



Construction Environmental Management Plan

Site Name	Heritage Road, Brymbo, Wrexham	
Site reference		
TW Company	North West	
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CONTENTS

1	INTRODUCTION	4
2	ENVIRONMENTAL CONSENTS	5
3	ROLES AND RESPONSIBILITIES	6
3.1	Roles	6
3.1.1	<i>TW Production Manager</i>	<i>6</i>
3.1.2	<i>TW Site Manager</i>	<i>6</i>
3.1.3	<i>All Staff.....</i>	<i>7</i>
3.2	Contacts	7
3.3	Site Communication	8
4	STAKEHOLDER ENGAGEMENT.....	9
4.1	Stakeholder Consultation.....	9
4.2	Complaint Procedure.....	9
5	PROJECT DESCRIPTION	10
5.1	Description of the development	10
5.2	Construction program	10
6	ENVIRONMENTAL CONSTRAINTS AND RECEPTORS	11
6.1	Noise Limits	11
6.2	Vibration Limits.....	11
6.3	Ecologically Sensitive Area	11
6.4	Construction Site Layout and Good Housekeeping.....	11
6.5	Environmental Receptors.....	12
7	KEY ENVIRONMENTAL IMPACTS	14
7.1	Ground Conditions	14
7.1.1	<i>Impacts</i>	<i>14</i>
7.1.2	<i>Mitigation.....</i>	<i>14</i>
7.2	Water Resources and Flood Risk.....	14
7.2.1	<i>Impact.....</i>	<i>14</i>
7.2.2	<i>Mitigation.....</i>	<i>15</i>
7.3	Ecology and Nature Conservation.....	15
7.3.1	<i>Impact.....</i>	<i>15</i>
7.3.2	<i>Mitigation.....</i>	<i>16</i>
7.4	Air Quality	16
7.4.1	<i>Impacts</i>	<i>16</i>
7.4.2	<i>Mitigation.....</i>	<i>16</i>
7.5	Noise and Vibration.....	18
7.5.1	<i>Impact.....</i>	<i>18</i>
7.5.2	<i>Mitigation.....</i>	<i>19</i>
7.6	Waste	21
7.6.1	<i>Impacts</i>	<i>21</i>
7.6.2	<i>Mitigation.....</i>	<i>21</i>
7.7	Transport.....	22
7.7.1	<i>Impact.....</i>	<i>22</i>
7.7.2	<i>Mitigation.....</i>	<i>22</i>
7.8	Archaeology and Cultural Heritage	23
7.8.1	<i>Impacts</i>	<i>23</i>
7.8.2	<i>Mitigation.....</i>	<i>23</i>
7.9	Landscape and Visual Impacts	23
7.9.1	<i>Impact.....</i>	<i>23</i>
7.9.2	<i>Mitigation.....</i>	<i>23</i>
8	MONITORING AND AUDITING	24
8.1	Introduction	24

8.2	Environmental Audits	24
8.3	Environmental Monitoring	24
8.4	Environmental incident and corrective action reporting	24
9	MANAGEMENT OF CONTRACTORS.....	25
10	TRAINING & COMPETENCE	26
10.1	Inductions	26
10.2	Toolbox Talks	26
10.3	Specialist training	27
11	CHANGE MANAGEMENT	28
12	FIGURES	29
	Figure 1: Site Location Plan	29
	Figure 2: Build Route & Compound Layout	291
	Figure 3: Compound Plan	
292	Figure 4: Traffic Management Plan	33

1 INTRODUCTION

This Construction Environmental Management Plan (CEMP) is intended to form the basis for the management of the main environmental aspects associated with the proposed residential development off Sutton Road in Saint Helens.

The CEMP sets out how the commitments will be translated into actions in the field and the means by which they will be monitored and verified. It outlines the environmental commitments that are to be delivered by the Principal Contractor. Taylor Wimpey UK Ltd is the principal contractor (PC) for this development.

Throughout the construction phases of the project, Taylor Wimpey UK Ltd (Taylor Wimpey) will also be following the mitigation measures outlined in their Environmental Management System (EMS) and associated documents.

Site location

The development area is located directly off Heritage Way, Brymbo, Wrexham. This document specifically covers the area within the line edged red on the Site Location Plan LOC 01) Presented in Figure 1.

The surrounding land use is as described:

North: Bloom Avenue & Ingot Close (Earlier Taylor Wimpey Development)

Northeast: Existing Mature Woodlands

East: Household Recycling Centre

Southeast: Brymbo Sports & Social Complex

South: Heritage Way & Park Road

Southwest: Bryn Gwenfro

West: Heritage Way & College Fields (Earlier Taylor Wimpey Development)

Northwest: Phoenix Drive (Earlier Taylor Wimpey Development)

Site History

The Site is positioned to the outskirts of Wrexham, approximately 3 miles to the south east, within the village of Brymbo. The Site previously formed part of the Brymbo Steelworks positioned to the north eastern side of Heritage Way.

2 ENVIRONMENTAL CONSENTS

The Site has been subject to several planning applications over recent years. The application of importance to this submission, is the granting of application reference P/2012/0817 for outline approval, which established the principle of residential development.

In January 2020 an application was submitted and was granted for a further 3 years' time extension made to the original outline application. Pursuant to Outline Planning Permission for residential development, and subsequent extension of time applications, a reserved matters planning application is set to be submitted in February 2021 to Wrexham Borough Council.

