and general waste (arising from materials packaging and office works). Estimated volumes are detailed in the tender documents.

- The main contractor will consider the arising materials once classified by The Site Manager and Geotechnical Engineer. The likely classification of materials will be either suitable for engineering material; cut/fill; or bioremediation (Only applicable to soils or crushed materials).
- The main contractor will take all reasonable measures to enable waste re-use, recycling and recovery, and minimise landfilling of waste arising from the works. All site personnel are to ensure good separation/segregation of materials. Mixing of materials on site must be avoided as this will likely render the material unsuitable, so all personnel at source are to separate topsoil, suitable fill and unsuitable fill as best practice.
- The fate of all materials will be tracked throughout the duration of the works, typically;

Brick and/or Concrete - Any brick and/or concrete arising from the works will be processed (crushed) to produce engineering materials. Concrete will be crushed to 6F2 specification and brick will be used for hardcore purposes. Any tarmac arising from the works will be incorporated into the processed materials in quantities not exceeding those from the 'Specification for Highway Works', Series 600, Table 6/1 for the type of aggregate being produced.

Vegetation, Trees & Hedges - All vegetation, trees and hedges will be dealt with in the Site Clearance; chipped and cut up as necessary. Chippings will remain on site, with cuts and stumps being removed from site.

General Waste - All general waste will be separated into the following categories and recycled as far as possible; paper, cardboard, plastics, cans and general waste. The estimated quantities of these wastes is very low, but will be tracked throughout the works.

Scrap Metal - There is likely to be a small quantity of scrap metal within the reinforced concrete slabs. This will be placed in separate skips and sent for recycling.

Soils - Suitable engineering materials will be used for cut to fill operations. Unsuitable inert materials will be used within the landform.

9.0 MANAGEMENT STRUCTURE & RESPONSIBILITIES

- 9.1.** The Project Management Team is required to carry out regular monitoring of the system. It is important that all established procedures are followed and that any problems are reported immediately. The site will also be subjected to a formal internal audit to assess the operation of the SHEMS.

10.0 STANDARDS TO BE ACHIEVED

- 10.1.** The Company standard for Health & Safety and Environmental is set out in the OWL Safety, Health & Environmental Management System. Compliance with the Regulations and Acts listed in document I1.R1 of the Safety, Health & Environmental Management System is a minimum requirement.
- 10.2.** Safety - Our aim is to ensure that whilst engaged in carrying out the Company's business, the health, safety and wellbeing of all employees and the general public is maintained at all times. (See Occupational Health & Safety Policy Statement in Appendix C).
- 10.3.** Environmental - Our objective is to balance the need to achieve our business aims with the need to protect and improve the environment. We use our knowledge and experience in planning to carry out work, minimising our environmental footprint by understanding the impact of our actions on our environment and taking more care. We seek to use innovative technologies including to reduce noise levels, air pollution and exhaust gas emissions.
- 10.4.** Should there be any changes in design which may affect the works, or the risks involved in the works, then the work element must be stopped and the risk assessment and method statement (RAMS) revised to account for the change. All personnel must be re-briefed to the amended RAMS in order that the revised risks are known. If the design change results in a significant risk in the installation, maintenance, decommissioning of the construction element or environmental impacts, the Principal Designer will be informed and **MUST** be approved before making the change. The details incorporated in the Health and Safety File.
- 10.5.** The Site induction focusses in particular on safety aspects and Safe Systems of Work (SSoW) of the site. Site inductions will include the site rules, emergency procedures and site-specific hazards. Regular tool box talks and daily activity briefings will be held to discuss further safety issues relevant to the works in progress. Interface with other contractors will be a feature of the works and will be included in briefings.
- 10.6.** A safe system of work (SSoW) is a procedure to eliminate the risk involved in a specific operation. If elimination cannot be achieved, then, at least, to reduce the risk to an acceptable level. A SSoW is a part of the risk assessment process which is systematically evaluated. Once underlying hazards are identified, then different measures can be taken to eliminate (or lower) risks. This can be achieved by introducing different SSoW procedures such as engineering controls and administrative controls. As a last resort, providing protective clothing and equipment (PPE).

10.7. The Health & Safety File:

The 'Works Information' prescribes exactly what 'as built' details are required on completion of the project. This is a contractual requirement and 'Practical Completion' will not be accepted without the information being passed over. This, together with the Health & Safety / Operation & Maintenance file and supplying the information as described is therefore of paramount importance and must be complied with. The Project Team are to maintain records of the works to include, but not be limited to, the following:

- Daily record sheets to include a summary of the day's activities;
- General description of the works completed, including any earthworks, excavations (including excavations of hard obstructions or foundations), placement and compaction methodology and plant used;
- Progress photographs (not less than weekly).
- Detailed weather conditions;
- Plant, personnel and visitors present;
- Aspects relating to Health and Safety, Environmental Control; and test results
- As built programme & as built dated drawings;
- Waste transfer notes;
- As built surveys, including base of excavations and removal of existing services

The contents of the health and safety file will vary depending on the type of project and the future health and safety risks that will have to be managed. The typical information which we put in the health and safety file will include:

- 'as built' drawings or records and inspections used and produced throughout the construction process.
- General details of the construction methods and materials used.
- Manuals produced by specialist contractors and suppliers which outline operating and maintenance procedures and schedules for material and equipment installed as part of the works.
- Details of the location and nature of utilities and services installed.

The information for the file should be collated as the works progress and should not be left to the end of the project, as late manuals could cause delays to the project handover. The format of the file should also be agreed with the Client / Principal Designer at the early stages of the project. In line with HSE guidance the file should not include things that will be of no help when planning future construction work such as pre-construction information, the construction phase plan, contractual documents, safety method statements.

11.0 COMMUNICATION OF HEALTH & SAFETY AND ENVIRONMENTAL RISKS

- 11.1.** We aim to deliver an accident-free workplace, we expect the commitment of every employee to be fully in line with Section 7 of The Health and Safety at Work Act. We communicate this to all our employees, clients and others
- 11.2.** All personnel on arrival at site will be given initial site safety induction and working procedure briefing (RAMS briefing).
- 11.3.** Toolbox talks will be held prior to each change of activity when the Site Manager will inform all site personnel, including Sub Contractors, of the probable risks and methods to be used to eliminate or reduce those risks to an acceptable level. Environmental awareness will also be continually promoted and further improvements discussed by carrying out Toolbox Talks on a regular basis to ensure that all operations are carried out to minimise the risk of pollution and reduce the volume of waste produced on site. All site personnel and sub-contractors will be required to sign the attendance record for these talks.
- 11.4.** Site notice boards must be established as the company standard for the site office and welfare unit, with all emergency details clearly displayed. Employees, contractors, visitors must always know where they are working to be able to quickly inform relevant staff in the event of an emergency.
- 11.5.** No work will be commenced on site until a safe method of working has been established. At the start of each shift for all attending site, inclusive of sub-contractors & visitors, a Daily Activity Briefing Sheet (DABS) will be completed, undertaken by the client or supervisor for each team, highlighting the activities and safe methods of work for the day.

12.0 SELECTION PROCEDURES

- 12.1.** OWL will only use contractors who will comply with the OWL Occupational Health & Safety Management System. Sub-contractors will attend Coordination Meetings, detailing the risks to Safety, Health & Environmental arising from all parties' activities.
- 12.2.** All other personnel employed on the site will be the company's directly employed Operatives or self-employed Operatives already known to the company and fully aware of its Occupational Health & Safety Management System and working procedures.
- 12.3.** All materials orders issued will require suppliers to provide all Health & Safety information relative to their products. Purchased materials and services are important inputs to processes and may represent, or contribute to, significant environmental aspects. Therefore, they are controlled, including an attempt to monitor and influence the environmental performance of respective suppliers and contractors. Environmental expectations are communicated to suppliers and contractors, who may also be offered environmental awareness training.
- 12.4.** All plant and equipment will be inspected by the main contractor Site Manager prior to its use, to ensure it is in good order. All drivers will hold CPC certificate (or similarly approved) for the class of plant being driven. Generally, plant will be provided by the

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

main contractor and where deemed necessary the manufactures guidance for each item of plant will be held within the cab of these machines.

- 12.5.** The main contractor Site Manager will also check all sub-contractor's plant and equipment including inspection certificates & SWL certificates for machines and lifting slings etc.
- 12.6.** Where there is any doubt regarding the safety of any equipment it will not be put into use until the Site Manager has had the plant or equipment checked by a competent Plant Inspector.

13.0 ACTIVITIES WITH RISKS TO HEALTH & SAFETY AND ENVIRONMENTAL

- 13.1.** OWL Safety, Health & Environmental Management System sets out the arrangements and procedures for identification and effective management of activities with risks to health and safety and the environment.
- 13.2.** Risk assessments and safety method statements or task sheets will prepared by the main contractor and its sub-contractors will be included in the Site Health & Safety 'As Built' File and will be produced at the appropriate time prior to commencement of the activities they cover. This will be an ongoing process throughout the works and the risks involved and the safe methods of working will be brought to the attention of all site personnel in the manner prescribed under the heading 'communication and co-operation'
- 13.3.** To determine the significant environmental aspects, all activities, products and services in the scope on this project are considered. Significant impacts can occur in the area of direct control and in the sphere of influence exerted over key suppliers and, to a lesser extent, customers. Consideration is given to environmental aspects under normal operating conditions, abnormal conditions such as start-up, shutdown and maintenance, and potential emergency conditions.
- 13.4.** The predicted environmental aspects of proposed new developments are also identified and actions included in management programmes to ensure control of associated environmental risks. The Management Procedure for Environmental Aspects (E1) includes a practical risk-based methodology for estimating the relative importance of the significant environmental aspects on the business and the environment. This facilitates the setting of priorities in the objectives and targets for improvement.

14.0 COMMUNICATION & CO-OPERATION

- 14.1.** Health & Safety and Environmental information will be distributed to all the project team in accordance with OWL, Health & Environmental Management System.
- 14.2.** Site communications will be controlled by the use of radios and mobile phones where acceptable. Site supervisors may be permitted to use mobile phones, but never whilst driving or engaged in any work activities. Any mobile phone use must be undertaken in a position of safety, away from working activities. It is preferable to use radios wherever possible.

14.3. On this site, information will be communicated:

- (a) At the initial induction training.
- (b) At the Method Statement/Task Sheet briefings
- (c) At the Daily Activity Briefings
- (d) Site Specific Environmental and Ecological briefings
- (e) At the site tool box talks
- (g) At the Progress Meeting with WSP / Miller Developments /OWL
- (h) Workforce Consultation Meetings

15.0 EMERGENCY PROCEDURES

15.1. The Emergency Procedures will be displayed throughout the compound, typically related to Fire, Safety & Spill Control, but not limited to.

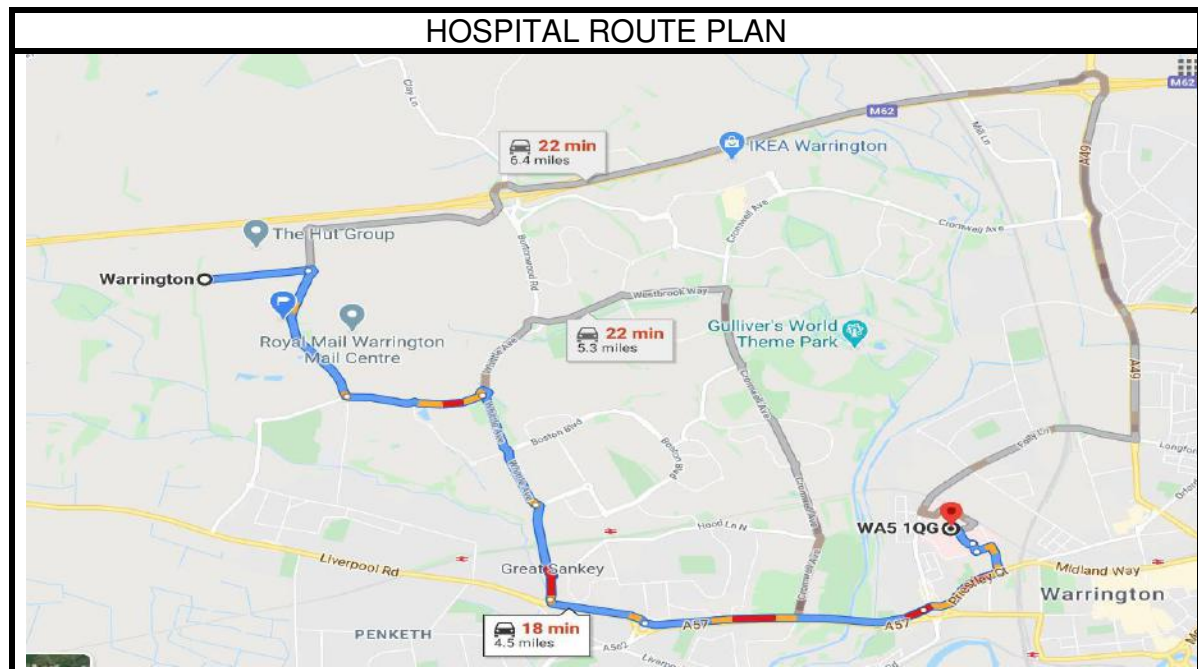
Certain activities will require the development of specific emergency procedures. Examples include confined space entry, working from MEWP/MCWP, roof work, working in proximity to overhead power cables, working in areas that are hazardous to health e.g. presence of substances/chemicals whether they are present as part of Client operations or as part of our activities. The emergency procedures section contained within the specific Method Statement document shall be completed in these events and shall contain details of the procedure to be followed, the names of responsible persons, their roles and contact numbers/details.

15.2. In the event of a safety emergency, this procedure will be followed:

- Follow normal site rules (displayed in site office) and make immediate contact with a site supervisor below if any accident, incident or dangerous occurrence happens whilst on site. In the event of an accident you may need to contact the nearest First Aider. If any damage occurs to services, no matter how minor it may appear, this must be reported to a site supervisor immediately.
- All personnel will make their way to the site office or nearest muster point as soon after the incident as possible, unless involved in the emergency dealing with a casualty or keeping persons away from danger.
- The site management will liaise with Fire & Medical Services during any emergency at the site entrance.

15.3. The nearest A&E hospital is approximately 4.0 miles from the site, address: Warrington Hospital, Lovely Lane, Warrington, WA5 1QG, Tel - 01925 635911.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN



15.4. Having completed the immediate actions, the following procedure will apply;

- Inform the Client
- Inform the Principal Designer
- Complete an Accident/Incident Report
- Undertake an Investigation (if necessary).
- Agree & Implement Corrective/preventive actions to avoid reoccurrence.

15.5. Fuel/Oil (or other potentially damaging substance) Spillage: In the event of a spillage incident the following procedure must be followed;

- Eliminate sources of ignition and cordon off area.
- Attempt to contain the spillage without risk to personal health and safety.
- Inform a member of the Site Supervisory Team of the approximate volume of the spillage, location and measures taken at present.
- Where necessary, use plant from the locality to form bunds, excavate to Dump Trucks or any other action which may contain/mitigate the spillage.
- Use spill kits from the plant to clean up or if necessary, use adjacent soils.
- Do not allow the spillage to enter a watercourse.
- Site Manager to inform WSP/Miller Developments staff and, if necessary, contact the following;

- Fire	999
- Environment Agency	0800 807060
- United Utilities	0845 746 2200
- Site Manager to liaise with the above and agree measures to remediate area.
- Site Manager to complete an 'Incident Report Form' or NCR.

15.6. Surface Water Release: In the event of surface water release the following procedure must be followed;

- Attempt to contain the release without risk to personal health and safety.
- Inform a member of the Site Supervisory Team of the approximate volume of water released, location and measures taken at present.
- Where necessary/possible, use plant from the locality to form bunds or excavate a sump (remembering to check Permit to Dig prior to breaking ground).
- Site Supervisory Team to call in bowser or pumps to ensure that the release is contained in the bund/sump and does not overflow.
- Project / Site Manager to inform WSP/Miller Developments staff and, if necessary, contact the following;

- Environment Agency	0800 807060
- United Utilities	0845 746 2200
- Site Manager to liaise with the above and agree further/improved mitigation measures.
- Site Manager to complete an 'Incident Report Form' or NCR.

15.7. In order to confirm that emergency procedures are effective the arrangements should be tried. Therefore, it is recommended that drills are undertaken at regular intervals. A drill should be undertaken within 4 weeks of the start of the project.

15.8. A Compound layout, Fire Plan and Traffic Management Plan have been produced to identify the areas of site which are at risk of fire and the preventative and emergency measures to be implemented to deal with fire. These plans include a sketch detailing the location and type of emergency equipment located around site as well as muster areas and procedures to be followed in the event of a fire. The plans also indicate the location of the Muster Point to be used in the case of an emergency as well as traffic routes, disposal areas and the location of the welfare facilities. These plans will be developed by the main contractor and will be clearly displayed within the site office and mess room, the particulars of which will be discussed during the site induction.

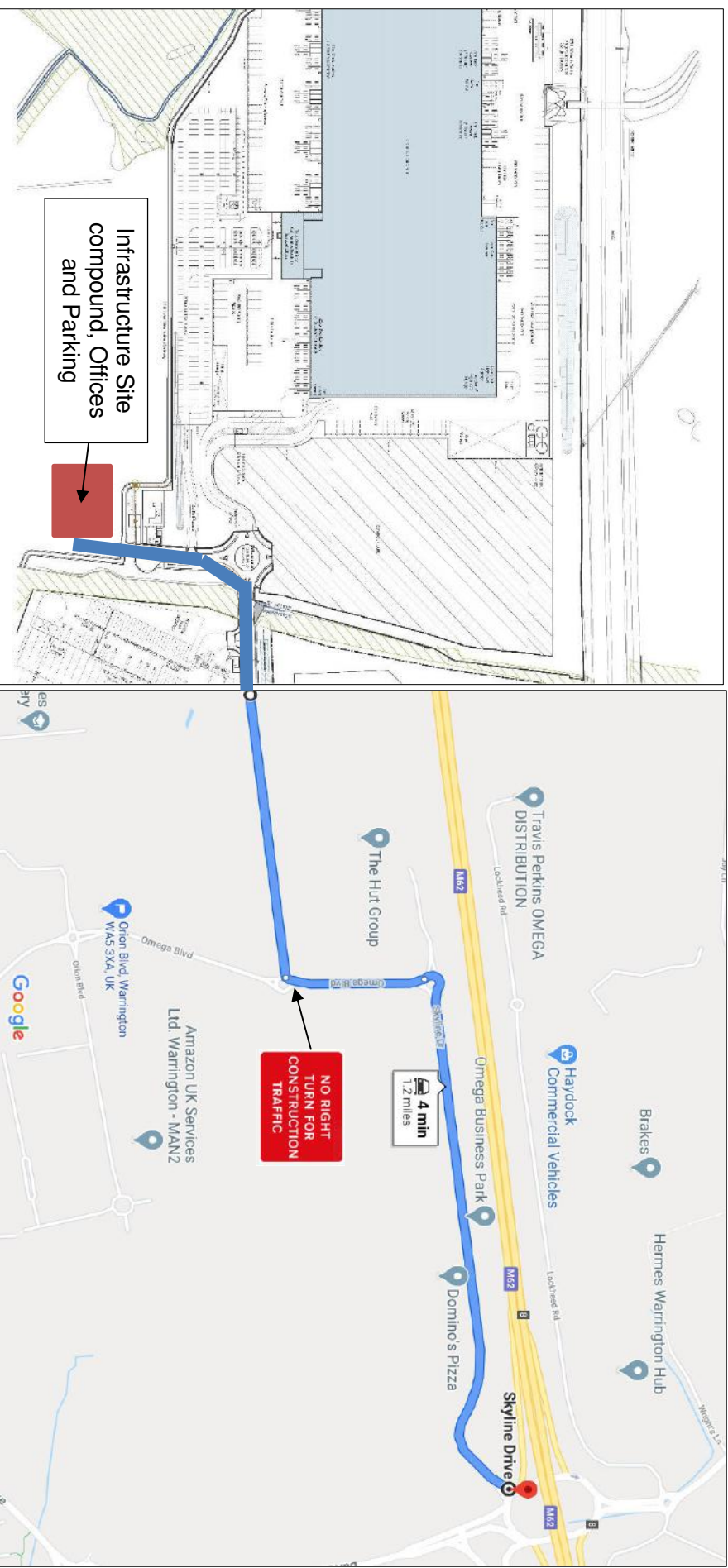


OMEGA

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

SHEQ/OWL/19.R1.4 / REV0

Figure 15.1 - Compound Location & Logistics



The compound will be located OWL's land as shown above, which avoids the TJM site (including expansion land), Infrastructure works (allowing the infrastructure to extend South if required), and SPEN Diversion corridor, but still close to Catalina Approach. Access will be by the footprint of the road network via a circulatory roundabout junction at Catalina Approach

