Construction Environmental Management Plan

Phase 5 Herne Bay Golf Club Herne Bay Kent

Redrow Homes Limited

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CONTENTS

1.	INTRODUCTION	3
2.	SITE ARRANGEMENTS	9
3.	MANAGING THE ENVIRONMENTAL IMPACT OF CONSTRUCTION	12
4.	DEMOLITION AND WASTE PROTOCOL	19
5.	CONSIDERATE CONSTRUCTORS SCHEME	21
6.	RELEVANT LEGISLATION, STANDARDS AND GUIDANCE	22

1.0 INTRODUCTION

1.1 Overview

This Demolition and Construction Environmental Management Plan (CEMP) has been prepared by Redrow Homes Limited to discharge conditions 9 and 10 of planning application ref: CA/15/00844/OUT. The permitted hybrid application is for the redevelopment of the former Herne Bay Golf Course, with the full element comprising the demolition of the existing club house, the creation of 113 residential units (including affordable housing), the creation of a sports hub and a new access off the Thanet Way. The outline element comprises up to 459 residential units (including affordable housing) along with a care home, doctors surgery, public house and commercial buildings.

Reserved Matters planning consent was granted for Phase 5 under application ref. CA/18/02369 which this CEMP relates specifically to.

Condition 9 reads (in part):

No development within a construction phase shall commence until a Demolition and Construction Environment Management Plan (CEMP) has been submitted to, and approved in writing by the Local Planning Authority. The works shall be carried out in accordance with the approved CEMP unless otherwise agreed in writing by the Local Planning Authority.

Condition 10 reads:

No works within a construction phase shall commence (save for any Advance Infrastructure and Enabling Works) until a Waste Management Plan has been submitted to and approved in writing by the Local Planning Authority for that construction phase. The Waste Management Plan shall include details of how the waste will be recycled and/or disposed of and managed during construction. The development shall be carried out in accordance with the approved Waste Management Plan.

The CEMP covers specific legislative requirements; compliance with British Standards and general aspects of the construction works potentially affecting local residents and the environment.

In this CEMP, the term 'construction' relates to all activities carried out on the site, relating to all intrusive ground investigations, site preparation, excavations, materials delivery, spoil disposal and removal, waste removal and all related engineering and construction activities.

The contractor(s) appointed for this scheme shall hold and maintain, for the duration for a project, an Environmental Management Plan (EMP) certified to the international standard ISO14001. It has been agreed that the system would be adopted for implementation during the construction period.

The CEMP would fall within the scope of the Contractor's externally certified international environmental management system, and as such would be subject to regular independent audits by the Contractor's certification body. A draft of the CEMP would be circulated to all Statutory Authorities prior to works commencing for information and comments.

All works on site would be undertaken in compliance with the CEMP.

1.2 Structure of this Document

This CEMP is set out in the following sections:

- Section 1 provides background information relating to the CEMP and its enforcement;
- Section 2 sets out arrangements on the site, key activities, access and hours of working;
- Section 3 sets out the minimum standards of construction practice and the mitigation measures.
 - o traffic and accessibility;
 - o noise;
 - o ground conditions;
 - water resources;
 - landscape and visual;
 - \circ ecology
- Section 4 provides details of how the demolition will be undertaken and how waste will be managed;
- Section 5 sets out how the contractors employed on site will be registered;
- Section 6 provides details on the relevant legislation and guidance applicable at the time of writing.

1.3 Commitment to Standards of Implementation

Redrow is committed to best practice standards of implementation to ensure safe and secure implementation of the project with the minimum possible environmental harm. These commitments are set out in the sections below.

Redrow closely monitors the environmental and health and safety performance of any and all sub-contractors subject to compliance with the CEMP through all normal electronic and written media, telephone conversation and at least weekly visits.

Redrow will seek remedy within the law in relation to any breach of the requirements of this document by any sub-contractor.

Redrow Sustainable Development Policies

Redrow's aim is to deliver long term sustainable high quality homes. In order to deliver Redrow's mission statement, a suite of policies have been developed with the guidance and assistance of stakeholders. Details of the following policies are found within this section:

- Environmental Policy
- Climate Change Statement

Environmental Policy

Redrow is one of the UK's most successful house builders. As well as maintaining and growing our profitability, and delivering the highest quality products to our customers, we aim to be a responsible business with a focus on positive engagement with other key stakeholders.

This policy focuses on the environmental aspect of responsible business and is the cornerstone of our environmental management system, setting out our broad aims and objectives, complemented by our Climate Change Statement.