Any planning conditions imposed as part of any planning application will be discharged in a timely manner. As soon as the decision notice is received from the local authority, the conditions pertinent to the environmental aspects of the development will be listed here in a future revision of the CEMP.

3 ROLES AND RESPONSIBILITIES

3.1 Roles

3.1.1 *TW Production Manager*

The TW Production Manager shall be responsible for:

- Appointing a Site Manager; and
- Reviewing the monthly Site Environmental Checklist audit completed by the Site Manager.

3.1.2 *TW Site Manager*

The TW Site Manager shall be responsible for:

- Undertaking weekly Site Compound Checks, and persons to supervise refuelling of tanks and bowsers;
- Ensuring the required consents are in place before work starts;
- Ensuring environmental and waste requirements are included on requisitions and in subcontracts and orders;
- Ensuring oil, including diesel is stored in properly bunded tanks / inc use of drip trays for plant and equipment / refuelling;
- Ensuring Waste Transfer Notes / Hazardous Waste Consignment Notes are checked against invoices before payment;
- Liaising with statutory authorities and TW as required and ensuring records of communication (including verbal communication) are kept. Statutory authorities should always be accompanied on site visits;
- Ensuring employees, contractors and subcontractors implement the controls set out in this CEMP;
- Ensuring employees, contractors and subcontractors receive Induction Training (including project environmental issues) and Tool Box Talks, as appropriate;
- Ensuring personnel needed for audits are available when required;
- Verifying actions resulting from Corrective Action Requests and Observations raised during audits are completed by the deadlines;
- Ensuring environmental training is provided;
- Reporting incidents to the Taylor Wimpey Production Manager immediately (inc. use of the TW advice line), and to statutory authorities where required;
- Logging and monitoring incidents and non-conformances;
- Disseminating information, including changes to legislation, and relay to relevant contractor's employees;
- Identifying employees who require environmental training and maintain training records in line with the contract for the works;
- Providing advice and dealing with queries and correspondence on environmental issues;
- Identifying significant environmental impacts for the project and assist in setting up contracts to include the necessary controls;

- Monitoring the progress in closing out Corrective Action Requests and Observations raised during audits;
- Ensuring all records are retained and readily available; and
- Carrying out monthly Site Environmental Checklist audit.

3.1.3 All Staff

All operatives have responsibility for the environment; responsibilities include but are not limited to:

- In the case of an incident, stopping work, implementing control procedures and reporting it to the Taylor Wimpey Site Manager;
- Contacting the Waste Representative when waste needs collecting;
- Passing any queries or correspondence on environmental issues to the Taylor Wimpey Site Manager; and
- Working in accordance with environmental procedures, the CEMP and Method Statements.

Contacts

The lists of contacts currently appointed for this project are as follows. The remaining positions shall be filled once planning permission for the development has been granted. Taylor Wimpey is supported by environmental specialists at RSK.

Name & Position:	Company	Contact no:	Email address:
TBC Site Manager	Taylor Wimpey	TBC	TBC
David Hopkin Project Manager	Taylor Wimpey	01925 849500	David.Hopkin@taylorwimpey.com
Darren Howell Production Director	Taylor Wimpey	01925 849500	Darren.Howell@taylorwimpey.com
Simon Devine Technical Director	Taylor Wimpey	01925 849500	Simon.Devine@taylorwimpey.com
Robert Allen Engineer	Taylor Wimpey	01925 849500	Robert.Allen@taylorwimpey.com
Environmental Advice Line	RSK	0845 003 8752	N/A
Environment Agency Incident Hotline	Environment Agency	0800 807060	N/A

3.3 Site Communication

Communication Method	Frequency	Attendees	Environmental Points for discussion
Contractor Site Meetings	Weekly	TBC	Any pertinent environmental issues.
Subcontractor Meetings	Monthly	TBC	Waste Management, Nuisance, Environmental Incidents
Toolbox Talks	As required	All site personnel, including subcontractors	Toolbox Talks will be used to inform all site personnel of key information concerning the management of the site, procedures to be followed and expected conduct when working on the project. The toolbox talks will cover a broad range of topics including those related to best practise environmental management.

4 STAKEHOLDER ENGAGEMENT

4.1 Stakeholder Consultation

In February 2020, Taylor Wimpey will send consultation flyers to local residents in the surrounding Brymbo area to inform them of our intentions to develop the site.

A dedicated webpage has been set up on the Taylor Wimpey website which confirms an email address for the general public to express their views on the development proposals.

Also a local press release will be undertaken to provide further details of the forthcoming development proposals.

Any further concerns raised by the public or local community can be brought to the attention of the Site Manager or reported to Head Office.

4.2 Complaint Procedure

Any concerns the public or local community wish to raise can be brought to the attention of the Site Manager. Any complaints received by other site operatives shall be immediately reported to the Site Manager. Site operatives will be informed about the process to deal with complaints from members of the public; should they be approached whilst working on site, through toolbox talks.

When a complaint is reported the following information shall be recorded:

- Details of the issue leading to the complaint;
- Details of the complainant;
 - Name;
 - Address;
 - Contact number;
 - Preferred contact method; and
- If a complaint has been previously made, any details of the previous incident.

Alternatively complaints can be reported to Taylor Wimpey UK Ltd through the Customer Service Department of the Manchester Business Unit. Those wishing to make a complaint should call 01925 849559 or email northwestcustomerservices@taylorwimpey.com.

