CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

for

Broad Lane, Rochdale

Date: November 2020

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1.0 Introduction

1.1 The purpose of this Construction and Environmental Management Plan is to provide detail in respect of planning consent for residential development, Broad Lane in Rochdale (Ref: 20/00238/FUL).

1.2 Pre-commencement condition 8 states:

No development shall take place (including demolition, ground works, vegetation clearance) until a construction environmental management plan (CEMP: biodiversity) to include the following has been submitted to, and approved in writing by the Local Planning Authority:

A) Risk assessment of potentially damaging activities;
B) Identification of 'biodiversity protection zones';
C) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts of construction (may be provided as a set of method statements).
D) The location and timings of sensitive works to avoid harm to biodiversity features.
E) The times during construction when specialist ecologists need to be present on site to oversee works.
F) Responsible persons and lines of communication.
G) The role of responsibilities on site of an ecological clerk of works or similarly competent person.
H) Use of protective fences, exclusion barriers and warning signs.

The approved CEMP shall be adhered to throughout the construction period. The development shall not be carried out otherwise than in accordance with the approved CEMP during the construction period.

1.3 The Construction and Environmental Management Plan provides the necessary information to discharge this condition as set out below;

Section A: Risk Assessment of Potentially Damaging Activities	Refer to Sections 4 of this CEMP
Section B: Identification of 'Biodiversity Protection Zones'	Refer to Section 8 of this CEMP
Section C: Protective Measures	Refer to Sections 7, 8, 9 & 10 of this CEMP
Section D: Location & Timing of Sensitive Works with respect to Biodiversity	Refer to Section 8 of this CEMP
Section E: Need for Specialist Ecologist	Refer to Section 8 of this CEMP
Section F Communication	Refer to Section 12 of this CEMP
Section G Ecological Clerk of Works	Refer to Section 12 of this CEMP
Section H Protective Fencing	Refer to Section 7 & 8 of this CEMP

2.0 Description of Works

2.1 The scope of the 'Works' are generally shown on the drawings contained in Appendix A. The works comprise new highways, street lighting, foul and surface water drainage, incoming services and landscaping along with the proposed construction of residential dwellings.

2.2 The works are proposed to be carried out in one phase over a 12 month period from January 2021 to January 2022.

2.3 Boarshurst Building Contractors will act as the build Contractor throughout construction. This document will form part of the requirements which the Boarshurst Building Contractors will need to comply with throughout the duration of the works. They are hereafter referred to in this report as the 'Contractor'.

2.4 In general, the site set up to which applies to this CEMP will involve:

- Installation of temporary security fencing required for site access control and protection of equipment and materials;
- Setup personnel support facilities:
- Offices;
- Welfare facilities;
- Parking areas.
- Mobilisation of heavy equipment:
- Excavators, front end loaders, dozers, JCBs, end dump trucks, compactors as required;
- Construction or reinforcement of access roads as required;
- Construct stockpiles for fill material storage;
- Compacted bunds around stockpiles to minimise sediment runoff;
- Covering off material or damping down during dry periods;
- Utilities standoff;
- Sensitive working practices with consideration given to the adjacent watercourse and biodiversity features;
- Security measures.

3.0 Working Hours and Staff Arrangements

3.1 All Contractor parking and visitor parking shall be restricted to within the Site Boundary. An area of the site will be dedicated as a Contractor's compound area and adequate space will be provided within this area for Contractor's and visitors parking as well as welfare facilities. If additional parking is required this will be contained within the overall site boundary. No off-site parking will be allowed unless absolutely necessary.

3.2 In order to avoid aggravating peak hour traffic congestion on the local road infrastructure contractors will be expected to have most of their staff on site by 08.00hrs.

Operation Times

THE SITE WILL BE OPERATIONAL AT THE FOLLOWING TIMES:-

MONDAY TO FRIDAY	7:30am to 6:00pm
SATURDAY	7:30am to 2:30pm

Site Induction and Training

3.3 All personnel will be required to attend a site induction by the management team to detail the health and safety measures and rules of the construction site. The site hazards will be made clear to personnel at this time and risk management advice will be made clear to personnel at this time and risk management advice will be provided. Site visitors will also be required to undergo a site induction prior to entering the working areas. If it is deemed that any of the site personnel or subcontracted personnel is under qualified or does not possess adequate training for the scheduled work, the management team will we required to provide training or to replace the employee with and appropriately trained employee.

Site Supervision

3.4 The Main Contractor (see section: Communication) will oversee the daily construction operations. The site manager is responsible for the daily management of site operations and for management of environmental operations.

