

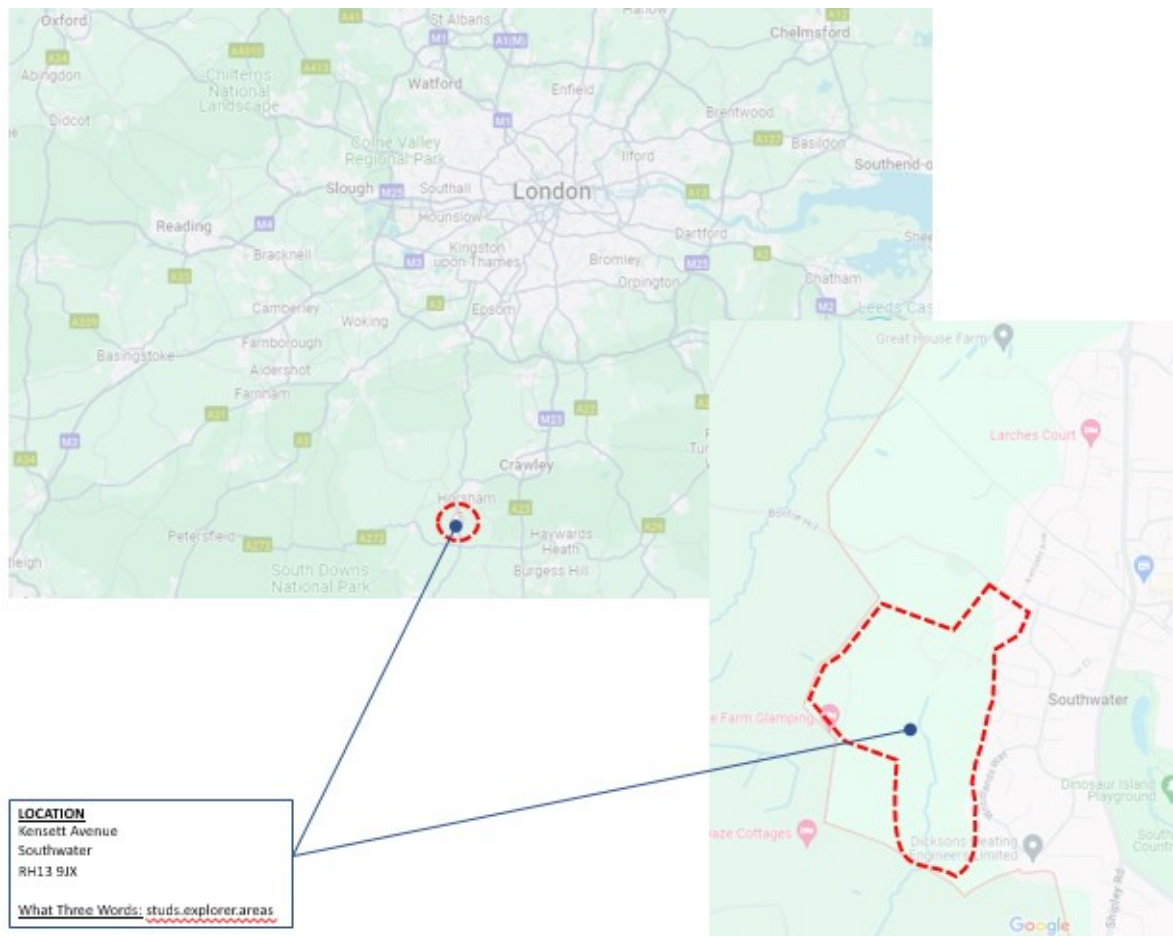
BROADACRES (PHASES 4 & 5)

**Worthing Road
SOUTHWATER
West Sussex**



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

SITE LOCATION:



CONSTRUCTION COMPOUND LOCATION:



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

1.0 Project Details

Project Name: Southwater Phases 4 & 5

Project Address: Land West of Worthing Road, Southwater, West Sussex

Project Number: S830

Construction Start: Spring 2025

2.0 Description of Project

Outline planning permission for residential development of up to 540 dwellings and 54 retirement living apartments, associated vehicular, cycle and pedestrian access, drainage and landscape works was granted by Horsham District Council on 25 June 2015. Phase 3.2 has completed recently, with the next phases (4 & 5) due to commence in Spring 2025 swiftly following a successful revised application (ie this application).

This Construction Environmental Management Plan is required under condition 27 of this planning permission (HDC ref: DC/14/0590).

The site lies to the west of the existing village and is bounded by Worthing Road to the east. The western boundary is defined by existing field boundaries, mature hedgerows and areas of woodland. Church Lane and the Downs Link bridleway pass through the site providing pedestrian and vehicular access to the centre of Southwater to the east and the open countryside to the west.

3.0 Introduction

The CEMP provides the management framework needed for the planning and implementation of construction activities in accordance with environmental commitments identified within the Environmental Statement and any requirements of planning conditions or Section 106 legal agreements. Its purpose is to reduce the risk of adverse impact of construction on sensitive environmental resources and to minimise disturbance to local residents.