On receipt of a complaint, Taylor Wimpey UK Ltd shall:

- Acknowledge all complaints within 2 working days; and
- Either reply fully within 7 working days of receipt, or reply within 7 working days to advise you of the steps we are taking and to give a date by which we will be able to reply fully.

Taylor Wimpey UK Ltd aims to resolve all complaints following the above procedure. However, this may not always be possible and there are additional procedures documented within the Taylor Wimpey UK Ltd EMS.

5 PROJECT DESCRIPTION

5.1 Description of the development

The development proposals consist of 70 traditional new-build homes with associated infrastructure and landscaping.

5.2 Construction programme

Upon receipt of the planning permission, works are scheduled to commence in July 2021.

The sales centre is scheduled to open in October 2022.

The site is set to complete in June 2023.

6 ENVIRONMENTAL CONSTRAINTS AND RECEPTORS

The site “core hours” will be Monday – Friday 08:00- 18:00; Saturday ‘core hours’ will be 08:00 – 13:00. There will be no works programmed at any other time including Bank Holidays unless otherwise agreed.

Operations such as earthworks can be seasonal and weather dependant, and as is customary in the construction industry the working day and or days may be extended to take advantage of extended daylight hours during the period April to October. Any extended working hours permitted will be approved in writing by Wrexham Borough Council.

Additional weekend, Sunday and Bank Holiday working may be required for certain types of activities such as work that entails the possession of a road, works for reasons of public safety, site logistics operations or work within buildings. This will be agreed beforehand with Wrexham Borough Council before works are undertaken.

6.1 Noise Limits

In accordance with good practice, construction activities that elevate noise levels, measured as LAeq (1hr) by more than 1dB above ambient level at the front of any noise sensitive premises, may not take place outside of normal hours of work.

6.2 Vibration Limits

In accordance with BS 5228, prior explanation shall be given to all potentially affected residents of vibration generating activities to place at site likely to cause vibration up to and in excess of the limit $1.0\text{mm}\cdot\text{s}^{-1}$. If any activities are likely to cause in excess of this level they shall only be undertaken for brief periods, to prevent the vibration impact from becoming intolerable to local residents.

A review of the likely vibration effects from construction works will be undertaken once a detailed schedule of equipment, processes and durations are known. This review could indicate a requirement for vibration monitoring at the vibration sensitive receptors whilst certain activities are taking place on site. Monitoring results could subsequently indicate requirements for further mitigation.

6.3 Ecologically Sensitive Area

The site is not within or in close proximity to any sensitive land use (i.e. Local Nature Reserve, Area of Outstanding Natural Beauty, Ramsar site, Area of Adopted Greenbelt, SSSI, SPA, SAC, etc.).

6.4 Construction Site Layout and Good Housekeeping

In planning the construction site layout, Taylor Wimpey will ensure that a good housekeeping policy is applied at all times, and as far as reasonably practicable; that amongst other things:

- Existing hedges and tree screens and the topography will be utilised to screen construction sites; temporary earth mounding or other temporary screening will also be included where appropriate, within the confines of the construction site;
- All site hoardings will be regularly inspected, repaired and repainted as necessary;
- All working areas will be kept in a clean and tidy condition;

- Adequate toilet facilities will be provided for all site staff;
- Rubbish will be removed at frequent intervals and the site kept clean and tidy;
- Food waste will be removed at frequent intervals;
- Any waste susceptible to spreading by wind or liable to cause litter will be stored in enclosed containers;
- Open fires will be prohibited at all times;
- All necessary measures will be taken to minimise the risk of fire and the contractor will comply with the requirements of the local fire authority;
- Storage sites, fixed plant and machinery, equipment and temporary buildings will be located to limit adverse environmental effects;
- All external lighting and illumination associated with the construction process will be in accordance with the guidance issued by the Institution of Lighting Engineers: “Guidance Notes for the Reduction of Light Pollution” and the CIE (International Commission on Illumination) Report: “Guide on the Limitation of the Effects of Obtrusive light from Outdoor Lighting Installations”;
- To ensure that construction lighting does not affect the amenity of residents or create a statutory nuisance under the Environmental Protection Act 1990 (as amended), 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 or the railway;
 - Seek to minimise light spillage or pollution;
 - Ensure that excess light does not fall on sensitive ecological habitats;
- Energy efficient options for site facilities will be incorporated wherever possible. They may include energy efficient light bulbs and automatic controls, which will supplement good housekeeping such as switching off equipment when not in use;
- Adequate security will be exercised by the principal contractor to protect the public and prevent unauthorised entry to or exit from the site. Site gates will be closed and locked when there is no site activity and site security measures will be implemented; and
- Any site cameras will be located and directed so that they do not intrude into occupied residential property.

6.5 Environmental Receptors

These are the environmental receptors that could potentially be impacted by associated environmental aspects from this project during construction:

- Air quality:
 - Dust (particulate matter, i.e. PM₁₀); and
 - Fumes (i.e. NO₂).
- Ground and groundwater:
 - Pre-existing contamination mobilised through development works;
 - Pollution spills;

- Vibration;
 - Dust (particulate matter, i.e. PM₁₀); and
 - Litter.
- Water bodies, streams, reservoirs, rivers and lakes:
 - Pollution spills;
 - Litter; and
 - Dust;
 - silt.
- Ecology (i.e. animals, birds, aquatic life, trees and plants):
 - Pollution spills;
 - Litter;
 - Noise;
 - Fumes (i.e. NO₂);
 - Vibration;
 - Silt; and
 - Dust (particulate matter, i.e. PM₁₀).
- Humans (i.e. neighbours and construction workers):
 - Pre-existing contamination;
 - Noise;
 - Dust (particulate matter, i.e. PM₁₀);
 - Fumes (i.e. NO₂);
 - Litter; and
 - Vibration.
- Surrounding land:
 - Pre-existing contamination mobilised through development works;
 - Pollution spills;
 - Litter;
 - Noise;
 - Fumes (i.e. NO₂);
 - Vibration; and
 - Dust (particulate matter, i.e. PM₁₀)
 - Silt.