Our over-arching principles are to:

- Prevent pollution from our activities.
- Comply with current environmental legislation and be proactive in anticipating forthcoming requirements.
- Focus on improving resource efficiency.
- Continually monitor and improve our environmental performance.
- Place environmental issues at the core of our business culture through effective communication of environmental issues, both internally and externally.

More specifically we will:

- Reduce the amount of waste we generate, both through product design and on-site management.
- Reduce energy and water use from our activities.
- Provide a continuous programme of communication, information and training for staff, to ensure that they are aware of their responsibilities and their successes.
- Work with sub-contractors and suppliers to ensure they comply with our policies and help them reduce their impact on the environment.
- Continue our strategy of developing land opportunities involving regeneration of brownfield sites.
- Implement procedures to protect and enhance retained habitats and biodiversity interests.
- Reduce the environmental impact of our homes throughout their design construction, use and final disposal.

We will monitor our progress through the setting and reviewing of objectives and targets and publish an annual environmental performance review.

Climate Change Statement

Redrow recognises that there is convincing evidence to support the reality of climate change, and that one of the primary influencing factors highlighted by science is the build-up of "greenhouse gases", which arise from human activities across the globe.

We at Redrow understand that we have a part to play in ensuring that our business and our products have minimum impact on the environment and climate and that we must work towards reducing reliance on fossil fuels, reducing energy demands and carbon emissions and maximising our efficient use of natural resources.

We are meeting these challenges on a number of fronts, from the perspective of our business activity and our products. In both these areas we are setting performance targets and through the efforts of our dedicated Research and Sustainability Team we are ensuring that all our staff are aware of our aims and can play their own part in reducing the impact of our business on the environment.

Development of our products is a continuous process, with full involvement of the Executive Board and the Chairman.

As the Government's energy strategy has unfolded, we have undertaken significant and invaluable development work in reducing energy demands in the home, which has informed industry and contributed to the shaping of current and future regulation and standards. We continue to build upon the foundations of this work in all aspects of sustainability, developing solutions to enable our core product to meet the demanding performance levels which move us towards the carbon emission targets of 2016 and through our committed and proactive engagement with Government, related industry task groups, our colleagues in the industry and through response to consultation. At the same time we strive to deliver the highest quality homes consistent with the demands of our customers.

We understand the value of engagement with our supply chain to ensure that we minimise our environmental impact and expect our suppliers and sub-contractors to demonstrate their commitment to the environment through their own codes of practice. These expectations



cover issues such as sourcing of materials, transportation and delivery, packaging, health and safety, workforce competency, training and welfare as well as payment and pricing terms. It is incumbent upon our supply chain partners that they are compliant with Redrow's Customer Service and Supplier Service Agreements.

Where possible, we specify products and materials which generate the least environmental impact, including timber from properly managed, certified plantations, key materials from our supply partners closest to specific sites and non-toxic paints.

We have an Environmental Policy underpinned by an Environmental Management System based around the themes of resource efficiency, preventing pollution and ensuring legal compliance which incorporates a robust internal auditing system for all sites, where these issues are examined on a regular and continuous basis and the performance of each of our regional Divisions is reported monthly to the Main Board.

To assist us in targeting improvements in our performance we have committed to set benchmarks in the following key areas which complement our Environmental Policy:-

- Our carbon footprint
- Water consumption in our offices and on our sites
- Waste management and re-cycling
- The products and materials we specify

1.4 Purpose of the CEMP

The purpose of this statement is to define the minimum standards of construction practice that are required of the appointed Contractor in so far as they affect the environment, amenity, safety and wellbeing of local residents, the general public and employees of local businesses. It aims to assure local residents and affected parties that potential impacts to the environment will be mitigated in accordance with recognised best practice, guidance and legislative standards.

The CEMP will be adopted by the Contractor through discussions with Canterbury City Council (CCC) and other statutory bodies in particular the Environment Agency. It will apply throughout the 7.5 year construction period.

1.5 Compliance with Relevant Standards, Legislation and Guidance

There are numerous Codes, Standards and Acts of Parliament which cover environmental and related matters and these are referred to as applicable in this CEMP. Notwithstanding those references, compliance with this CEMP will not absolve the Contractor or its sub-contractors from compliance with all legislative requirements applicable at the time of construction activities. Wherever this Statement makes reference to Legislation, Standards or Codes it shall be the Contractor's responsibility to ensure that the current versions are used at all times. Examples of key relevant legislation include:

- The Control of Pollution Act 1974;
- Health and Safety at Work Act 1974;
- Environmental Protection Act 1990;
- The Construction (Design and Management) Regulations 2015;
- Management of Health and Safety at Work Regulations 1999;
- Control of Substances Hazardous to Health Regulations 1999.

