



Bloor Homes Ltd

Proposed Development at Hollingworth Road and Rakewood Road, Littleborough

Construction Environmental Management Plan

3020007 CTR032 (03)

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RSK GENERAL NOTES

Project No.: 302007 CTR032 (03)

Title: Construction Environmental Management Plan (CEMP) – Proposed Development at Hollingworth Road and Rakewood Road, Littleborough, Littleborough

Client: Bloor Homes (North West)

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Revision No.	Revision Information	Date	Reviser
00	First issue submitted to Bloor Homes for comment as Outline CEMP.	21/12/2023	Andrew Sowerby
01	Updated following client feedback.	12/02/2024	Andrew Sowerby
02	Updated with additional information received from client.	17/06/2024	Andrew Sowerby
03	Updated following final comments from client and finalised.	21/06/2024	Andrew Sowerby

1 INTRODUCTION

RSK have been commissioned by Bloor Homes ('client') to develop a Construction Environmental Management Plan (CEMP) for the development of land parcels located off Hollingworth Road and Rakewood Road, Littleborough.

Up until recently, a standalone planning application was being prepared for alterations and extension to the car park at Rakewood Road. As a result of re-consideration of the proposed planning strategy, the Applicant now intends to submit one single planning application covering the proposals at Hollingworth Road and Rakewood Road in Littleborough. The two land parcels are referred to in the CEMP as the 'Hollingworth Road land parcel' and the 'Rakewood Road land parcel'.

The CEMP outlines the aspects of environmental management required to mitigate any potential environmental impacts during construction.

1.1 Project Description

For the purposes of the CEMP, we have assumed that the development includes the following principal components on two parcels of land (Hollingworth Road and Rakewood Road):

- Development of 312 residential dwellings;
- Development of a primary school on the southeastern part of the Hollingworth Road land parcel;
- Development of public open space with soft landscaping, children play areas, and flood attenuation basins;
- Construction of two vehicular access points to the Hollingworth land parcel from Hollingworth Road on the eastern boundary with associated infrastructure; and
- Associated utility infrastructure will be installed (including gas, electricity, water sewerage, telecommunication).

1.2 Site Location and Description

The Site comprises of two parcels of land, Hollingworth Road (the land parcel to the north in **Figure 1**- Site Location Plan) and Rakewood Road (the land parcel to the south in **Figure 1** – Site Location Plan), with a combined total of 21.49 hectares (ha).

The Hollingworth Road land parcel is located to the north-east of Smithy Bridge and north of Hollingworth Lake. This land parcel is centred approximately at National Grid Reference SD 93341 15448, around 4 miles east of the town of Rochdale. This parcel of land is 18.85 ha.

The Rakewood Road land parcel is located approximately 185 metres to the east of the Hollingworth Road land parcel and is centred approximately at National Grid Reference SD 94042 15228. The Rakewood Road land parcel is bordered by Rakewood Road to the south, the Hollingworth Country Park car park and RSPCA building to the west and agricultural land to the north and east. This parcel of land is 2.64 ha overall. The main part of the Rakewood Road land parcel is 2.38 ha and will accommodate the proposed

extension to the car park at Hollingworth Lake Country Park. The remaining land (0.26 ha) includes an access route to the proposed extended car park from Rakewood Road through the existing Hollingworth Lake Country Park car park, alongside a number of existing car parking spaces, which are proposed to be re-configured.

The Hollingworth Road land parcel appears to have been used as agricultural land since the start of the historical record period available (1851). Features of note include a sandstone quarry in the northwest of the site, two wells shown in proximity to a former dwelling named Heald, and a separate well located in the west of the site, a drain conduit that runs across the site from the off-site Hollingworth Reservoir north to the Rochdale Canal (shown only in 1851 mapping), the presence of Cleggs Wood Lane and other smaller footpaths, and from the 1980s a car park shown to occupy the south-east corner of the site. The land is located within an area that has been subject to historical underground coal mining activity. The Coal Mining Risk Assessment prepared by Stantec refers to two coal seams worked beneath the site in the 1800s up to 1900. The worked seams are identified by the Coal Authority as being at about 60 metres and between 96 metres and 110 metres depth. No specific mitigation strategy is proposed and there are no constraints or restrictions regarding the layout of the proposed development, other than in the far north-west corner where a suitable stand-off zone will need to be agreed with the Coal Authority. There is a residual risk of unrecorded mine entries to be present on site.

The closest surface water to the Hollingworth Road land parcel include:

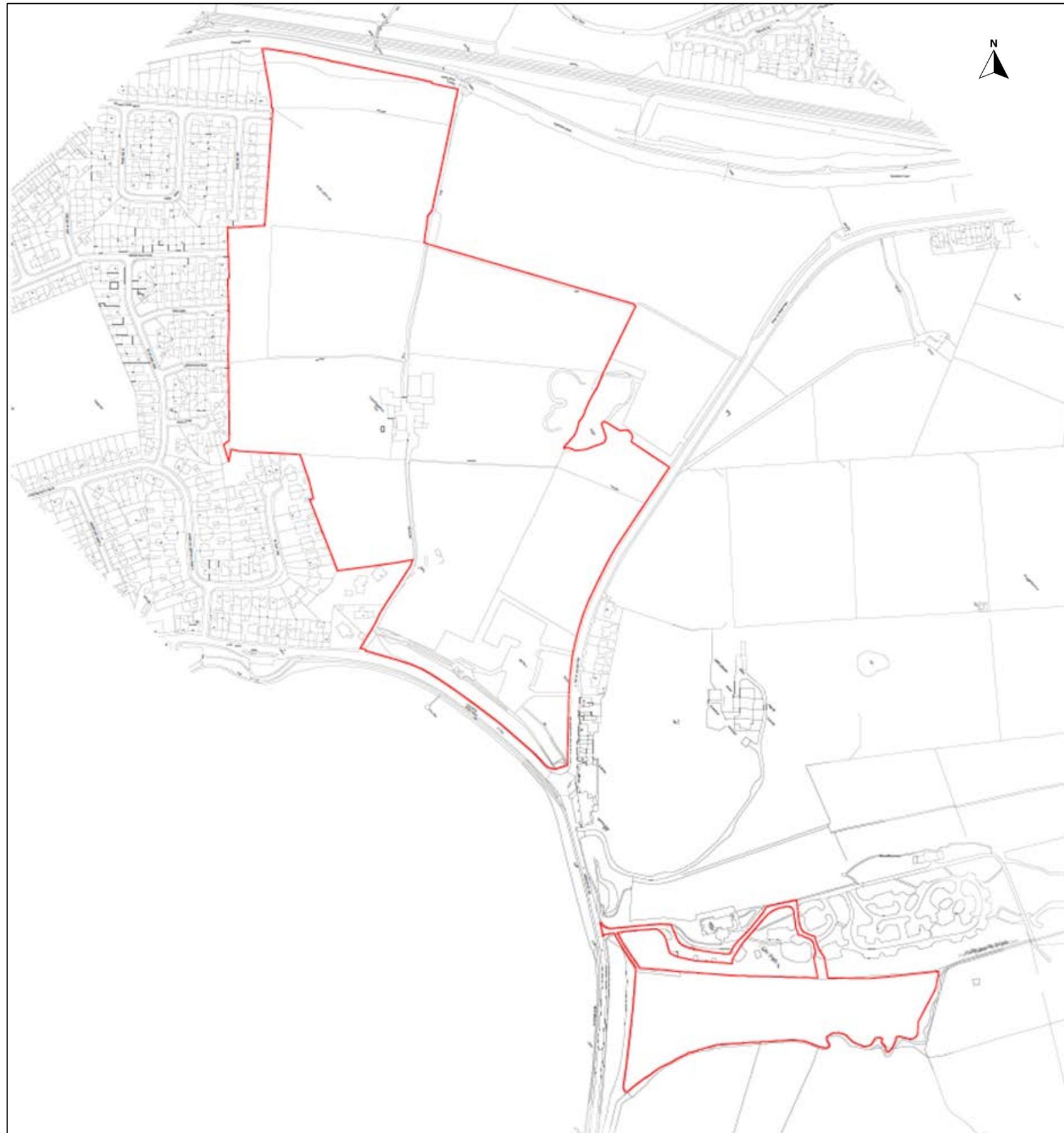
- A reservoir located immediately east of the site, and Hollingworth Lake located approximately 20m south of the site.
- Rochdale Canal along the northern boundary of the site.
- The River Roch located approximately 70m north of the site, flowing to the southwest.