7 KEY ENVIRONMENTAL IMPACTS

7.1 Ground Conditions

7.1.1 Impacts

Ground conditions can be impacted by

- Fuel and liquid spillages;
- Dust;
- Vibration;
- Windblown waste / litter; and
- Contaminated land.

7.1.2 Mitigation

All fuel will be stored in a double skinned tank or a tank in a suitable bunded area, designed to hold 110% of the tank's capacity, in compliance with the Control of Pollution (Oil Storage)(England) Regulations 2001. All connections shall be situated within the bund. All fuel and chemical stores and refuelling activities shall be situated at least 30 meters from any given watercourses, where practicable.

Re-fuelling activities will only be undertaken in designated areas, by suitably qualified persons. Toolbox talks will be communicated to site staff and contractors so that they are fully informed of refuelling procedures.

Pumps and generators used on the site will have integral drip trays where possible. All items of plant without an integral drip tray shall be stored over a portable drip tray. Drip trays shall be inspected and kept free of accumulated rainwater as necessary. Any oily water shall be disposed of at an appropriate licensed facility. Any cleaning/arising from drip trays etc. is to be disposed of as hazardous waste in accordance with Environment Agency guidance and current legislation.

All hazardous liquids e.g. oils, lubricants, chemicals and tins of paint are to be stored in a segregated area in a suitable locked COSHH container and in accordance with the products Safety Data Sheet. COSHH assessments will be available nearby for information in the event of a spillage.

A spill response kit will be available onsite and accessible to all to control pollution incidents. These spill kits will contain absorbent pads, absorbent granules and methods of disposal of materials and used kit. These kits will be located at appropriate points around the site which are considered to be at a higher risk of pollution (e.g. refuelling area and next to fuel tanks). Further spill kits and supplies will be located in the stores within the site, where replacements for used kits will be found. Spill kits will need to be regularly inspected and immediately replaced if used.

7.2 Water Resources and Flood Risk

7.2.1 Impact

Groundwater was recorded between 1.0m below ground level (bgl) and 9.0m bgl across the site and recorded at depths between 4.1m bgl and 30.0m bgl beneath the coal measures. The site sits on a Secondary A aquifer that is considered to have low permeability.

The site is not within a designated groundwater source protection zone.

Taylor Wimpey standard Silt Management procedures will be adhered to by all contractors on site. This includes, but is not limited to:

- Avoiding excessive topsoil stripping
- Stockpiles are to be situated away from any rivers/watercourses
- Avoiding tracking machines near to any rivers/watercourses
- Pumping of any silty water is to go directly to a tank or designated storage area with the use of silt management materials i.e. straw bales or silt bags
- Stockpiles are to be sealed appropriately and stored away from rivers and drains

7.2.2 *Mitigation*

All options are to be considered for occurrence of silt runoff into the mains sewer and the surrounding environment. These include:

- Leaving grassy areas as catchment or settlement areas;
- Battering or sheeting oil stockpiles and locating them away from the watercourses and drains, where possible;
- Protection of drains;
- Use of grips and straw bales;
- Silt fencing; and
- Dewatering.

7.3 Ecology and Nature Conservation

7.3.1 *Impact*

An ecological assessment concluded that there are no protected species on the development. There are not any nationally designated wildlife sites (i.e. SSSI, SPA, etc.) within close proximity to the site.

No other evidence of protected species (i.e. plant or animal) was found on site during the survey. There are not any trees covered by a Tree Protection Order located on site.

Construction activities have the potential to damage root systems and also to above ground parts of the tree. This could occur through excavations (i.e. during groundworks) and compaction of the soil within close proximity of the tree. Mobile plant has the potential to cause accidental damage through collision. Also, accidental spills of polluting substances (i.e. hydrocarbons) have the potential to cause damage and poison trees.

The site does not contain any protected hedgerows.

Consideration shall also be given to the following likely significant effects, which may spread beyond the application site:

- Disturbance to populations within hearing range during the construction phase due to noise or vibration;
- Disruption to habitats / populations within receiving range of dust or other air quality considerations during the construction and operation phase;
- Disruption to the normal diurnal patterns for species during construction and operation due to lighting;

- Disturbance to habitats / populations within walking distance during the operation phase; and
- Pollution to watercourses and potential effects on sensitive habitats further downstream during the construction and operation phases.

7.3.2 Mitigation

All site personnel, including sub contractors, are to be given the Taylor Wimpey Environmental Management Toolbox Talk. This will enable the workers to recognise protected species and invasive species and to know their responsibilities.

The potential for breeding birds at site has not been identified. Breeding birds are protected under the general provisions of Section 1 of the Wildlife and Countryside Act 1981 as amended. Whilst the nest is being built or is in use, the eggs, young and nests are protected against intentional and reckless taking, damage and destruction. Regardless of location, if any nesting bird is found on site the Site Manager is to be contacted immediately.