Figure 15.2 - Compound Layout Plan



SHEQ/OWL/19.R1.4 / REV0





OMEGA

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

SHEQ/OWL/19.R1.4 / REV0

KEY

- OMEGA WEST TITLE BOUNDARY
- TJ MORRIS PLOT BOUNDARY

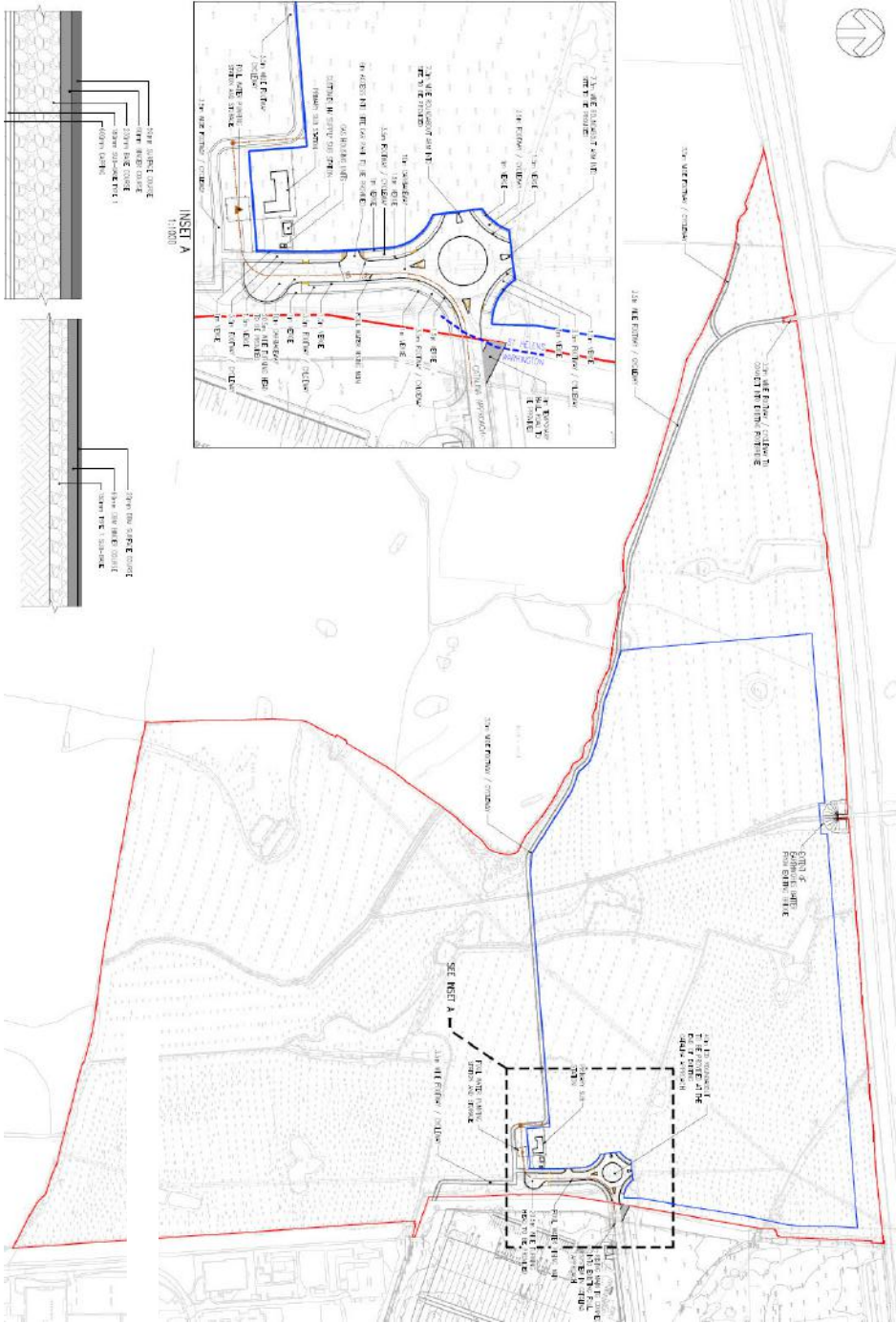


Figure 15.3 - Diagram/plan showing the site split between TJM works and OWL works
(The bridge ramp removal works will be on the TJM site and careful coordination between contractors will be required)

16.0 PERMIT TO WORK REQUIREMENTS/PROCEDURES

No work will proceed until the following documents have been agreed, issued and briefed.

Description of Task	Document Ref.	Responsibility
Construction Phase H&S Plan	I9.R1.4 (this document)	SHEQ Manager /CM
Site Induction	I9.R2.1	SM / SHEQ Assistant
Hydrema Familiarisation Checklist	I9.R9.7	SM
Quick Hitch Operator Assessment Checklist	I9.R9.6	SM
Quick Hitch Operator Assessment Checklist	I9.R9.6	SM
Risk Assessments	H1.R1 & R1.E1 to R1.E4	SM
Method Statements	I9.R3	SM
Task Sheet	I9.R4	SM
Daily Activity Briefing	I9.R5	SM
Temporary Works Register	I9.T3	SM
Fire Plan	Site Reference	SM / SHEQ Assistant
Traffic Management Plan	Site Reference	SM / SHEQ Assistant
Underground Services Drawing Register	I9.R6.6	SM
Permit to Dig	I9.R6.1	Engineer
Confined Space Permit	I9.R6.2	Engineer
Hot Works Permit	I9.R6.5	Engineer
Site Risk Assessment Permit to Work	RA60	Engineer
Permit to Enter*	I9.R6.3	SM
Permit to Demolish*	I9.R6.4	SM
Lifting Plan for Excavators	I9.G1 - Lifting Procedure	Appointed Person/SM

*Should they be needed (to be identified through Risk Assessment and detailed in Method Statements).

17.0 NOTICES

Copies of the following notices will be displayed and brought to the attention of all site visitors and personnel displayed on the main contractor Site Notice board:

- i. Certificate of Insurance
- ii. Health & Safety Law Poster
- iii. Site Rules
- iv. Company Policies
- v. Emergency Procedures
- vi. F10 Notification of Construction Project
- vii. Site Management Structure & Accountability

18.0 REPORTING OF RIDDOR INFORMATION

- 18.1.** All personnel including sub-contractors are required to report all incidents and accidents in accordance with OWL Safety Management System.
- 18.2.** All accidents will be entered in the site Accident Book. The Accident Book entries for each site, together with any F2508 & F2508A completed, will be used to compile the statistics required to report the Company's RIDDOR information.
- 18.3.** Any accident, incident or unsafe working condition must be reported to the project management team and working methods reassessed. Having completed the immediate actions, the procedure listed within section 14.3 above will apply.

19.0 WELFARE

- 19.1.** First Aid equipment will be located within the main contractor Site Office and will be clearly visible and there will be sufficient first aiders available on site (usually Site Supervisors).
- 19.2.** Toilet and washing facilities will be provided on site with warm and cold water, soap and drying facilities available for washing.
- 19.3.** Canteen facilities are to be provided as a separate facility on site, set aside for eating and drinking. Drinking water and cups will be available. The canteen will be sufficiently heated and ventilated and will be sufficient for the number of people on site. There will be a facility for keeping food and drink cold as well as a means of heating them.
- 19.4.** A designated smoking area will be available near the site compound. No smoking shall be permitted on any part of the site.
- 19.5.** All personnel must consider good hygiene practices on completing each shift or part shift and wash prior to eating, drinking or smoking.
- 19.6.** No works will commence on site until suitable and sufficient welfare has been implemented for the works being undertaken.

20.0 INFORMATION & TRAINING FOR PEOPLE ON SITE

- 20.1.** All personnel visiting or working on site will be given the necessary health & safety and environmental information, together with any training required to carry out the work in accordance with the risk assessments and method statement.
- 20.2.** The methods of communication are covered under the heading 'Communication and co-operation' Section 11.
- 20.3.** Signed records will be kept in the Health & Safety 'As Built' file to prove that the information and training have been provided.

21.0 CONSULTATION WITH PEOPLE ON SITE

- 21.1.** Consultation to gain the views of personnel on site will take place at tool box talks, Daily Activity Briefings, through observation cards and Fortnightly Team Meetings. OWL invites the involvement of all employees and sub-contractors with an 'open door' policy.
- 21.2.** The Director(s) of the main contractor shall nominate staff members to consult with the workforce, via open forums, to discuss SHEQ matters. This will ordinarily be carried out by the SHEQ Manager by means of a presentation and Q&A session. The entire workforce can be addressed and consulted, with any comments noted and acted upon through the SHEMS. The forums will particularly involve the following activities: incident investigation, review of OH&S and Environmental policies, procedures and objectives as well as hazard identification, risk assessment and the appropriate precautions to be taken.

22.0 OMEGA WARRINGTON LTD (OWL) GENERAL SITE RULES

- All visitors and personnel visiting the site must initially report to the contractor's site office for initial site safety induction and working procedures. All personnel must then take site transportation to the respective work area.
- All operatives are to hold full and valid CTA/CITB/CPCS/CCDO/NPORS/STREETWORKS licences. All operatives are to hold CSCS cards. Details of all Certificates of Competence will be inspected and recorded in the Site Safety File.
- All personnel to follow the reverse parking rule. Reverse Parking is safer than driving into a parking space and then reversing out. So, unless specific risk assessment dictates otherwise, reverse parking is standard on this site.
- At the start of each shift a 'Daily Activity Briefing Sheet' (DABS) will be completed, undertaken by the supervisor for each team, highlighting the activities and safe method of works for the day. Each attendee, inclusive of clients, sub-contractors and visitors, will sign the DABS to confirm they understand.
- All work activities are briefed using Method Statements, Risk Assessments and Task Sheets. All operatives MUST be briefed and signed on to the Method Statements AND Task Sheets before the commencement of any works.

- No work is to proceed until a Service Location Scan has been carried out, and a joint valid permit to work has been issued by the site engineer listing any or all constraints associated with the work area (typically a 'Permit to Dig')
- Our works take place in line with a documented Safe System of Work, which includes "Permit to Work" procedures for; excavation, confined space, hot works, plant maintenance, lifting, demolition and building entry etc. "Permit to Work" documents must be in place for those activities and you should be briefed on their contents. Never dig mechanically or by hand until a careful investigation using detection equipment has been made for buried services and a "Permit to Work" is issued. When live services are known/suspected, careful hand digging is required within 1 meter of live services.
- OWL operates a zero-tolerance policy to safety. Anyone found to be working outside of the restrictions stated in this induction and the relevant Method Statement, Risk Assessments and Task Sheets, which constitute a safe system of work, will be removed from site.
- The WHOLE of the SITE requires the wearing of HARD HATS, SAFETY BOOTS, REFLECTIVE VESTS/JACKETS and GLOVES whilst in the work area. Details of additional task specific PPE are contained within the Risk Assessment. All personnel must wear Personnel Protective Equipment, (PPE), when instructed to do so.

... "Only work safely – Otherwise do not do the work
If you do not have the correct PPE/RPE - Do not do the work

- When working within 30m of any breakers, or other noisy activities, hearing protection must be worn. Your supervisor can supply this where necessary.
- **Dust control, mitigation and monitoring measures** - Where necessary, FFP3 masks MUST be used and all personnel trained in face fit techniques for the particular mask in use. Wherever possible the use of respiratory protective equipment (RPE) will be the last control after all the above techniques have been adopted.

When using abrasive wheels for cutting, all cut off saws to be equipped with water bottles to suppress dust. Wherever small tools are used which may cause dust, methods to control the dust must be employed.

- **RPE, Facial Hair and Face Masks** - Where necessary, respiratory protective equipment (RPE) will be issued as a means of control to prevent the inhalation of hazardous substances at work. When worn and used correctly, RPE can prevent serious lung conditions caused by inhaling dust and other contaminants.

In order that a specific make, model and size of mask is able to achieve a good fit to an individual wearer, a face fit test should be conducted by a competent person and the wearer must have no facial hair in the region of the face seal. Facial hair can prevent the mask from forming a good seal, by creating gaps around the edges of the mask. This allows contaminants into the mask, to be breathed in by the wearer.

If you believe you have not been Fcae-Fit tested for the type of RPE you are using, you MUST report to the Site Manager to make the neccasry arrangements. Its your responsibility to use PPE, look after it and to be clean shaven when using RPE

- All personnel on site must co-operate with the Site Management at all times.
- All personnel must work safely and have consideration for themselves and others who may be affected by their actions. Accept Challenges - Respond positively if colleagues point out a safety risk or lapse. Let us know what we're doing well & what we can improve
- ALL delivery vehicles **MUST** be banked on site when other operatives are working in the vicinity. If there is **NO** need for operatives on the ground, the vehicle is free to reverse using mirrors/reversing cameras.
- **Together Everyone Achieves More.** It's good talking to someone, especially if you're new to us. Teamwork is an opportunity to build confidence for everyone to share information pooling knowledge & experience in a well-run business. ..“We have a Duty of Care to each other”...**YOU** protect your colleagues and yourself & **THEY** protect you.
- **All Plant & Equipment must also be inspected prior to its use, to ensure it is in good order and to identify whether any work equipment intended for use can be operated, adjusted and is maintained as intended by the manufacturer for its safe use. If YOU decide it's not safe then don't use it.**

By law, we must ensure that the equipment we use is fit for purpose and safe and our method of compliance with this legal requirement is to complete a 'Plant Operators Daily Checklist'.

Through the training you have received and the company requirement of handing in your completed checklists, you know that this is a duty that YOU MUST undertake. If you sign the sheet to say you have completed the checks, this MUST mean that you have. If you sign to say the checks have been carried out and they haven't, then you are making false statement – this is a conduct matter and could result in Disciplinary Action being taken against you.

- **All personnel must immediately report to the Site Management any defective plant or equipment. This will be recorded on the daily check list, but if necessary, report to your supervisor immediately (if problem is serious).**
- Personnel must **NOT** use any plant or equipment that they have not been trained & authorised to use.
- All personnel must obey all site safety notices and signs.
- Personnel must **NOT** indulge in any horseplay.
- Personnel must **NOT** tamper with equipment provided in the interests of Health & Safety and Welfare.
- All work will be left in a safe condition at the end of each shift, with all additional measures as deemed necessary by the Site Supervisor installed to protect any area/operation/activity considered to be a hazard.

- **OWL expects good housekeeping at all times and the skips provided must be used. Follow the 'Take 5' where all personnel must spend 5 minutes prior to each activity and at the end of their lunch break to reassess their working area and environment to ensure they have suitable access/egress; housekeeping is acceptable; the work area is safe; there are no environmental concerns; and that they are not impacting on others around them.**
- Good housekeeping not only improves the working environment and makes work tasks easier to accomplish, an organised and tidy site has less accidents than a site where good housekeeping is not practiced.
- It should also be noted in areas away from site, fly tipping may be present prior to works commencing. All site personnel should be aware of any other hazards such as drug paraphernalia. Therefore, there is a potential of discarded needles being discovered. Please be vigilant to this potential and if you discover any stop work and inform the site manager immediately.
- **NO SMOKING IS PERMITTED ON SITE.** Smoking will only be allowed in designated areas within the "Smoking Area".
- **NO MOBILE PHONES OR HEAD-PHONES** are permitted on site, unless specifically sanctioned by OWL. Supervisors will be required to limit their use of mobile phones to safe areas off site. Communication with managers/supervisors will be through the use of site radios.
- You **MUST NOT** use any hand-held mobile phone, radio, or headphones whilst driving or operating machinery whether on the highway (It's illegal) or on site (It's unsafe). You **MUST NOT** answer any call, unless it's safe to do so and **MUST NOT** use a phone for personal reasons outside of work breaks, unless in an Emergency.
- Do not work under overhead cables unless a safe method of work has been agreed and authorisation given. There are overhead, high voltage cables (suspended on large pylons) located on site. All backacters will be fitted with restrictor systems to prevent the dipper arm being permitted to exceed a height within 6m of the cables. A 'goalpost' array will be set up either side of the overheads to pre-warn all plant operators of the presence of overhead services.
- Two or more employers sharing a workplace must co-operate with each other and co-ordinate the respective measures taken to fulfil relevant Health and Safety statutory provisions. All works will be clearly demarcated with heris fencing and all interfaces will be clearly communicated to all. Risk(s) to health and safety arising from activities which may affect other contractors together with the protective / preventive measure which have been adopted, must conversed via the Project Managers, Interface meetings and Daily Activity Briefings to the workforce
- Throughout the works there will be exclusion zones imposed. These will be fenced off wherever possible and you will be informed daily, via Daily Activity Briefings, where the exclusions zones are located around site.

- Keep to your intended area of work and do not enter into any area where access is prohibited or if you are not authorised to do so.
- Do NOT alter or change any Traffic Management equipment for any reason. Contact the site manager to arrange for qualified TM operatives to undertake this task.
- Works in Traffic Management must be kept clean and tidy at all times. All fencing must be in place all time and checked prior to breaks or leaving site to protect the public. Any public interface required must be done with the highest of respect. If for any reason members of the public become trapped or confused within Traffic Management, please escort the public from the works area and notify them of the footpath diversions. All issues if any should be reported to the Site Management Team.
- All plant fitters are required to complete a permit to work prior to carrying out any repairs. Your supervisor will supply this where necessary.
- Do not use retractable blade knives whilst working on this site.
- All personnel who use vibratory tools will be expected to complete the form 'I9.R11 – Daily Hand Arm Vibration Exposure Record' to control and record individual exposures to such equipment on a daily basis.
- All plant and site vehicles must have a fully functional flashing orange beacon and dipped headlights in use when using the site roads. All standard vehicular safety features must be used when on site (e.g. seatbelts, indicators, headlights, etc.). All vehicles must ensure that any load is fully secured prior to setting off and only used for their designed purpose.
- During the loading operation of forward tipping dumpers, the driver of the dumper should dismount and stand clear from the arm of the excavator at all times.
- The site speed limit is 10mph. Please ensure that all vehicles obey this and stay to the designated routes.
- No plant or vehicles will be left idling when not in use. Every effort must be made to limit noise and ensure that engines are switched off when not in use. Over revving of the engines must be avoided to reduce noise and ensure fuel efficiency.
- Due care and attention must be paid to operated plant movements on site. Personnel should not enter into the working area of any machine without following the 'SAY HELLO, WAVE GOODBYE' rule. In addition, no operative should enter the working radius of ANY excavator unless the bucket is positioned on the ground with the controls isolated AND the driver indicates it is safe to approach.
- **Plant Interface** – Ensure that you THINK before you ACT when it comes to driving any vehicle or operating any plant

ALWAYS:

Check your mirrors and cameras before moving
Stop if you are unsure of hear a horn

NEVER:

Move unless you are sure it's clear
Get too close to other plant/vehicles

- ALL delivery vehicles MUST be banked on site when other operatives are working in the vicinity. If there is NO need for operatives on the ground, the vehicle is free to reverse using mirrors/reversing cameras.
- Ensure good separation/segregation of materials. Mixing of materials on site must be avoided, so please separate breakables, wood, glass and other wastes as best you can. Also, please use the recycling bins in the canteen.
- Water & silt control is very important on this project. Please ensure that surface water is not escaping into nearby watercourses. If you see site surface water being released into a nearby watercourse try to contain it and do not damage any silt fencing. If you see any damaged silt fencing or notice any site surface water being released into a nearby watercourse inform your supervisor.
- All site employees are to make themselves aware of the location of emergency spill kits and their use. No one is to remove or interfere with the spill kits unless they are to be used in a spill emergency.
- Always respect the natural environment and the local community.
- Plant is not to stray from the designated haul routes and every effort should be made to avoid disturbing flora and fauna adjacent to haul routes. Passing places must always be utilised for oncoming traffic and all heavy plant movements have right of way. Please obey these rules.
- Make sure you understand the permitted plant routes and stick to them. If routes are in poor condition or are unsafe then STOP and seek advice from site management
- Ensure that you have read and understand the contents of Control of Substances Hazardous to Health (COSHH) assessments for material you use on site.
- If you require a fire extinguisher for your work, see your foreman/supervisor. Do not take extinguishers from fire points
- When refuelling, park away from any watercourses or drains. When refuelling by hand, use a funnel or container with a spout AND a drip tray to prevent spillages
- When installing pins/rebar or any other protruding 'sharp' ends ensure that 'mushroom' caps are used to provide visual reference to their presence.
- Ladders and steps may only be used once a suitable risk assessment has been carried out.
- **SITE SECURITY** - We must be cautious at all times, remain extra vigilant and ensure we are discouraging opportunistic theft and vandalism by removing tools from view, as well as securing any equipment and materials that might tempt thieves.
- All incidents, no matter how minor, are to be reported to the Site Manager and/or Client team, as soon as 'reasonably practicable' e.g. no later than the end of the shift. External parties will be contacted if required by the main contractor or Client Site Management.

23.0 ARRANGEMENTS FOR MONITORING

23.1. The main contractor team will be responsible for ensuring audits are carried out on the Site Safety, Health & Environmental Construction Files that contains the Company's statutory registers, Safety Inspection Checklists, Method Statements, Risk Assessments and record sheets of Health & Safety and Environmental information and training provided. The sheets to be used are as follows;

Document	Document Ref.	Responsibility
Site OH&S Systems Audit	I17.R2	SHEQ Manager / Contracts Manager
Welfare, Segregation & PPE Inspection	I9.R7.1	SM
Weekly Environment Site Inspection	R3.C17a	SM
Daily Dust Site Inspection	R3C17b	SM
Excavation Inspection	I9.R7.2	SM/Engineer
Daily Activity Briefing	I9.R5	SM/Foreman
Competence Register (embedded within induction records)	I9.R2.1	SM
Lifting Equipment Calibration/Certificate & Inspection Register	I13.R1a	SM
Plant Calibration/Certificate Register	I13.R1b	SM
Safety Equipment Calibration/Certificate Register	I13.R1c	SM
Plant Inspection Checklist	I9.R9.1	Site Manager / Operative
Dumper Inspection Checklist	I9.R9.2	Site Manager / Operative
Roller Inspection Checklist	I9.R9.3	Site Manager / Operative
Vehicle Inspection Record	I9.R9.5	Driver / Site Manager
Ladder Inspection Sheet	I9.R8.4	Operator/ Site Manager
Power Tool & Non-Operated Plant Inspection Record	I9.R9.4	Operator/ Site Manager
Hired Mobile Plant Inspection Record	I9.R10	Operator/ Site Manager
Daily HAV Record	I9.R11	Site Manager
PPE / RPE Record Issue Sheet	I13.R2	Operator/ Site Manager
Employee Fit Test Record	I12.R3	Face Fit Tester
Occupational Health Screening Questionnaire	I9.R2.4	Employee / HR

- 23.2.** The works will be closely monitored by the site supervisory team and continually assessed for safe working practices. Should any works appear to be unsafe, then they must stop and the Method Statement and Risk Assessments reviewed and amended to suit.
- 23.3.** The RIDDOR statistics, together with all information recorded in the site accident book and Reports of Dangerous Occurrences will be monitored at the Site Team Meeting.
- 23.4.** All contractors employed by OWL will be monitored against their agreed systems of work. Any contractors deemed seriously non-compliant may be removed from site and will likely be removed from our approved list.