Documentation

3.5 The Main Contractor will provide, maintain and update all documentation that form the environmental management of the project, and allow access to this documentation at all times for auditing purposes. This will include complaint and notifiable incident procedures, compliance monitoring and reporting, environmental audits, and regular reviews and updates of the CEMP

4.0 Risk Assessment

Hazards & Risks - Development

	Element	Hazard	Risk	Operational Control
1	Proximity to existing properties	Noise, dust, build sequence and timing. Traffic Management/Pedestrian Management.	Medium	Careful planning, co-ordination and control of build operations. Set up loading and off-loading area and system prior to works commencing on site. Review system regularly. Avoid vehicles reversing wherever possible (so far as is reasonably practicable).
2	Ground Contamination	The site investigation indicates that no potential contaminative sources were identified on the site.	Low	Any evidence of contamination encountered during construction work should be reported to the Environmental Health Officer & The Environment Agency (where necessary).
3	Working adjacent to a watercourse	Falls of material into watercourse and pollution incident	Medium	Contractor's RAMS to be assessed and signed off prior to works commencing. To include provision of protective barriers at the top of bank to catch run away material.
4	Excavation works	Excavation works for foundations, new drainage and services on site	Medium	Contractors RAMS to be assessed and signed off prior to works commencing. To included provision of trench support where necessary. See Designers Risk Assessments for foundation options.
5	Working adjacent to high risk buried services	Striking a service	High	All excavations will be carried out in line with HSG47
6	Use of Plant & Equipment	Noise and nuisance	Medium	All plant & equipment to be inspected before use and utilised silencers where appropriate.
7	Public Interface	Construction related vehicles, plant movements, deliveries.	High	Appropriate working hours and utilisation of Best Practical Means for construction activities. Letter drop to neighbours regarding ongoing site activities. Update the traffic management plan as the project progresses.
8	Manual Handling	Risk of Manual Handling	High	Utilise mechanical means for handling where reasonably practicable. Contractors to submit manual handling risk assessments for approval before works commence.

Emergency Incidents and Management

Emergency Plans

4.1 Emergency plans will be provided by the Contractor to outline the necessary response to prevent injury or mitigate environmental impacts from a rising occurrence. These plans will be in-line with the existing emergency incident plans put in place for the site (as outlined in this CEMP).

Emergency Reporting

4.2 The management team will be responsible for recording all emergencies and each report will be investigated to identify the cause of the emergency. Revisions to procedure will be made, if necessary, based on the findings.

Accidents

4.3 Should there be any accidents these will be reported, and the site personnel will be transferred to the hospital, located at:

Oldham Hospital A&E
Rochdale Road
Oldham
OL1 2JH

5.0 Loading and Unloading of Plant and Materials

5.1 There will be a requirement for deliveries throughout the construction of the Works. Contractors will ensure that plant and material suppliers select appropriate delivery vehicles which will only enter the site as long as the delivery can be received and offloaded in a safe and appropriate manner.

5.2 All vehicles entering and leaving the site will access through the main site entrance. Information regarding traffic management restrictions and health and safety regulations on site will be passed to the driver before the vehicle can proceed to parking and off-loading. Sufficient space will be provided and incoming deliveries will be managed in such a way to prevent queuing / waiting on the highway.

5.3 Once within the site, vehicles will be directed to the relevant offload area via appropriate signage. Any loading / unloading areas will be pedestrian free zones. Suitable audible and visual devices will be used on any plant / machinery and all personnel on site will wear suitable protective equipment. When reversing all vehicles will be assisted by a banksman.

6.0 Storage of Plant and Materials

6.1 All plant and materials will be stored within the site boundary, most likely within the site compound area. High value plant and materials may be stored in a lockable compound. Security arrangements will be put in place by the Contractor throughout the duration of the works to ensure all plant and machinery are secure when there is no presence on site.

6.2 Any oil and chemical tanks stored on site shall be sited on an impervious base and surrounded by a protective bund.

7.0 Hoarding, Fencing & Protective Measures

7.1 The site boundary will be secured with a mix of palisade fencing and heras fencing with vehicle and pedestrian access gates at the site entrance. The security gates will be locked outside of working hours and no personnel will be allowed on site without authorisation from the Contractor.

7.2 Boundary hoardings / fencing will be robust and will be maintained by the Contractor throughout the duration of the works.

7.3 The Contractor will be responsible for security of the site and shall maintain adequate signage to ensure the health and safety of staff and visitors.