Trees that have been chosen to be retained shall be protected from damage during construction activities. Protective fencing shall be erected around the Root Protection Area with appropriate and visible signage. Storage areas for liquids such as oils, fuels and paints shall not be within 10m of any trees to prevent contamination.

The protected hedgerows/retained hedgerows shall be protected with tree protection fencing.

7.4 Air Quality

7.4.1 Impacts

Air quality within the vicinity of the site and along haulage routes will be impacted by fumes (i.e. particularly NO₂), dust and particulate matter (PM₁₀) during construction activities. The main sources of these pollutants include:

- Haulage routes, vehicles and construction traffic,
- Materials handling, storage, stockpiling, spillage and disposal,
- Exhaust emissions from site plant, especially when used at the extremes of their capacity and during mechanical breakdown,
- Construction and fabrication processes, and
- Internal and external finishing and refurbishment.

Receptors prone to impacts from decreased air quality include:

- Local ecology (i.e. animal and plant species, watercourses such as Sutton Brook),
- Human receptors both on and off site through inhalation of pollutants,
- Settlement of dust and particulate matter on local and surrounding area causing nuisance.

7.4.2 Mitigation

Fumes from vehicles will be minimised by the following measures:

- Engines of all vehicles and plant on site will not be left running unnecessarily;

- Low carbon vehicles and plant fitted with catalysts will be used where possible;
- Ultra low sulphur diesel fuel will be used in plant and vehicles;
- Ensuring that plant and vehicles are well maintained and hold a valid MOT;
- All commercial road vehicles and construction plant, including stationary plant must comply with any legislative requirements including the European Emission Standards. It is good practice for contractors to aim to meet the highest Euro standards for emissions for all HGVs and LGVs accessing the site; and
- Wherever possible, use of electrical powered tower cranes.

The potential to produce dust and particulate matter (PM₁₀) will be minimised by implementing Best Practical Means (BPM) measures. These will include:

Site Planning:

- Dampening of exposed soil and material stockpiles using sprinklers and hoses when necessary to prevent dust and particulate matter becoming mobile;
- Stockpiles of soils and materials would be located as far as possible from sensitive properties, taking account of prevailing wind directions and seasonal variations in the prevailing wind;
- Surface areas of stockpiles would be minimised (subject to health and safety and visual constraints regarding slope gradients and visual intrusion) to reduce area of surfaces exposed to wind pick-up; and
- Where appropriate, windbreak netting/screening should be positioned around material stockpiles and vehicle loading/unloading areas.

Demolition activities:

- Water shall be utilised as a dust suppressant;
- Any cutting equipment employed shall have a dust suppressant system or suitable local extract ventilation;
- Enclosed chutes and covered skips shall be used at site to control dust generation from the waste handling activities; and
- If a crusher is to be used at site the contractor shall:
 - Notify the local authority if a crusher is to be used ;
 - Keep a copy of the permit on-site and adhere to the conditions therein at all times; and
 - Refer to Process Guidance note PG 3/16 (04)12 and use best available techniques (BAT) according to the guidance at all times.

General construction activities:

- Visual inspection of the site perimeter to check for dust deposition (evident as soiling and marking) on vegetation, cars and other objects, and the implementation of remedial measures would be carried out, if necessary;

- Construction operatives will use appropriately designed vehicles when handling material and design controls for the use of construction equipment and vehicles. Additionally it will be ensured that all construction plant and equipment is maintained in good working order;
- Short-term releases may also occur during start up of diesel engines, etc. Regular visual checks and routine maintenance would be applied in accordance with the plant specification, to minimise releases. Faulty site plant will be decommissioned until repairs are carried out and it has been tested and found to be operating satisfactorily;
- On-site cement and concrete batching (if required) will be undertaken in enclosed areas, with suitable water dowsing and wind shielding measures applied as appropriate;
- Dust-suppressed tools will be used for all operations; and
- No unauthorised burning of any material will be carried out anywhere on site.

Earthwork activities

- Take into account the predominant wind direction when siting stockpiles to reduce the likelihood of affecting sensitive receptors;
- Dampening of exposed soil and material stockpiles using sprinklers and hoses when necessary to prevent dust and particulate matter becoming mobile; and
- Completed earthworks should be covered or vegetated as soon as is practicable.

Construction traffic:

- Surfaced and un-surfaced site access roads will be watered as necessary using a water bowser and surfaces kept in good order;
- Regular inspection of local highways and site boundaries to check for dust deposits shall be carried out. A road sweeper shall be employed to ensure site road and local highways are kept free of deposits; the frequency of visits shall be varied depending on the condition noted during the inspections. All road sweeper collections will be disposed of in accordance with current waste management legislation;
- Vehicles carrying loose aggregate and workings should be sheeted at all times;
- Construction traffic shall be routed to avoid sensitive roads (i.e. residential areas, etc.); and
- Speed limit around site of 20 mph.

7.5 Noise and Vibration

7.5.1 Impact

Noise and vibration will be caused during construction activities by:

- Traffic movements;

- Plant movements;
- Demolition operations;
- Excavating operations
- Piling operations; and
- General construction activities.