1.6 Responsibilities and Incident Reporting Procedures

The appointed Contractor will nominate a senior member of staff to supervise the activities on the construction site at all times when the site is operational. The appointed person will be responsible for ensuring the CEMP is adhered to and will hold meetings with Redrow, Canterbury City Council and statutory bodies as necessary.

Regular audits would be completed to verify that the project is compliant with the established CEMP, contractual requirements and legislation. The project would also fall within the Contractor's ISO14001 Registration and as such would receive regular independent audits by the certification body.

This person must also inform Redrow of any incidents of non-compliance with the CEMP as soon as reasonably practicable. Redrow has ultimate responsibility in the event of non-compliance by a Contractor in respect of constructing the development but may apply by contract disclaimers that it would be for a court of law to determine.

The designated person from the Contractor will be the first point of contact for members of the public in the event that there are complaints or disturbance. Contact details should be clearly displayed on hoardings around the site. All complaints must be logged and appropriate action taken within two days. A written response must be provided within 5 days.

2.0 SITE ARRANGEMENTS

2.1 Hours of Working

The standard working hours for all construction activities will be from 08.00 - 18.00 Monday to Friday and 08.00 - 13.00 Saturdays. No continuous 24-hour activities are envisaged at this stage and any working on Sundays or Bank Holidays will be subject to reasonable notice. Any change to working hours will be agreed in advance with Canterbury City Council. These hours will be strictly adhered to unless or in the event of an emergency demands continuation of works on the grounds of safety, fitting out works are being carried out within the containment of the building envelope and completion of an operation that would otherwise cause greater interference with the environment / general public if left unfinished. It should be noted that the above times do not ban works being undertaken on the site outside of these hours, as long as it is not audible outside the site, for example; painting by hand.

2.2 Site Housekeeping

A 'good housekeeping' policy shall be applied on the site at all times. This shall include, but not necessarily be limited to, the following requirements:

- i. All working areas to be kept in a clean and tidy condition.
- ii. All working areas shall be no-smoking.
- iii. Open fires shall be prohibited at all times.
- iv. All necessary measures shall be taken to minimise the risk of fire and the Contractor shall comply with the requirements of the local fire authority.
- v. Audio equipment (radios), other than for communication purposed shall not be operated on site.
- vi. Waste is to be stored in designated and enclosed containers and removed at frequent intervals.
- vii. Toilet facilities will be provided for all site staff.
- viii. Food waste will be removed frequently.
- ix. A wheel washing facility will be provided and cleaned regularly.
- x. Working areas will be inspected frequently and Redrow will be allowed to carry out site inspections at any time without prior notice.

2.3 Fencing and Hoardings

The Contractor shall ensure that all working areas are sufficiently and adequately fenced off from members of the public and to prevent animals from straying on to the working area. Temporary hoardings may be erected consisting of:

- a wire mesh fence, where appropriate for minimum security needs; or
- a 2.4 m minimum height, plywood faced, timber framed boundary hoarding or other hoarding providing equivalent security and noise attenuation, in the vicinity of noise sensitive neighbours.

Furthermore, temporary fencing will be erected where trees are being retained under the proposals in order to suitably safeguard the trees during the construction phase as recommended by BS5837:2012. Construction staff will only be permitted to enter these areas for the purpose of tree management.



All hoardings shall be maintained in a neat and tidy condition and to provide contact details for the nominated staff members. All fencing and hoarding shall be removed as soon as reasonably practicable after completion of works.

As per the recommendation in the Ecological Appraisal, prior to onset of development amphibian fencing will be installed in strategic areas around and throughout the development area, to safeguard the inhabiting great crested newt and reptile populations and to enable trapping and relocation of animals to the areas of protected retained receptor habitat, including all the breeding ponds and associated terrestrial habitat. Similarly, the hedgerows including mature hedgerow trees to be retained and protected, will be fenced with BS approved fencing, throughout the construction period, to avoid any adverse impact on tree root protection areas (RPAs) and the inhabiting wildlife.

2.4 Lighting and Security

Construction equipment and lighting shall be sited so as to minimise visual intrusion and light spillage at nearby residential properties, in so far as is consistent with site safety.

Site lighting shall be positioned and directed to minimise nuisance to residents and disturbance to wildlife.

The Contractor shall comply with the Institute of Lighting Engineers document Guidance Notes on Reduction of Light Pollution (2000) in so far as is reasonably practicable and applicable to the construction works.

Adequate security shall be exercised by the Contractor to prevent unauthorised entry to or exit from the site. Site gates shall be closed and locked when there is no site activity and site security measures shall be implemented. Lighting for security purposes will be sited so as to minimise visual intrusion and light spillage.