7.4 Warning signs will be used to convey the dangers of specific areas where necessary.

7.5 Any fencing erected will ensure protection of trees, habitats and species within the site boundary area in accordance with the details set out in this CEMP.

7.6 The Main Contractor will be required to provide all necessary security.

8.0 Ecology and the Protection of Retained Trees

Sudden Brook

8.1 Sudden Brook runs along the western boundary of the site and must be protected during the construction along with bank side vegetation and trees to be retained. Refer to the Landscape Plan contained Appendix A (13271/P01b) for areas to be protected during construction, which includes:

- Heras fencing to be installed along the bank side to prevent unnecessary disturbance of the bank, including ivy ground covered banks which are to remain undisturbed.
- Work areas will be clearly set out at the onset of activity to prevent any accidental encroachment on areas to prevent impacts on established vegetation.
- An Ecological Clerk of Works (ECoW) will be commissioned to oversee works close to the watercourse and within the western section of the site, a tool-box talk will be delivered to all contractors at the start of works which will set out ecology and highlight the most likely areas of habitat within the Site in which they could occur.
- Vegetation will be cleared under the supervision of the ECoW. It will take place in a directional manner, moving from south to north.

8.2 All works undertaken will be required to adhere to CIRIA guidance 'C532 – Control of Pollution from Construction Sites'. Where appropriate, site works will be undertaken in accordance with the Environment Agency's Pollution Prevention Guidelines (please note, these are now longer in use, but still continue to provide useful guidance for construction work), in particular:

- PPG1 'General Guide to the Prevention of Water Pollution';
- PPG5 Works or Maintenance in or Near Water';
- PPG6 'Working at Construction and Demolition Sites'; and,
- PPG21 'Incident Response Planning'.

8.2 Further information is provided in the following section of this report.

Nesting Birds & Other Mammals

8.4 Birds may nest in the trees shrubs around the site in the spring and summer months. In order to prevent disturbance and/or harm to nesting birds:

- Vegetation works are undertaken in the winter months (October – February).
- If this is not possible, the ECoW will check the vegetation on site to determine the presence / absence of nesting birds prior to the start of any works.
- If birds are found actively nesting on site, the nest and surrounding vegetation (5m) must be left undisturbed until the young have fledged.

8.5 In order to prevent harm to these species, such as hedgehog:

- Ground vegetation works are undertaken with care, by hand; all shrubs and long grass must be cut short at least two weeks prior to the start of ground works to ensure the site becomes unfavourable for these species; the species can then leave of their own volition.
- If common toad or hedgehogs are found during works, they can be picked up and moved to a safe place where works are not proposed. This can be off-site, but within a 250m radius of the survey site.

Existing Trees

8.6 Existing trees are to be protected and retained wherever possible. Trees that are to be retained will be clearly identified and are to be protected from construction activity.

8.7 Trees that are to be retained are to be protected in accordance with the following guidelines: British Standard: 5837 “Trees in Relation to Construction”.

8.8 The part of the tree most susceptible to damage is the root system. BS 5837 advises that in order to avoid damage to the roots or root environment of retained trees, a root protection area (RPA) should be determined. The RPA is the minimum area which should be left undisturbed during construction and is designed to prevent any significant long term damage to the tree by protecting the root plate and to some extent the lower branches of the tree.

Each tree to be retained in an area for construction is to have its RPA calculated and protective fencing erected around the full perimeter of its RPA. The protective fencing will be erected prior to work commencing on site and remain until construction activities have been completed. This protective zone is to be considered sacrosanct.

Timing of Works

8.9 Vegetation clearance and the installation of protective fencing will be undertaken in winter months. If work, which is to begin in spring (March onwards), the ECoW shall in engaged and oversee works.

Discovery of unidentified protected species

8.10 Where protected species are discovered after construction work has begun the Contractor will carry out the following:

- Stop work immediately in the area;
- Demarcate the area and restrict access to ensure that there is no disturbance to the habitat or species;
- Do not attempt to disturb or remove protected species;
- Contact the ECoW who will provide guidance on how to proceed; and
- Details of the incident, including photos and relevant information on the environmental Incident will be recorded and reported.

Refer to the Landscape Plan contained Appendix A (13271/P01b) for areas to be protected during construction and for those trees to be retained.