7.5.2 Mitigation

To mitigate the potential impacts of noise and vibration the following measures shall be adopted for the general construction activities and site management:

- All activities with the potential to cause noise and vibration will be limited to the “core hours” will be Monday – Friday 08:00 – 18:00 and Saturday 08:00 – 13:00;
- Where there is a requirement to undertake works on a Sunday or Bank holiday; written approval shall be sought from the Local Planning Authority in advance of the works;
- General induction training for site operatives and specific training for staff having responsibility for particular aspects of controlling noise from the site shall be delivered;
- Where generators are operated overnight, measures shall be taken to minimise noise levels at the nearest dwellings;
- Care will be taken when erecting or striking scaffolds to avoid impact noise from banging steel. All operatives undertaking such activities will be instructed on the importance of handling the scaffolds to reduce noise to a minimum; and
- Contractors must use “best practicable means” (BPM) to minimise the nuisance from noise and vibration; this is to include compliance with BS 5228, Noise Control on Construction and Open Sites.

Specific mitigation measures shall be adopted to control the potential impact from each site activity, as detailed below.

Traffic Movements:

- All visitors to site shall be required to adhere to the Traffic Management Plan for the development. The Traffic Management Plan shall be displayed in prominent locations to ensure all visitors are aware of how to navigate the site; and
- Deliveries will be programmed to arrive during permitted hours only. Care will be taken when unloading vehicles to minimise noise. Delivery vehicles would be routed to minimise disturbance to local residents. Delivery vehicles will be prohibited from waiting on the highway or within the site with their engines running.

Plant movements and operation:

- Use of most environmentally acceptable and quietly operating plant and equipment appropriate to the works with emission levels limited to relevant EC Directive/ UK Statutory Instrument levels and the levels quoted in BS5228;
- Intermittently operating plant will be shut down in the intervening periods between operations (including during breaks and down time of more than 30 minutes);
- Any compressors brought on to site would be silenced or sound reduced models fitted with acoustic enclosures;
- All pneumatic tools will be fitted with silencers or mufflers;

- Where possible, noisy plant shall not be used simultaneously and/or in close proximity to each other, to avoid cumulative noise impacts; and
- Site inspections shall be undertaken and will include checks to ensure that plant is being operated with any specified acoustic covers in place. Excessively noisy plant shall be removed from site for repair or maintenance. Quieter construction methods will be used, where required and where considered reasonable and feasible.

Demolition operations:

- Adherence to noise and vibration limits, and operating hours, shall be included in contractual agreements with contractors;
- Contractors shall be required to ensure that plant is operated with all specified acoustic covers in place. Regular inspections of plant shall be undertaken to ensure this measure is being followed;
- Equipment will be switched off when not in use (including during breaks and down times of more than 30 minutes);
- Compressors should be fitted with properly lined and sealed acoustic covers which should be kept closed whenever in use;
- Pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers;
- Equipment which breaks concrete, brickwork or masonry by bending or bursting or “nibbling” shall be used in preference to percussive tools where practicable. Avoid the use of impact tools where the site is close to occupied premises;
- Where practicable, rotary drills and bursters activated by hydraulic, chemical or electrical power shall be used for excavating hard or extrusive material;
- Where practicable, equipment powered by mains electricity shall be used in preference to equipment powered by internal combustion engine or locally generated electricity; and
- Plant shall be maintained in good working order so that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.

Piling operations:

- Adherence to noise and vibration limits, and operating hours, shall be included in contractual agreements with contractors;
- Contractors shall be required to ensure that plant is operated with all specified acoustic covers in place. Regular inspections of plant shall be undertaken to ensure this measure is being followed;
- Equipment will be switched off when not in use (including during breaks and down times of more than 30 minutes); and
- Where possible, piling activity shall not be undertaken in close proximity to or at the same time as other loud or vibration generating equipment.

Excavation operations:

- Adherence to noise and vibration limits shall be included in contractual agreements with contractors;
- Equipment and excavation work sites shall be oriented, where possible, to reduce noise emissions to sensitive receptors;

- Excavation operations will, wherever possible, be undertaken without the use of pneumatic breakers; and
- Where it is necessary to use pneumatic tools, all items will be fitted with silencers or mufflers.

7.6 Waste

7.6.1 Impacts

The construction works are likely to produce the following wastes:

- Mixed construction waste;
- Light mixed and compactable waste;
- Mixed inert waste;
- Timber;
- Plasterboard;
- Mixed metals;
- Paper, cardboard & plastics; and
- Hazardous waste – small quantities of part full paint tins, mastic tubes and aerosols.

7.6.2 Mitigation

Taylor Wimpey has developed a Site Waste Management Plan (SWMP) for the phase(s) of the development. The SWMP details how each waste stream will be managed; the projected waste volumes and the Duty of care checks on all waste carriers and permitted disposal/ treatment sites. The details of the Duty of care checks shall be recorded within the sites Waste Management Matrix (WMM) contained within the SWMP and displayed within the site office. Site operatives shall undertake checks of the Waste Transfer Notes and Hazardous Waste Consignment Notes supplied against the details of the WMM to ensure waste is being managed in line with current waste legislation.

Waste will be segregated into individual front end or rear end loaders (metal, hardcore, timber, inert etc.) and monitored in relation to type and weight, enabling the onsite recycling of materials to be maximised. Taylor Wimpey also have an internal scheme called ReUSE which allows the company to source soils and aggregates from within the business and to use them on sites under the CL:AIRE Code of Practice. A Materials Management Plan (MMP) may be utilised to manage arisings from excavations and services. In addition there is the opportunity for Taylor Wimpey to include the import of Clean Naturally Occurring topsoil to cap the site under the MMP.