The Rakewood Road land parcel is shown as agricultural land since the earliest records available (1851). There is a high risk of unrecorded shallow workings on the site and it lies within the Coal Mining Authorities Coal Mining Reporting Area. A report (see Geo-Environmental Desk Study and Coal Mining Risk Assessment prepared by Betts Geo) shows that there are records of historical working at 81m beneath the site (last worked in 1900. These workings are unlikely to pose a risk to future development. There are also three mine entries within 100m of the site boundary. It is thought unlikely that there are unmapped shafts on site.

The closest surface water feature to the Rakewood Road land parcel is Hollingworth Brook which runs north along the southeastern and northeastern boundaries. Hollingworth Lake is the next closest water feature separated from the site by an embankment adjacent to the southwest.

During construction there will be a site compound located within the development that will provide a site office, meeting room, canteen, toilets and drying room. There will be a main site storage area for materials and wastes. There will also be a designated site parking area for site personnel and contractors. These will be developed in detail prior to works commencing.

Figure 1 Site Location



1.3 Planning Requirements

This CEMP sets out the environmental commitments that are to be delivered by the Principal Contractor for the proposed development.

Bloor Homes require a CEMP to manage environmental performance of construction activities, which will be aligned to any planning conditions required. Should further information be required the CEMP can be reviewed and amended prior to construction commencing on the site.

The CEMP is considered a 'live' document and can also be reviewed and updated during construction.

1.4 References

The technical reports which have been reviewed in order to prepare this CEMP are detail in **Table 1**.

Table 1: Report References

Title	Prepared By	Date	Reference
Phase 1 Ground Condition Assessment for Hollingworth Road, Littleborough	Stantec	February 2024	332010570
Coal Mining Risk Assessment for Hollingworth Rad, Littleborough	Stantec	February 2024	332010570/3501/R02
Geo-environmental Desk Study and Coal Mining Risk Assessment for Rakewood Road, Littleborough	Betts Geo Consulting Engineers	November 2023	23BLH039/DS&CMR A
Extended Phase 1 Habitat Assessment for Hollingworth Road	Tyler Grange	2022	-
Ecological Impact Assessment for Land off Rakewood Road, Littleborough	Tyler Grange	January 2024	11833_R01_NB
Arboricultural Impact Assessment for Littleborough Mixed Use Development (Hollingworth Road)	Tyler Grange	January 2023	11833_R06a_JJ
Arboricultural Impact Assessment for Land off Rakewood Road, Littleborough	Tyler Grange	January 2024	11833_R08_WS_LB
Flood Risk Assessment and Drainage Management Strategy for Land off	Betts Hydro Consulting Engineers	March 2023	HYD760_HOLLINGWORTH.ROAD_FRA&DMS (Rev 3.0)

Title	Prepared By	Date	Reference
Hollingworth Road, Littleborough			
Flood Risk Assessment and Drainage Management Strategy for Land off Rakewood Road, Littleborough	Betts Hydro Consulting Engineers	December 2023	HYD822_RAKEWOO D.ROAD_FRA&DMS (Rev 1.0)

In addition to the above, several plans have been provided for the site. In some cases, copies of these plans have been inserted into the CEMP.

2 KEY ENVIRONMENTAL IMPACTS AND MITIGATION METHODS

Environmental management measures have been developed to avoid or reduce environmental impacts associated with the construction works. Environmental management measures shall be incorporated into Risk Assessments and Method Statements (RAMS) and will be communicated to the workforce.

2.1 Noise and Vibration

A review of the likely noise and vibration effects from construction works can be undertaken once a detailed schedule of equipment, processes and durations are known. Mitigation measures can be planned onsite in accordance with BS 5228 2009+A1:2014 – Code of Practice for noise and vibration on construction and open sites (Part 1. Noise and Part 2. Vibration) as outlined below.

Permitted hours of work

No construction work including site clearance and the delivery of materials will take place within the site outside of the following hours:

07.30 – 18.00 Monday to Friday

08.00 – 13.00 Saturdays

No construction work or deliveries to be carried out on Sundays or Bank Holidays.

There may be instances where Bloor Homes are required to work outside the permitted hours for noisy works. In this case, Bloor Homes will contact Rochdale Borough Council's Environmental Health Officer to confirm what actions they would require.

Table 2: Noise & Vibration Mitigation and Control Measures

Mitigation & Control Measures	Responsibility
Compliance Obligation: To be a good neighbour - to minimise noise and vibration disturbances to nearby residences.	
Consideration will be given to reducing noise emissions from site:	Site Manager

Mitigation & Control Measures	Responsibility
- Static plant such as generators, compressors and pumps will be positioned in a way that causes the minimum noise disturbance, i.e., away from sensitive receptors or behind noise barriers; - Where practicable, noisy plant and/or equipment will not be used simultaneously and/or in close proximity together to avoid cumulative noise impacts; and - The use of impact tools will be avoided near to occupied premises, wherever possible.	
Plant and equipment will be switched off when not in use (including during breaks and down time of more than 30 minutes). No idling vehicles or plant onsite.	Site Manager/Ground Works Contractor
Audible reversing warning systems on mobile plant and vehicles will be of a type which, whilst ensuring that they give proper warning, have a minimum noise impact on persons outside sites.	Site Manager/Ground Works Contractor
Vehicles and mechanical plant will be maintained and operated in such a manner as to minimise noise emissions. The contractor shall ensure that all plant complies with the relevant statutory requirements.	Site Manager/Ground Works Contractor
Where practicable, equipment which breaks concrete, brickwork or masonry by bending, bursting or “nibbling” will be used in preference to percussive tools.	Site Manager/Ground Works Contractor
Pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers.	Site Manager/Ground Works Contractor
Materials will be lowered and not dropped with drop heights minimised where practicable.	Site Manager/Ground Works Contractor
Site personnel must be instructed on Best Practical Means (BPM) to reduce noise and vibration as part of their induction onsite training and as required prior to specific works.	Site Manager/Ground Works Contractor

2.2 Air Quality

The development is located within the Greater Manchester Combined Authority Air Quality Management Area (AQMA).

Construction works may give rise to a risk of dust impacts during earthworks and construction, as well as from track-out of dust and dirt by vehicles onto the public highway. The IAQM (Institute of Air Quality Management, 2023) guidance 'Guidance on the Assessment of Dust from Demolition and Construction V2.1' recognises that, even with a rigorous dust management plan in place, it is not possible to guarantee that the dust mitigation measures will be effective all of the time, for instance under adverse weather conditions. The local community may therefore experience occasional, short-term dust annoyance.

To reduce emissions of dust and limit dispersion, the following mitigation measures must be followed.