9.0 Protection of Water Resources

9.1 The following activities give rise to potential risks to water course contamination (Sudden Brook). The proposed mitigating measures against this have been identified.

a) Deliveries

Special care is to be taken during deliveries, especially when fuels and hazardous materials are being handled. All deliveries are to be supervised by a responsible person so that storage tank levels are checked before delivery to prevent overfilling and that the product is delivered to the correct tank. Contingency plans are to be agreed and suitable materials available to deal with any incident that occurs. All employees are to be briefed on the actions that are required in the event of a spillage. Any spillages are to be recorded and advised to the Main Contractor.

b) Storage

Many of the materials used in construction operations, such as oil, chemicals, cement, lime, cleaning materials and paint have the potential to cause serious pollution. All fuel, oil and chemical storage must be sited on an impervious base within a bund at least 110% of capacity and secured. The base and bund walls must be impermeable to the material stored and of an adequate capacity. Leaking or empty oil drums must be removed from the site immediately and disposed of via a licensed waste disposal contractor. The contents of any tank are to be clearly marked on the tank, and a notice displayed requiring that valves and trigger guns be locked when not in use.

c) Security

All valves are to be protected from vandalism and unauthorised interference and turned off and securely locked when not in use. Any tanks or drums are to be stored in a secure container or compound, which is to be kept locked when not in use.

d) Silt

Water containing silt is never to be pumped directly into surface water drains. Silty water can arise from excavations, exposed ground, stockpiles, plant and wheel washing.

i) Excavations

Measures are to be taken to prevent water from entering excavations. This could be by the use of cut-off ditches to prevent entry of surface water and well point dewatering or cut-off walls for ground water. Personnel and/or plant are not to disturb water in the excavation. The means of dewatering excavations in the event there is ingress is to be agreed in advance with the landowner.

ii) Spoil Heaps

Spoil heaps are to be located and configured in a way that will avoid the risk of contamination of drainage ditches.

iii) Plant and wheel washing

Wheel washes and plant washing facilities are to be securely constructed with no overflow and the effluent should be contained for proper treatment and disposal. Recycling of water is to be included within the design.

iv) Site roads

These are to be kept free from dust and mud deposits. In dry weather dust suppression measures may be required.

e) Refueling

The risk of spilling of fuel is at its greatest during the refueling of plant. Mobile plant is to be refueled in a designated area, preferably on an impermeable surface away from any drains or watercourses. A spill kit is to be available in this location. Hoses and valves are to be checked regularly for signs of wear and turned off and securely locked when not in use. Diesel pumps and similar equipment are to be placed on drip trays to collect minor spillages. These should be checked regularly and any accumulated oil removed for disposal.

f) Concrete

Concrete is highly alkaline and corrosive and can have a serious impact on watercourses. It is essential to take particular care with all works involving concrete and cement. Suitable provision is to be made for the washing out of concrete mixing plant or ready mix concrete lorries so that washings do not flow into any drain or watercourse or seep underground.

In the event of a spillage on site, the material must be contained (using an absorbent material such as sand or soil or commercially available booms). All spillages are to be reported and the Environment Agency will be advised in the event of a significant occurrence.

10.0 Wheel Washing & Dust and Dirt Control/ Contamination

10.1 Dust dirt, and mud control is essential and will almost certainly be required at various stages of development. Contractors will be required to take measures to minimise the presence of air borne dust during construction. The Contractor will take all reasonable measures to avoid mud being deposited on public roads. Adjacent roads and footways will be regularly inspected and cleaned.

10.2 Given the size of the site and location of the works the risk of dust and dirt affecting neighbouring residential properties is minimal however the Contractor will be response for reducing dust and dirt at source. The following measures will be undertaken by the Contractor:-

- Hard routes will be constructed with stone or tarmac or stoned
- Design controls will be implemented for construction equipment and vehicles, and appropriately designed vehicles are to be used for materials handling
- Completed earthworks will be vegetated as soon as practicable
- The site will be regularly inspected and site boundaries checked for dust deposits and removed as necessary. In addition, the local highway network immediately adjacent to the site is to be checked and cleaned when necessary
- The provision of easily cleaned and properly drained hardstanding for vehicles entering, parking on and leaving the site
- Secure sheeting of lorries carrying spoil or other particulate materials
- Design controls are to be implemented for construction equipment and vehicles, and appropriately designed vehicles are to be used for materials handling.
- Completed earthworks are to be vegetated as soon as practicable.
- There is to be no burning of materials on site.
- The Contractor will take all reasonable measures to minimise sedimentation of highway drainage systems. This will include the use of sediment traps and/or barriers to prevent mud and/or contaminated materials entering the system.