2.5 Site Compound and Welfare Facilities

All staff will benefit from a range of facilities within the site compound. The following provisions will be included within the compound:

- 1. 2 x Site Offices.
- 2. 2 x Meeting Rooms.
- 3. 3 x Canteens.
- 4. 2 x Drying Rooms.
- 5. 2 x Toilets.

An example of a typical site compound can be seen at Appendix A.

On completion of the project, the Contractor shall clear and clean all working areas and accesses as work proceeds and when no longer required for the works.

All surplus soil and materials, plant, sheds, offices and temporary fencing shall be removed when they are no longer required on site.

A secure and bunded storage area will be located on-site and will be provided for the duration of the construction period. Plant and equipment would be stored in areas that are less

susceptible to possible pollution incidents, or in dedicated areas of hard standing. A spill kit will be available for use of in the event of an incident. All deliveries will be supervised by a responsible person. Any fuel deliveries will take precautions to ensure that the fuel storage tanks are checked before and during delivery to prevent overfilling.

2.6 Site Safety

The Contractor shall prepare and maintain a set of Emergency Procedures and Contacts which should be prominently displayed on the site at all times. Such procedures must be followed in the event of a site emergency.

They shall contain emergency phone numbers and the method of notifying emergency services. Copies of the Procedures will be issued to Canterbury City Council, the Fire Brigade, the Police, the Ambulance Service and the relevant statutory bodies.

Special precautions in relation to contaminated material shall be displayed on a Safety Information Sheet to be prominently displayed in rest/mess rooms and wash rooms covering hygiene, work practices, clothing requirements etc. Further information concerning disposal of contaminated materials is described in Section 3.5.

All site work will be carried out under the provisions of the Health and Safety at Work Etc. Act 1974. Health and Safety briefings will be made to all staff before they enter the site initially followed by regular updates and awareness raising.

3.0 MANAGING THE ENVIRONMENTAL IMPACT OF CONSTRUCTION

3.1 Introduction

This section sets out the mitigation measures that are proposed in relation to the development in order to minimise and to manage the potential environmental impact of construction.

3.2 Dust and Air Quality

Measures to reduce the levels of dust and prevent the deterioration of local air quality are included in a CEMP as best practice and ensure that levels do not become significant.

3.2.1 Dust

The Contractor shall take all necessary measures to avoid creating a dust nuisance during construction. Best Practicable Means will be used to minimise the creation and emission of dust, the following measures take into account guidance prepared by the Buildings Research Establishment (BRE) on the Control of Dust from Construction and Demolition Activities¹. These include:

- water suppression or dust extraction technology to be fitted to drilling and grinding equipment;
- where appropriate, drilling and excavation surfaces will be wetted;
- during dry conditions, debris piles will be kept watered as necessary so that no dust nuisance may be caused;
- suitable measures will be taken during the construction period to prevent the deposition of mud and dirt on the public roads and to prevent the propagation of dust from the site;
- sheeting of lorries during transportation of construction materials and spoil export; and
- all containers will be totally enclosed or covered by tarpaulins to prevent escape of dust or waste materials during loading and transfer from site.

3.2.2 Local Air Quality

The Contractor shall take precautions to prevent the emission of smoke or fumes from construction vehicles, site plant and stored materials including volatile substances. Vehicles and plant shall be well maintained and measures shall be taken to ensure that engines and motors are not left running for long periods when not in use.

The Contractor shall comply with the provisions of the Environment Act 1995, the Clean Air Act 1993 and the Health and Safety at Work Etc. Act 1974.

The Contractor shall comply with the Control of Substances Hazardous to Health Regulations (COSHH) 1999 and Health and Safety Executive (HSE) Guidance Notes EH 40/90 and EH 40/97 on Occupational Exposure Limits.

The Contractor shall take precautions to prevent the occurrence of smoke emissions or fumes from site plant or stored fuel oils. Plant shall be well maintained and measures shall be taken to ensure that it is not left running for long periods when not in use. There will be no burning of waste on site.

¹ BRE (2003) Guidance on the Control of Dust on Construction and Demolition Activities.

3.3 Traffic and Accessibility

The predicted traffic generation associated with the construction works are not expected to result in significant impacts on existing traffic on the surrounding road network. Nevertheless, a number of mitigation measures will be implemented to minimise the effects of construction traffic movements, particularly HGVs, as far as possible. These include the following:

- 1. Material delivery will be restricted, where possible, to non-peak traffic periods.
- Scheduled construction shift times will be outside of normal weekday peak traffic periods where possible to minimise potential traffic impacts on the surrounding road network.
- 3. The reversing of construction vehicles onto the public highway will not be permitted and all contractors and visitors will endeavor to adhere to this.
- 4. Where possible, heavy and special loads, will be delivered to the site during off peak hours and subject to agreement with the Council and providing this does not give rise to additional levels of construction noise.
- 5. Materials and equipment will be stored securely on site to minimise unnecessary traffic movements.
- 6. The Contractor will ensure that delivery and construction vehicles do not park on, or obstruct the highway.
- 7. A parking area will be provided on site which will be provided in tandem with a no parking policy outside of the site. All delivery vehicles will be brought completely into the site off the main road for unloading.
- 8. Where possible encourage contractors to use public transport such as rail and bus so to minimise car movements.
- 9. Vehicle access will be controlled using a gateman / Banksman who will be responsible for the vehicle movement in and around the gate area.