Taylor Wimpey has appointed Reconomy to act as the Waste Broker for the development. Reconomy automatically update the SWMP with waste arising data, for collections under their contract. Reconomy will log all the materials removed from site and the method in which it has been dealt with. Taylor Wimpey provides supplementary information for all services outside of the Reconomy contract. Overall responsibility for the maintenance and review of the SWMP remains with Taylor Wimpey. A copy of the most up to date SWMP will be held within the site office.

All waste materials should be stored appropriately on site, including:

- 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 are stored in suitable containers away from sensitive receptors and site traffic,
- Avoiding the mixing of hazardous and non-hazardous materials.

7.7 Transport

7.7.1 Impact

Traffic may cause the following impacts:

- Noise;
- Dust;
- Traffic congestion resulting in extra travel time for local residents;
- Vibration;
- Nuisance; and
- Additional hazards to local residents of moving vehicles.

The impacts of construction traffic have been assessed during the planning process for the development. As a result of the construction activities, there may be some disturbance to the existing residents of Morris Street, Oak Street and Sutton Road. Any disturbance will be kept to a minimum and access and egress will be fully maintained to the properties during the development phase.

7.7.2 Mitigation

The movement of heavy good vehicles associated with the transportation of material to and from the site shall be restricted to the hours of Monday – Friday 08:00- 18:00; Saturday ‘core hours’ will be 08:00 – 13:00. No activities will take place outside of these times, including Bank Holidays.

Taylor Wimpey shall prepare and implement a Traffic Management Plan (TMP) outlining procedures to follow and prescribed routes when working on the site. The TMP shall incorporate any restrictions imposed by the planning consents, Highways Authorities and/or the Police Authority. The TMP will include specific routing for construction traffic to the site.

The TMP shall be circulated by the Taylor Wimpey Production Manager to all parties who are employed or have a legitimate interest in the works.

The Taylor Wimpey Site Manager shall ensure that Construction Traffic Routeing Signs are erected prior to works commencing, and that these are maintained in good and clean condition throughout the duration of the works.

Taylor Wimpey shall apply the following additional measures to control any potential impacts arising from site traffic:

- Appropriate authorisation of any temporary road closures or diversions;
- Measures to prevent off-site parking of HGVs and employees’ cars and to ensure vehicles use designated routes;
- Maintenance of traffic and pedestrian safety at all times (including, for example, provision of ramps, barriers, uniform surfaces, signage etc); and
- Measures to avoid mud being deposited on roads (i.e. road sweeper/wheel wash facility).

7.8 Archaeology and Cultural Heritage

7.8.1 Impacts

There are no listed buildings, scheduled ancient monuments or conservation areas on site or within close proximity to it. It is likely that archaeological deposits found on site, if any, will not be of national significance.

The following activities associated with the proposed development could impact on potential archaeological remains:

- Excavation work for footings;
- Pre-construction drainage works and fencing;
- Movement of heavy machinery; and
- Installation of services, drainage and cabling.

7.8.2 Mitigation

Any unexpected archaeological discoveries shall be reported to the Council Archaeology Advisor, English Heritage and Taylor Wimpey Environmental Advice Line. Expert knowledge will be sought before continuing works.

7.9 Landscape and Visual Impacts

7.9.1 Impact

During the development stage there are likely to be some minor visual impacts to surrounding areas. This will include stockpiles of soils and aggregate materials, mobile plant and movement of heavy goods vehicles and temporary site offices.

7.9.2 Mitigation

The impact of the development itself has been assessed as being positive and no further landscape mitigation measures are proposed. During the construction phase, keeping the welfare areas, inclusive of hoardings, clean and tidy, shall mitigate the impact on the visual amenity. These areas will be monitored on a daily basis by site operatives from Taylor Wimpey.

All lighting of the site compound and welfare facilities will be directional and non-polluting (i.e. not pointing into the sky) and will either be set on timers or activated by passive infrared system to minimise their operation.

Existing trees and tree groups, especially those of moderate to high value, are to be retained in line with the submitted Arboricultural Report and detailed on the respective layout plans submitted within the planning application. Also, new planting within gardens and alongside residential streets will provide extra tree cover, increasing the visual amenity of the site.

8 MONITORING AND AUDITING

8.1 Introduction

Appropriate monitoring of the environmental effects of construction enables the effectiveness of environmental mitigation to be evaluated. It also allows environmental problems to be identified and responded to at an early stage. Monitoring will also help Taylor Wimpey to identify and implement environmental improvements, which will contribute to the overall environmental performance of the project.

8.2 Environmental Audits

Taylor Wimpey will carry out appropriate environmental inspections and monitoring of environmental performance in the form of monthly audits. Formal audits will be against an audit checklist, which will provide a mechanism to monitor and assess compliance against all Taylor Wimpey's requirements and standards.

Where problems are recognised, the corrective action will be identified by the inspector and subsequent corrective action undertaken within a defined time frame.

8.3 Environmental Monitoring

Environmental monitoring shall be carried out as necessary and requirements for environmental monitoring shall be reviewed as consents are received and consultations completed.

Key parameters that will require environmental monitoring include:

- Energy use arising from construction site activities;
- Water use arising from construction site activities;
- Waste generation during construction; to be monitored as part of the Site Waste Management Plan to ensure the appropriate treatment, handling, management and disposal measures are applied. Records shall be kept of quantities and types of waste handled;
- Dust pollution arising from construction site activities.