24.0 PROJECT REVIEW

- 24.1.** Whilst all Health & Safety and Environmental procedures are constantly under scrutiny, a Project Review will take place upon completion, with the aim of contributing to the Company's continual improvement.
- 24.2.** Should there be any significant changes to the work or working methods then this document must be reviewed and amended in line with the changing requirements of the activities and significant risks. Any amendments to this plan will require review by the signatories on the cover sheet of this document.

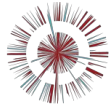
25.0 APPENDICES

Appendix A – Supporting Documents
Appendix B – Silt Mitigation Workshop
Appendix C – CEMP: Biodiversity document
Appendix D – Arboriculture Supervision Method Statement
Appendix E – Ecological Clerk of Works Method Statement
Appendix F – Woodland Clearance Method Statement
Appendix G – Tree Protection Plan
Appendix H – Pond Clearance Methodology

APPENDIX A - Relevant Documentation / Existing Records / Supporting Documents

A number of records for the Site, relevant figures, guidance notes and reports will be made available as required to the main contractor and regulators throughout the planning and operational of all phases. The following documents have been provided to help produce this CEMP. The contents of all the below documents prepared by / or on the behalf of Miller Developments must be adhered to at all times:

	Reference No.	Title/Description	Rev.
DO	BS 42020:2013	Biodiversity — Code of Practice for Planning and Development	
DO	OPP DOC.11.6	Chapter 6 Air Quality	
DO	OPP DOC.11.7	Chapter 7 Noise and Vibration	
DO	OPP DOC.11.8	Chapter 8 Cultural Heritage	
DO	OPP DOC.11.9	Chapter 9 Biodiversity	
DO	OPP DOC.11.10	Chapter 10 Landscape and Visual	
DO	OPP DOC.11.11	Chapter 11 Water	
DO	OPP DOC.11.12	Chapter 12 Transport	
DO	OPP DOC.11.14	Chapter 14 Land and Soils	
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CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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APPENDIX B

ENVIRONMENTAL TEAM (SILT MITIGATION & DRAINAGE) WORKSHOP

Before commencing works within a new area, the following should be considered:

- Minimise the area of exposed ground – strip vegetation & topsoil only when needed.
- Minimise the time ground is exposed – less opportunity for water to drain from exposed ground, undertake reinstatement at earliest opportunity.
- Identify and protect water courses – remember 3m (min) buffer zone, install splash boards on crossings.
- Identify any existing land drains and sources of water that cross the works area – install culverts to allow water to bypass the works area, locate outfalls of land drains and monitor (ongoing), isolate land drains if necessary.
- Identify low points in works area – keep ‘clean’ and silt contaminated water separate, access road run off will naturally drain to these locations.
- Water must be as clean as possible at discharge point, and regularly monitored by the site team.
- Filtering will be achieved using check dams and silt nets (Dug in to ensure integrity).
- The ‘*Environmental Team (Silt Mitigation & Drainage) Workshop*’ list specific measures to be adopted within each works area. These control measures will be subject to change as works progress and all the above points must be taken in to account prior to new operations commencing.



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX C

CEMP: BIODIVERSITY DOCUMENT

Ecological Assessments

Environmental Statements (Biodiversity)

Species Surveys

Phase I Habitat Survey

National Vegetation Classification

Planning Guidance

Habitat Regulation Assessment

Protected Species Licensing

42020 CEMP: Biodiversity

BREEAM LE01 - 05

CEMP: Biodiversity (Infrastructure)





Plot 1, Omega Zone 8

St Helens, WA5 3UG



Consultant Report on behalf of:



Issue/revision	Issue 1: DRAFT TO CLIENT	Issue 2: FINAL	Issue 3: AMENDED FINAL
Project No.	169-03		
Report Ref.	16903-CEMP (Unit 1-Infra) _A		
Date	10 TH March 2020	17 th March 2020	
Prepared by	JC	JC	
Signature			
Reviewed by	AA/Client	AA	
Signature			

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1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1. The following report has been prepared on behalf of Omega Warrington Ltd and provides a Construction and Environmental Management Plan (CEMP): Biodiversity for infrastructure works to be undertaken at Unit 1, Omega Zone 8, St Helens ('The Site').
- 1.1.2. This document has been prepared following the British Standard 42020:2013¹. It should be read in conjunction with the CEMP: Biodiversity (TJM)².

Location

- 1.1.3. The Site forms part of the Omega business estate located west of Warrington, falling just within St Helens District. It is immediately south of the M62, west of Junction 8, and immediately west of the Warrington Borough boundary and Lingley Mere. The location is shown Figure 1.

Proposals

- 1.1.4. The works are to support Full Planning Permission for the erection of a B8 warehouse, with ancillary offices, associated parking, infrastructure, and landscaping. The configuration of these proposals is complex and is therefore shown in Figure 2.

Site description

- 1.1.5. The Site is dominated by arable land with woodland belts, a network of ponds and ditches improved grassland and scrub habitat present. There is a brook along the Southern boundary of the Site from the northwest. Off-site woodland is present to the south, east and west of the Site.

¹ **The British Standards Institution 2013** BS 42020:2013 Biodiversity - Code of practice for planning and development. Published by BSI Standards Limited 2013. ISBN 978 0 580 77917 6

² **Ecology Practice, 2020a.** Omega Zone 8 Unit 1 CEMP: Biodiversity. Report No. 16903-CEMP (Unit 1) _A

Figure 1
Location

Omega Zone 8, St Helens

Legend



the
omego
opportunity

Drawing No.: 16903-13CEMP_A

Revision Dates

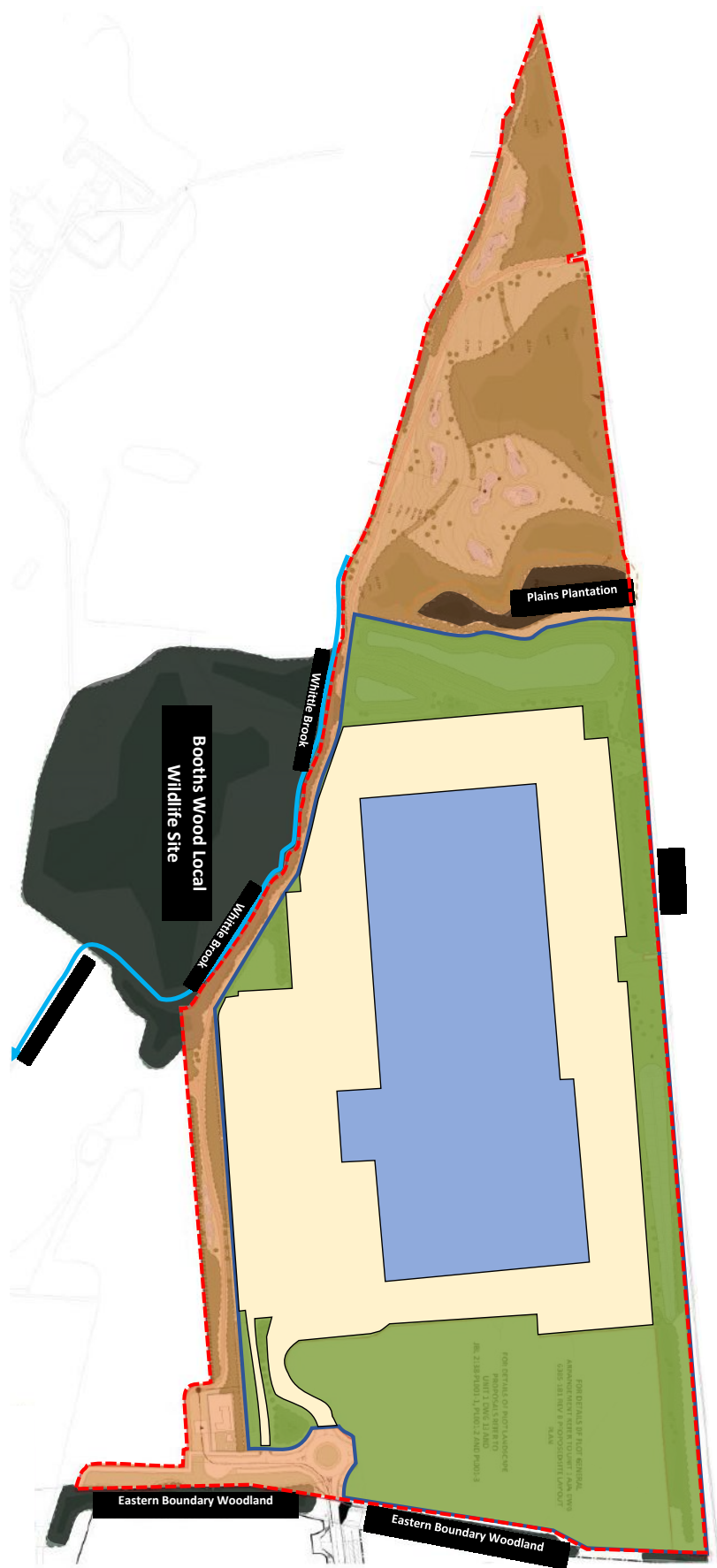
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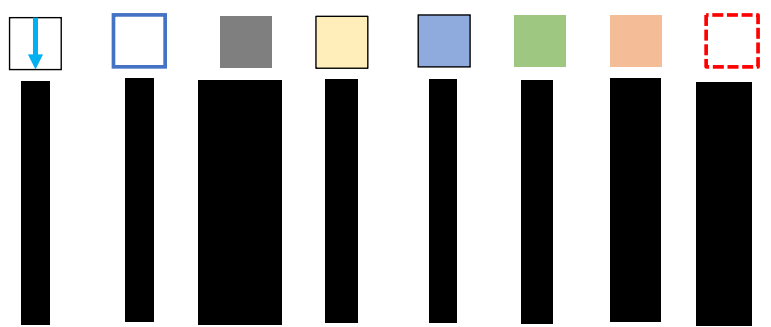
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Figure 2
Detailed
Application
Configuration

Omega Zone 8, St Helens



Legend



Drawing No.: 16903-01LEMP_A

Revision Dates			
A	B	C	D
10/09/20			

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2 BIODIVERSITY PROTECTION DETAILS

2.1 RISK ASSESSMENT OF POTENTIALLY DAMAGING DEVELOPMENT ACTIVITIES

Table 1: Risk Analysis and Resolution

(L = Likelihood, S = Severity, R = Risk; Values = 0 [lowest] – 5 [highest]) Residual risk to be managed (refer to

Activity	Existing Risk (L X S = R)			Mitigation	Residual Risk (L X S = R)		
Site clearance							
Removal or pruning/cutting of trees, shrubs and ground vegetation (e.g. during bird breeding season);	5	5	25	Carry out removal 1st September - 1st March	0	5	0
				Tree & Woodland removal subject to Arboricultural Mitigation Report			
				Woodland felling subject to Woodland Clearance Method Statement			
				Woodland felling to avoid concentric circle approach; to be carried out in a single direction for the entirety of the removal of a woodland block.			
Removal of soil, rubble and other materials	5	1	5	Use dedicated haulage route and public highways	0	1	0
Site set up							
Location of site offices, site huts, temporary latrines (including their drainage);	5	4	20	Welfare facilities to be self-contained and emptied off-site	0	4	0
				All associated works restricted to within the heras fencing (refer to box 1, and Figure 4)	0	4	0
Temporary storage areas and stockpiles for soils, materials, spoils and waste;	5	3	15	All associated works restricted to within the heras fencing and bunded where necessary	0	3	0
Site lighting spillage onto neighbouring habitat	5	5	25	Avoid illumination of maintained habitat	0	5	0

Activity	Existing Risk (L X S = R)			Mitigation	Residual Risk (L X S = R)		
Areas for plant maintenance and for storage of oils, fuels and chemicals;	5	3	15	Provide Construction Phase Environmental Management Plan	0	3	0
Establishment of haul roads (e.g. construction of rubble or concrete temporary roads);	5	2	10	Provide Construction Phase Environmental Management Plan	0	2	0
Site fencing (e.g. disruption/severance of animal runs and paths).	5	1	5	Provide egress underneath	0	1	0
Groundworks							
Ground investigations, foundations, excavations and piling, temporary earthworks, tunnelling (including the necessary space to operate cranes and large machinery);	5	2	10	Leave escape from trenches, cover wet excavations and pipe apertures	0	2	0
Installation of underground services (e.g. pipes, electricity, gas, telecommunications cables, foul and surface water drains);	5	2	10	Leave escape from trenches, cover wet excavations and pipe apertures	0	2	0
Assembly areas for dry trades (e.g. Steel works and reinforcements);	5	1	5	All associated works to be restricted to within the heras fencing	0	1	0
Assembly areas for wet trades (e.g. Concrete pours and batching).	5	3	15	All associated works to be restricted to within the heras fencing	0	3	0
				Concrete to be delivered ready-mixed			
Marine works							
Piling or other works relating to foundations.	5	1	5	Concrete to be delivered ready-mixed	1	5	5
Construction - general							
Increase in traffic movements	5	1	5	Driver awareness	1	1	1

Activity	Existing Risk (L X S = R)			Mitigation	Residual Risk (L X S = R)		
There may be damage or destruction of maintained trees or woodland	3	4	12	Maintain Tree Root & Construction Exclusion Protection Zones	0	4	0
Neighbouring habitat outside the development footprint may be adversely affected.	5	5	25	Heras fencing will delineate the construction footprint	0	5	0
General construction may impede animal movement throughout the Site	3	2	6	Provide egress underneath fencing Works limited to daytime hours	0	2	0
Construction - Drainage							
Drainage may decrease off-site water quality	2	4	8	Construction drainage subject to an agreed methodology	0	4	0
There may be insensitive destruction of waterside habitat to provide outfall(s).	4	5	20	Ecology survey within 48 hours of outfall construction on natural watercourse	0	5	0
Environmental Incidents							
Vandalism	4	4	16	24-hour security	0	4	0
Fires and burning of wastes	1	5	5	Burning piles moved on day of burning	0	5	0
Pollution (air, water and ground);	5	5	25	Provide Construction Phase Environmental Management Plan	0	5	0
Erosion and sediment run-off;	5	5	25	Provide Construction Phase Environmental Management Plan	0	5	0
				Measure water quality	0	5	0
Accidents (e.g. Fuel leaks and spills).	5	5	25	Provide Construction Phase Environmental Management Plan	1	5	5
Final Site Works							

Activity	Existing Risk (L X S = R)	Mitigation	Residual Risk (L X S = R)
Disposal of wastes, removal of site offices and final site clearance after Construction	5 2 10	Provide Construction Phase Environmental Management Plan	0 2 0

Table 2: Secondary mitigation for residual risks

Risk	Front-line mitigation	Residual Risk/25	Secondary Mitigation
Piling or other works relating to foundations.	Concrete to be delivered ready-mixed	5	Avoid use of dangerous liquids uphill from any watercourse
Increase in traffic movements	Driver awareness	1	Speed limit signs
Accidents (e.g. Fuel leaks and spills).	Provide Construction Phase Environmental Management Plan	5	Be vigilant and ensure you read the CEMP.

2.2 BIODIVERSITY PROTECTION ZONES

- 2.2.1 All Biodiversity Protection Zones (BPZs) are shown in Figure 3. These include areas where there is strictly no access, areas where mitigation is required prior to any works taking place and areas where there may be controlled, restricted access. Access is controlled by permission from the Ecological Clerk of Works (ECOW), whose details are:

Mark Morgan
Ecology Practice
Tel. 01691 600908
Mobile: 07398 24346

Josh Cartlidge
Ecology Practice
Tel. 0845 602 3822
Mobile: 07776 742209

BPZ 1 – Important Habitats

- 2.2.2 These are important habitats, species and/or other biodiversity features, that are to be retained and protected during construction or implementation of the development, with strictly no access allowed.

Booths Wood LWS

- 2.2.3 A Local Wildlife Site protected from all access.
- Root Protection Areas (RPAs) and placement of protective fencing are shown in the Tree Protection Plan³
 - Limit of landscaping is shown in PoE drawing set 199_005 (INFRA DWG Set).
 - Booths Wood Method Statement⁴
 - Post and rail fence required to separate Booths Wood LWS from all construction activities, fitted with appropriate signage identifying 'No Access to Wildlife Site'

Plains Plantation

- 2.2.4 A woodland that benefits from a TPO and is protected from all access.
- Root Protection Areas (RPAs) and placement of protective fencing are shown in the Tree Protection Plan³.

³ **Ecology Practice, 2019.** Arboricultural Impact Assessment, Method Statement and Tree Protection Plan. Report No. 16903_AR_A

⁴ **Ecology Practice, 2020c.** CEMP: Biodiversity (Infrastructure) Woodland, Tree & Hedgerow Clearance Method Statement. Report No. 16903-TR_A

- Limit of landscaping is shown in PoE drawing set 199_005 (INFRA DWG Set).
- Heras fence required to separate Plains Plantation from all construction activities, fitted with appropriate signage identifying 'No Access to Woodland'

BPZ 2 – Important Habitats

- 2.2.5 These are areas that are to be restricted for some or all construction-type activities for the whole or part of the construction/implementation process.

Eastern Tree Belt

- 2.2.6 An area of deciduous woodland with no special protection but is a priority habitat and therefore access is controlled by the ECW.
- Root Protection Areas (RPAs) and placement of protective fencing are shown in the Tree Protection Plan³.
 - Limit of landscaping is shown in PoE drawing set 199_005 (INFRA DWG Set).

BPZ 3 – Off-Site habitat

- 2.2.7 Whittle Brook is designated a main river by the Environment Agency and therefore falls into the guidance provided by the Water Framework Directive (WFD). Access is controlled by the ECW.
- Particular care must be taken not to damage the brook or its banks, the brook abutting the southern boundary for much of the extent.
 - Marine works such as cement washing, fuel oil etc. do not wash into Whittle Brook especially where there is sloped ground; all such works will be bunded to avoid this.
 - Any outfall to the Brook will be guided by the ECW to avoid tree RPAs and headwall installation will be subject to ECW agreement on location.

2.3 PRACTICAL MEASURES TO AVOID IMPACTS DURING CONSTRUCTION

General Construction Awareness

Biodiversity Champion

2.3.1 To ensure there is a daily watch on biodiversity issues, a biodiversity Champion will be nominated by the Principle Contractor. The Champion will liaise directly with the ECoW and be responsible for daily biodiversity protection tasks that do not necessarily require ecological expertise and can be delegated by the ECoW. For example, as follows:

- Inspections to ensure that wildlife does not become trapped in pipes, excavations an inspection shall regularly be carried out at the end of each day and items such as trenches will contain a means of escape for wildlife where left overnight (refer to 2.3.6 onwards).
- The Heras fencing will be inspected weekly to ensure it provides the necessary protection to habitats to remain (refer to Figure 4). Lost or damaged signs should be replaced at the earliest possible opportunity.
- The Biodiversity Champion will enforce the protection status of BPZs on a daily basis (see section 2.2).
- The Biodiversity Champion will be the daily point of contact for the construction team, able to interpret and police the contents and instructions in this CEMP: Biodiversity Appendix. This includes:
 - Regular review of mitigation measures that have been put in place to ensure their effectiveness and compliance with legal, planning and contractual requirements where necessary.
 - Maintenance of records and regular review of environmental procedures to report to the Site Manager.

Construction Good Practice

2.3.2 For all areas of woodland off-site, construction activities are restricted as follows:

- The extent of an RPA may be up to 10m in radius or the width of the tree canopy for trees and should exclude all construction by way of temporary protective fencing.

- The fence should be installed prior to any works (including ground works) are carried out or materials and plant are brought onto site, and not be removed until all construction works are complete, and all plant and temporary accommodation have been removed from the site.
- No vehicle shall be parked or driven within the RPA.
- No storage of any new building materials or equipment within the RPA.
- All static plant placed within 10m of a tree is to be fully banded to ensure no fuel leakage is possible into the water table close to the habitat. It is essential that allowances are made for the slope of the ground so that damaging materials such as concrete washings, mortar or fuel oil cannot run towards a habitat such as grassland or a tree.
- No fires to be lit beneath or in close proximity to a canopy of a tree (10m).
- The lighting design shall be constructed to avoid illuminating the trees on the east, south and western border, in order to reduce potential impacts on wildlife (Bat Conservation Trust guidance⁵).
- Care should be exercised when using cranes or similar equipment near the spread of a tree. In the case where plant or wide/tall loads are being used, it must be ensured that all parts of the equipment remain outside of the RPAs, in order that they can operate without coming into contact with any of the on-site or adjacent trees. All works must have appropriate supervision by a banksman, to ensure that adequate clearance from trees is maintained at all times.
- During any works close to the RPA fence any root smaller than 35mm diameter should be pruned carefully with a propriety cutting tool such as saw or secateurs and roots larger than this will require consultation with an arboriculturist before severing.
- If damage occurs to part of a tree during the works, the project Arboriculturist must be contacted without delay.