10.3 Particular care will be taken to ensure dust and pollution control within the adjacent residential areas area and to prevent / control water run-off and pollution towards to the watercourse.

10.4 At all times during any remediation works at the site a specialist consultant shall be on site to oversee all material movements.

10.5 There must be maintained on site a sufficient water supply to ensure dowsing down of materials prior to moving. Should there be insufficient water on site to dowse down the materials no movement of materials shall occur until the problem is rectified.

11.0 Waste Management

11.1 The Contractor will employ measures to minimise disposal of waste generated during the construction period. The Contractor will re-use and recycle any waste materials as far as is reasonably practical.

11.2 The Contractor will comply with all relevant guidance and legislation including the following:-

- Environmental Protection (Duty of Care) Regulations 1991;
- Environmental Protection Act 1990, Part II;
- The Waste (England and Wales) Regulations 2011;
- List of Wastes (England) Regulations 2005;
- Hazardous Waste Regulations, 2005;
- Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991;
- A Simple Guide to Site Waste Management Plans (Environment Agency NetRegs Guidance) 2011;
- Environmental Permitting (England and Wales) Regulations 2010;
- Clean Neighbourhoods and Environment Act 2005; and
- Definition of Waste: Development Industry Code of Practice, CL:AIRE 2011.

11.3 The Contractor will be responsible for developing a detailed Waste Management Plan (WMP) The WMP will contain details of the procedure for assessment, separation and storage of waste materials for re-use, recycling or disposal. The WMP will identify recycled material content, methods of waste minimisation and recycling.

11.4 A Site Waste Management Plan is to be provided by the Contractor that includes the following:

- Organisational responsibility for the preparation and implementation of the plan
- The types and quantity of waste anticipated
- The measures that will be used to monitor delivery of the plan
- The available options for waste management and preferences
- The waste disposal sites and contractors that are proposed. All sites must be approved by the appropriate Waste Regulation Authority
- Identify how hazardous and non-hazardous waste is to be disposed
- Include how the necessary familiarisation and training to make the plan effective is going to be implemented
- The measures to be used to ensure the efficient use of materials and minimise the production of waste and its handling
- The means of monitoring how much and what types of waste are produced
- A review process that monitors performance against targets and implements improvement actions where appropriate. The review period is to be every 3 months.

The objectives of the plan are to deliver the following:

- To minimise the creation of waste wherever possible;
- To remove rubbish, debris, surplus material and spoil regularly and keep the site clean and tidy;
- To ensure that waste disposal is managed in a controlled way
- To ensure that surplus material is minimised and any non usable surplus is recycled;
- To provide all necessary waste transfer documentation

11.5 The Contractor will be required to investigate the possibility to minimise waste arisings at source and where waste generation is unavoidable, to maximise the recycling and re-use of materials. All waste will be stored in labelled skips or containers and material to be re-used will be sorted on site. It may be

necessary for some waste to be taken off site for segregation by others. The amount of waste re-used, recycled or disposed off site will be recorded by the Contractor.

11.6 Any waste taken off site will be taken to a licensed waste disposal facility by a registered waste carrier. The Contractor will ensure that all waste and disposal facilities are appropriately licensed. Where potential hazardous or contaminated ground is encountered the Contractor will carry out sample testing to classify the materials. The waste soils shall be classified in accordance with the Landfill (England and Wales) (Amendment) Regulations 2004, the Hazardous Waste Regulations 2005 and provided with a six figure European Waste Catalogue code as described by the List of Wastes Regulations (England) 2005. The Contractor will use a qualified specialist for treatment of any such materials and the disposal of the material will be dealt with under all relevant regulations.

11.7 Measures will be taken to ensure any waste leaving the site is protected to prevent waste deposits onto the public highway.

11.8 The following documentation must be completed and held on-site by the Contractor in a designated file:

- Targets for waste minimisation and recycling;
- Quantities of waste produced, reused, recycled and sent to landfill;
- Waste Transfer Notes (Controlled Waste);
- Hazardous Waste Consignment Notes;
- Waste carrier's registration licences; and
- Other relevant Environmental Permits and licenses if required for disposal sites.

12.0 Communication

12.1 A sign board, clearly located at the site entrance will be erected by the infrastructure contractor which will provide details of the company and a single point of contact on site.