Specific measures relating to mud on roads will be implemented across the site, these include:

- 1. The provision of easily cleaned hardstandings for vehicles entering, parking and leaving the site
- 2. The provision of wheel washing facilities.
- 3. The Gateman will sweep the road immediately of any loose debris.
- 4. The use of a mechanical road sweeper to clean the site of hardstanding and any mud or debris deposited by the site vehicles on roads or footpaths in the vicinity of the site.
- 5. The adequate sheeting of each lorry load of spoil removed, to prevent spoil falling off during its journey.
- 3.3.1 Speed Limit on Site

A speed limit of 15mph will be imposed for all vehicles within the site.

3.3.2 Construction Vehicle Routes

The Construction Traffic Routes throughout the wider site have been prepared on the basis that construction vehicles will access the strategic road network by the most convenient route, while minimising any effects on local residents. For all phases, wherever possible, vehicles will use the site access on the Thanet Way – from here construction traffic will make



a left turn onto the A2990 Thanet Way, and will travel towards the roundabout junction with the B2205. All traffic will proceed to the 5th exit of the roundabout and return along the A2990 Thanet Way, which provides a link to the A299. The A299 is a dual carriageway that provides a direct link towards Thanet to the east and London/M25 to the west. It is therefore expected that all traffic would make use of this route, which would apply to vehicles travelling both away from and towards the site.

The existing golf club access will be utilised to provide access for demolition and construction of the first section of the spine road and construction of the first phase of residential development. A parking area will be provided adjacent to the site compound, to the south of the first phase of development, and a turning area will be also be provided in this area to ensure all construction and delivery vehicles can turn to access and exit and the site safely.

After discussions with the local highway authority, it has been agreed that construction traffic for Phase 4 will not access and egress the site via Bullockstone Road as previously proposed due to concerns about the road's suitability for construction vehicles. Therefore all construction traffic associated to Phase 4 (and all future phases) will continue to use the established route, following the approved spine road. In addition, the highways authority has clarified the requirement relating to the installation of the 'stump buster' bus gate, whereby only details of the bus gate are required to be approved prior to any development taking place above DPC level.

3.3.3 Road and Footpath Closures

It is anticipated that occasional short-term road closures might be required on the A2990 Thanet Way, to accommodate site access works and large sized deliveries. Any temporary road closures will be agreed with the Highways Authority, CCC and the local police. Notices will be posted to alert the public to any planned road closures and / or diversions.

3.4 Noise and Vibration

Unacceptable impacts arising from construction noise are not expected on the site. In general, 'Best Practicable Means' as defined in Section 72 of the Control of Pollution Act, 1974 will be employed to minimise noise and vibration, furthermore, the guidance provided in British Standard 5228-1:2009 - Code of practice for noise & vibration control on construction & open sites-Part 1: Noise will be followed. Such measures control the noise at source by using effective acoustic enclosures, screens and barriers and ensuring regular maintenance of vehicles. The following measures will be implemented:

- Normal working hours will be 08.00 to 18.00 hours Monday to Friday and 08.00 to 13.00 hours on Saturdays, with no works taking place on Sundays or bank holidays.
- No work which is audible at the site boundary will be undertaken outside the specified hours, except in cases of emergency where safety is an issue, or where prior agreement has been reached with Canterbury City Council.
- All trade contractors will be made familiar with current noise legislation and the guidance contained in BS 5228 (Parts 1 and 2) which will form a prerequisite of their appointment.
- The Contractor will use only the most environmentally acceptable and quietly operating plant and equipment compatible with the safe and efficient execution of the works.



- Noise emitted by plant items should not exceed the limits quoted in the relevant EC Directive, UK Statutory Instrument or BS 5228-1:2009.
- Items of plant operating on site will be shut down in intervening periods of use.
- Compressors brought onto the site will be silenced or sound reduced models fitted with acoustic enclosures.
- All pneumatic tools will be fitted with silencers of mufflers
- Care will be taken during the erection of scaffolding to avoid impacts from banging steel.
- Deliveries will be programmed to arrive during working hours only. Care will be taken when unloading vehicles and construction vehicles will be routed on major roads only.
- Noise levels during construction will be monitored by the Project Manager (or designated representative) and through regular communication with residents in close proximity to the site. Any noise issues are expected to be resolved quickly.