⁵ <https://www.bats.org.uk/about-bats/threats-to-bats/lighting>

Siting and timing of all construction activities

2.3.3 Works to affect bird breeding habitat should not take place during the period 1st March to 31st August, or:

- bird breeding habitat should be removed outside the bird breeding season in advance of the works, or
- where clearance of vegetation likely to support nesting birds takes place between 1st March and 31st August a method statement will be agreed in writing by the Local Planning Authority.

Security & other construction lighting

2.3.4 Security/construction lighting will be directed away from surrounding natural habitat, and avoid illuminating any trees, except where health & safety requires illumination.

General monitoring and provision of advice by an ecologist

2.3.5 Advice in advance from a suitably qualified ecologist should be obtained for specified destructive activities, as follows:

Woodland and Tree Clearance

- All Woodland and tree clearance is subject to a Method Statement⁴.
- Woodland clearance be restricted to those wooded areas and individual trees as shown in the Tree Protection Plan³.

Excavations

2.3.6 During the wider construction period particular care must be taken when creating trenches or similar excavations, as these could act as 'pitfall traps' and/or may fill with water and pose a threat to mobile or nocturnal animals such as badgers from drowning, even when excavations are not deemed to be very deep.

- Dry excavations left open overnight will have a means of escape for any animals that might fall in (e.g. a simple plank or a soil ramp).

- Where an excavation already holds water (e.g. the entry and exit pits) these must be fully and securely covered at night to ensure an animal cannot accidentally fall in and a means of escape should also be provided.
- Daily inspection of such excavations MUST be carried out by the contractor at the end of each day prior to dusk, allowing enough time to install the necessary mitigation before nightfall. The ECW will visit the Site randomly to ensure that the Site is left in a manner which does not put animal welfare at risk.
- Should any excavation be left in an unsafe manner, the contractor will have an obligation to rectify this to the satisfaction of the ECW at the time of visit, and certainly before dusk of the day of that visit. Should it be determined that the contractor is unable to make safe any excavation prior to dusk at any time throughout the course of the entire works, then the ECW will take the necessary steps to make that excavation(s) safe and the cost of this will be borne by the contractor.

2.3.7 Similar threats exist with pipes. Open ends of pipes must be blocked from animal access at the end of each day.

Non-native and invasive species

2.3.8 These are subject to a method statement prepared by WSP (ref).

Biosecurity protocol

2.3.9 When working with water, contractors should ensure all clothing and footwear is free of spoil & vegetation. The clothing should be freshly worn attire each day, with worn clothing being dispensed for washing at the end of each day. On no occasion should personnel enter more than one water feature with the same clothing/boots. This applies to all utensils and all other equipment.

Training and awareness

2.3.10 The Principal Contractor should acknowledge the contents of this CEMP.

- 2.3.11 A simple toolbox presentation should be provided by the ECoW, providing the initial guidance and preparation details on biodiversity protection, woodland removal and any other point of importance for biodiversity.

Procedures to avoid pollution incidents

- 2.3.12 No oil, bitumen, cement or other material likely to cause an adverse effect shall be stored or discharged within 10 metres of a tree.
- No such material will be stored or discharged uphill from any watercourse
 - Use of spill kits with machinery
 - Use of silt fencing when excavating within 10m of a watercourse.

Reporting of unexpected occurrence of protected species

- 2.3.13 The ECoW will be informed should a previously unrecorded protected species such as a reptile be found during construction/implementation. The Ecological Clerk of Works can be contacted at The Ecology Practice 01989 770457.

Locational items

- 2.3.14 Where intrusion into a Root Protection Area is unavoidable, then an arboriculturist is to be present and a photographic record is to be made of any works during its construction. Heras fencing will delineate the working easement to protect neighbouring vegetation.

2.4 THE ROLE OF AN ECOLOGICAL CLERK OF WORKS

- 2.4.1 The ECW role is subject to a Method Statement provided in Method Statement: ECW⁶.

⁶ **Ecology Practice, 2020e.** CEMP: Biodiversity (Infrastructure) Ecological Clerk of Works Method Statement. Report No. 16903-ECW(Infra)_A

2.5 USE OF PROTECTIVE FENCES, EXCLUSION BARRIERS AND WARNING SIGNS

Location

- 2.5.1 All areas outside the construction will be protected by fencing to prevent disturbance from construction activities, and appropriate hazard signage used. The location of all protective fencing is shown Figure 4.
- 2.5.2 The use of plastic tape, etc., instead of fixed fencing should be considered only in situations where very temporary protection is needed and should be restricted to operations where on-site ecological monitoring and advice is available throughout the operations that pose a risk.

Timing

- 2.5.3 Protective fencing will be erected before any materials or machinery are brought onto the whole or part of a site where a risk has been identified, and before any demolition, development or removal of soil or vegetation commences. Once erected, barriers will not be removed or altered without prior recommendation by an ecologist and approval in writing by the decision-maker.

Type

- 2.5.4 Generally temporary security and protective fencing will consist of a typical heras fence such as that shown in Box 1 below.

Signage

- 2.5.5 Warning signs should be fixed securely in appropriate locations (e.g. next to sensitive features such RPAs) and should explain to construction site personnel why certain areas or features are being protected for part or for the whole duration of the development. They should be written in plain language and should be large enough to be visible and clearly legible from the cab of any construction machinery that

might be operating in close proximity. Lost or damaged signs should be replaced at the earliest possible opportunity.

Security & other construction lighting

- 2.5.6 All temporary lighting used during construction will ensure low emission are below 3 lux at ground level, to avoid disturbance to bat flight paths (BCT 2007⁵). Directional lighting (e.g. cowls, baffles and shields) will be used to ensure there is no light spill towards natural habitat (e.g. BPZ 1).

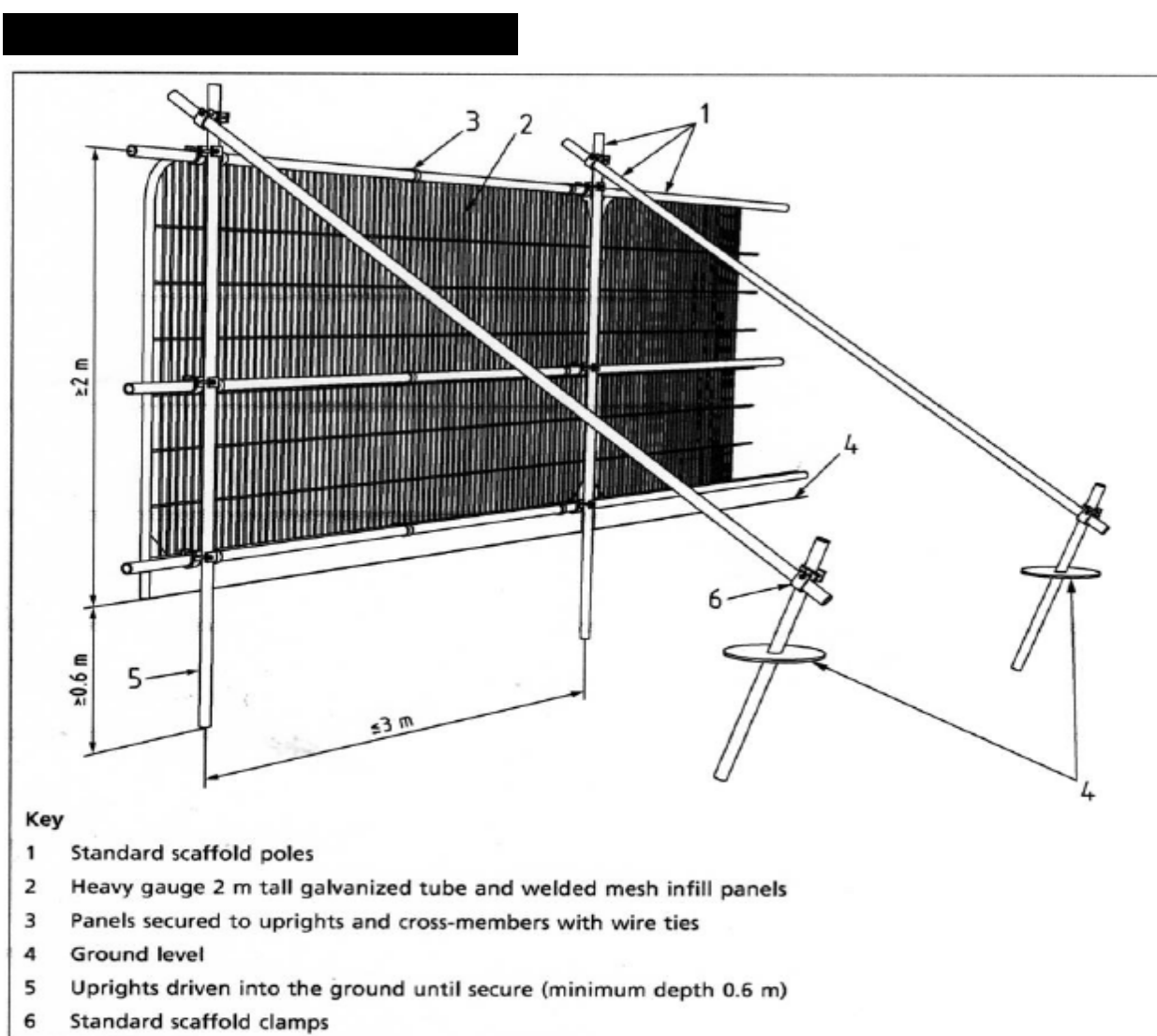
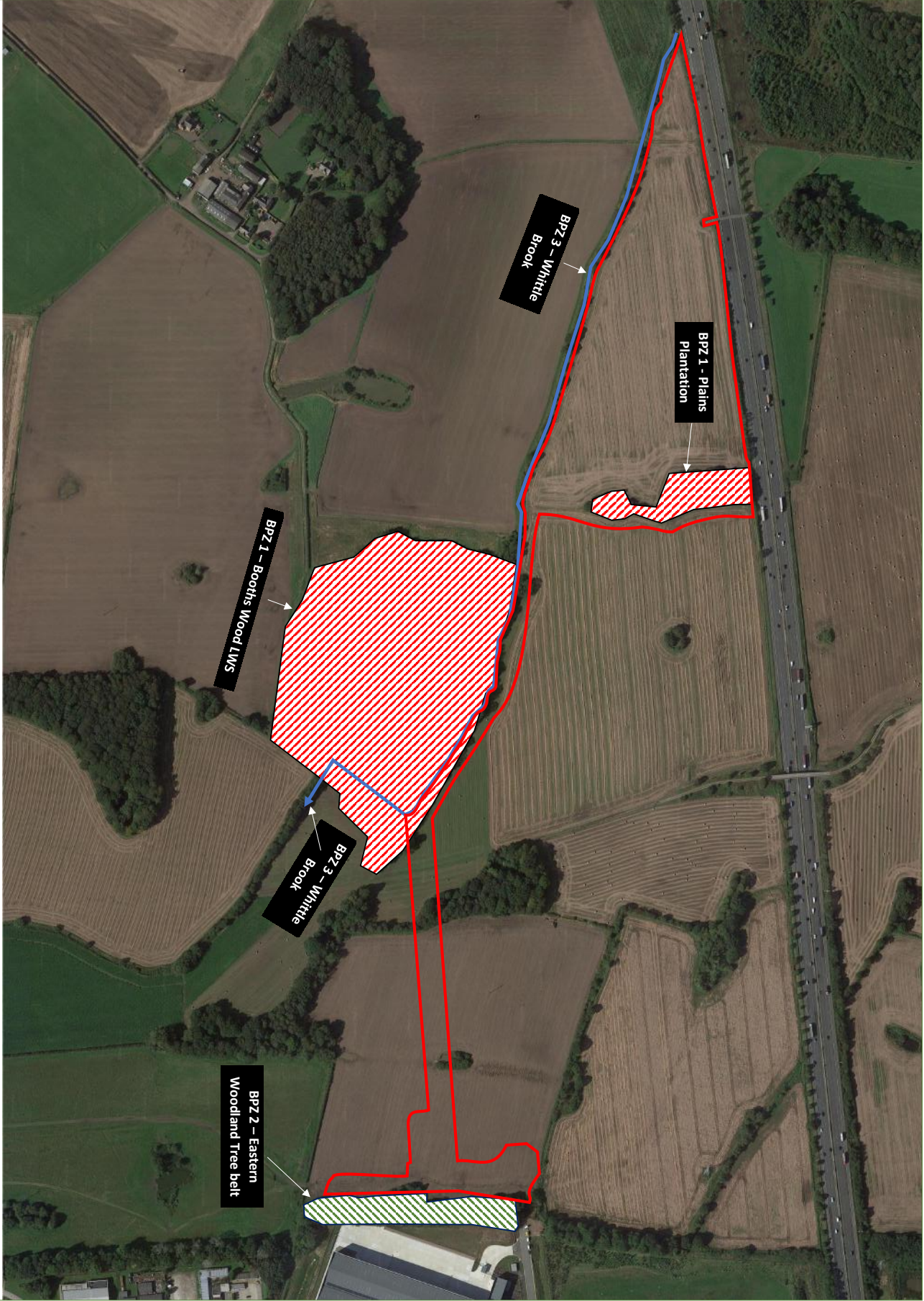
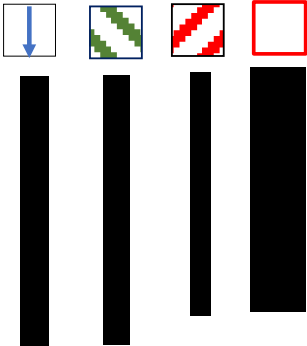


Figure 3

**Biodiversity Protection
Zones (BPZs)**

Omega Zone 8, St Helens

Legend



Drawing No.: 16903-10CEMP_A

Revision Dates

A 12/03/2020

B

C

D

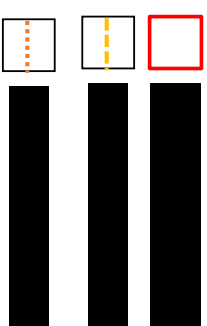
the ecology Practice



Figure 4
Fencing

Omega Zone 8, St Helens

Legend



Drawing No.: 16903-10CEMP_A

Revision Dates

A B C D

12/03/2020

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CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX D

ARBORICULTURE SUPERVISION METHOD STATEMENT

CEMP: Biodiversity (Unit 1 & Infrastructure)

Arborist Clerk of Works Method Statement

Ecological Assessments

Environmental Statements (Biodiversity)

Species Surveys

Phase I Habitat Survey

National Vegetation Classification

Planning Guidance

Habitat Regulation Assessment

Protected Species Licensing

42020 CEMP: Biodiversity

BREEAM LE01 - 05




Plot 1, Omega Zone 8

St Helens, WA5 3UG



Consultant Report on behalf of:



Issue/revision	Issue 1: DRAFT TO CLIENT	Issue 2: FINAL	Issue 3: AMENDED FINAL
Project No.	169-03		
Report Ref.	16903-AMS(Unit 1)_A		
Date	30 th March 2020		
Prepared by	Josh Cartlidge		
Signature			
Reviewed by	Andrew Arnott		
Signature			

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1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1. The following report has been prepared on behalf of Omega Warrington Ltd and provides an Arborist Clerk of Works (ACW) method statement for tree works/removals within Plot 1 and associated landscape at Omega Zone 8, St Helens ('The Site').
- 1.1.2. This document has been prepared following the British Standard 42020:2013¹. It should be read in conjunction with the CEMP: Biodiversity², Arboricultural Impact Assessment and Tree Protection Plan³. In addition, Ecology Practice 2020c⁴ provides the accompanying ecological methods when tree felling and this document should be read in conjunction with that.

Location

- 1.1.1 The Site forms part of the Omega business estate located west of Warrington, falling just within St Helens District. It is immediately south of the M62, west of Junction 8, and immediately west of the Warrington Borough boundary and Lingley Mere. The location is shown in Figure 1.

Proposals

- 1.1.2 There is Full Planning Permission for the erection of a B8 warehouse, with ancillary offices, associated parking, infrastructure, and landscaping. The configuration of these proposals is complex and are therefore shown in Figure 2.

¹ **The British Standards Institution 2013** BS 42020:2013 Biodiversity - Code of practice for planning and development. Published by BSI Standards Limited 2013. ISBN 978 0 580 77917 6

² **Ecology Practice, 2020a.** CEMP: Biodiversity (TJM). Report No. 16903-CEMP (Unit 1) _A

³ **Ecology Practice, 2020b.** Arboricultural Impact Assessment, Method Statement and Tree Protection Plan. Report No. 16903_AR_B

⁴ **Ecology Practice, 2020c.** Method Statement: Woodland, Tree & Hedgerow Clearance. Report No. 16903-TR_A

Site description

- 1.1.3 The Site (30.64ha) is dominated by arable land with woodland belts, a network of ponds and ditches improved grassland and scrub habitat present. A brook along the Southern boundary of the Site from the northwest. Off-site woodland is present to the south, east and west of the Site.

Figure 1
Location

Omega Zone 8, St Helens

Legend



The
omega
opportunity

Drawing No.: 16903-02LEMP_A

Revision Dates

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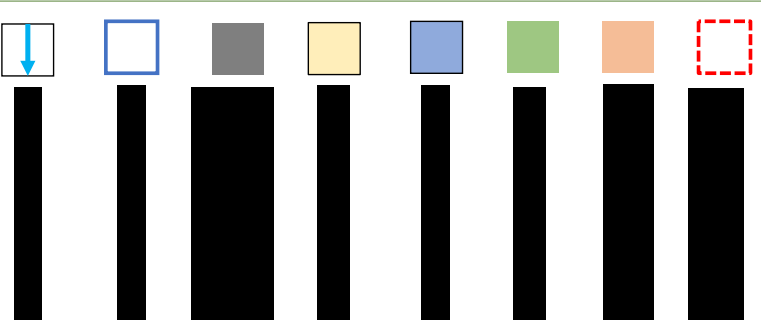
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Figure 2
Plot 1

Configuration

Omega Zone 8, St Helens

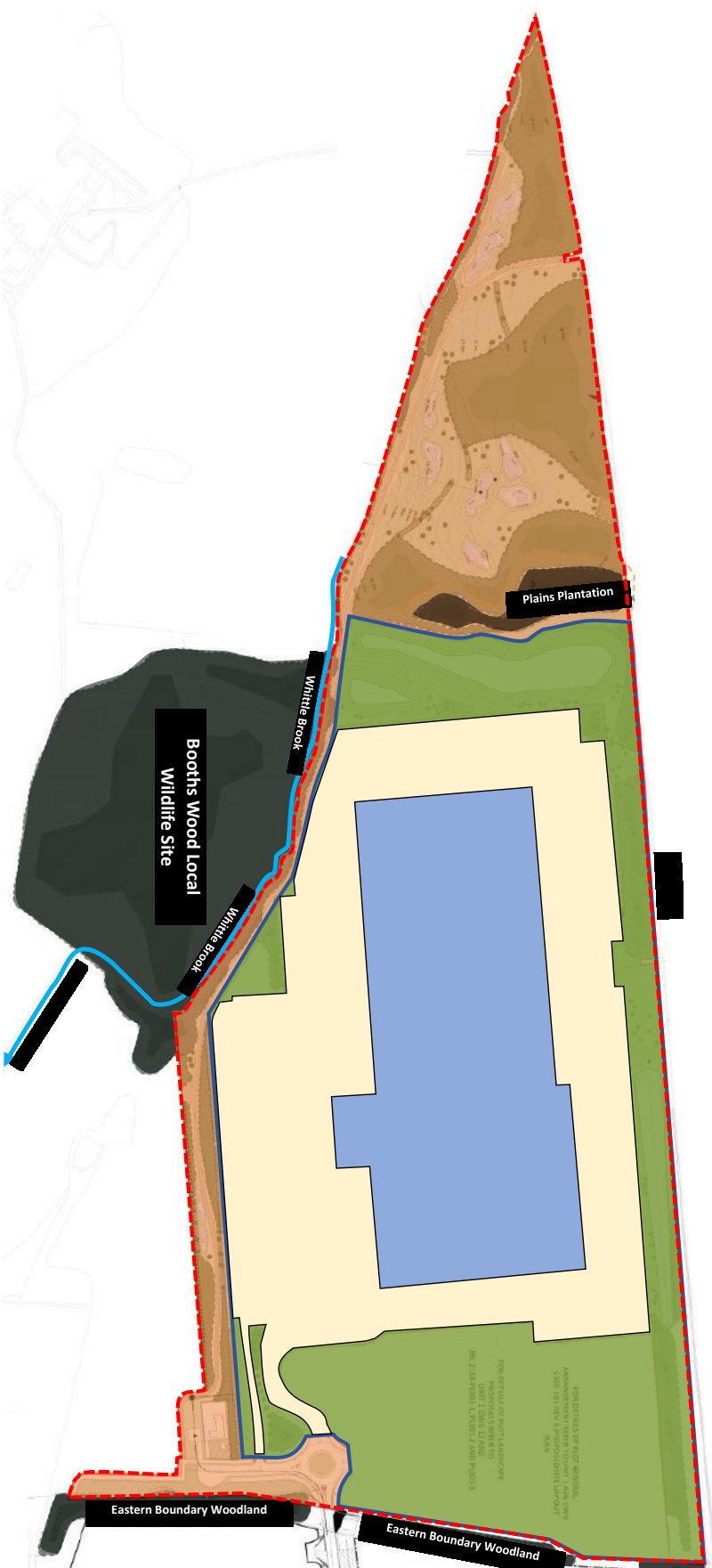
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2 ARBORICULTURAL METHODOLOGY

2.1 ARBORIST CLERK OF WORKS

Competencies

- 2.1.1 Any individual dealing with ecological issues should be able to demonstrate that they have sufficient technical competence and experience to carry out the particular tasks and activities for which they are responsible in the role that they are performing. They should only attempt to offer a bona fide arboricultural opinion if they have the necessary knowledge, skills and experience to do so, or have secured appropriate competent assistance.
- 2.1.2 Where the ACW has line management responsibilities, they should ensure that their staff are competent to undertake all work assigned to them and are appropriately supervised and supported where necessary, especially where junior or inexperienced staff are involved. Evidence of qualifications, additional training and experience should be available on request.