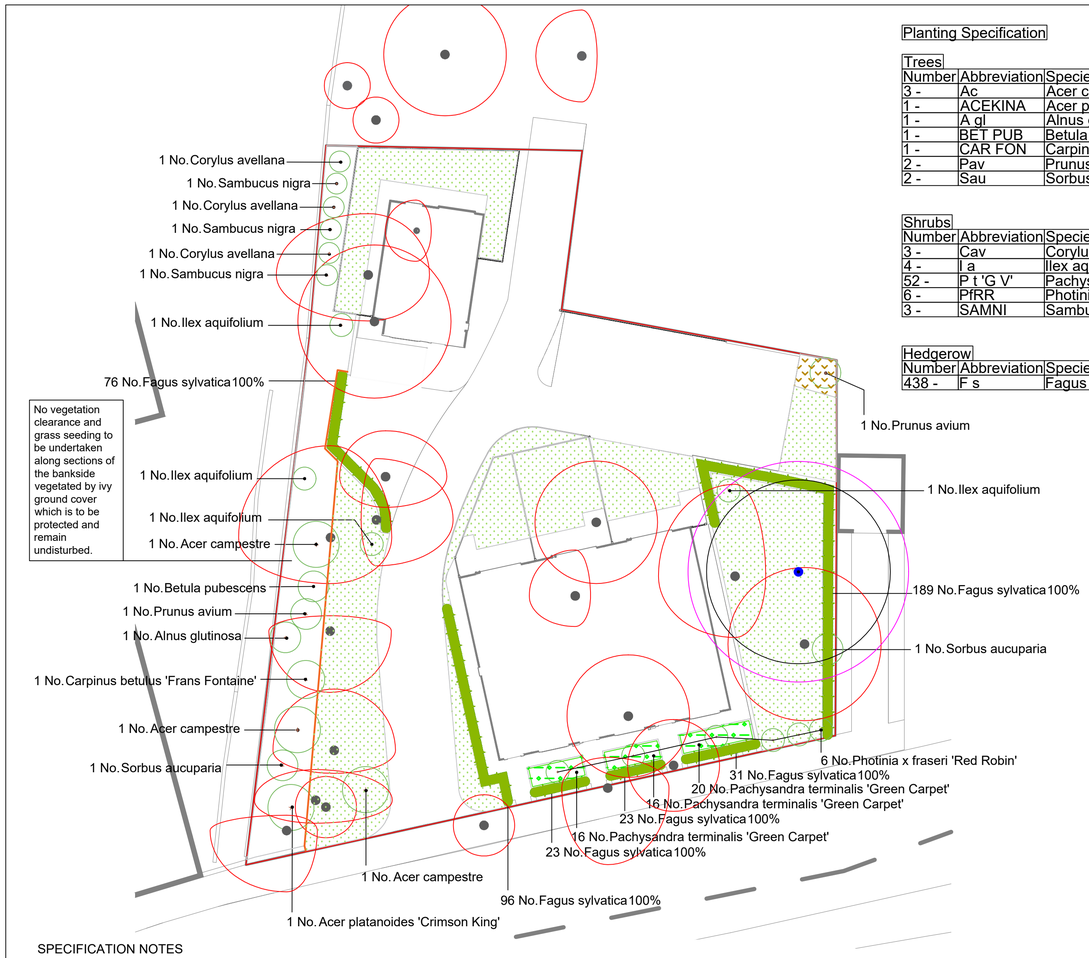
12.2 The Contractor will implement a complaints procedure and the point of contract provided will be responsible for dealing with any complaints received. The contractor will be required to keep a log book on site off all complaints received, the date received and the details and date of the response provided.

12.3 The contractor is to liaise with local resident groups so as concerns that they might have can be aired and resolved. Contractors are expected to embrace the objectives of the Considerate Constructors Scheme

Main Contractor	Paul Merrington Boarshurst Building Contractors 0161 678 0300
Site Manager	Paul Merrington Boarshurst Building Contractors 0161 678 0300
Ecological Clerk of Works	Verity Webster Ecology Consultant 07917 852 401
Landscape Consultant	Jon Berry Tyler Grange 01285 831 804

Appendix A

Drawings



Planting Specification

Amenity Grass (total 353m2): 8,836g EG22C Strong Lawn Grass Mixture with Clover (Sowing rate: 25g/m2)
Wildflower Meadow Mix (total 6m2): 24g EM1 Basic General Purpose Meadow Mixture (Sowing rate: 4g/m2)