In addition, liaison with the Environmental Health Officer at Canterbury City Council will be maintained throughout the construction period.

3.5 Ground Conditions

3.5.1 General

All materials used in the construction must be of clean, inert composition. No material that may be a source of significant potential contamination must be introduced into the site.

If during development, in areas where contaminated land may be present, the ground must be engineered in such a way as to minimise risk to potential receptors (humans, animals and plants). This may require the removal of contaminated material to a location where it can be safely treated, in situ treatment/remediation or encapsulation in accordance with a remediation strategy.

3.5.2 Contaminated Land

A Contaminated Land Assessment was submitted with the original planning application. This assessment identified potential sources of contamination and recommended that an intrusive site investigation should be undertaken to confirm if a potential risk exists.

Further intrusive ground investigation is to be undertaken which will further inform the CEMP and the extent and nature of the made ground. These further investigations will inform a remediation strategy which will be agreed by the Council. Whilst the exact details of the remediation strategy is unknown at this stage, the risk to construction works can be mitigated through adequate personal protective equipment and compliance to the various policy and legislation.

The contractor will comply with the provisions of the Environmental Protection Act 1990, and the Special Waste Regulations 1996 (as amended). The removal and disposal of contaminated materials will be conducted under a strict consignment note system. Disposal sites will be agreed with the Environment Agency.



The Environmental Protection Act 1990 (s.34) imposes a Duty of Care on any person who produces, imports, carries, keeps, treats or disposes of controlled waste. The Contractor will comply with this duty as set out in the Waste Management; the Duty of Care - Code of Practice March 1996.

The contractor will comply with the Control of Substances Hazardous to Health Regulations (COSHH) 1999 and HSE Guidance Note EH 40/99, Occupational Exposure Limits 1999, to ensure that contaminated excavated materials are handled and disposed of safely and properly.

In undertaking work on contaminated sites, useful information concerning the safe operation and redevelopment of contaminated sites may be found in HS(G)66 Protection of Workers and the General Public during the Development of Contaminated Land 1991. Precautions include:

- Protective clothing including overalls, hand protection, head protection and safety boots to be worn at all times;
- If it is necessary to remove contaminated material from site, then lorries or skips used for the removal of the material should be fully covered.
- Detailed records of disposal should be discussed and agreed with the Environment Agency. All disposals will take place at licensed tips.

3.5.2 Groundwater

Construction methods employed within the scheme will be designed to prevent significant short-term and residual impact to both the groundmass and groundwater conditions on the site. Where sub-surface structures are constructed, such as piles, the techniques employed should be developed in accordance with the guidance provided in National Groundwater and Contaminated Land Centre report NC/99/73, Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution and Prevention. The results of the site investigation will be taken into account to ensure that the most appropriate method of construction is designed.

3.6 Water Resources

All construction and other works that may affect the ponds and river watercourses on site are to be undertaken in accordance with the Environment Agency Pollution Prevention Guidelines (PPGs). Pollution Prevention Guidance comprises a set of guidance notes aimed at providing developers and contractors with a set of best practice methods to minimise impacts on the water environment, specifically PPG5: Works and Maintenance in or near Water, which addresses all construction and maintenance works in, near, or liable to affect surface waters including ponds.

- The Environment Agency will be notified in advance of all works to allow pollution prevention and emergency procedures to be agreed.
- Spill kits etc. will be available in the unlikely event of a spill, and site personnel will be trained in their use.
- Potentially contaminative liquids such as oils and lubricants will be stored in bunded and lockable oil storage tanks, with hoses and gauges kept within the bund; the capacity of the bund will be equal to 110% of the storage tank volume.
- Adequate provision for the collection, treatment and disposal of sewage from site offices and accommodation should be provided.

∲REDROW

• Earth moving operations that have the potential to give rise to contaminated drainage will be undertaken in compliance with British Standard Code of Practice for Earthworks, BS 6031, 1987.

3.8 Landscape and Visual

To reduce landscape and visual impacts throughout the construction phase, the following mitigation measures will be implemented:

- materials and machinery will be stored tidily during the works tall machinery will not be left in place for longer than required for construction purposes, in order to minimise its impact in views;
- lighting of compounds and works sites will be restricted to agreed working hours and that which is necessary for security;
- roads providing access to site compounds and works areas will be maintained free of dust and mud, as will the access road to the south of the site;
- contractors' compounds will be located away from sensitive receptors e.g. nearby residential properties, watercourses';
- on completion of construction works, all remaining construction materials will be removed from the site; and

3.9 Ecology and Nature Conservation

To ensure potential impacts on terrestrial ecology are reduced to a practical minimum the following measures will be implemented during the works.