Proportionality

- 2.1.3 The ACW should take a proportionate approach to ensure that the provision of information is appropriate to the environmental risk associated with the development and its location.
- 2.1.4 The work involved in preparing and implementing all arboricultural surveys and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to woodlands, trees and hedgerows and to the nature and scale of the proposed development. Consequently, the ACW should only request supporting information and arbor measures that are relevant, necessary and material to the application in question. Similarly, the ACW and their consultees should ensure that any comments and advice made are also proportionate

2.2 RECOMMENDED TREE WORKS/REMOVALS

2.2.1 Tree works tabled below (Table 1) have been identified as a result of one or more of the following reasons:

- to directly implement the proposal,
- to facilitate the implementation and construction of the proposals,
- to assist in the creation of a balanced and desirable layout juxtaposition and
- in the interests of reasonable arboricultural management.

2.2.2 All tree works should be carried out by qualified and competent Arborists working to BS 3998:2010 'Tree Work – Recommendations'.

Table 1: Summary of Recommended Tree Works

Tree No.	Species	BS5837:2012 Category	Recommended Works
T10	English oak	U	If within proximity to development reduce to standing dead wood poles and retain as habitat to benefit biodiversity.
T4	English oak	C1	Remove - to accommodate the proposed development. Note: W4 and W5 are covered by the TPO 5/2.
T7	Beech	C1	
T8	English oak	B1	
G4	Mixed species*	C2	
G5	Mixed species*	C2	
G9	Mixed species*	C2	
W4	Mixed species*	A2	
W5	Mixed species*	B2	
G3	Mixed species*	C2	Partial Removal - to accommodate the proposed development.
G8	Mixed species*	B2	
G9	Mixed species*	C2	
G10	Mixed species*	B2	

*Reference Tree Schedule for mixed species within groups and woodlands.

2.3 SUMMARY OF MITIGATION

- 2.3.1 The table below summaries the mitigation methods required for The Site, specific to any trees where their RPA may be subject to impact by the proposed development.
- 2.3.2 Each specific requirement is detailed further in the subsequent sections of this report.

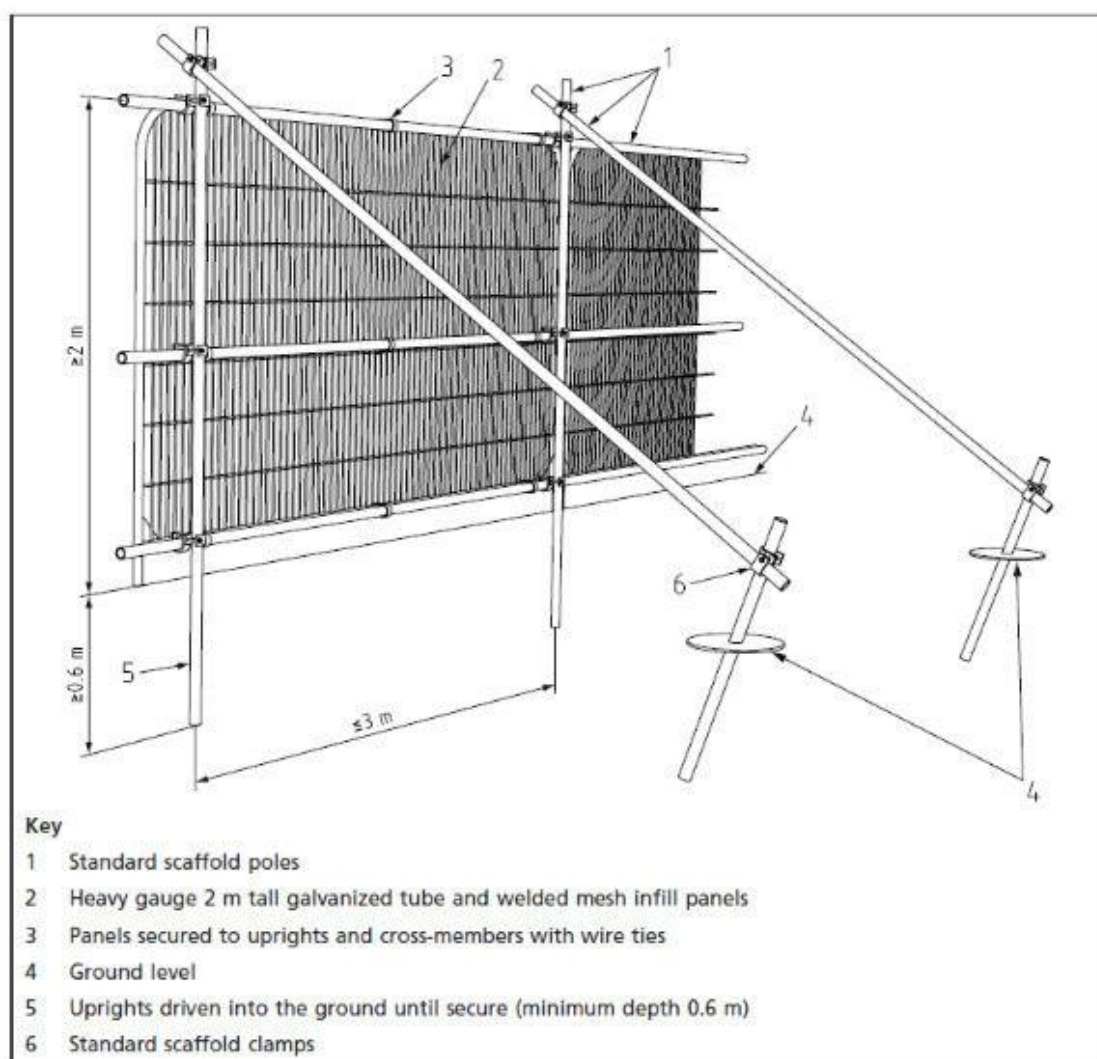
Table 2: Summary of Mitigation Requirements

Tree No.	Works effecting	Mitigation Required
Throughout the Site	Retained trees in general proximity to the proposed construction works	Create a construction exclusion zone, by erecting and maintaining temporary tree protection fencing for the duration of the construction works.
		The tree protection fencing should be installed as detailed on the Tree Protection Plan (Appendix A).
Along southern boundary		The specification for the new hardstanding should follow the guidance in Section 6.13 with a 'no-dig' construction method and three-dimensional cellular containment system to be used within the RPA.
	A small percentage of the RPA is within the proposed hard standing.	Temporary protective fencing should be installed at the edge of the new hardstanding for the duration of the construction works, as shown in the Tree Protection Plan (Appendix A). The areas enclosed by the protective should be maintained as a total exclusion zone to all construction activity. No working activity, storage of materials, ground level changes, excavations or vehicular access is permitted within the protected area.

2.4 ERECTION OF PROTECTIVE FENCING

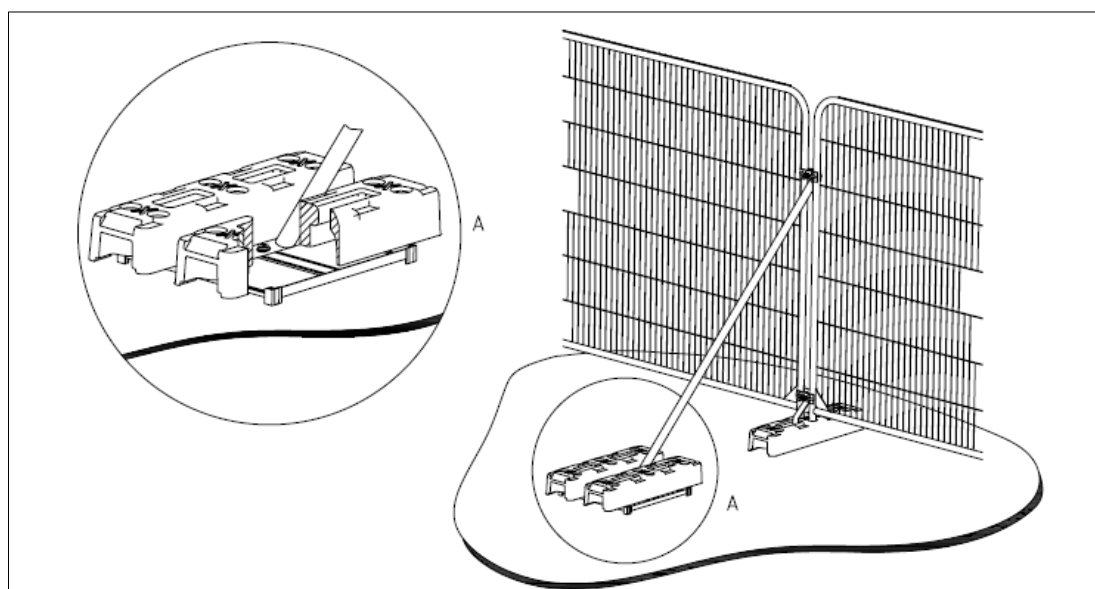
- 2.4.1 It is recommended that temporary protective fencing should be erected in order to create a construction exclusion zone which adequately protects the retained trees from damage during the construction works. This fencing should be erected at the outset of the development works, before any activities (including demolition and ground works) are carried out or materials and plant brought onto site.
- 2.4.2 The recommended position for protective fencing is detailed on the Tree Protection Plan (Appendix A).
- 2.4.3 The fencing should consist of a vertical and horizontal scaffold framework which is well braced to resist impacts as seen below in Figure 3.

Figure 3. Default specification for protective barrier © British Standards Institute



- 2.4.4 All-weather warning notices should be attached to the fencing to clearly identify the area as a tree protection exclusion zone into which access is not permitted
- 2.4.5 Once erected, the protected area should be regarded as sacrosanct and the fencing should not be removed or altered unless recommended by the project Arboriculturist and, where necessary, approval from the local planning authority.
- 2.4.6 Where the Site circumstances and associated risk of damaging incursion into the RPAs do not necessitate the default level of protection, an alternative specification may be considered to be appropriate. For example, 2m tall welded mesh panels on rubber or concrete feet as illustrated below in Figure 4.

Figure 4. Alternative Specification for Protective Fencing © British Standards Institute



- 2.4.7 In this instance, it is considered that the associated risks to trees from the proposed development are such that the default specification for temporary protective fencing should be used.

2.5 ADDITIONAL GENERAL PRECAUTIONS OUTSIDE OF THE EXCLUSION ZONE

- 2.5.1 Fires on site should be avoided wherever possible. Where they are unavoidable, they should be kept well away from the exclusion zone, and only lit in positions where heat will not affect foliage or branches. The potential size of a fire and wind direction should be taken into account and it should be attended at all times until safe to leave.
- 2.5.2 Any materials, fuel or chemicals whose accidental spillage would cause damage to a tree should be stored and handled well away from the exclusion zone.

2.6 SITE MONITORING

Site Meetings

- 2.6.1 The ACW will make provision for a meeting on site prior to works taking place on site between the ACW, the developer, developer's relevant contractors and Ecological Clerk of Works (ECW) / Supervisor, the biodiversity Champion and the St. Helens Countryside Development and Woodlands Officer. A schedule of progress meetings with these parties will be arranged by the ACW/ECW.
- 2.6.2 It is considered necessary for the proposed works to be monitored as a number of retained trees are likely to be impacted by construction activities. A four-stage visit must be arranged with the ACW at:
 - **Phase one:** prior to any works.

A visit should be arranged to mark out the trees to be felled and discuss the work that will be undertaken. Also, to answer any questions and queries the contractors may have regarding the works to take place. The ACW will use the method statement to form a toolbox talk and have all site operatives sign off on the statement.
 - **Phase two:** to arrange The Site layout/protective barrier (prior to any construction activity).

A visit should be arranged to mark out The Site in regard to the location of the protective barriers, the RPA's and where the safe working zones are, and areas of works within any RPA whereby mitigation must be adhered to.
 - **Phase three:** a mid-construction unannounced spot check to ensure The Site work force are adhering to the mitigation requirements

- **Phase four:** nearing completion.

A visit should be arranged for the ACW to monitor The Site nearing completion to assess the mitigation. Also discuss the aftercare and monitoring that will take place.

- 2.6.3 Random site monitoring can take place throughout the duration of the construction to check that all guidelines are being adhered to.

2.7 GROUND WORKS, DEMOLITION & CONSTRUCTION WORKS

- 2.7.1 Installation of the recommended protective mitigation measures prior to the commencement of any works, combined with use of temporary ground protection and/or the retention of existing hard surfacing within the RPAs, will allow the ground works to take place whilst minimising any adverse effect or impact on the retained trees.
- 2.7.2 All plant and vehicles engaged in ground works should either operate outside the RPA, or run on temporary ground protection or existing hard standing, where appropriate.
- 2.7.3 During ground works and demolition, the utmost caution should be used to not sever any roots, especially those measuring $\geq 25\text{mm}$ in diameter. Any roots uncovered roots should be wrapped/covered to prevent them from desiccation and rapid temperature changes (any wrapping should be removed prior to backfilling).
- 2.7.4 In the case where plant or wide/tall loads are being used, it must be ensured that all parts of the equipment remain outside of the RPAs, in order that they can operate without coming into contact with any of the on-site or adjacent trees. All works must have appropriate supervision by a banksman, to ensure that adequate clearance from trees is maintained at all times.
- 2.7.5 Access facilitation pruning should not be necessary on this site but if it does become necessary to maintain a safe clearance. All work must be approved by the project Arboriculturist and carried out taken by a qualified and competent Arborist working to BS 3998:2010.

- 2.7.6 If damage occurs to part of a tree during the works, the project Arboriculturist must be contacted without delay.

2.8 SOIL COMPACTION AND REMEDIATION MEASURES

- 2.8.1 Soil that has been compacted will not provide suitable conditions for the survival and growth of vegetation, whether existing or new, and is a common cause of post-construction tree loss on development sites.
- 2.8.2 Compacted soil will adversely affect drainage, gas exchange, nutrient uptake and organic content, and will seriously impede or restrict root growth.
- 2.8.3 Soil compaction should be avoided around existing vegetation, including trees, and in areas where new planting or seeding is proposed.
- 2.8.4 Where soil compaction has occurred near to existing trees, remedial works might include sub-soil aeration using compressed air, and the addition of other materials, preferably of a bulky, organic nature (but excluding peat), to improve structure.
- 2.8.5 Heavy mechanical cultivation such as ploughing or rotavating should not occur within the RPA.
- 2.8.6 Any cultivation operations should be undertaken carefully by hand to minimize damage to the tree, particularly the roots.
- 2.8.7 Decompaction measures include forking, spiking, soil augering and tilled radial trenching. Care should be taken during such operations to minimize the risk of further damage to tree roots.

2.9 CONTRACTORS STORAGE, PARKING & ACCESS

- 2.9.1 Provision should be made for welfare facilities, The Site office, contractor parking, storage for materials, plant and spoil and space for mixing outside of the RPAs of retained trees.

- 2.9.2 In this instance, it is considered that there is sufficient space for provision of the above, without placing significant constraints on the working space available for the construction and its associated activities.

2.10 COMPLETION

- 2.10.1 At the completion of the construction works, before removal of any of the tree protection measure at the completion of the project it is recommended that the advice of the project Arboriculturist is sought regarding whether a re-survey of the retained trees is necessary for signs or symptoms of damage and/or stress that the construction may have caused.
- 2.10.2 The protective fencing and ground protection measures should remain in position until its use is considered unnecessary and any risk of damage to the retained trees and/or their respective RPAs e.g. soil compaction from vehicular plant or machinery, has completely passed.

2.11 TREE PLANTING & AFTER CARE

- 2.11.1 When planning or implementing any new tree planting scheme, it is recommended that the guidance within BS 8545:2014 'Trees: from nursery to independence in the landscape – Recommendations' is followed.
- 2.11.2 The following points summarise good after care for newly planted trees with an additional consideration to any necessary formative, corrective and maintenance pruning:
- 2.11.3 Water immediately after planting and weekly throughout the first growing season by allowing 10 – 20 litres of water for each tree. This is especially important during prolonged periods of dry weather in which case the frequency of watering may need to be increased.
- 2.11.4 Do not allow weeds or grass to grow within a 500mm radius of the stem.

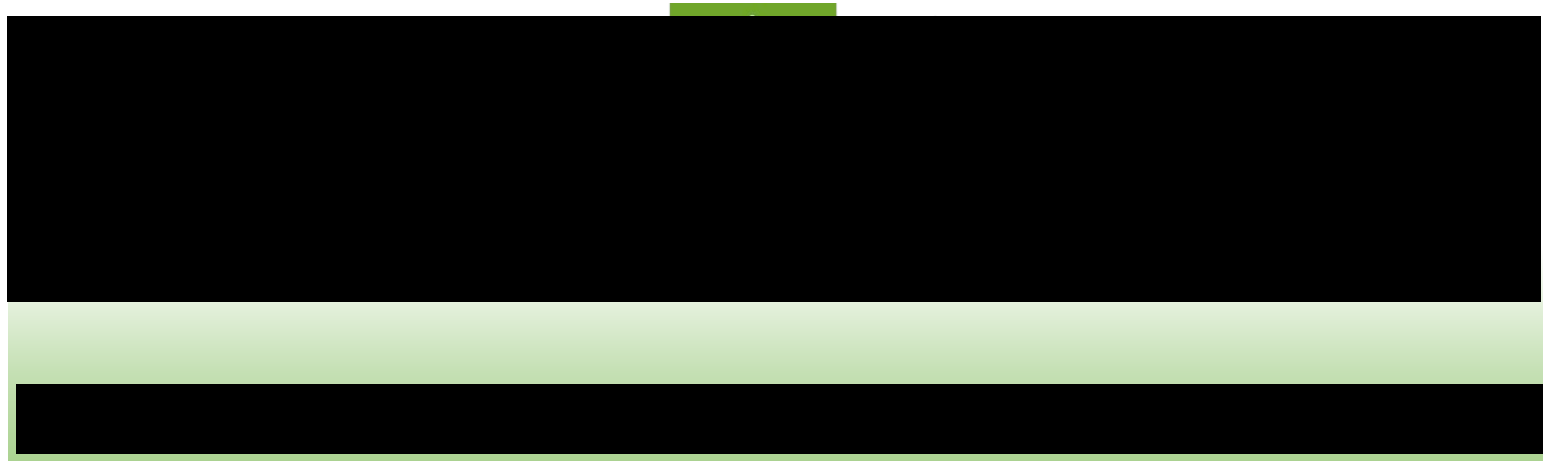
- 2.11.5 Maintain an organic mulch (e.g. composted woodchip or bark) to a minimum depth of 75mm for a radius of 500mm around the base of new trees.
- 2.11.6 At the end of each growing season, check that tree-ties are not damaging the tree stems and loosen if necessary.
- 2.11.7 Ensure that the tree stakes remain firm while the new planting becomes established and only remove when the tree can support itself, usually after a period of 2 -3 years.
- 2.11.8 Carry out formative pruning to the young trees by removing dead or crossing branches, suckers arising from the roots or weak shoots on the stems.

2.12 CONTACT

- 2.12.1 Ecology Practice, 01989 770457, enquiries@ecologypractice.co.uk.

3 APPENDICIES

3.1 APPENDIX A: TREE PROTECTION PLAN





CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX E

ECOLOGICAL CLERK OF WORKS METHOD STATEMENT

CEMP: Biodiversity (Infrastructure) Ecological Clerk of Works Method Statement

Ecological Assessments

Environmental Statements (Biodiversity)

Species Surveys

Phase I Habitat Survey

National Vegetation Classification

Planning Guidance

Habitat Regulation Assessment

Protected Species Licensing

42020 CEMP: Biodiversity

BREEAM LE01 - 05






Unit 1, Omega Zone 8

St Helens, WA5 3UG



Consultant Report on behalf of:



Issue/revision	Issue 1: DRAFT TO CLIENT	Issue 2: FINAL	Issue 3: AMENDED FINAL
Project No.	169-03		
Report Ref.	16903-ECW(Infra)_A		
Date	13 th March 2020	19 th March 2020	
Prepared by	Andrew Arnott	Josh Cartlidge	
Signature			
Reviewed by	Josh Cartlidge	Andrew Arnott	
Signature			

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1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1. The following report has been prepared on behalf of Omega Warrington Ltd and provides a description of the duties of an Ecological Clerk of Works (ECW) overseeing construction of Plot 1 and associated landscape at Omega Zone 8, St Helens ('The Site').
- 1.1.2. This document has been prepared following the British Standard 42020:2013¹. It should be read in conjunction with the CEMP: Biodiversity².