Table 3: Air Quality Mitigation and Control Measures

Mitigation/Control	Responsibility
Compliance Obligations: To be a good neighbour – to minimise the generation of dust during the construction phase of the development. To protect the environment – to mitigate against the release of air emissions including gases and particulates which can have an adverse effect to human health.	
Communications	
Communication with local stakeholders will take place prior to works starting on site. This will include communication with Rochdale Borough Council and nearby properties.	Site Manager/Ground Works Contractor
Display the regional office contact information	Site Manager/Ground Works Contractor
Site Management	
Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken	Site Manager/Ground Works Contractor

Mitigation/Control	Responsibility
Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the logbook	Site Manager/Ground Works Contractor
Make the complaints/incidents log available to the Local Authority (LA) upon request	Site Manager/Ground Works Contractor
Site Preparation	
Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.	Site Manager/Ground Works Contractor
Fully enclose specific operations where there is a high potential for dust production, and they are active for an extensive period	Site Manager/Ground Works Contractor
Keep site fencing, barriers and scaffolding clean using wet methods.	Site Manager/Ground Works Contractor
Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used	Site Manager/Ground Works Contractor
Operating Vehicle/Machinery and Sustainable Travel	
Plant and equipment will be switched off when not in use (including during breaks and down time of more than 30 minutes). No idling vehicles or plant onsite.	Site Manager/Ground Works Contractor
Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable	Site Manager/Ground Works Contractor
Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas	Site Manager/Ground Works Contractor

Mitigation/Control	Responsibility
Operations	
Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems.	Site Manager/Ground Works Contractor
Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.	Site Manager/Ground Works Contractor
Use enclosed chutes and conveyors and covered skips	Site Manager/Ground Works Contractor
Minimise drop heights and use fine water sprays wherever appropriate	Site Manager/Ground Works Contractor
Ensure equipment is available to clean any dry spillages and clean up spillages as soon as reasonably practicable using wet cleaning methods.	Site Manager/Ground Works Contractor
Earthworks	
Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.	Site Manager/Ground Works Contractor
Appropriately seal using hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable	Site Manager/Ground Works Contractor
Only remove the cover in small areas during work and not all at once	Site Manager/Ground Works Contractor

Mitigation/Control	Responsibility
Construction	
Avoid scabbling (roughening of concrete surfaces) if possible.	Site Manager/Ground Works Contractor
Ensure sand and other aggregates are stored bunded areas and are not allowed to dry out, to avoid windblown dust.	Site Manager/Ground Works Contractor
Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	Site Manager/Ground Works Contractor
Track-out	
Use water-assisted dust sweeper on access and local roads, if required	Site Manager/Ground Works Contractor
Avoid dry sweeping of large areas	Site Manager/Ground Works Contractor
In the event of extreme conditions, the use of a road sweeper may also be employed if necessary.	Site Manager/Ground Works Contractor
Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Site Manager/Ground Works Contractor
Other	
Bonfires or burning of waste materials is prohibited.	Site Manager/Ground Works Contractor

2.3 Ecology and Nature Conservation

Extended Phase 1 and Phase 2 surveys have been undertaken on the site by Tyler Grange to support the Ecology Chapter prepared for the Environmental Statement (ES). Surveys within the ES include:

- (Confidential) Badger Survey
- Bat Survey
- Bird Survey
- Great Crested Newt Survey
- Otter and Water Vole Survey

The site is not subject to any statutory or non-statutory ecological designations. The nearest statutory designation is Rochdale Canal located adjacent to Hollingworth land parcel to the north. Rochdale Canal is designated as a Site of Special Scientific Interest (SSSI), as it contains important habitats for submerged aquatic plants and emergent vegetation and supports a diverse assemblage of aquatic flora, and a Special Area of Conservation (SAC), due to the presence of a floating water plantain *Luronium natans*.

South Pennine Moors SAC /SSSI and South Pennine Moors Phase 2 Special Protection Area (SPA) are located approximately 1km to the east of the Sites.

There are four non-statutory sites, of which are entitled Sites of Biological Importance (SBI). They are:

- Rochdale Canal (Scowcroft to Warland) SBI, immediately north of Hollingworth Road land parcel and 880 metres north of Rakewood Road land parcel;
- Hollingworth Lake SBI, 20m to the south of Hollingworth Road land parcel and 40 metres southeast of Rakewood Road land parcel;
- South Pennine Moors (north) SBI 1.4km east of Hollingworth land parcel and 560 metres southeast of Rakewood Road land parcel; and,
- Slopes by River Beal, Fir Grove Farm SBI, 1.9km south-west of Hollingworth land parcel.

Badger - A data search returned seven records of badger setts within 1km of the Hollingworth Road land parcel site boundary and seven records within 2km of the Rakewood Road land parcel. Several setts relate to badger setts located adjacent to the land parcels. The sites are considered to be of local ecological importance for badgers.

Full details of relevant legislation, as well as survey methods and results are provided in the Confidential Badger Survey Report. No further details are provided within this CEMP.

Bats – Surveys observed common pipistrelle emerging from the southern gable end of the farmhouse on the Hollingworth Road land parcel. The majority of the trees on Site were assessed as providing negligible bat roosting potential, as many of the ‘internal’ trees were hawthorn and goat willow, providing unsuitable roosting opportunities. There is a mature ash, which was assessed as having moderate bat roosting potential. The woodland block to the south-east of the Hollingworth Road site (surrounding the car park) comprised predominantly young/early mature plantation, with no suitable roosting opportunities. The Site offers low foraging opportunities.

The Rakewood Road land parcel offers limited foraging and commuting activity for bats, restricted to the woodland edge of the embankment and brook corridor. The land parcel contains no buildings for which bats could roost in but the embankment has five trees with moderate bat roosting potential.

Birds - On the Hollingworth Road land parcel a total of eight priority bird species were recorded. Of those, four were recorded as either confirmed or probable breeding within or adjacent to the site

It is considered that the assemblage of birds that may use the Rakewood Road land parcel for foraging and breeding is of negligible ecological importance.

Great Crested Newts and other Amphibians – Records states that the nearest Great Crested Newts have been observed 1.8km southwest of the Hollingworth Road site. No Great Crested Newts were found to be present on the land parcels with the peak count of four smooth newts and one palmate newt on the Hollingworth Road land parcel.

Otter and Water Vole – The nearest record of water voles to Hollingworth Road land parcel is 550 metres northeast along the Rochdale Canal. Records of otter show that there have been sightings on the River Roch

An Arboricultural Impact Assessment has been prepared for both parcels of land. On the Hollingworth Road land parcel a total of 41 individual trees, 20 tree groups, 1 woodland area and 1 hedgerow were identified. A total of 10 individual trees, of which 2 are category B and the rest are Category C, are proposed for removal or partial removal. It is also proposed that six groups of trees will be either removed or partially removed (all Category B or C), and selected trees within the woodland will also require removal.

On the Rakewood Road land parcel three individual trees and part of one group of trees, the majority of which are of low quality, are proposed for removal.

Table 4: Ecology & Nature Conservation Mitigation and Control Measures

Mitigation/Control	Responsibility
Site personnel will be given site inductions providing information on the presence of any protected species, their legal obligations and what to do in the event of unexpected finds, i.e. stop work immediately and inform the site manager who will determine the next steps following consultation with ECoW.	Site Manager/Groundworks and Ecological Clerk of Works
Rochdale Canal SAC is located immediately to the north of the Site. The Canal will be provided with silt fencing between the construction area and its southern bank. A buffer zone of 10 metres within which no construction activities will take place will also be maintained. Should works be required immediately adjacent to the canal (i.e. within the 10m buffer zone) a detailed assessment will be completed prior to commencement to ensure any additional measures required to reduce the risk of pollution to the canal are in place. This may include (but is not limited to): • informing the Canal and River Trust of the intention to undertake works in the area; • the use of drip trays on all static plant and equipment; • the use of swales and filter strips to prevent any surface water runoff entering the canal; • increased visual monitoring of the canal downstream of any works; and/or • ensuring that any waste material, concrete, cement, grouts, oils and other potentially polluting materials are not stored within the 10 metre buffer zone. The site manager will ensure that the canal is regularly checked to ensure that there is no impact from works being undertaken.	Project Manager/ Site Manager/Groundworks and Ecological Clerk of Works
Habitats of highest ecological value/ importance in other areas of the Site and immediately adjacent (woodland, scattered mature trees and offsite pond) will be fenced off, ensuring a suitable buffer zone where no construction works will take place.	Project Manager/ Site Manager/Groundworks and Ecological Clerk of Works
The pond in the northeast corner of the site will be retained. Prior to construction commencing on site the pond area will be fenced off, ensuring a suitable buffer zone is left undisturbed around the pond.	Project Manager/ Site Manager/Groundworks and Ecological Clerk of Works