The CEMP describes the checking, monitoring and audit processes that would be implemented to ensure works are being undertaken in accordance with these requirements, together with measures to ensure that appropriate corrective actions or mitigation measures are taken.

The CEMP forms part of the overall Berkeley Homes Project Management Processes and as such, activities described would be integrated with other Quality, Sustainability and Health and Safety management processes.

The Programme

A programme of works will identify and sequence activities that are needed in order to complete a required construction process. The programme would identify reference documentation, the approval required to complete that activity and the verification documentation to be produced as evidence of satisfactory completion.

The programme would include the following sections:

- advanced works

- site clearance and fencing (including tree and hedge protection fencing)
- contractor's compound-already implemented
- topsoil strip
- earthworks & haul roads
- drainage works
- building foundations
- superstructures to buildings
- building finishes and fit-out
- road and car park construction
- landscaping and planting.

3.1 Risk Assessments

All activities undertaken on site would be subject to Berkeley Group Health and Safety assessment which will include environmental issues, as well as specific Sustainability assessments from our Sustainability Advisor. Risk assessments would be undertaken by trained staff following an approved procedure which would:

- identify the significant environmental impacts that can be anticipated
- assess the risks from these impacts
- identify the control measures to be taken and re-calculate the risk
- report where an inappropriate level of residual risk is identified so that action can be taken through design changes, re-scheduling of work or alternative methods of working in order to reduce the risk to an acceptable level

The results of risk assessments, and their residual risks are only considered acceptable if: the severity of outcome is reduced to the lowest practical level; the number of risk exposures are minimised; all reasonably practical mitigating measures have been taken and the residual risk rating is reduced to a minimum.

The findings of the risk assessment and in particular the necessary controls would be explained to all operatives before the commencement of the relevant tasks using an agreed instruction format (inductions/tool box talks etc).

3.2 Method Statements

Method statements would be completed on behalf of the Main Contractor or Subcontractor by trained engineers or other appropriate experienced personnel, in consultation with Sustainability Advisor and, where necessary, environmental specialists. Their production would include a review of the environmental risks and commitments and health and safety risk assessment, so that appropriate control measures are developed and included within the construction process.

Method statements would be reviewed by Construction/Site Manager, and where necessary by the Sustainability Advisor. Method statements would contain as a minimum:

- location of the activity and access/egress arrangements
- work to be undertaken and methods of construction
- plant and materials to be used
- labour and supervision requirements
- health, safety and environmental considerations
- any permit or consent requirements

3.3 Site Environmental Standards

These would be agreed with the Project Team and would detail the minimum measures that should be achieved for general operations that would fall outside the risk assessment/method statement procedure designed to cover the majority of construction activities. They would cover issues such as storage of materials, design and location of access routes, details of proposed location of wheel washing facilities, parking for construction traffic, turning areas for construction traffic within the site clear of the public highway, agreed traffic routes associated with the movement of bulk material to and from site, management of waste, water pollution, noise and vibration, and water pollution control. (Refer to Site Logistic Plan for details) The standards would be printed on A3, placed in the induction folder and used within the site induction process.

4.0 Control of Construction Processes

4.1 Training, Awareness and Competence

The raising of environmental awareness is viewed as a crucial element in the appreciation and implementation of the CEMP. As a consequence, all staff would undergo environmental awareness training, by way of the pre-start induction process.

Training for all personnel identified in the Company training plan would be completed before commencement of the associated construction activities. This includes all site managers to receive a 3-hour Sustainability Training course specific to their role. Line managers and supervisors would ensure that all personnel engaged in activities that may have an impact on the environment are competent to carry out their duties.

Supervision of Construction Activities

All construction and installation activities including those carried out by subcontractors and suppliers would be supervised, or regularly checked through the completion of site inspections by suitably qualified Construction/Site Managers and Sustainability Advisor(s) within their site visits, to ensure that requirements identified in risk assessments or method statements have been implemented. The frequency and extent of this supervision would vary according to the degree of competence displayed by the workforce and the level of risk of the activity and to the environment.

4.2 Inspection of Other Operational Impacts

Appointed representatives would carry out weekly inspections of their respective construction areas, to verify that housekeeping or supporting controls are being implemented effectively. These inspections would utilise the site environmental standards as the minimum standards that should be achieved, with necessary actions being recorded and raised at regular progress meetings. Subsequent inspections would commence with a review of all outstanding actions from previous reports to verify that they have been completed.

(Berkeley Homes BHC-F-20b)

4.3 Inspections of Environmental Aspects

Environmental deliverables required by the CEMP would be subject to regular independent inspections by the Berkeley Homes (Southern) Limited Site Manager and Sustainability Advisor. These inspections would be used to confirm that:

1. Construction works are progressing in accordance with the agreed method statements'
2. Agreed protection or mitigation measures are in place, prior to or during the implementation of construction activities
3. Construction works have been completed in accordance with the design and commitments made during the statutory process

4.4 Environmental Monitoring

Monitoring of noise, vibration, dust and water quality would be carried out in accordance with the specialist environmental procedures and environmental commitments included within the CEMP, the method statements, and project waste management plan (PWMP).