Location

- 1.1.1 The Site forms part of the Omega business estate located west of Warrington, falling just within St Helens District. It is immediately south of the M62, west of Junction 8, and immediately west of the Warrington Borough boundary and Lingley Mere. The location is shown in Figure 1.

Proposals

- 1.1.2 The ECW will work with Full Planning Permission for the erection of a B8 warehouse, with ancillary offices, associated parking, infrastructure, and landscaping. The configuration of these proposals is complex and are therefore shown in Figure 2.

Site description

- 1.1.3 The Site is dominated by arable land with woodland belts, a network of ponds and ditches improved grassland and scrub habitat present. A brook along the Southern boundary of the Site from the northwest. Off-site woodland is present to the south, east and west of the Site.

¹ **The British Standards Institution 2013** BS 42020:2013 Biodiversity - Code of practice for planning and development. Published by BSI Standards Limited 2013. ISBN 978 0 580 77917 6

² **Ecology Practice, 2020b.** CEMP: Biodiversity (Infrastructure). Report No. 16903-CEMP (Infra) _A

1.2 ECOLOGICAL CLERK OF WORKS

Competencies

- 1.2.1 Any individual dealing with ecological issues should be able to demonstrate that they have sufficient technical competence and experience to carry out the particular tasks and activities for which they are responsible in the role that they are performing. They should only attempt to offer a bona fide ecological opinion if they have the necessary knowledge, skills and experience to do so, or have secured appropriate competent assistance.
- 1.2.2 Where the ECW has line management responsibilities, they should ensure that their staff are competent to undertake all work assigned to them and are appropriately supervised and supported where necessary, especially where junior or inexperienced staff are involved.
- 1.2.3 Evidence of qualifications, additional training and experience should be available on request.

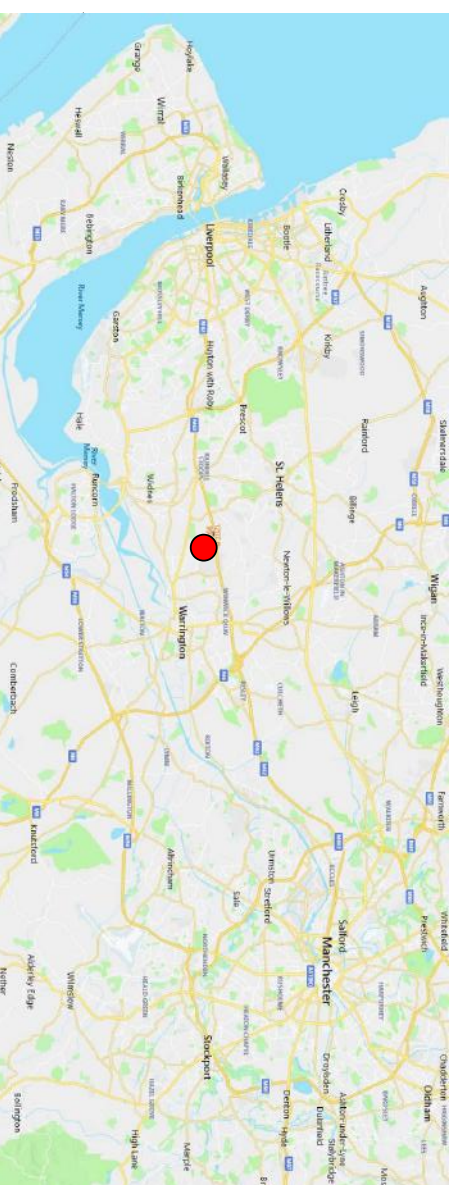
Proportionality

- 1.2.4 The ECW should take a proportionate approach to ensure that the provision of information is appropriate to the environmental risk associated with the development and its location.
- 1.2.5 The work involved in preparing and implementing all ecological surveys and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the ECW should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the ECW and their consultees should ensure that any comments and advice made are also proportionate.

Figure 1
Location

Omega Zone 8, St Helens

Legend



The
omega
Opportunity

Drawing No.: 16903-02LEMP_A

Revision Dates

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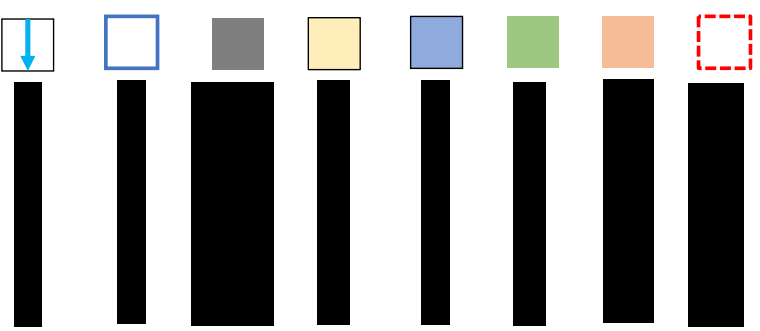
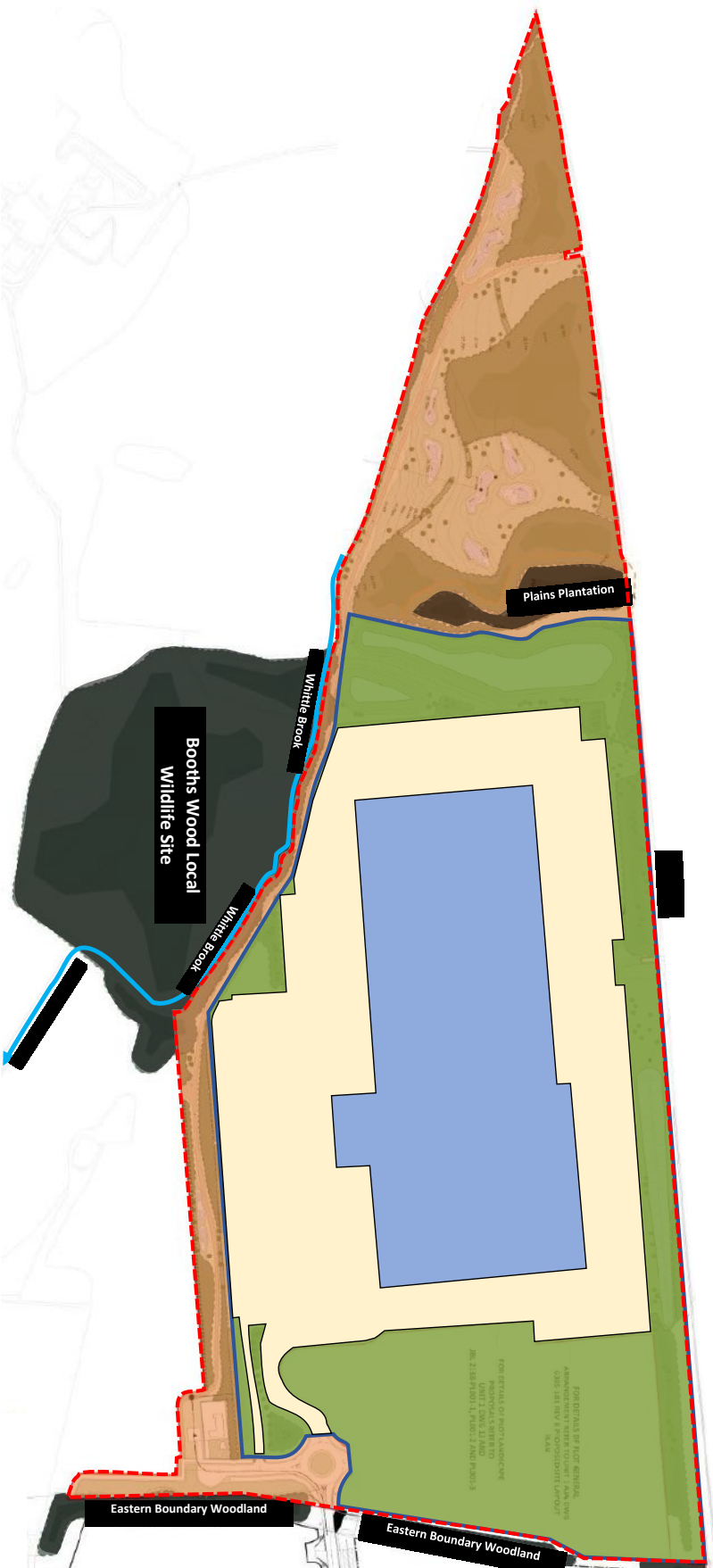
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Figure 2
Plot 1

Configuration

Omega Zone 8, St Helens

Legend



Drawing No.: 16903-01LEMP_A

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2 THE ROLE OF THE ECOLOGICAL CLERK OF WORKS

2.1 SITE AND PROJECT FAMILIARIZATION

2.1.1 The ECW will ensure they are familiar with all plans that support the proposals, including any biodiversity reports, assessments and the results of any surveys that have been carried out. In particular:

- The ECW will read and implement the CEMP: Biodiversity².
- The ECW will oversee the preparation of a Biodiversity Risk Assessment.
- The ECW will establish and/or review boundaries for Biodiversity Protection Zones, which are areas that require different levels of protection from construction.
- A comprehensive list of measures to avoid and reduce impacts during construction will be produced by the ECW including the preparation of a schedule of time-sensitive works.

2.2 SITE WORKS

2.2.1 The ECW will oversee the installation of protective fencing to surround the Construction Zone. No works will take place until this fencing is in place and fit-for-purpose.

2.2.2 The ECW will supervise key works that are a potential risk to biodiversity. For the Omega Site these will be as follows:

- Woodland clearance: a method statement has been produced which will guide the way in which woodland clearance will take place (refer to EP 2020³)

³ **Ecology Practice, 2020g.** CEMP: Biodiversity (Infrastructure) Woodland Tree and Hedgerow Clearance Method Statement. Report Ref. 16903-TR_A

- Landscape and Ecology Management: a Landscape and Ecology Management Plan (LEMP) has been produced which will guide the way in which management will take place (refer to EP 2020⁴)
- Works to affect Whittle Brook.
- Oversee protection measures as provided in the CEMP: Biodiversity²
- Advice on the placement of any marine works and ensure these are kept downhill of Whittle Brook and the surrounding Biodiversity Protection Zones or suitable shoring is provided.
- Advice on the placement of the construction compound including accommodation, welfare facilities and parking.
- Ensure the routes chosen for access, including hauling and temporary works, do not impinge on Biodiversity Protection Zones (refer to CEMP: Biodiversity²)
- Monitor and report on compliance with legal, planning and contract requirements
- Investigate and report unplanned incidents (e.g. pollution, damage to habitats, unexpected occurrence of protected species, implications of delays due to bad weather)
- Be prepared to rescue any unrecorded wildlife such as reptiles

2.3 LIASION

Principle Contractor

Toolbox Talk

- 2.3.1 The ECW will provide a toolbox talk to the key staff members of the work force, providing suitable commentary on potential risks to biodiversity, the location of biodiversity protection zones and their reason for designation. They will provide guidance on key activities such as the placement of marine works and how to avoid pollution incidents.

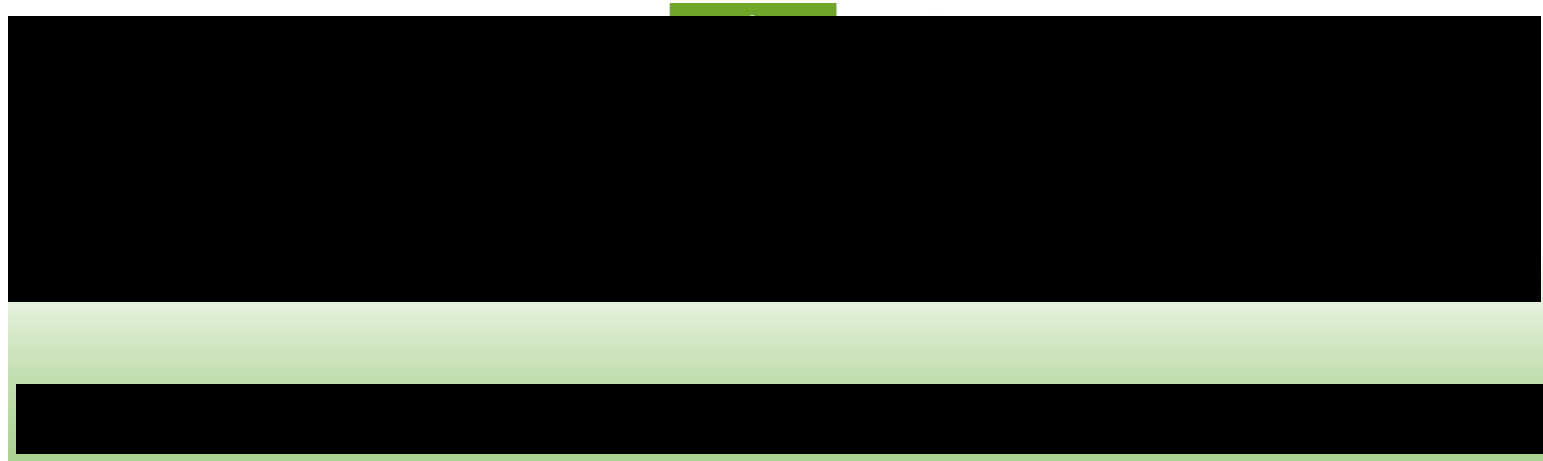
⁴ **Ecology Practice, 2020i.** Landscape and Ecology Management Plan (LEMP). Report Ref. 16903-LEMP(Infra)_A

Biodiversity Champion

- 2.3.2 The ECW will advise on the appointment of a Biodiversity Champion, who will be responsible for ensuring the contents of the CEMP: Biodiversity are upheld. The BC will be responsible for ensuring protective fencing is in place and fit-for-purpose, that open trenched and pipes are covered each evening, or a means of escape is provided. The BC will liaise directly with the ECW.

Site Meetings

- 2.3.3 The ECW will make provision for a meeting on site prior to works taking place on site between the developer, developer's relevant contractors and Ecological Clerk of Works / Supervisor, the biodiversity Champion and the St. Helens Countryside Development and Woodlands Officer.
- 2.3.4 A schedule of progress meetings with these parties will be arranged by the ECW.





CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX F

WOODLAND CLEARANCE METHOD STATEMENT

CEMP: Biodiversity (Infrastructure) Woodland & Tree Clearance Method Statement

Ecological Assessments

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Species Surveys

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National Vegetation Classification

Planning Guidance

Habitat Regulation Assessment

Protected Species Licensing

42020 CEMP: Biodiversity

BREEAM LE01 - 05






Plot 1, Omega Zone 8

St Helens, WA5 3UG



Consultant Report on behalf of:



Issue/revision	Issue 1: DRAFT TO CLIENT	Issue 2: FINAL	Issue 3: AMENDED FINAL
Project No.	169-03		
Report Ref.	16903-TR_A		
Date	11 th March 2020	17 th March 2020	
Prepared by	Andrew Arnott	Josh Cartlidge	
Signature			
Reviewed by	Josh Cartlidge	Andrew Arnott	
Signature			

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1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1. The following report has been prepared on behalf of Omega Warrington Ltd and provides a method statement for tree removal to facilitate construction of Plot 1 and associated landscape at Omega Zone 8, St Helens ('The Site').
- 1.1.2. This document has been prepared following the British Standard 42020:2013¹. It should be read in conjunction with the CEMP: Biodiversity² and the Arboricultural Method Statement.

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- 1.1.1 The Site forms part of the Omega business estate located west of Warrington, falling just within St Helens District. It is immediately south of the M62, west of Junction 8, and immediately west of the Warrington Borough boundary and Lingley Mere. The location is shown in Figure 1.

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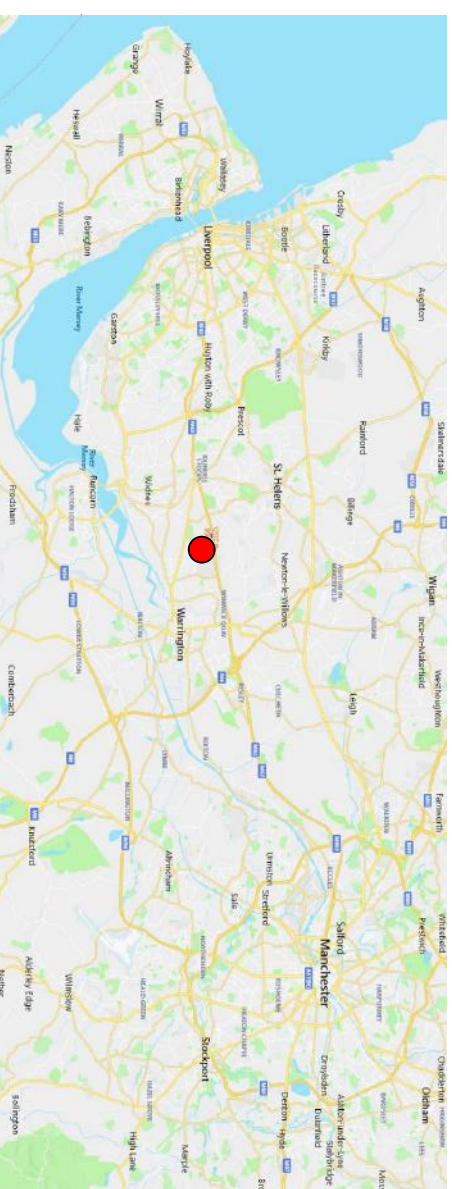
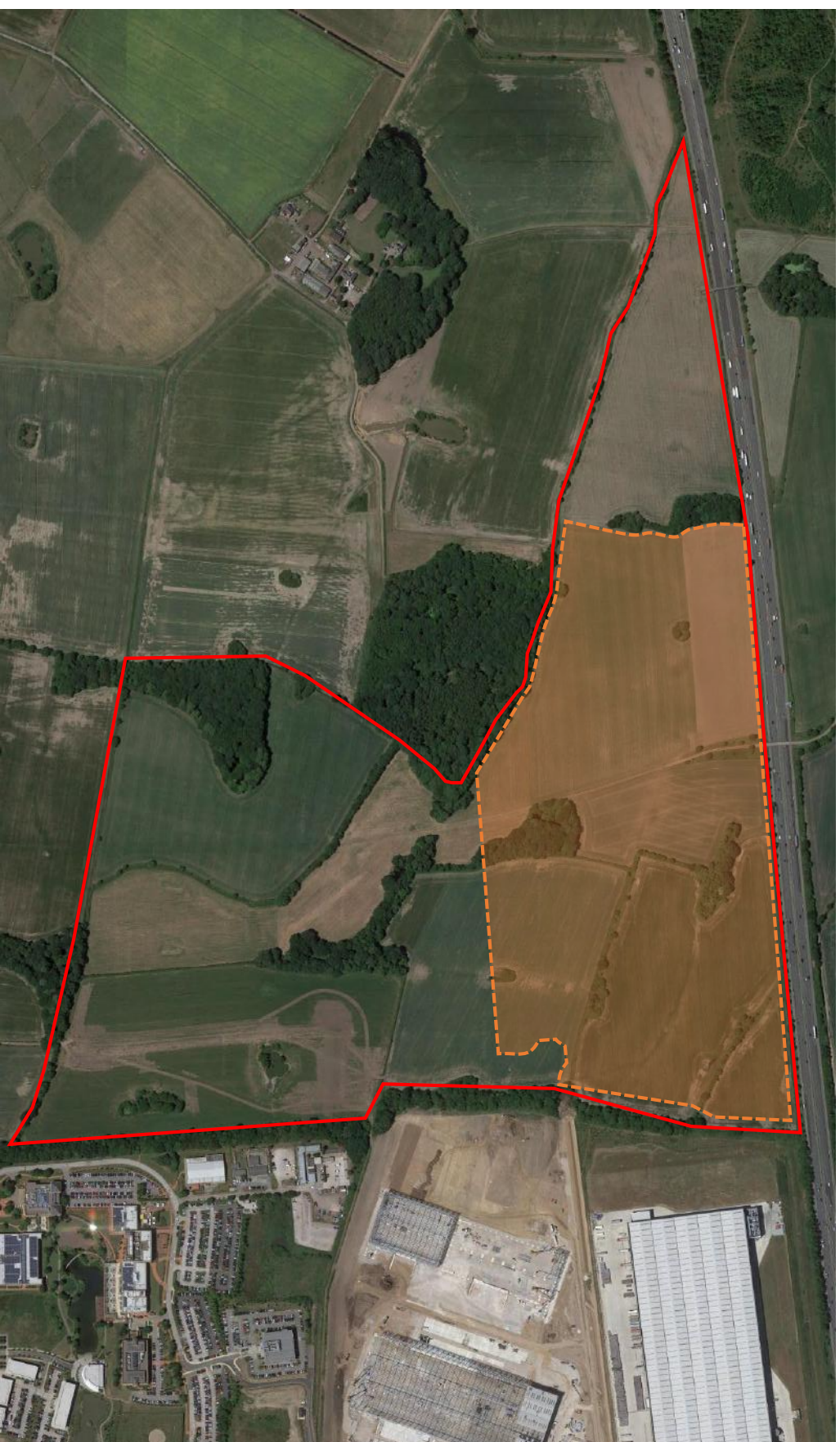
¹ **The British Standards Institution 2013** BS 42020:2013 Biodiversity - Code of practice for planning and development. Published by BSI Standards Limited 2013. ISBN 978 0 580 77917 6