Mitigation/Control	Responsibility
The use of silt fencing will also be considered to ensure that no runoff of silt laden surface waters can enter the pond to damage any of the wildlife present. The pond will be checked regularly to ensure it remains undisturbed.	
Invasive Species Some small patches of Himalayan Balsam have been identified near to the farm/barn complex. To prevent the spread of this invasive species during any demolition and preparatory works, specialist contractors will be appointed prior to works commencing to ensure these patches of Himalayan Balsam are eradicated. In order to remove all traces of Himalayan Balsam and the seed bank, repetitive herbicide treatments is likely to be required. Should any Himalayan Balsam be removed from site then it will be deemed a controlled waste. Disposal of this material is only possible at a suitably licensed landfill site.	Project Manager/ Site Manager/Groundworks and Ecological Clerk of Works
Mitigation to prevent harm to mammals e.g. badgers, hedgehogs etc. Compliance Obligation: To prevent activities that intentionally or recklessly damages or obstructs a protected species breeding or resting place and/or disturbing a protected species	
The exact location of the offsite badger sett remains confidential. However, the sett will be retained and is approximately 31.5m from the nearest proposed works, therefore no specific mitigation is required for the badger sett. A resurvey of the Site will be undertaken prior to development work commencing. If in the interim, badger setts have colonised elsewhere on the Site, or adjacent land that could be disturbed, suitable mitigation would need to be devised (such as closing new setts under licence, or redesigning areas to avoid new setts).	Site Manager/Groundworks and Ecological Clerk of Works
If excavations and trenches are required to be left open overnight, measures will be put into place to ensure mammals cannot become trapped. This could simply be in the form of a gently graded ramp or roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water.	Site Manager/Groundworks and Ecological Clerk of Works

Mitigation/Control	Responsibility
Any temporarily exposed open pipes (>150mm outside diameter) should be blanked off at the end of each working day so as to prevent small mammals gaining access as may happen when contractors are off-site.	Site Manager/Groundworks and Ecological Clerk of Works
Any trenches or pits will be inspected each morning to ensure no mammals have become trapped overnight. Should a trapped animal be encountered the Ecological Clerk of Works will be contacted immediately for further advice.	Site Manager/Groundworks and Ecological Clerk of Works
Potentially poisonous/hazardous substances required on site during the construction phase should be stored securely in fenced areas.	Site Manager/Groundworks and Ecological Clerk of Works
All site materials to be stored off the ground on pallets and all woody vegetation removed to be stored in skips prior to chipping, or chipped immediately, with all arisings moved off-site.	Site Manager/Groundworks and Ecological Clerk of Works
Mitigation to prevent disturbance of bats. The following section describes how Bloor Homes will mitigate against harm to bats onsite.	
Loss of a confirmed bat roost is anticipated, due to the removal of the farmhouse on the Hollingworth Road land parcel during the construction phase. As a result: - An alternative bat roost will be designed into the scheme, prior to the demolition of the farm building. This shall comprise artificial bat boxes, ideally located within close proximity to the building – in locations such as the adjacent retained trees and integrated into the fabric of the houses on site. - A 'low impact' licence application to Natural England, and update surveys in the year of the application will need to be undertaken. Three nocturnal dusk emergence surveys will be undertaken on the farm building.	Site Manager/Groundworks and Ecological Clerk of Works
Light-spill onto retained and newly created habitat, in particular the retained hedgerows, tree lines and scrub, will be minimised in accordance with good practice guidance (Bat Conservation Trust and Institute of Lighting Professionals, 2018) to reduce potential impacts on light-sensitive bats (and other nocturnal fauna) giving consideration to the following:	Ecological Clerk of Works

Mitigation/Control	Responsibility
• Light exclusion zones or 'dark buffers'; • Appropriate luminaire specification – ideally less than 2,700K; • Light barriers / screening e.g., new planting of trees and hedgerows, fences or walls; • Spacing and height of lighting units – increased spacing and lower heights will decrease the space that is illuminated; • Light intensity; • Directionality e.g., avoid upward spread of light or towards trees if possible; and • Dimming and part-night lighting e.g., when human activity is low switch off or dim lights.	
Mitigation to prevent disturbance of nesting birds. The following section describes how Bloor Homes will mitigate against harm to nesting birds onsite. Compliance Obligation: To prevent activities that intentionally or recklessly, damage or destroy nests.	
Of the four priority species recorded as either confirmed or probable breeders on Site, only lapwing breed in habitats which are to be impacted during the construction phase of the development. The remaining three species breed in boundary habitats which are largely to be retained.	
To avoid a potential offence under the relevant legislation, no clearance of suitable vegetation should be undertaken during the bird-nesting season (1st March to 31st August inclusive). If this is not practicable, any potential nesting habitat to be removed should first be checked by a suitably qualified ecologist in order to determine the location of any active nests. Any active nests identified would then need to be cordoned off (minimum 5m buffer) and protected until the birds have fledged. These checking surveys would need to be carried out no more than three days in advance of vegetation clearance.	Site Manager/Groundworks and Ecological Clerk of Works
During the clearance works continuous checks will be made by contractors for nesting birds.	Ground Works Contractors

Mitigation/Control	Responsibility
Large and/or structurally complex areas of vegetation will be subject to a careful inspection and where necessary may require an ecology watching brief to work alongside the contractors clearing and checking vegetation.	Site Manager/Ecological Clerk of Works
Where breeding bird activity cannot be established within structurally complex areas of vegetation, bow saw, and loppers will be used to carefully cut away small sections of vegetation, ensuring disturbance is localised.	Ground Works Contractor/Ecological Clerk of Works
The following number of birdboxes will be installed within the Site: • 10 x boxes targeting house sparrow integrated in new buildings within the Site; • 10 x boxes targeting swift in new buildings within the Site; • 10 x boxes targeting starling in new buildings and/or boundary trees within the Site.	Ground Works Contractor/Ecological Clerk of Works
The detailed planting scheme will include berry-producing hedgerow and tree species, open areas of neutral grassland and SuDS creation; all of which will enhance the Site for over-wintering bird species.	Ground Works Contractor/Ecological Clerk of Works
Mitigation to prevent disturbance of reptiles and amphibians. The following section describes how Bloor Homes will mitigate against harm to reptiles onsite.	
Although the pond was found to be negative for great crested newt and shall be retained as part of the Proposed Development, adjacent habitats such as the rush grassland may provide some (although limited) terrestrial habitat for other notable amphibians, namely common toad. To this end, clearance of habitat, during construction, which could contain amphibians should be checked immediately prior to works commencing. This should include, but not be restricted to marshy grassland, and poor semi-improved grassland. Should any amphibians or reptiles be found, a 'no-work' areas should be clearly outlined and protected. Any amphibians found should then be moved to a receptor area in a retained/ protected area of the Site	Ground Works Contractor/Ecological Clerk of Works

Mitigation/Control	Responsibility
To discourage reptiles and amphibians from areas which will be soon stripped: • Cut scrub and tall grass no lower than 150mm; carefully remove arisings and leave habitat undisturbed for 48 hours. • To be followed by directional vegetation clearance (avoiding wet weather during the active period) and soil stripping – the direction of working to be determined by the location of good habitat to be retained (starting furthest away from the favourable habitat and working towards it, to encourage newts to disperse towards safe areas).	Ground Works Contractor/Ecological Clerk of Works
Tree/Hedgerow Retention and Protection The following section describes how Bloor Homes will mitigate against harm to trees and hedgerows onsite. Compliance obligation: To protect trees and hedgerows from accidental damage from construction activities	
All hedgerows, trees and scrub to be retained within the proposed development and adjacent to the site, shall be protected during construction in line with standard arboriculturalist best practice (BS5837:2012 - Trees in relation to design, demolition and construction) or as otherwise directed by a suitably competent arboriculturalist. This will involve the use of protective fencing or other methods appropriate to safeguard the root protection areas of retained trees / hedgerows.	Site Manager/Groundwork Contractor and Arboricultural Clerk of Works
Should any works be considered as likely to impact upon trees scheduled for retention then specialist arboricultural advice should be sought.	Site Manager/Groundwork Contractor and Arboricultural Clerk of Works

2.4 Archaeology and Cultural Heritage

If any situation or works activity arises which may impact any surrounding archaeological and/or heritage areas, then suitable mitigation measures shall be implemented.

Table 5: Archaeology and Cultural Heritage Mitigation and Control Measures

Mitigation/Control	Responsibility
Compliance Obligation: To prevent damage to buried archaeological features as a result of excavation activities.	
If archaeological remains are found after construction work has begun the Responsible Person will carry out the following: - • Stop work immediately in the area; • Mark the area to avoid further disturbance. • Protect the find by fencing/blocking it off; and • Inform the Project Lead immediately.	Site Manager/Ground Works Contractor

2.5 Oil and Fuel Storage and Contaminated Land

The construction works would be managed in accordance with CIRIA guidance 'C532 – Control of Pollution from Construction sites' to help ensure a well-managed operation which minimises potential environmental risks.