Documentation from environmental monitoring shall be maintained and made available as appropriate.

8.4 Environmental incident and corrective action reporting

Taylor Wimpey has an emergency response system documented within Section 4 of the Taylor Wimpey HSE Manual. All environmental incidents and near misses shall be reported and investigated by Taylor Wimpey.

The incident must then be reported to the Taylor Wimpey Environmental Advice Line (0845 003 8752) where an Environmental Consultant shall provide additional advice and support. Where relevant, the appropriate statutory authority (e.g. Environment Agency) shall be informed immediately. For Environmental Incidents the Taylor Wimpey procedure requires the site operatives to prevent the continuation of the incident, where safe and possible to do so. Copies of incident investigation reports shall be kept by Taylor Wimpey and action taken to prevent recurrence.

9 MANAGEMENT OF CONTRACTORS

All sub-contractors are required to provide Method Statements and Risk Assessments for all their proposed working methods as per Taylor Wimpey UK Ltd procedures. These will contain methods of activities, potential environmental receptors and are required prior to commencement on site. Copies of all these documents are to be held within the Site Office.

Method statements obtained by the contractor from their subcontractors should include, as a minimum:

- A description of the works being undertaken;
- Descriptions of the impacts to the environment caused by their works based on a review of surveys and information available for the development. The impacts should consider areas such as landscape and visual; transport, waste and noise and vibration;
- Details of the activities to be undertaken; equipment to be used; hours of operation; site access arrangements and likely vehicle movements and details of waste and emissions expected to be generated;
- Management and Mitigation measures;
- Monitoring and measurement responsibilities; and
- Emergency preparedness and response procedures.

The method statements of Taylor Wimpey and all the subcontractors will include the following environmental control measures:

- All waste to be segregated and placed in a suitable waste container;
- All fuel to be stored in suitable double skinned bowers, tanks or within a bunded area;
- Drip trays or absorbent blankets to be placed under all static plant;
- All hazardous chemicals to have an up to date COSHH assessment, be appropriately labelled and be stored in a locked container;
- Emergency arrangements for spill response;
- Spillages to be reported immediately;
- Core working hours;
- Vehicle and plant engines to be turned off when not in use; and
- For excavations, works to stop immediately if unknown remains found.

10 TRAINING & COMPETENCE

Taylor Wimpey procedures for ensuring the correct levels of training and competence include:

- All operatives are informed at the induction stage of all sensitive ecological areas and are issued with an ecological document stating the reasons and locations of all the relevant areas;
- All operatives are inducted by Taylor Wimpey before work commences and informed that they are required to 'sign in' before the operative commences work;
- Taylor Wimpey works to their Taylor Wimpey HSE Manual and Taylor Wimpey CDM/EMS Manual, where individual operatives have specific Induction Sheets. These documents are read to the relevant operatives, where a signature is required on completion and a record kept in the site file;
- There are also procedures in place that any issues raised in relation to Environmental Health & Safety and work ethics, whether highlighted by Taylor Wimpey staff or site operatives, are relayed via 'Tool Box Talks' and are noted on an individual form, allowing site management to resolve the issues raised.
- A record of Tool Box Talks will be kept on site, stating date, description of non-conformance, potential implications, proposed corrective actions, individual responsible and target date.

10.1 Inductions

All project personnel and sub-contractors shall receive an Environmental Induction Presentation, prior to commencement of works onsite. No personnel, including subcontractors, shall be permitted to commence employment on site without prior attendance at an induction.

Environmental topics covered in the induction shall include but will not be limited to:

- Water resources;
- Pollution prevention;
- Emergency response procedures;
- Waste management and housekeeping;
- Management structure;
- Duties and responsibilities;
- Relevant procedures;
- Ecologically sensitive areas;
- Incident reporting;
- Consents and licenses;
- Legislation; and
- Environmental best practice.

10.2 Toolbox Talks

Regular 'Tool-Box Talks' on specialised topics will supplement the induction course. Toolbox talks shall be used to highlight issues of concern and to disseminate new information not previously provided. They will also offer site personnel with the opportunity to provide feedback.

Tool Box Talks shall include, but will not be limited to, instances where:

- There is a change to existing legislation, which requires an operational change;
- Site inspections or audits have identified corrective actions which require rolling out;
- Work is being undertaken in environmentally sensitive areas;
- There are significant changes in environmental conditions, i.e. heavy rainfall.

The frequency and topics of the Toolbox Talks shall depend upon the phase of construction. They shall be provided as often as necessary to address site-specific environmental requirements.

Toolbox talk topics for environmental management shall include, but will not be limited to:

- Ecologically sensitive areas.
- Environmental incident and reporting.
- Invasive weeds.
- Protected species.
- Silt and water management.
- Waste management and segregation.

Records of all 'Tool-Box Talks' and attendance shall be kept in the site offices.

10.3 Specialist training

Specialist training for specific members of the construction crews will be provided as required. This may include but will not be limited to:

- Emergency environmental crews.
- Waste representatives.
- Fuel tanker drivers.

11 CHANGE MANAGEMENT

This CEMP will be reviewed 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.

12 FIGURES

Figure 1: Site Location Plan (Ref; LOC 01)

NB: The red line demarcates the residential development site boundary.

Figure 2: Build Route with Compound Layout (Ref; LOC 01)

Figure 3: Compound Plan (Ref; COM 01)

Figure 4: Traffic Management Plan (Ref; TMP 02)

(PDF documents attached)