- Habitat loss will be limited to the minimum needed for construction purposes.
- Best site management practices will be adopted to minimise the risk of secondary impacts to adjacent habitat (including direct incursions, lighting, pollution, draining of adjacent areas etc.).
- Check surveys for protected species, specifically bats and nesting birds will be undertaken prior to work commencing. Any necessary mitigation measures that are required will be agreed with Natural England, furthermore the relevant licenses will be obtained prior to any on site works.
- The Ecological Assessment considered that the site is of negligible-low ecological value for foraging/commuting bats, Badger, Otter, Dormouse, other mammals, reptiles, birds and invertebrates, largely due to the dominance of regularly managed amenity habitats within the site. Due to the presence of a number of trees of moderate-high bat roosting potential, overall the site is considered to be of low-moderate ecological value for roosting bats. Due to the presence of a small number of Water Vole droppings recorded along Plenty Brook within the site, the site is considered to be of low-moderate ecological value to Water Vole at the local level.
- Three ponds within the site were recorded to support breeding Great Crested Newts (GCNs). In addition, the site supports a number of terrestrial habitats of value for GCNs and other amphibian species.
- Specific mitigation measures will therefore be required to ensure that the inhabiting
 populations of GCNs are safeguarded during the construction period and that current
 population levels of GCNs are maintained. These measures include the retention of
 all pond, ditch and hedgerow habitats and the enhancement of retained grassland
 through appropriate management and the provision of hibernacula and log piles. It
 will be necessary to ensure the provision of sufficient high quality terrestrial habitat
 to support populations as well as maintaining connectivity to enable GCN dispersal
 among breeding ponds. A programme for the creation of receptor areas and for the



capture / relocation of great crested newts and reptiles from the development area will also be implemented, together with monitoring surveys to assess the effectiveness of the mitigation. A Natural England EPS licence will also be required with respect to GCNs, to enable the proposed development and mitigation works to be implemented. Measures will also be implemented to ensure that any mature trees with potential to support bat roosts are safeguarded during the construction phase of the development.

4.0 DEMOLITION AND WASTE PROTOCOL

4.1 Introduction

As set out in Redrow's environmental policy, Redrow will aim to reduce the amount of waste generated, both through product design and on-site management. Any waste that is produced through the construction of units will be carefully segregated and recycled wherever possible and where it cannot be recycled it will be disposed of in the correct manner.

A build route phasing plan for the phase can be seen at Appendix B. This plan identifies the build direction and the location of the sales area and site compound. All ecological and archaeological work has already been completed and signed off by the relevant authority.

4.2 Site Waste Management Plan

Redrow is to establish a dedicated Waste Management Coordinator (the Site Manager) who will be tasked with the removal of all waste from site. A recycling regime for materials and packaging to achieve a minimum of 80% recovery. The waste management coordinator will compile a report quantifying the materials recovered.

It is planned that site waste will be reduced through segregation and recycling.

Redrow intends to segregate the following materials in the material recovery programme;

- Wood
- Brick and Rubble
- Metal
- Plasterboard
- Mixed Waste
- Hazardous Waste

Dedicated skips will be provided for the collection of the listed materials about the site.

All contractors working on the site will be supplied with refuse bins by waste management coordinator. Once the bins are filled the waste management team will consolidate the waste and remove it from the site.

The consolidated waste will be collected from site by licensed waste carrier. Waste materials fall into three categories for management, these are;

- Reuse
- Recycle
- Landfill (disposal)

<u>Reused</u> – If surplus materials can be used in the permanent works they are classified as materials, which have been reused. If they are surplus to requirements and need to be removed from the site and they can be removed and used in their present form, they can be removed from the site for subsequent reuse.

<u>Recycling</u> – if a surplus material cannot be reused in its present form but could be used in a different form, it is sent for recycling. An example is recycled timber to make chipboard.



<u>Landfill</u> – If either of the above cannot be satisfied then the only option left is to send the waste materials to landfill. <u>Landfill is only a last resort.</u>

Waste certificates will be collated for all waste deposited at Environmentally Controlled Waste Reception Centres. Copies of all waste transfer notes will be kept for two years. Records will be gathered about the waste gathered on site including volume, type and cost - including how it was packaged, when it was transferred, where it went to and who it was transferred to. These are all requirements of the duty of care.

Any hazardous waste that is removed from the site will be monitored and tracked to record compliance with the site waste management plan.