The following mitigation measures will be applied to prevent oil, lubricants, chemicals and fuel from entering surface water features during site preparation and construction:

Table 6: Ground Conditions Mitigation and Control Measures

Mitigation/Control	Responsibilities
Compliance Obligation: To protect sensitive receptors by undertaking activities that reduce the risk of ground contamination	
All oil and fuel storage will be sited at least 10 m from the known watercourses located on site, i.e. watercourse flowing along southern boundary of site.	Site Manager/Ground Works Contractor
All fuel will be stored in a double skinned tank, or a tank in a suitable bunded area. Containers will be in good condition and be bunded with secondary containment of 110% of the biggest container capacity or 25% of the total stored capacity, whichever is the greater. All valves, filters, sight gauges, vent pipes or other related equipment (not including a fill pipe or draw off pipe) will be situated within the Secondary containment.	Site Manager/Ground Works Contractor
All fuel deliveries on site will be supervised by a responsible person and storage tank levels will be checked before and during delivery to prevent overfilling and that the fuel that is delivered is to the correct storage tank.	Site Manager/Ground Works Contractor
Re-fuelling activities will only be undertaken by suitably competent persons and spill kits will be available within the site compound. Vehicles will not be left unattended during refuelling.	Site Manager/Ground Works Contractor
All static plant shall be placed with drip trays to prevent ground contamination as a result of oil spills and leaks. Plant and machinery will be kept within the compound and secure containers outside of working hours.	Site Manager/Ground Works Contractor

Mitigation/Control	Responsibilities
An Emergency Response Procedure will be prepared and will be displayed on the project Health and Safety noticeboard and briefed to all site staff.	Site Manager/Ground Works Contractor
Containers must be labelled with the contents and maximum volume and be of sufficient strength and structural integrity to ensure it is unlikely to burst or leak in its ordinary use. COSHH assessments will be available nearby for information in the event of a spillage.	Site Manager/Ground Works Contractor
During any excavation/enabling works those undertaking the works will observe the uncovered ground for any visual and odorous signs of contamination, as the release of noxious fumes, petrol, oils, solvents, chemical residues and smells may indicate contamination. When contamination is suspected the following will be carried out: • Work will be stopped immediately; • Suspected contamination reported to the site manager and further advice sought; • Area is to be sealed off and methods used (where possible) to prevent the spread of the contamination; • Clear the area to ensure there is nothing that could cause a fire; • Ensure that suspected contamination is tested and characterised and remediation strategy is put into action; and • Follow good practice guidance to remediate the area.	Site Manager/Ground Works Contractor

2.6 Water Resources and Flood Risk

A Flood Risk Assessment and Drainage Management Strategy has been prepared for both parcels of land by Betts Hydro Consulting Engineers.

The Hollingworth Road and Rakewood Road land parcels are located within Flood Zone 1, an area considered to be at little or no flood risk from rivers and/or the sea.

Hollingworth Road Land Parcel

There is a watercourse in proximity of the Hollingworth Road land parcel, however as the existing topography falls towards the watercourse from the lowest boundary, the Hollingworth Road land parcel is at very low flood risk from fluvial flood risk. The Rochdale Canal is located adjacent to the northern boundary of the Site. Consultations with The Canal & Rivers Trust (CRT) have confirmed that they are not aware of any breach events in the vicinity of the Proposed Development Site. As the existing onsite levels fall towards the canal and significantly away from the Proposed Development, the risk of flooding associated with canal is 'low'. The Hollingworth Lake reservoir is located less than 100m to the south of Site and is elevated in comparison. The flood risk mapping shows that part of the Site would be susceptible to significant flooding should a failure occur in the nearby reservoir. Although reservoir flooding is highly unlikely, due to the strict maintenance and monitoring regimes implemented by the Environment Agency, as part of the Reservoirs Act 1975. The primary flood risk potential to the Proposed Development is therefore considered to be from surface water run-off; this risk varies across the Site and is closely associated with the existing topography.

Rakewood Road Land Parcel

Consultation with the Environment Agency, United Utilities, and Rochdale Metropolitan Borough Council has not identified any historical flooding at the site or within the wider area. The proposals are deemed to be at 'low' risk from the flood sources reviewed as part of the Flood Risk Assessment.

Hydrogeology

Hollingworth Road - The EA mapping data for groundwater shows that the Site is underlain by a Secondary A Bedrock Aquifer with Secondary (undifferentiated) superficial deposits. The Site is also located within a Low Groundwater Vulnerability Zone to a Minor Aquifer.

Rakewood Road – The mapping data for groundwater shows that the site is underlain by a Secondary A Bedrock Aquifer with Secondary A superficial deposits. The site is also located within a Medium Groundwater Vulnerability Zone.

Drainage

Hollingworth Road

It is deemed that for the purposes of drainage that infiltration is not feasible. Therefore discharge of surface water runoff will be to a watercourse. The nearest waterbody to the Hollingworth Road land parcel is the Rochdale Canal, located adjacent to the northern boundary. At present flows would naturally convey towards this area and therefore the proposals would be to continue to do this via a formal connection (subject to relevant consents). As the canal is a private asset, consent for works to this asset is required from the Canal & Rivers Trust. A pre-development response from the Canal and Rivers Trust has confirmed they would allow a connection into the canal at a restricted discharge rate.

Rakewood Road

Based on the ground conditions identified and the soil classifications, it is deemed that infiltration would not offer a full viable drainage management solution. It is understood that the wider site drains naturally with the topography towards Hollingworth Brook in the north-eastern corner of the site. This watercourse flows in a north-easterly direction, joining with Shore Lane Brook to form Ealees Brook. The proposals are therefore to mimic the existing regime and continue to discharge surface water run-off into Hollingworth Brook located along the northern boundary of the site. The proposals are to utilise a combination of Sustainable Drainage Systems including permeable surfacing, bio-filtration tree pits, along with a conveyance swale to outfall where feasible.

Table 7: Water Resources & Flood Risk Control and Mitigation Measures

Mitigation/Control	Responsibilities
Compliance obligation: To prevent pollution to watercourses	
To minimise the amount of exposed ground and prevent silt laden surface water run-off, only the areas where work is to start will have vegetation removed and topsoil stripped.	Site Manager/Project Manager
Temporary dewatering from excavations to surface water may take place under the Environment Agency Regulatory Position Statement (RPS) (link) providing the conditions of the RPS are met. If the conditions of the RPS are not met or are exceeded, then water discharge activity permit may be required.	Project Manager/Site Manager

Mitigation/Control	Responsibilities
Compliance obligation: To prevent pollution to watercourses	
Soil and aggregate stockpiles will be positioned away from watercourses and drains. These stockpiles will be appropriately sealed.	Site Manager
Grassy areas of vegetation will be left along the edge of the watercourse to act as a natural barrier to filter silt from any surface water run-off.	Site Manager
Silt protection measures shall be designed and installed along the Cuttle Brook that runs along the northern and eastern boundary of the site. Silt protection measures will be inspected at regular intervals during the construction phase to check their efficiency and determine when they need maintaining.	Site Manager
In the event of bad weather: • Stop works; • Monitor water flow along the ditch (upstream and downstream), taking photos as evidence; and • Install sandbags/ alternative mitigation to prevent sediment laden run-off from entering the ditch.	Site Manager
Surface water drains will be protected with gully guards or other measures deemed appropriate. These will be inspected at regular intervals during the construction phase to determine when they need replacing.	Site Manager
Use of self-contained vehicle wheel wash system or wheel washing facilities in the form of a pressure washer to be provided at all times at the site entrance. Resulting material to be carefully removed and disposed off-site to avoid any siltation contamination.	Site Manager
Other practices Bloor Homes will employ to mitigate against flood risk are listed below:	
Unauthorised discharges into controlled waters or the local drainage network	
In the event of an unauthorised discharge into a watercourse the Environment Agency will be notified as soon as reasonably practicable.	Site Manager

Mitigation/Control	Responsibilities
Compliance obligation: To prevent pollution to watercourses	
In the event of an unauthorised discharge into the drainage network the sewerage provider will be notified as soon as reasonably practicable.	Site Manager

2.7 Waste Management

The earthworks and construction work on the site are likely to produce the following wastes:

- Mixed construction waste;
- Mixed inert waste;
- Timber from construction;
- Plasterboard;
- Mixed metals from construction;
- Paper, cardboard & plastics; and
- Hazardous waste – small quantities of part full paint tins, mastic tubes and aerosols. May also include asbestos.