Trees

Number	Abbreviation	Species	Girth	Height	Density	Specification
3 -	Ac	Acer campestre	12-14cm	350-425cm	Counted	RB; 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
1 -	ACEKINA	Acer platanoides 'Crimson King'	12-14cm	350-425cm	Counted	RB; 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
1 -	A gl	Alnus glutinosa	12-14cm	350-425cm	Counted	RB; 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
1 -	BET PUB	Betula pubescens	12-14cm	350-425cm	Counted	RB; 3x; Heavy Standard; clear stem 175-200cm; 5 breaks
1 -	CAR FON	Carpinus betulus 'Frans Fontaine'	12-14cm	350-425cm	Counted	RB; 3x; Heavy Standard; clear stem 175-200cm; 5 breaks
2 -	Pav	Prunus avium	12-14cm	350-425cm	Counted	RB; 3x; Heavy Standard; clear stem 175-200cm; 5 breaks
2 -	Sau	Sorbus aucuparia	12-14cm	350-425cm	Counted	RB; 3x; Heavy Standard; clear stem 175-200cm; 5 breaks

Shrubs

Number	Abbreviation	Species	Pot Size	Height	Density	Specification
3 -	Cav	Corylus avellana		80-100cm	Counted	B; 1+2; Transplant - seed raised; branched; 3 breaks
4 -	I a	Ilex aquifolium	25-35L	175-200cm	Counted	Leader with laterals
52 -	P t 'G V'	Pachysandra terminalis 'Green Carpet'	2L	N/A	3/m²	Several shoots; 7 breaks
6 -	PfRR	Photinia x fraseri 'Red Robin'	18L	125-150cm	Counted	Ball on stem; Topiary Half Standard; ball diameter 40-50cm; clear stem 100cm; neatly clipped
3 -	SAMNI	Sambucus nigra		80-100cm	Counted	B; 1+1; Transplant - seed raised; branched; 3 breaks

Hedgerow

Number	Abbreviation	Species	Height	Density	Specification
438 -	F s	Fagus sylvatica	60-80cm	0.3Ctr Double Staggered at 0.5m offset	RB; Transplant (1+1)

SPECIFICATION NOTES

GENERAL

Proposals to be read in conjunction with Architects and Engineers Drawings;

All landscape operations to be in accordance with all relevant and current BS and BS EN standards including BS 8545: 2014, BS4428: 1989 & BS 3936: 1990,1992,2007; and all amendments to date. Plant material to conform with the National Plant Specification;

Any Plant material planted outside the recognised planting season (Nov-Feb), to be containerised stock and supplied at the sizes specified;

Plant handling and planting operations to be in accordance with HTA "Handling and Establishing Landscape Plants parts I - III;

All planting to be maintained and guaranteed for 12 months to include watering, weeding, litter picking, pest & disease control;

The landscape contractor is to take all safety precautions to prevent any injury to any persons. The landscape contractor shall comply with the requirements of the Health and Safety at Work Act 1974 and current Construction, Design and Management Regulations.

Fence along the edge of the bankside vegetation to be retained and protected to be installed prior to the commencement of site clearance activities.

SOIL AND MULCH

Existing topsoil to be stripped and stored on site in heaps not exceeding 2m height and kept weed free;

Any compacted subsoil to be broken up to allow free drainage and to enable topsoil to key into surface;

Any imported topsoil to be to BS3882:2015, weed free, medium texture, neutral PH value, reasonably stone free with no stones over 20mm in size;

Finished topsoil levels to be flush with adjacent paved surfaces;

Soil depths to be 900mm for Extra Heavy Standard trees, 600mm for Heavy Standard trees, 600mm for Standard trees; 450mm for shrub and hedge planting, 150mm for grass turfing and seeding.

Backfill for trees as per detail and other planting to be a mix of 50/50 approved/stored topsoil and shrub planting compost evenly mixed.

All planting areas to be covered with a 75mm depth of medium grade bark mulch.

PLANT MATERIAL TREATMENT

All to be British grown stock and fully hardened off;

Root Dip - Proprietary Root Dip applied to all bare root stock at time of lifting at nursery and prior to planting (for hedgerow plants);

Anti-Desiccant - Proprietary anti-desiccant to be applied to foliage of all containerised/rootballed material in leaf prior to transportation and during any delay in planting;

Tree Stakes and Ties - Stakes to be pressure treated, round, smooth and peeled Larch or Chestnut as per detail.

EXISTING TREES AND SHRUBS

Where existing trees and shrubs are to be retained they will be subject to a full Arboricultural inspection for safety;

Any surgery required shall be in accordance with BS3998: 2010 'Tree Work - Recommendations';

All existing trees and hedges to be retained are subject to BS5837: 2012 'Trees in relation to Construction - Recommendations', and should be fully fenced off in accordance, prior to the commencement of any works;

No storage of materials, disposal of rubbish, fires, spillage of oil and chemicals, ground compaction, excavation or changes in level shall be carried out within existing tree/hedge canopies or their Root Protection Areas.