² **Ecology Practice, 2020b.** CEMP: Biodiversity (Infrastructure). Report No. 16903-CEMP (Infra) _A

Figure 1
Location

Omega Zone 8, St Helens

Legend



the omego
opportunity

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Revision Dates

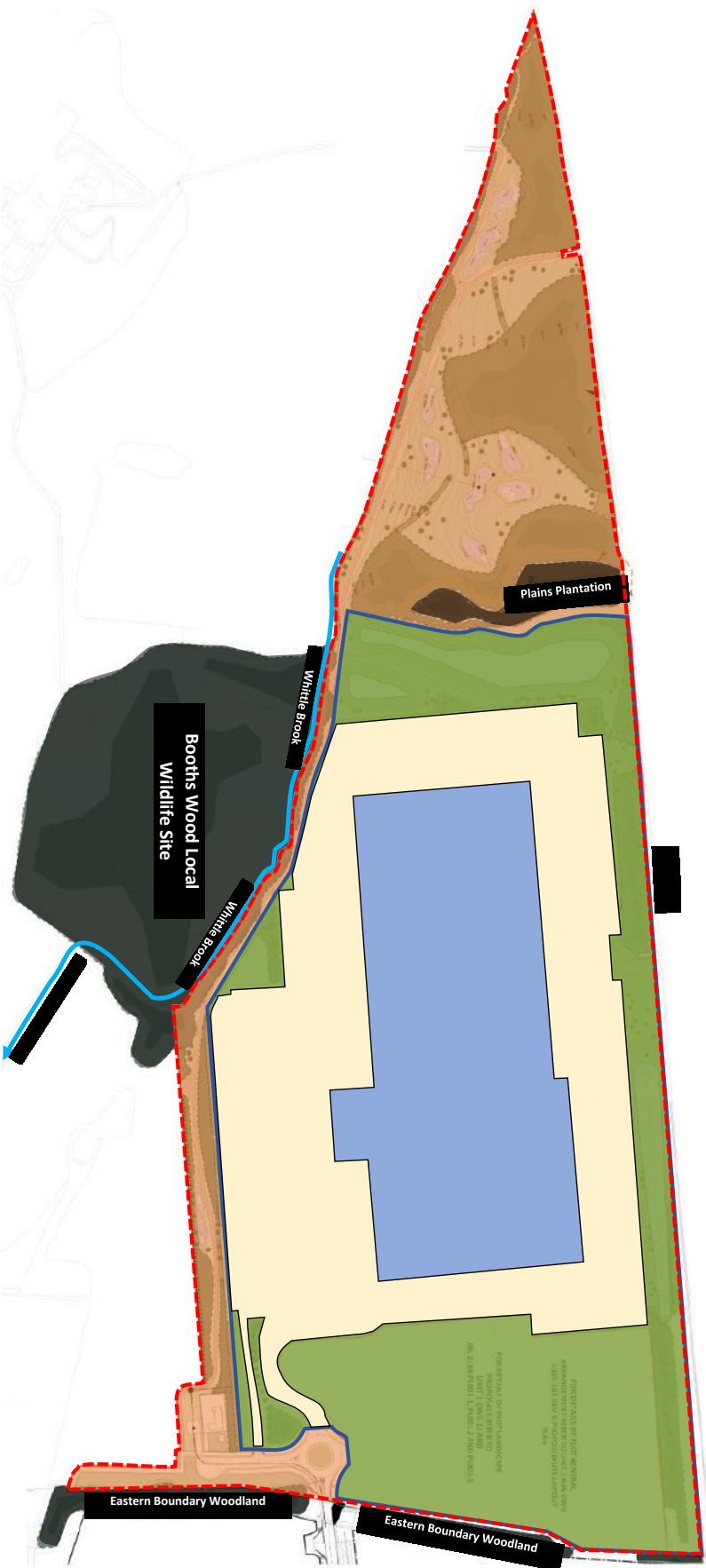
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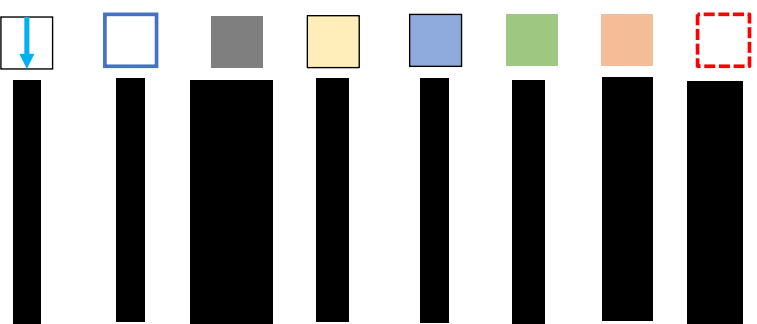
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Figure 2
Detailed
Application
Configuration

Omega Zone 8, St Helens



Legend



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2 WOODLAND & TREE DESCRIPTIONS

2.1 WOODLANDS

- 2.1.1 Woodlands within and surrounding the proposals and its construction footprint are shown in Figure 3.

Woodlands Description

Big Wood Belt (to be lost) (TPO ref – 5/2 W7)

- 2.1.2 Big Wood Belt is located near the centre of the Site. It is dominated by sycamore with pedunculate oak and hawthorn noted as frequent. Elder, alder (*Alnus glutinosa*), horse chestnut (*Aesculus hippocastanum*), silver birch, large leaved lime (*Tilia platyphyllos*) and beech (*Fagus sylvatica*) were noted as rare. Trees were mostly of the mature age, with plenty of regeneration present within the understory (mostly sycamore). Ground flora consists largely of bare-earth ground with bramble noted as occasional throughout. Common grasses (such as Yorkshire fog (*Holcus lanatus*) and false-at grass (*Arrhenatherum elatius*) were noted extending up to 5m into the northern woodland edge. A small 5m strip of tall ruderal vegetation was recorded along the northern boundary of the woodland adjacent to the arable field.
- 2.1.3 A single pond (~900m²) exists to the northwest of the woodland. The pond is heavily shaded by woodland and fish presence was noted. Old fishing platforms were observed at the pond edge. No vegetation was observed within the pond.
- 2.1.4 A small number of species were noted at or near the pond edge, including male fern (*Dryopteris filix-mas*), bittersweet nightshade (*Solanum dulcamara*), bramble, soft rush, silver birch and wood millet (*Milium effusum*). While wood millet is an ancient woodland indicator species, it was not found to be growing in conjunction with other ancient woodland indicator species. Species diversity was considered to be largely poor throughout the woodland.

- 2.1.5 A shallow dry ditch extends from the northeast of the pond, with a second running laterally immediately south of the pond. There was no change in vegetation within these ditches.

Plain Plantation (to be fully protected)

- 2.1.6 Plain Plantation is located towards the northwest of the Site. It is a small, mature woodland (~1.6 ac) dominated by sycamore (*Acer pseudoplatanus*) and pedunculate oak (*Quercus robur*), with occasional sessile oak (*Quercus petraea*). The understorey consists of mature and immature hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*) and alder (*Alnus glutinosa*) mostly at the woodland edges. However, the understory is dominated by rhododendron (*Rhododendron ponticum*) throughout the core of the woodland with sycamore saplings and hawthorn scattered throughout. There is a distinct lack of ground flora here, probably due to the presence of rhododendron.
- 2.1.7 Bramble (*Rubus fruticosus*), young hawthorn and grey willow (*Salix cinerea*) dominate the ditch banks to the south of the woodland, where greater herbaceous plant diversity was noted.
- 2.1.8 A wet ditch extends through Plain Plantation from the northwest corner of the woodland to the south-western extent. The ditch is approx. 0.5-1m in width at most, containing shallow water (between 1-5cm) throughout.
- 2.1.9 The ditch consists of shallow earth banks which are mostly unvegetated, becoming more vegetated as the ditch extends south beneath scattered scrub and trees. A large area of hemlock water dropwort was noted beneath the scattered scrub which is present along the ditch to the north, while becoming sparser.

Booth's Wood (to be fully protected)

- 2.1.10 Booth's Wood is a large, mature woodland, mostly located offsite to the west and designated as a Local Wildlife Site. An unnamed watercourse bisects the woodland with areas located to the north and east of the watercourse being on site. Approximately 1 ac of Booth's Wood exists within the application boundary.

- 2.1.11 Sycamore occurs most frequently, although a greater heterogenous structure and overall diversity than the other woodland on site was noted. Sessile oak, pedunculate oak, hawthorn, alder and ash were noted as occurring occasionally, with large leaved lime noted as rare.
- 2.1.12 The understorey contains rhododendron (locally abundant), holly (*Ilex aquifolium*) and blackthorn (*Prunus spinosa*) as occasional, with elder, rowan, immature beech and hazel occurring as rare.
- 2.1.13 This area of woodland contains undulating ground, with natural damp earth mounds containing mosses, although sparsely covering the ground. The ground flora is limited and consists of remote sedge, bramble, bracken (*Pteridium aquilfolium*), wood millet as occasional with nettle (*Urtica dioica*) and broad buckler fern (*Dryopteris dilatata*) occurring as rare.
- 2.1.14 Where the arable field meets the woodland on the southern aspect of the wood, mechanical damage from flailing was noted. A small number of standing deadwood trees were noted along the woodland edge.
- 2.1.15 A pond is situated east of the unnamed watercourse within the woodland. It was approximately 100m² at the time of survey and heavily shaded by bankside trees and rhododendron. There was no macrophyte cover in the pond, and the water appeared largely black from a decaying heavy litter layer. Hemlock water dropwort (*Oenanthe crocata*) was noted on the western pond bank.

Woodlands to be lost

- 2.1.16 There are areas of TPO that will be removed entirely (W7 – Big Belt Wood). This loss totals 12,829m², with 1125m² from the infrastructure area.
- 2.1.17 There are two woodlands that are also covered by A TPO shown that are adjacent to the construction site boundary, Booth's Wood (W8) and Plains Plantation (W16), which will not be affected directly but will require protection.
- 2.1.18 The status is shown in Table 1.

Table 1. Woodland & Tree loss/retention

Woodland #	Area (m ²)	To be lost (m ²)	Retained (m ²)
Plain Plantation	5685	0	5685
Big Belt Wood	8563	1125	0
Booth's Wood	5949	0	5949
TOTAL TREE	20197	1125	11634

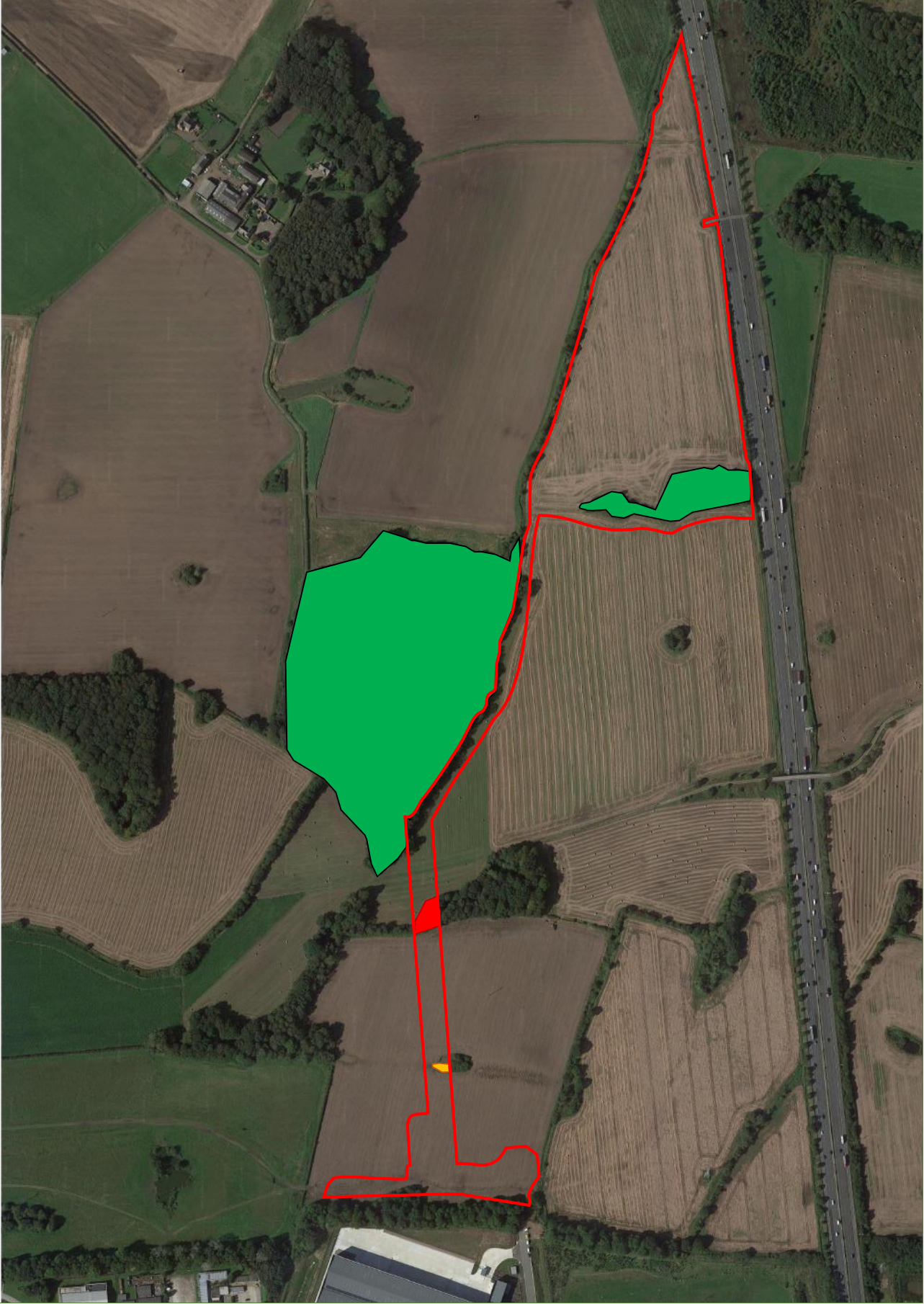
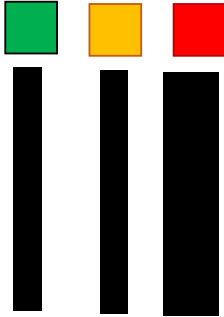
Figure 3

Woodland & Tree

Loss

Omega Zone 8, St Helens

Legend



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3 WOODLAND & TREE REMOVAL METHOD STATEMENT

3.1 WOODLAND & TREE CLEARANCE

Timing

- 3.1.1 All woodland clearance must be carried out between the 1st September - 1st March. Woodlands are a complex and sometimes dense habitat so it will not be possible to clear these habitat types at any other time of year due to the significantly high likelihood of breeding birds. The various schedules must be designed to account for this.

Ecological Clerk of Works (ECW)

- 3.1.2 All clearance activities must be supervised daily by an ECW.
- 3.1.3 The ECW will walk the entirety of the woodland each morning before works commence to flush out more mobile species such as deer.
- 3.1.4 The ECW will survey each woodland in June to identify any new badger setts that may have been created, allowing maximum time to acquire a license and complete any mitigation works before the badger breeding season commences in December

Best Practice

- 3.1.5 There are methods of woodland clearance that will assist minimizing the impact as follows:
- Woodland felling to avoid a concentric circle approach; to be carried out in a single direction for the entirety of the removal of a woodland block.
 - Trees should not be allowed to fall into protected areas. These are detailed in the CEMP: Biodiversity (infrastructure)².
 - Woodland removal is subject to the contents of the Arboricultural Mitigation Report³.

³ **Ecology Practice, 2019.** Arboricultural Impact Assessment, Method Statement and Tree Protection Plan. Report No. 16903_AR_A

- Once trees are removed, the understory will not be removed for 24 hours to allow smaller mammals the chance to escape.
- Arisings from tree removal, where it is not being further processed for timber, and where the wood arisings are sufficient in size, can be used by the ECW to create deadwood piles in existing woodlands and those to be created. Refer to the Landscape and Ecology Management Plan⁴.

Species-Specific Guidance

Bats

- 3.1.6 The pre-application process carried out an assessment of all trees within and adjacent to the application site, including those trees that lie within the development footprint of the Full Planning proposals. Trees were then classified as having Low (yellow), Medium (orange) or High (red) potential to contain roost features (PRFs).
- 3.1.7 For those classified as Medium/High Potential each tree was visited, and an endoscope survey was carried out. The three classifications are shown in Figure 4 (yellow or Low potential) and Figure 5 (orange/red or medium/high potential).
- The ECW and a surveyor will visit those trees on the boundary (e.g. T77) to accurately determine which needs to be felled.
 - Yellow/Low potential trees must be soft felled⁵.
 - Orange/red high potential trees must only be felled with a licensed bat person present. There is no need for a licence to cover these works. The trees must be soft-felled⁵.
- 3.1.8 No trees within Plains Plantation or Booth's Wood will require moving for ecological reasons.
- 3.1.9 Should works not proceed for more than one year from the time of the survey to inform these works, the survey has to be repeated.

Mobile Mammals

- 3.1.10 The ECW will walk the entirety of the woodland daily in the morning before works commence to flush out more mobile species such as deer or even hare.

⁴ **Ecology Practice, 2020f.** Landscape and Ecology Management Plan (LEMP). Report Ref. 16903-LEMP_A

⁵ Refer to Box 1

- 3.1.11 Woodland felling to avoid a concentric circle approach; to be carried out in a single direction for the entirety of the removal of a woodland block.

Breeding Birds

- 3.1.12 All woodland clearance must be carried out between the 1st September - 1st March. Woodlands are a complex and sometimes dense habitat so it will not be possible to clear these habitat types at any other time of year due to the significantly high likelihood of breeding birds. The various schedules must be designed to account for this.

Owls and roosting birds

- 3.1.13 The ECW will visit each tree in each woodland to make a ground assessment of holes or large fissures that may allow an owl to form a roost. Owls present will be flushed from the roost and the roost filled with foam.

Mycology

- 3.1.14 Woodlands of this maturity may have an interesting mycological interest. Prior to works commencing each woodland will be visited by a mycological consultant to determine if any special mitigation is required, such as relocation of key areas of deadwood to the retained woodlands.

Box 1. Soft felling methods

Soft felling methods

Carried out in autumn or in spring.

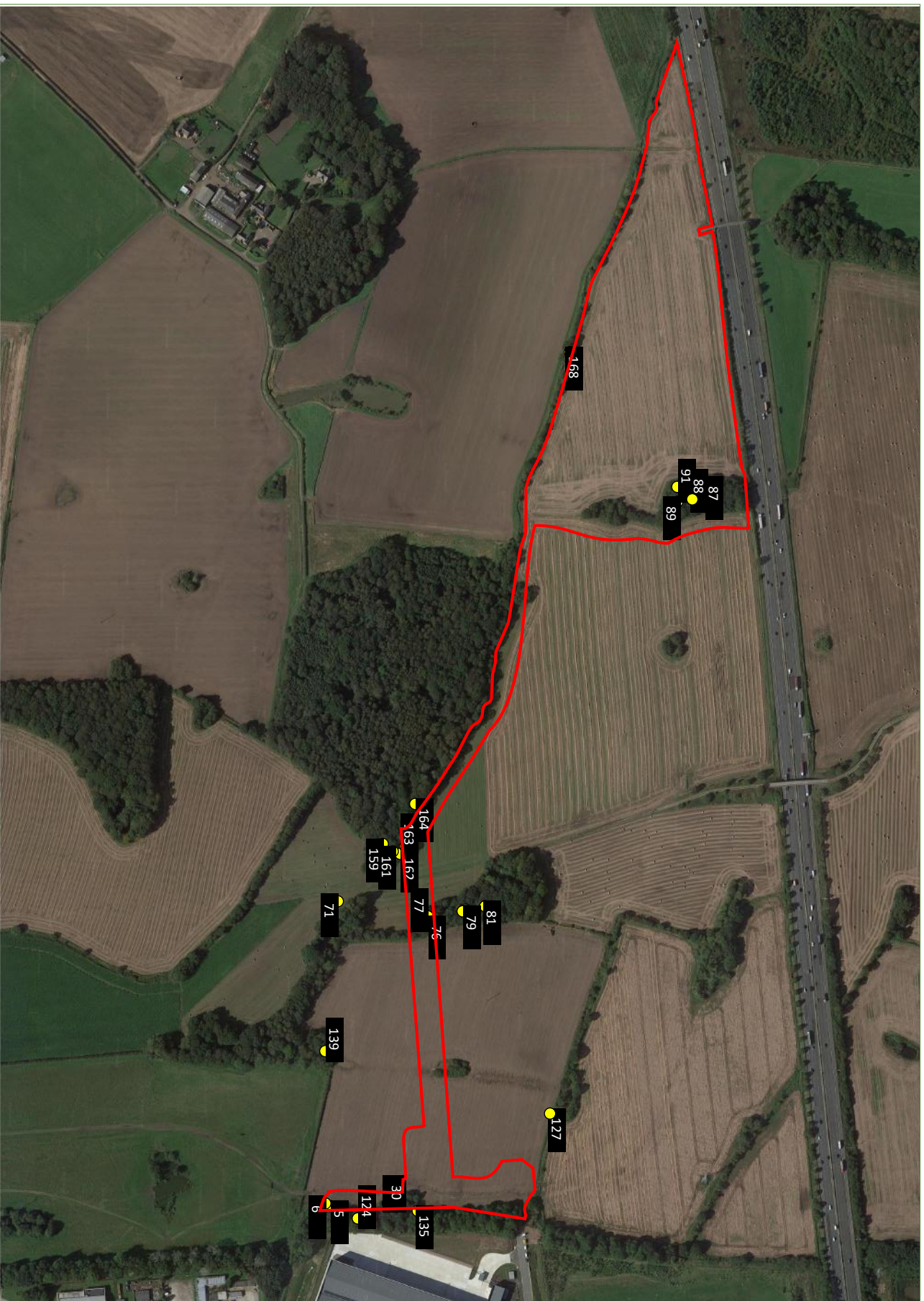
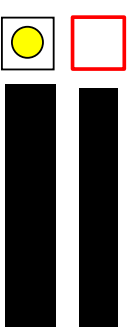
Parts of the tree with low potential roost feature are removed but this is done by making cuts away from the feature and the section is lowered by rope (slowly and gently) to the ground.