Table 8: Waste Management Mitigation and Control Measures

Mitigation/Control	Responsibilities
Compliance Obligation: To ensure waste is removed from site in line with the legal requirements of 'Duty of Care'.	
There will be a defined waste storage area to encourage the reuse and recycling of materials, this will include; • Segregating wastes using appropriate storage containers; • Using suitable containers for waste types and labelling containers appropriately (i.e., gypsum/plasterboard, timber, etc.); • Use covered skips to prevent spread of wind-blown wastes; • Hazardous wastes will be stored in suitable lockable containers away from sensitive receptors and site traffic; and • Avoiding the mixing of hazardous and non-hazardous materials.	Site Manager
Facilitating effective segregation will require communication with contractors, sub-contractors and site operatives to ensure correct segregation of waste streams.	Site Manager/All onsite Contractors

Mitigation/Control	Responsibilities
Where practicable bricks/blocks and aggregates will be reused within hardstanding areas onsite.	Site Manager
Appoint appropriately registered waste management contractors for the development.	Project Manager
Site operatives shall undertake regular checks of the Waste Transfer Notes and Hazardous Waste Consignment Notes supplied against the details of the Waste Management Matrix (WMM) to ensure waste is being managed in line with current waste legislation.	Site Manager
The Site Waste Management Matrix will be maintained periodically throughout the construction phase.	Site Manager/Ground Works Contractor/Surveyor
Open fires and burning of waste will be prohibited at all times.	Site Manager

2.8 Soil Management

Under the Waste Framework Directive naturally occurring soils are not considered waste if re-used on the site of origin. However, if it is proposed to import clean and naturally occurring soils direct from another site, a Materials Management Plan (MMP) would need to be in place at the receiving site and we assume this will be conditioned.

Table 9: Soil Management Mitigation and Control Measures

Mitigation/Control	Responsibility
Compliance obligation: to protect soil resources and promote their reuse	
Any imported topsoil and inert material intended for use within gardens shall require suitable evidence to demonstrate it is appropriate for use on residential developments. If not used upon receipt it will be suitably stored to avoid any risk of contamination.	Site Manager
Where possible any stripping, stockpiling or placing of soil should be carried out under dry weather conditions and where possible using tracked equipment to reduce compaction.	Site Manager/Ground Works Contractor
Traffic movement will be confined to designated routes to avoid compaction of soil.	Onsite Contractors
Stockpiles of different soil materials should be clearly defined and signed where necessary to avoid the mixing of topsoil and subsoil.	Site Manager/Ground Works Contractor
Soil will not be mixed with construction waste or contaminated materials.	Onsite Contractors
Should a Materials Management Plan (MMP) be required, it will be developed to manage arisings from excavations and services as per the CL:AIRE Code of Practice. It will include details of: - the materials in terms of potential use and relative quantities; - where and how these materials will be stored; - the intended final destination and use of these materials; and - how these materials are to be tracked and moved.	Site Manager/Ground Works Contractor

Mitigation/Control	Responsibility
Where off-site disposal is required, a suitable chemical analysis will be performed to classify if the soil is hazardous or non-hazardous and Waste Acceptance Criteria [WAC] testing performed to determine a suitable disposal facility.	Site Manager/Ground Works Contractor
Any soils with elevated contaminants will be further assessed for suitability under a material management plan or waste exemption, if unsuitable for reuse in this manner it will be removed from site for disposal.	Site Manager/Ground Works Contractor

2.9 Transport

Traffic Management will be required for the duration of the work programme.

Currently the main vehicle access to the Hollingworth Road land parcel is via Heald Lane, where the track runs through the centre of the site. During construction, vehicular access to the proposed development site will be from Hollingworth Road on the eastern site boundary. The precise form of the access junction will be informed through consultation with the local highway authority. A secondary access can be accommodated on Hollingworth Road which will also provide access to the proposed primary school.

Main access to the Rakewood Road land parcel will be from Rakewood Road through the existing Hollingworth Lake Country Park car park.

Table 10: Transport Mitigation and Control Measures

Mitigation/Control	Responsibilities
Compliance obligation: Limit of vehicle movements as per planning conditions	
The movement of heavy goods vehicles associated with the transportation of material to and from the site shall be restricted to the following hours: Mon – Friday: 07.30 – 18.00 Saturdays: 08.00 – 13:00 No delivery (or construction) activities will take place on Sundays or Bank Holidays. The loading and unloading will take place in the site compound or storage area in the centre of the site.	Site Manager
No waiting or standing of delivery vehicles will be allowed on the existing roads adjacent to the site.	Project Manager/Site Manager

Mitigation/Control	Responsibilities
Compliance obligation: Limit of vehicle movements as per planning conditions	
The following traffic management measures to control any potential impacts arising from site traffic: - Use of speed limits on the access road and on site; - All engines will be switched off while waiting to unload; - Retractable sheeted covers will be used to protect against wind-blown material; and - Mud on roads from site clearance and muck shifting will be removed using road sweepers – any associated effluent or waste from the cleaning process will be managed in accordance to waste Duty of Care requirements.	Project Manager/Site Manager

2.10 Residents and Local Community

Given the location and nature of the development, the construction process may impact upon residential properties located within the vicinity of the proposed development, however the sensitivity of each receptor may vary. It is considered that the following environmental issues may be of concern:

- Nuisance including:
 - o Mud on roads spread by construction traffic;
 - o Excessive or poorly directed light; and
 - o Litter.
- Dust and fumes from transport and construction activity;
- Site lighting;
- Noise and vibration from transport and construction activity; and
- Traffic and transport disruption.

Many of these issues have been covered in the sections above. The table below summaries the remaining issues.

Table 11: Residents and Local Community Mitigation and Control Measures

Mitigation/Control	Responsibilities
Compliance obligation: Manage work activities to reduce nuisances to the local environment	
Residents will be approached in advance of potentially noisy disturbances. There will be a noise complaint handling procedure for the site, any complaints made will be responded to in a timely manner.	Site Manager

Mitigation/Control	Responsibilities
Compliance obligation: Manage work activities to reduce nuisances to the local environment	
To reduce the risk of construction lighting affecting the amenity of residents or creating a statutory nuisance, external lighting will be designed and positioned to: • Provide the minimum levels necessary for safe working; • Avoid disturbance to adjoining residents and occupiers; • Avoid creating dazzle or distraction for drivers using adjacent highways; • Seek to minimise light spillage or pollution; and • Reduce excess light on sensitive ecological habitats.	Site Manager

3 GENERAL ENVIRONMENTAL REQUIREMENTS

3.1 Emergency Preparedness and Response

The Contractor shall provide details for emergency preparedness and response within their detailed CEMP, including:

- Spill kit contents, locations and spill drills;
- Plan for extreme weather events;
- Incident reporting and investigation; and
- Emergency contacts.

3.2 Site Fencing and Security

During initial works on site the perimeter will be identified, marked and construction areas fenced to prevent unauthorised access. The site will be assessed on a site-specific level, with different types of fencing installed to the environment.

All fencing will:

- 2.4m high as a minimum;
- If mesh fence (Heras) is to be used, mesh will not exceed 30mm depth;
- Be secured to prevent failure due to vandalism and wind damage; and
- Include lockable gates will be provided at all entry and exit points.

The suitability of the fencing selected & installed will be monitored as a part of the on-going monitoring of the construction activities occurring on site.

Further site security measures (such as manned security outside of working hours, CCTV monitoring etc.) will be evaluated as the project progresses.