The contractor shall maintain protective fencing around retained trees and hedgerows until all site works are completed. The contractor will then remove the fencing and reinstate the ground maintaining all existing levels.

All works shall comply fully with the Arboricultural Method Statement;

PROPOSED TREES

Contractor to ascertain the location of all sewers and services prior to tree planting;

No trees to be planted within 3 metres of sewers or services or other easement recommended by the relevant statutory undertaker without the use of tree root barriers. Use Green Blue Urban Reroot 2000 in the vicinity of buildings and Reroot Ribbed Barrier in the vicinity of paths/hard surfaces and services (refer to tree pit details). All tree pits with root barriers are subject to engineer's approval.

Fencing: Identify and mark out an access route to the tree planting locations to avoid / minimise the extent of any localised disturbance to the ivy ground cover as a result of tree planting works.

Where necessary increase tree pit dimensions to ensure that tree pits are at least 75mm deeper and 150mm wider than the rootball. Break up bottom of pits to a depth of 150mm. Compacted glazed sides of pits should be roughened;

Cut back any broken or damaged roots to sound growth.

Plant trees upright, in the centre of the pit and at original soil depth.

New trees to be fitted with strimmer guards.

SHRUBS

Before planting, remove any non-perishable containers and carefully prune any damaged roots. Plant upright or well balanced with best side to front. Carefully return excavated topsoil/shrub planting compost mix, packing around evenly spread roots or root ball and heel well in;

Planting holes for shrubs to be 150mm wider than root spread and 450mm deep.

Shrubs to be planted in groups of 3-7 of the same species wherever possible, with smaller plants located abutting paths and roads;

Water plants thoroughly immediately after planting;

Immediately after planting cut back any damaged, dead or diseased branches;

After planting rake soil to a fine tilth with approved cambers and no hollows;

After raking apply approved bark mulch to a depth of 75mm.

HEDGING (Native)

Plant hedging in trenches 450mm depth and large enough to take the full spread of roots;

Backfill with excavated topsoil/shrub planting mix;

Prune back native hedging hard at the appropriate season in year one (and outside of the bird nesting season September 1st to February 28th).

PREPARATION OF AMENITY GRASS and WILDFLOWER AREAS

Prepare the ground by rotavation to break up topsoil to full depth and reduce top 100mm to a fine tilth. Avoid doing this when the soil is wet, to avoid damaging the soil structure and drainage. All turfed areas are to be weed free prior to turfing;

Remove all undesirable particles brought to the surface including clay balls and stones larger than 50mm in any dimension, building debris, or roots;

Grade the final surface to smooth contours ensuring the removal of all localised hollows and ridges, allowing for any settlement so that finished levels should be approx. 30mm higher than adjacent kerbs and manholes.

GRASS SEEDING – AMEMITY and WILDFLOWER

Seeding to be undertaken between April-October (in accordance with Emorsgate recommendations);

Seed in calm weather with seed evenly distributed in 2 directions;

Sowing rates as recommended by Emorsgate;

Roll seed to ensure contact with the soil ("crinkle or Cambridge" or as appropriate);

First and subsequent cuts in accordance with Emorsgate recommendations).

WATERING

Planting areas are to be brought up to field capacity on completion of planting and during maintenance visits subject to prevailing conditions.

WEEDING AND LITTER CLEARANCE

Planted areas to be maintained weed and litter free during maintenance and management period to include the maintenance of ivy free tree pits to protect the planted trees.

0 10m

North

This document should not be relied on or used in circumstances other than those for which it was prepared and for which Tyler Grange was appointed.

Tyler Grange accepts no responsibility for this document to any other party other than the person by whom it was appointed.

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Key:

- Site Boundary
- Retained Tree - RPA indicated in purple
- Tree to be removed - canopy extent indicated in red
- Proposed Tree / Shrub
- Proposed Native Hedgerow
- Proposed Amenity Grass
- Proposed Wildflower Meadow Mix
- Proposed Ground Cover
- Indicative extent of wooden post and rail fence to include one access/egress style (exact position to reflect the extent of ivy ground cover to be retained and protected)

Rev	Description	Date
b	Final	09.06.2020
a	Final	09.06.2020
-	Draft for comments	04.06.2020

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