Site Security: Redrow Homes Limited will take reasonable steps to ensure site security measures are in place to prevent the illegal disposal of waste at each respective site.

Monitoring: Skips need to be monitored continuously to ensure that contamination of segregated waste does not occur. During this monitoring we will regularly update on how the waste management system is working.

A record will be kept to continually review the type and amount of surplus material being produced and where possible/practical alter the site set up to maximise on reuse or recycling to maintain the use of disposal as a last resort.

The plan shall be communicated to the whole project team (including the client) prior to commencement and at every revision stage. Business wide updates including the KPIS will be communicated and discussed at IMS and Management meetings.

4.3 Demolition

No demolition is required in this phase of the development.

5.0 CONSIDERATE CONSTRUCTOR'S SCHEME

The site will be registered under the considerate constructor's scheme; it is Redrow's aim to exceed the standard level of considerate constructors.

The Site Code of Considerate Practice forms the basis of all the Scheme's requirements. Which include:

Considerate: All work is to be carried out with positive consideration to the needs of traders and businesses, site personnel and visitors, and the general public. Special attention is to be given to the needs of those with sight, hearing and mobility difficulties.

Environment: Be aware of the environmental impact of your site and minimise as far as possible the effects of noise, light and air pollution. Efforts should be made to select and use local resources wherever possible. Attention should be paid to waste management. Reduce, reuse and recycle materials where possible.

Cleanliness: The working site is to be kept clean and in good order at all times. Site facilities, offices, toilets and drying rooms should always be maintained to a good standard. Surplus materials and rubbish should not be allowed to accumulate on the site or spill over into the surroundings. Dirt and dust from construction operations should be kept to a minimum.

Good Neighbour: General information regarding the Scheme should be provided for all neighbours affected by the work. Full and regular communication with neighbours, including adjacent residents, traders and businesses, regarding programming and site activities should be maintained from pre-start to completion.

Respectful: Respectable and safe standards of dress should be maintained at all times. Lewd or derogatory behaviour and language should not be tolerated under threat of severe disciplinary action. Pride in the management and appearance of the site and the surrounding environment is to be shown at all times. Operatives should be instructed in dealing with the general public.

Safe: Construction operations and site vehicle movements are to be carried out with care and consideration for the safety of site personnel, visitors and the general public. No building activity should be a security risk to others.

Responsible: Ensure that everyone associated with the site understands, implements and complies with this Code.

Accountable: The Considerate Constructors Scheme poster is to be displayed where clearly visible to the general public. A site's contact details should be obvious to anyone affected by its activities.

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6.0 RELEVANT LEGISLATION, STANDARDS AND GUIDANCE

Legislation

- The Control of Pollution Act 1974
- Health and Safety at Work Act 1974
- Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations, 2010
- Environmental Protection Act 1990
- Water Resources Act 1991
- Clean Air Act 1993
- The Construction (Design and Management) Regulations 2015
- Special Waste Regulations 1996 (as amended)
- Management of Health and Safety at Work Regulations 1999
- Control of Substances Hazardous to Health (COSHH) Regulations 1999
- Pollution Prevention and Control (England and Wales) Regulations 2000
- Countryside and Rights and Way Act 2001
- Traffic Regulations and General Direction 2002 (as amended)

Standards

- BS 5228-1:2009 Code of practice for noise & vibration control on construction & open sites-Part 1: Noise
- BS 5837 2012 Trees in Relation to Design, Demolition and Construction
- BS 6031 Code of Practice for Earthworks
- BS 6472 Guide to Evaluation of Human Exposure to Vibration in Buildings
- DoE Advisory Leaflet 72 Construction Noise Limits Applicable at Residential Locations During daytime hours.

Guidance

- Building Research Establishment Control of Dust from Construction and Demolition Activities
- Environment Agency Pollution Prevention and Guidance Notes
- National Planning Policy Framework (2012)
- PPG01 General Guide to Water Pollution Prevention
- PPG02 Above Ground Oil Storage Tanks
- PPG05 Works In, Near or Liable to Affect Watercourses
- BS5228: Part 1: 2009 Noise control
- HSE Guidance Notes EH40/90 and 40/97 Occupational Exposure (1999)
- HSE Guidance Note MS 13 Asbestos (1991)
- HSE Guidance Note HS(G) 66 Protection of Workers and the General Public during Development on Contaminated Land (1991)
- Lighting Engineers Notes on Reduction of Light Pollution (2000)
- National Groundwater and Contaminated Land Centre Report NC/99/73 Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination; Guidance on Pollution and Prevention

APPENDIX A – TYPICAL SITE COMPOUND







APPENDIX B – BUILD ROUTE PHASING PLAN