3.3 Key Contacts

Bloor Homes and/or their appointed contractor shall be responsible for implementation of this CEMP. A list of contacts responsible for the environmental management of the development shall be compiled, utilising Table 12 below. .

Table 12: Key Contacts

Name & Position:	Company	Contact no:	Email address:
Construction Director – TBC	Bloor Homes	01284 777509	TBC

Name & Position:	Company	Contact no:	Email address:
Site Manager - TBC	Bloor Homes	01284 777509	TBC
Technical Director – TBC	Bloor Homes	01284 777509	TBC

3.4 Change Management

The CEMP may be reviewed and amended following:

- A major environmental incident;
- A major change in the construction methods to be used on site;
- Change of environmental regulations that affect the works; and
- Change to the environmental aspects and impacts of the works.

APPENDIX A

SERVICE CONSTRAINTS

1. Service Constraints for all Reports

1.1. This Report (the "Report") and any study, inspection, investigation, sampling, testing and or interpretation carried out in connection with the Report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) trading as Carbon Zero Consulting, Leap Environmental or RSK Geosciences, for the Client named in the first paragraph of the Report (the "Client") in accordance with the terms of an RSK Fee Proposal including RSK Environment Standard Terms and Conditions (the "Appointment") between RSK and the Client, unless otherwise stated in the first paragraph of the Report. The Services were performed by RSK with the reasonable skill and care ordinarily exercised by a geo-environmental consultant at the time the Services were performed. Nothing in this Report shall be construed as imposing any fitness for purpose obligation. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the Client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the Client.

1.2 Other than that, expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services. RSK shall not be liable in respect of any action or proceedings arising out of or in connection with this Report whether in contract, in tort, for breach of statutory duty or otherwise after the expiry of six (6) years from either (i) the date of the Report or (ii) such earlier date as prescribed by law, unless varied in the terms of the Appointment.

1.3 Unless otherwise agreed in writing, the Services were performed by RSK exclusively for the purposes of the Client. RSK is not aware of any interest of or reliance by any party other than the Client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent, or condone any party, other than the Client relying upon the Services. Should this Report or any part of this Report, or details of the Services or any part of the Services, be made known to any such party, and such party relies thereon, that party does so wholly at its own and sole risk, and RSK disclaims any liability to such parties. Any such party would be well advised to seek independent advice from a competent geo-environmental consultant and/or lawyer.

1.4 The Client shall not, without the prior written consent of RSK, assign, transfer, charge, mortgage, subcontract, or deal in any other manner with all or any of the benefits provided in this Report. Unless specified in the Appointment, RSK shall not be obliged to assign the benefit of the Report whether by collateral warranty, third party rights pursuant to the Contracts (Rights of Third Parties) Act 1999, letter of reliance or otherwise. If RSK agrees to any assignment of the benefit of this Report, in whatever form, benefits to third parties through collateral warranties, third party rights or letters of reliance shall not be provided unless a fee for each right, warranty or letter is agreed. The form of wording used in the warranty or letter shall be provided by RSK for agreement by the Client. Any reasonable changes to the form of wording will be implemented by mutual agreement, however the terms in the warranty or letter cannot offer the third party any greater benefit than the Appointment offered to the Client.

1.5 It is the understanding of RSK that this Report is to be used for the purpose described in the introduction to the Report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the Report is used, or the proposed use of the site change, this Report may no longer be valid and any further use of or reliance upon the Report in those circumstances by the Client without the review and advice of RSK shall be at the Client's sole and own risk. RSK shall not be liable for any use of this Report for any purpose other than that for which it was provided.

1.6 The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the Report inaccurate or unreliable. The information and conclusions contained in this Report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the Report in the future shall be at the Client's own and sole risk.

1.7 The observations and conclusions described in this Report are based solely upon the Services which were provided pursuant to the agreement between the Client and RSK. RSK has not performed

any observations, investigations, studies or testing not specifically set out, or required by the Appointment between the Client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this Report, RSK did not seek to evaluate the presence on or off site of asbestos, invasive plants, electromagnetic fields, lead paint, heavy metals, radon gas, fuel storage, persistent bio-accumulative or toxic chemicals (including PFAS and related compounds) or other radioactive or hazardous materials, unless specifically identified in the Services.

1.8 The Services are based upon RSK's observations of existing physical conditions at the Site gained from a visual inspection of the site together with RSK's interpretation of desk based publicly available information, including documentation, obtained from third parties and from the Client on the history and usage of the site, unless specifically identified in the Services and the limitations below:

- a. The Services were based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely.
- b. The Services were limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the visual inspection.
- c. The Services did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the Client or third parties, including laboratories and information services, during the performance of the Services.
- d. The Client has identified in writing to RSK, the information, reports, findings, surveys and preliminary works RSK may not rely upon when providing the Services.

RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK, and including the doing of any independent investigation of the information provided to RSK, save as otherwise provided in the terms of the Appointment between the Client and RSK.

1.9 Any site drawing(s) provided in this Report is (are) not meant to be an accurate base plan for scale measurement but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (intrusive and sample locations etc) annotated on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for accurate setting out and should be considered indicative only.

1.10 Should RSK be requested to review the Report after the date of issue of this Report, RSK shall be entitled to additional payment at the existing rates, or such other terms as agreed between RSK and the Client.

2. Service Constraints where the Report provides an intrusive assessment of ground conditions:

2.1 The intrusive environmental ground investigation aspects of the Services are a limited sampling of soil from the site, at pre-determined locations based on the known historic / operational configuration of the site. The conclusions given in this Report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the properties of the materials adjacent and local conditions, together with the position of any current structures and underground utilities and facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters (as stipulated in the scope agreed between the Client and RSK, based on an understanding of the available operational and historical information) and it should not be inferred that other chemical species (not tested) are not present.

2.2 The comments given in this Report and the opinions expressed are based on the ground conditions encountered during the site work and on the results of tests made in the field and in the laboratory. The extent of the exploratory holes, laboratory testing and monitoring undertaken may have been restricted due to a number of factors including accessibility, the presence of buried or overhead services, current development, site usage, timescales or the Client's specification. The exploratory holes only assess a small proportion of the site area with respect to the site as a whole, and as such may only provide an indicative assessment of ground conditions on site. There may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account. In particular, it should be noted that there may be areas of made ground not detected due

to the limited nature of the investigation or the thickness and quality of made ground across the site may be variable. In addition, groundwater levels and ground gas concentrations and flows, may vary from those reported due to seasonal, or other, effects and the limitations stated in the data should be recognised. The presence of hotspots of undisclosed contamination or exceptional and unforeseen ground conditions cannot be discounted.

2.3 Where the Services include Investigation of an exploratory nature or relating to physical ground works, any costings and prices provided in the Report are estimated and provided for guidance purposes only. The actual cost and time quantities shall be remeasured and shall be dependent upon the ground or other conditions, constraints present, and number and depth of the investigation locations, which shall influence the number of samples and tests required, and the quantities of soil being classified.

2.4 Asbestos is often observed to be present in soils in discrete areas. Whilst asbestos-containing materials may have been locally encountered during the fieldworks or supporting laboratory analysis, the history of brownfield and demolition sites indicates that asbestos fibres may be present more widely in soils and aggregates, which could be encountered during more extensive ground works. However, this Report does not constitute an asbestos survey. On this basis, the presence of asbestos on site cannot be discounted and a full asbestos survey should be undertaken.

2.5 Unless stated otherwise, only preliminary geotechnical recommendations are presented in this Report and these should be verified in a Geotechnical Design Report, once proposed construction and structural design proposals are confirmed. Eurocode 7 gives guidance on the type of sampling, sample quality, number and spacing of intrusive investigations, and number of laboratory tests required. It is intended that the Geotechnical Information section of this Report will fulfil the general requirements of the Ground Investigation Report as set out in section 6 of Eurocode7, although this is subject to the restrictions imposed on the investigation, as listed above. For geotechnical design, Eurocode 7 requires the Geotechnical Design Report to address both the geotechnical and structural aspects of the geotechnical design for both the limit and serviceability states. The Geotechnical Appraisal section of this Report will not meet the requirements of a Geotechnical Design Report (GDR) and should therefore be used for preliminary guidance only.