This section is then leant against a standing tree for 24 hours with the roost feature facing outwards to allow the bat to fly out that night if it is present.

Figure 4
Low Potential
Trees

Omega Zone 8, St Helens

Legend



Drawing No.: 16903-09CEMP_A

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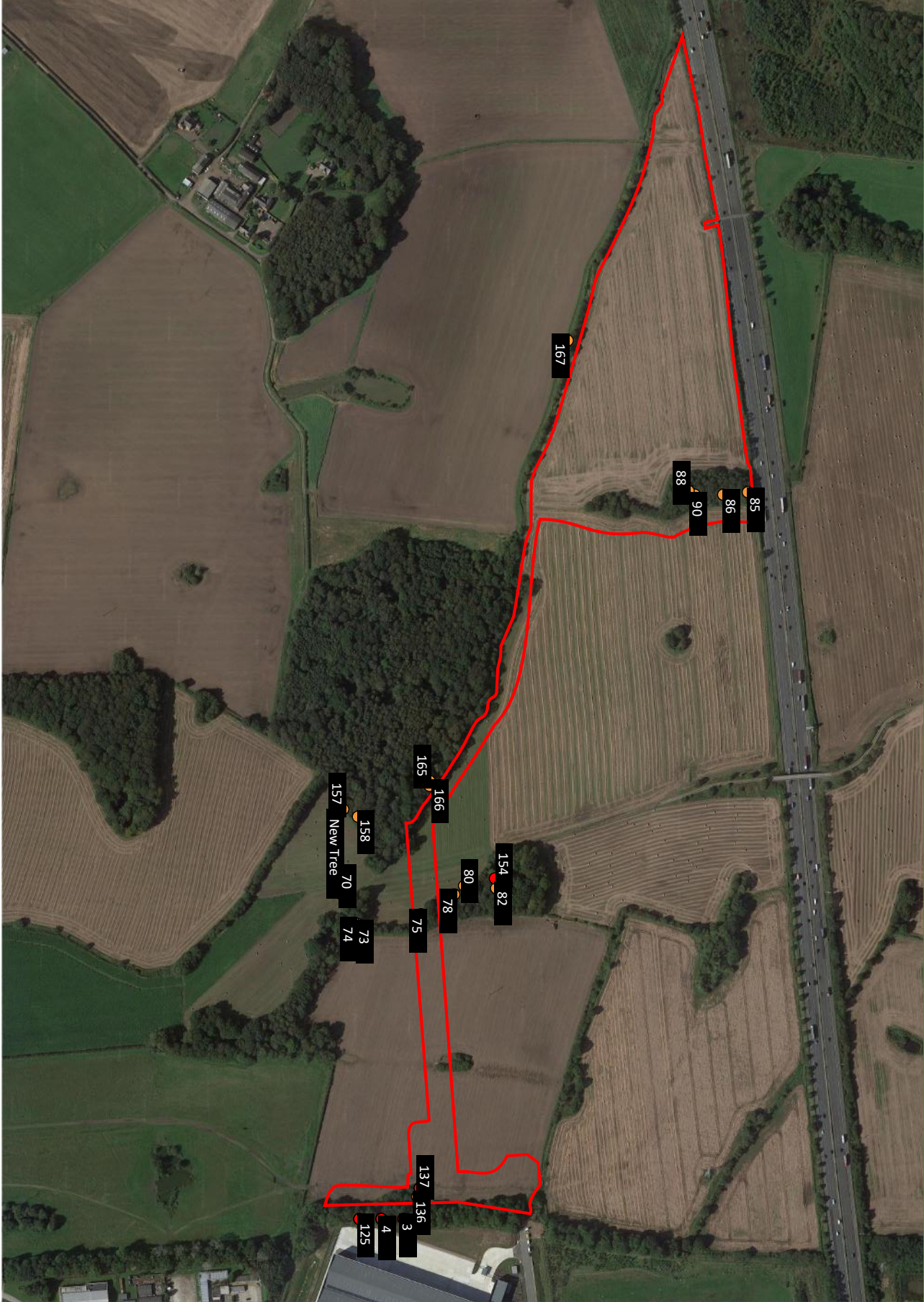
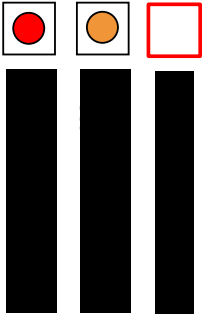
Figure 5

Moderate & High

Potential Trees

Omega Zone 8, St Helens

Legend



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CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX G TREE PROTECTION PLAN



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX H

POND CLEARANCE METHODOLOGY

CEMP: Biodiversity (Infrastructure) Pond Clearance Method Statement

Ecological Assessments

Environmental Statements (Biodiversity)

Species Surveys

Phase I Habitat Survey

National Vegetation Classification

Planning Guidance

Habitat Regulation Assessment

Protected Species Licensing

42020 CEMP: Biodiversity

BREEAM LE01 - 05




Plot 1, Omega Zone 8

St Helens, WA5 3UG



Consultant Report on behalf of:



Issue/revision	Issue 1: DRAFT TO CLIENT	Issue 2: FINAL	Issue 3: AMENDED FINAL
Project No.	169-03		
Report Ref.	16903-PC_A		
Date	11 th March 2020	17 th March 2020	24 th March 2020
Prepared by	Andrew Arnott	Josh Cartlidge	Andrew Arnott
Signature			
Reviewed by	Josh Cartlidge/Client	Andrew Arnott	
Signature			

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■	GREAT CRESTED NEWT STATUS	7
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Figure 3	Pond Loss (Infrastructure)	9

1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1. The following report has been prepared on behalf of Omega Warrington Ltd and provides a method statement for clearance of ponds to facilitate construction of the Infrastructure associated with Plot 1 and associated landscape at Omega Zone 8, St Helens ('The Site').
- 1.1.2. This document has been prepared following the British Standard 42020:2013¹. It should be read in conjunction with the CEMP: Biodiversity².

Location

- The Site forms part of the Omega business estate located west of Warrington, falling just within St Helens District. It is immediately south of the M62, west of Junction 8, and immediately west of the Warrington Borough boundary and Lingley Mere. The location is shown in Figure 1.

Proposals

- The work follows Full Planning Permission for the erection of a B8 warehouse, with ancillary offices, associated parking, infrastructure, and landscaping. The configuration of these proposals is complex and is therefore shown in Figure 2.

Site description

- The Site is dominated by arable land with woodland belts, a network of ponds and ditches improved grassland and scrub habitat present. A brook along the Southern boundary of the Site from the northwest. Off-site woodland is present to the south, east and west of the Site.

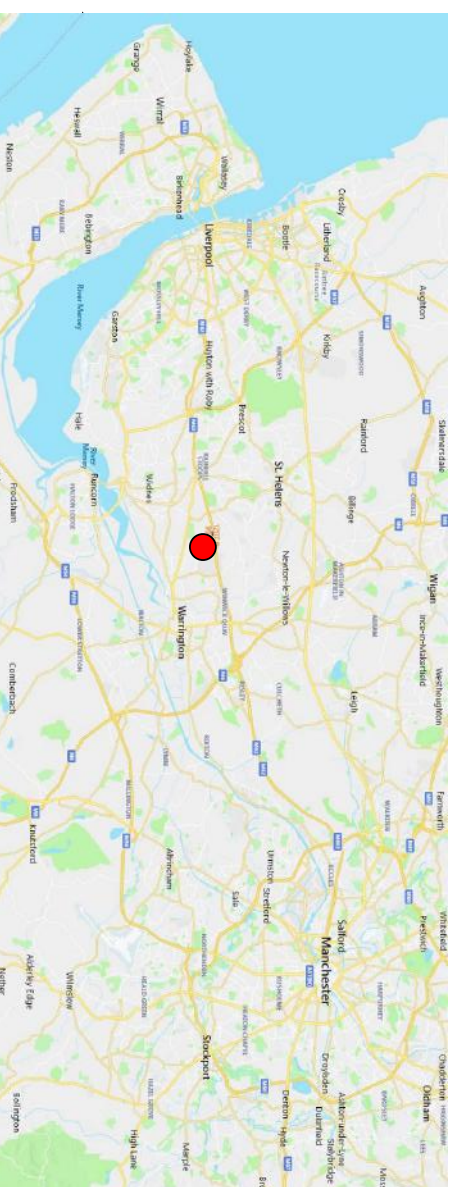
¹ **The British Standards Institution 2013** BS 42020:2013 Biodiversity - Code of practice for planning and development. Published by BSI Standards Limited 2013. ISBN 978 0 580 77917 6

² **Ecology Practice, 2020a.** Omega Zone 8, Unit 1 CEMP: Biodiversity. Report No. 16903-CEMP (Unit 1) _A

Figure 1
Location

Omega Zone 8, St Helens

Legend



The
omega
opportunity

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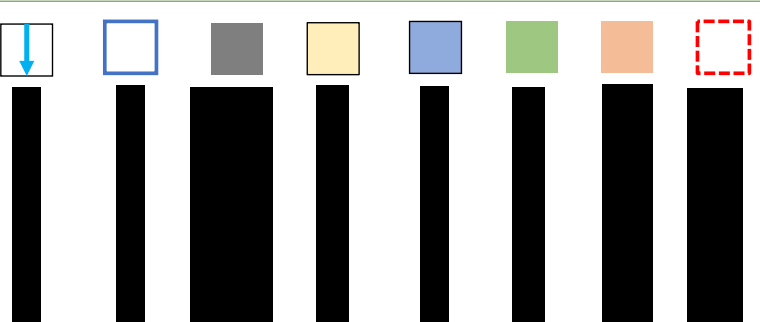
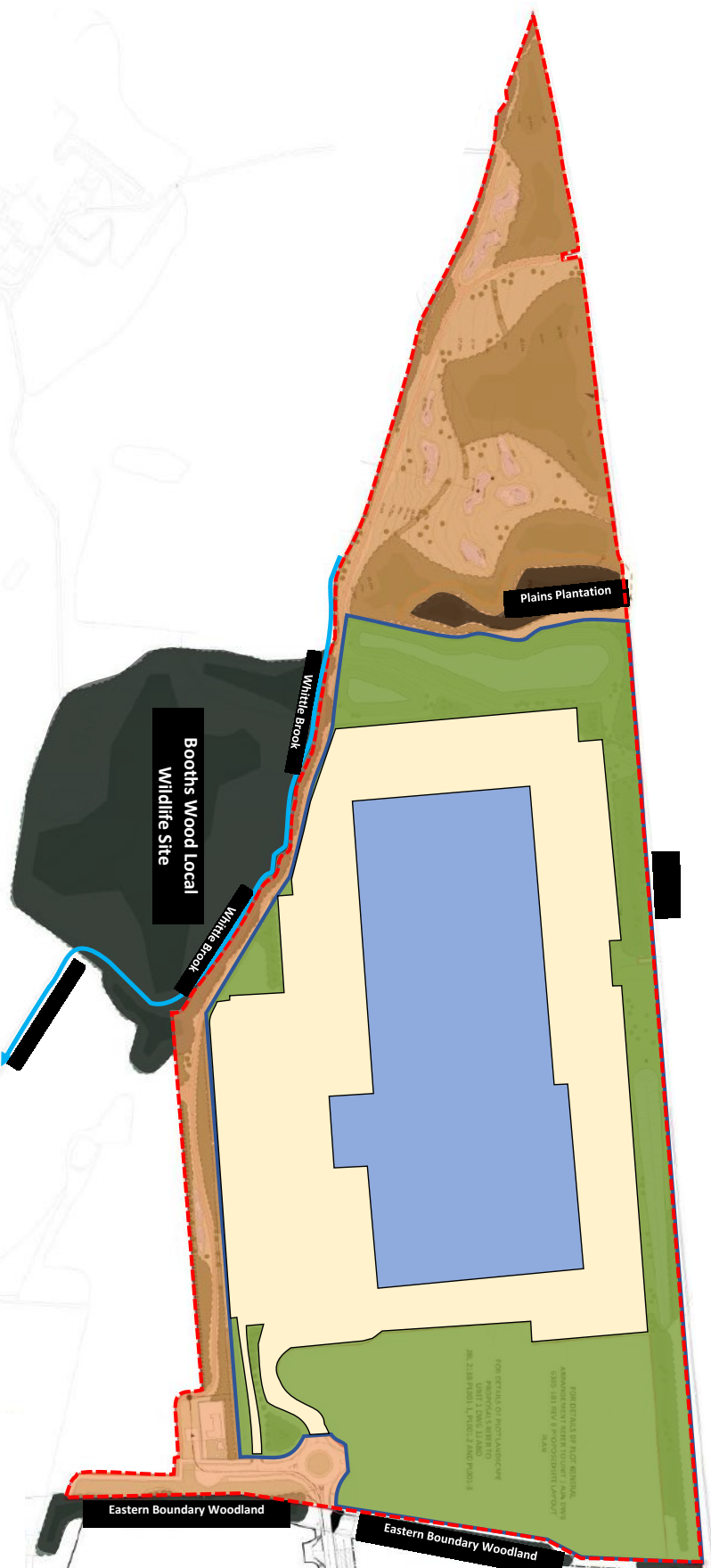
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Omega Zone 8, St Helens



2 POND LOSS

2.1 HABITAT DESCRIPTION

- Ponds within the proposals and its construction footprint are shown in Figure 3. A total of 2 ponds are located within the infrastructure footprint.
- All woodland ponds are highly shaded and therefore offer little quality in terms of macrophyte or invertebrate diversity.
- In-field ponds were found to be prone to silt/soil runoff from surrounding arable land and created poor conditions for biodiversity. While there is a fairly large number of ponds scattered around the overall hybrid site all within close proximity, they are mostly isolated from one another by frequent agricultural practices (such as ploughing/harvesting).

2.2 GREAT CRESTED NEWT STATUS

- All ponds onsite and within 500m of the boundary of the entire hybrid application (except for Booth's Wood pond) and therefore including those up to 500m from the development footprint were sampled for great crested newt (*Triturus cristatus*) eDNA scoring negative throughout (refer to EP 2020a³).

Habitat Suitability Index (HSI)

- A Habitat Suitability Index was carried out for 2019 using Oldham's score (Oldham et al. 2000⁴). Of the 8 ponds surveyed, only 1 of good suitability for GCN.

³ **Ecology Practice 2020** Great Crested Newt Survey – eDNA. A consultant report to OWL Ltd. 15th October 2019. Repert ref: f 16903-GCN_A

⁴ **Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000).** Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155.

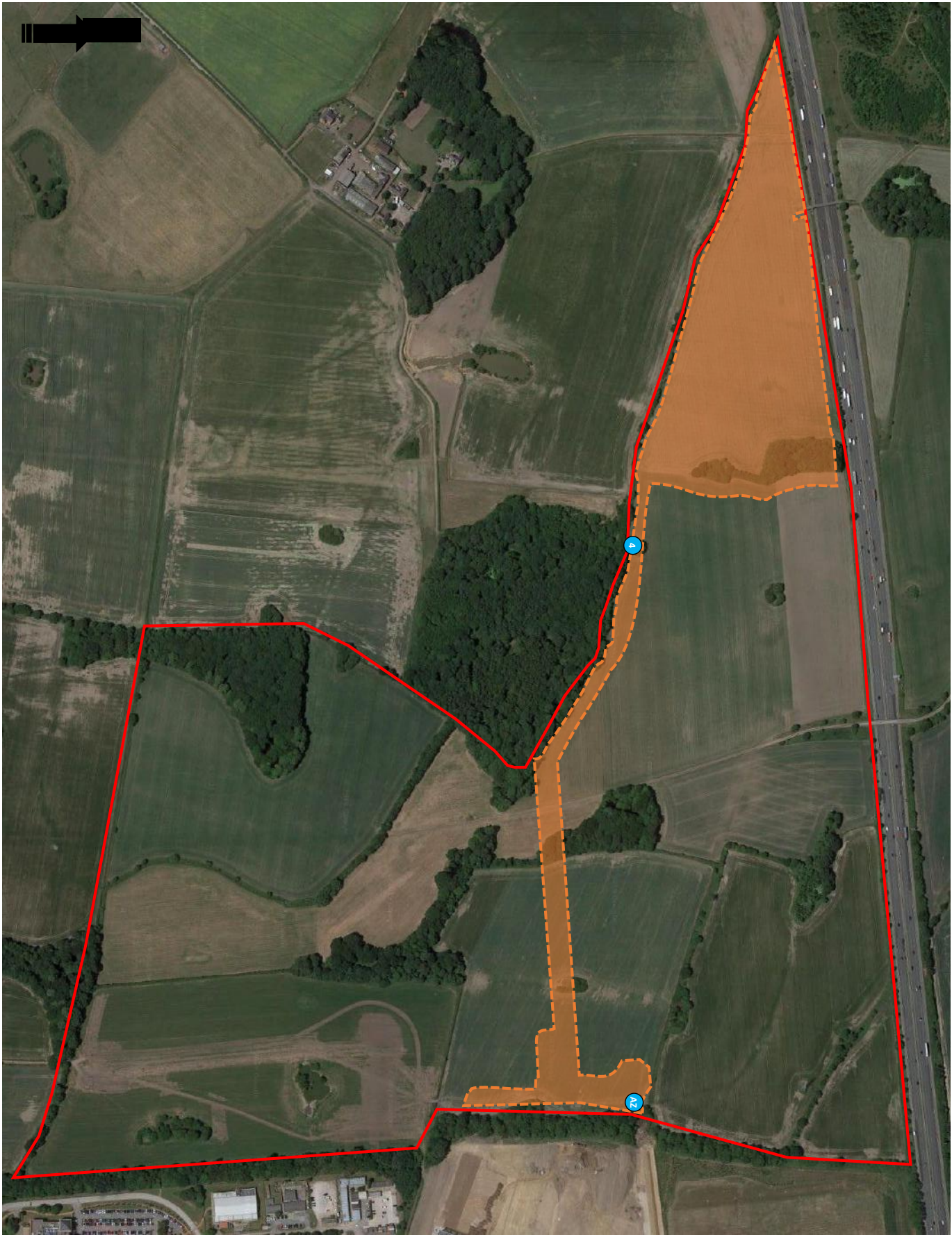
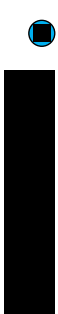
2.3 PONDS TO BE LOST

- There are 2 ponds are to be affected by Infrastructure Works: Pond 4 and Pond AZ (refer to Figure 3).

Figure 3
Pond Loss
(Infrastructure)

Omega Zone 8, St Helens

Legend



Drawing No.: 16903-14CEMP_A

Revision Dates

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11/03/20

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3 POND REMOVAL METHOD STATEMENT

3.1 TIMING

- All pond clearance must be carried out between the 1st September - 1st March. Ponds can be complex habitats usually surrounded by inaccessible reedbeds so it will not be possible to clear these habitat types at any other time of year due to the significantly high likelihood of breeding birds. The various schedules must be designed to account for this.

3.2 FISH RELOCATION SURVEY

- Fish will be removed from the affected ponds pre-September, after the 15th June once the spawning season for coarse fish has closed. This will be by boat-based electric fishing using bankside equipment and a portable generator onboard a small inflatable boat. Electric fishing would be conducted by professionals trained under the Environment Agency Electric Fishing Code of Practice and using equipment that complies with Annex A & B, Issue II Specification of that code. The team would conduct multiple runs, until catch depletion numbers indicate that >90% of the population has been captured from the works area.
- Seine netting techniques would also be used to increase the fish capture efficiency. We have the option to deploy a range of net sizes (25 – 50m) with micromesh and coarser mesh sites depending on the conditions of the site. Seine netting techniques can be limited if there is an uneven substrate with significant underwater obstacles, so the nature of the site would be assessed, and advice sought from the client prior to deploying a seine net.

Consents and licensing

- Qualified personnel and licensed equipment will be used to undertake the fish pond removal and relocation. FR2 authorisation (permission to catch fish without rod and line) from the Environment Agency would be undertaken prior to any works.

3.3 ECOLOGICAL CLERK OF WORKS (ECW)

- All clearance activities must be supervised daily by an ECW.
- The ECW will drain down each pond using a floatation filter device and hand search the emptied pond to avoid killing or injuring commoner amphibians.
- Ponds can be infilled once empty without further constraint.

3.4 ANIMAL RELOCATION

- Animals will be relocated to similar habitat from which they were removed. That habitat will not be within the area earmarked for future Zone 8 development, instead it will comprise existing ponds that hold water for 12 months of the year in the neighbouring Omega South development.