3. Service Constraints where the Report relates to Surface Water Management:

3.1 The Surface Water Management Inspection (SWMI) Report, documents provided, observations, actions, and recommendations, with respect to the management of potential pollution issues to surface waters, made during the site Inspection visit, are those present at the time of the visit, and may not represent those recorded by others on the same day.

3.2 The comments given in this Report and the opinions expressed are based on the weather, ground and ground water conditions encountered during the site work and on the results of tests made in the field and in the laboratory. However, there may be conditions pertaining to the site that have not been disclosed by the inspection and therefore could not be taken into account. In addition, groundwater levels and flows, may vary from those Reported due to seasonal, or other, effects and the limitations stated in the data should be recognised.

3.3 RSK places a degree of dependence upon oral information provided by site representatives, which is not readily verifiable through visual inspection, or supported by any available written documentation. RSK shall not be held responsible for conditions or consequences arising from relevant facts that were not fully disclosed by facility or site representatives at the time this Report was prepared.

3.4 This Report is a live document, to be continually reviewed and updated as the development progresses or other changes occur on site. RSK can only maintain the currency of this Report through the Client requesting support with supplementary site visits or attendance at meetings ahead of key stages of the development in relation to surface water management. Our risk rating assesses a number of risk factors in line with the source-pathway- receptor model and is therefore subject to constant change.

3.5 Standard design drawings are indicative. Material types, dimensions and construction details will need to be adjusted by the Client to suit the specific conditions / flows on Site.

3.6 The full responsibility for implementing the site-specific protection and maintenance measures to protect the surface water system as stated in this Report, remains with the Client and their site management team. Additional control measures may be required to achieve the objectives set out in the Surface Water Management Plan to be implemented and financed by the Client.

4. Service Constraints where the Report relates to Waste Management:

4.1 In accordance with the definition provided in the Waste Framework Directive (WFD), materials are only considered waste if 'they are discarded, intended to be discarded or required to be discarded, by the holder'. Naturally occurring soils are not considered waste if re-used on the site of origin for the purposes of development. Soils such as made ground that are not of clean and natural origin (irrespective of whether they are contaminated or not) and other materials such as recycled aggregate, do not necessarily become waste until the criteria above are met. Excavation arisings from the development may therefore be classified as waste if surplus to requirements and/or unsuitable for re-use.

4.2 It is the duty of the waste producer, to ensure that all waste is accurately classified prior to waste disposal. Technical Guidance WM3 (EA, 2018) sets out in its Appendix D requirements for waste sampling. It is a legal requirement to correctly assess and classify waste. The level of sampling should be proportionate to the volume of waste and its heterogeneity. Unless otherwise stated, the waste assessment presented in this Report should be considered as preliminary and further testing and assessment of the waste under the provisions of a Waste Sampling Plan may be required to obtain the necessary level of data required for basic characterisation of the waste in support of disposal.

4.3 Unless stated otherwise in the Report, information relating to historical operations at the site was not reviewed as part of the assessment by RSK. In addition, unless otherwise stated in the Services, RSK was not present during the collection of the samples nor had any input on the chemical testing suite. Therefore, the waste assessment and classification detailed in this Report are based solely on any information that were provided to RSK (e.g., laboratory chemical data, exploratory hole records) and were completed without prejudice for our Client.

4.4 RSK's assumes that any ground investigation data, chemical testing results etc., that were provided by the Client to inform the waste assessment and supporting review were carried out in accordance with current best practice and relevant guidance/ standards, where applicable. Thus, the comments given in this Report and the opinions expressed are based solely on the information provided by the Client. However, it is noted that there may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account as part of the RSK assessment.

5. Service Constraints for Construction Environmental Management Plan Reports:

5.1 This Report should be considered in the light of any changes in legislation, statutory requirement or industry practices that may have occurred subsequent to the date of issue.

5.2 The measures and comments outlined in this Report and any opinions expressed are based on the plans provided at the time and discussions with relevant parties. However, there may be conditions pertaining to the site that have not been disclosed by investigations and therefore could not be taken into account.

5.3 This CEMP is a live document and is subject to change throughout the project, as and when necessary, to ensure management of environmental aspects remains relevant, and to ensure continued compliance with legislation and commitments as they may change. RSK understands that this CEMP will be reviewed by the Client every six months and updated as and when necessary.

5.4 It is the full responsibility of the Principal Contractor/ Client to ensure that their works do not contravene legal requirements, and adherence to this CEMP alone cannot be a full defence regarding legal action against the Principal Contractor.

6. Service Constraints where the Report relates to Ground Gas Membrane Verification:

6.1 This Report is limited to the verification of the gas resistant membrane/vapour membrane/ radon barrier after installation and no inspections were undertaken of the substrate (i.e. prepared ground). The Report therefore does not constitute as a full verification of ground gas protection system.

6.2 The comments given in this Report and the opinions expressed, are based on the condition of the ground gas membrane as encountered at the time of inspection by suitably qualified personnel. RSK cannot accept liability for any subsequent change to the status of the gas membrane by follow-on trades or other construction activity.

6.3 Where not designed by RSK, the verification of protection measures is carried out with reference to the gas protection design provided by the Client. RSK assume the scope of gas protection measures as determined by third parties to be correct and to have achieved any required approval from authorities.

6.4 The Ground Gas Design Report/Remediation Strategy and Verification Plan contains details of the procedures to be adopted for inspection and validation of the works. However, it should be noted that responsibility for the correct implementation of the strategy lies with the appointed contractor. RSK cannot be held responsible for any remedial works that are carried out without the agreed procedures involving either direct supervision by RSK, or inspection and validation of the works by a representative from RSK.

7. Service Constraints for Environmental Due Diligence (EDD) Reports:

7.1 The comments given in this Report and the opinions expressed are based on the information obtained and reviewed as part of the desk-based assessment. However, there may be conditions pertaining to the Site that have not been disclosed by the assessment and therefore could not be taken into account. Furthermore, no intrusive investigations, monitoring or sampling have been undertaken to confirm the environmental status of the site, therefore any comments relating to ground conditions and subsurface contamination are based solely on a review of desk-based information.

7.2 This Report describes the results of the EDD exercise. The scope of this EDD Report, where appropriate, covers legal or regulatory compliance with respect to UK or international regulations associated with environmental matters.

7.3 As with any EDD exercise, there is a certain degree of dependence upon information provided by the target company. The EDD does not include a site walkover / visit or liaison with site representatives unless identified in the Services. Therefore, the assessment is based on the available desk study information. Also, there is a certain degree of dependence upon oral information provided by site representatives, which is not readily verifiable through visual inspection, or supported by any available written documentation. RSK shall not be held responsible for conditions or consequences arising from relevant facts that were not fully disclosed by facility or site representatives at the time this EDD exercise was performed.

7.4 This Report, including all supporting data and notes (collectively referred to hereinafter as "information"), was prepared or collected by RSK for the benefit of its Client.

7.5 The comments given in this Report and the opinions expressed are based on the information obtained and reviewed as part of the desk-based assessment and the site inspection visit. However, there may be conditions pertaining to the Site that have not been disclosed by the assessment and therefore could not be taken into account. Furthermore, no intrusive investigations, monitoring or sampling have been undertaken to confirm the environmental status of the Site therefore any comments relating to ground conditions and subsurface contamination are based solely on a review of desk-based information and observations collected during the site inspection visit.

8. Service Constraints for Ground source heat energy Reports:

8.1 It is understood that this is a desktop survey only and that there are no requirements for a site walkover, service utility survey, or provision of service plans. These services can be provided upon request if required.

8.2 At a later stage, it is possible that a thermal response test (TRT) will need to be completed, for which a test borehole will have to be drilled, and these would be costed at the time. RSK can provide all aspects of subsequent site work for a GSHP system if required.

9. Service Constraints for Water Abstraction Borehole Reports:

9.1 The Report aims principally to only identify and assess the suitability of the site for a water abstraction borehole. This Report should be considered in the light of any changes in legislation, statutory requirements, and industry practices, that have occurred subsequent to the date of the Report.

9.2 Unless stated in the Report, the opinions expressed in this Report including all comments and recommendations provided are on the basis of the information obtained from a desk-based assessment.