PHASE 5

DUST MONITORING POSITION =



PHASE 4

DUST MONITORING POSITION =



The Project Waste Management Plan (PWMP) will be implemented to encourage the principles of the waste hierarchy which are to reduce, reuse and recycle waste. Our commitment as a division is to recycle a minimum of 85% of the waste that will be removed from site. The following measures may be implemented:

- Ensuring that all contractors are contractually obliged to participate in reducing waste from site, which is included in our Sustainability Policy;
- Reduction of materials wastage through efficient buying, good storage and handling;
- Providing sustainability training, including waste minimisation, for all of the Berkeley Homes site team.

- Regular toolbox talks throughout the construction phase to raise awareness of the importance of minimizing; segregating and recycling wastes during the construction process;
- Ensuring adequate waste storage facilities are provided for both raw materials and waste streams generated (e.g. Timber, Metal, Plasterboard and General);
- Ensuring adequate security measures are in place.

4.5 Control of Non-conformance

Non-conforming products or processes would initiate a Non-Conformance Report, which would identify the nature of the problem, the proposed corrective action, action taken to prevent recurrence of the problem and verification that the agreed actions have been carried out. (Berkeley Homes form BHC-F-19a).

4.6 Communication and Co-ordination

Internal project communications would be via regular team meetings, a monthly Project Health & Safety Review, and a quarterly sustainability assessment by our Sustainability Advisor.

Site sustainability assessments will formally assess the site by monitoring;

- Waste Management
- Ground and Water Pollution Prevention
- Fuel/ COSHH Storage and Handling
- Materials Storage and Housekeeping
- Energy and Water Efficiency
- Dust and Noise
- Ecology
- Transport Management
- CCS and Community Involvement
- Sustainability Paperwork.

4.7 Weekly Team Meetings

Weekly meetings chaired by the Project Manager would be held by the construction teams to review performance and co-ordinate short-term planning of forthcoming activities. The management team would use these meetings to report on the findings of their inspections together with any systematic or recurring issues. Actions from these meetings would be recorded via minutes and reviewed by Senior Managers, Directors and Sustainability Advisor.

4.8 Monthly Project Environmental Review (PRM)

Environmental issues would be primarily discussed at a monthly Project Review, chaired by the Project Manager and attended by the Sustainability Advisor, relevant subcontractors representatives and, when necessary, specialists and representatives from statutory consultees. The Project review would:

- consider past performance from inspections, audit reports and monitoring data
- plan actions required to mitigate forthcoming risks
- disseminate best practice

4.9 Communications and Consideration with the Public

The construction process can be very disruptive to those living in close proximity to the development site. Berkeley Homes (Southern) Limited aim to act with consideration as to the impacts we have on the local community during this process.

Before starting works, the site will be registered to the Considerate Constructors Scheme to ensure an external audit is carried out at regular intervals. This will enable the construction process to be monitored with the aim of maintaining the highest possible standards of the site within the construction industry.

The Code of Considerate Practice commits the site to care about appearance, respect the community, protect the environment, secure everyone's safety and value their workforce.

One of the Berkeley's Groups commitments relating to 'Our Vision' commits all live construction sites registered with CCS to achieve a minimum score of 38 points in each site audit.

Actions generally include the following:

1. Considering the needs of the local community during the construction process
2. Minimising noise during the construction process
3. Keeping the site clean and in good order at all times
4. Maintaining a channel of communication with neighbours via letter drops and signage as a minimum
5. Maintaining a safe and respectful standard of behaviour and eradicating derogatory behaviour and language
6. Considering the safety to the general public and site personnel at all times
7. Routing Agreement for the site construction traffic and HGV traffic associated with the movement of bulk material to and from site, to minimise disturbances far as practically possible.
8. Schedule site deliveries outside times of peak traffic volume. This should be 08.00-09.00h and 16.00-17.00h. (WSCC LHA requirement)
9. Ensuring that deliveries to site are kept to their allocated time slots. (WSCC LHA requirement)
10. Avoid contractor parking in residential streets surrounding the site. (WSCC LHA requirement)
11. All loaded vehicles leaving site must be sheeted. (WSCC LHA requirement)
12. Ensure that there are designated walkways on and around site. (WSCC LHA requirement)

Any site person receiving a concern or complaint from adjacent properties or passing pedestrians shall refer the matter immediately to the site manager, who will record the fact and refer the matter to the management team who will subsequently carry out an investigation.

Any complaints will be recorded and categorised by the site management team into the following categories: Noise; Dirt and Dust; Parking; Safety; Inconsiderate Behaviour; Road Conditions and Vehicle Movements; Environmental Concerns; Pedestrian Access Obstruction; Property Damage; Site Lighting; Working Hours and Other Issues.

The site management team will record the date, time and reason for the complaint and what action has been taken to investigate and respond to the complaint.

Project Manager: 01372 370400

TBC (complaints and emergency out of hours contact)
Berkeley Homes (Phs 5 Compound)
Church Lane
Southwater
RH13 9BT

Sustainability Advisors: 01372 370400

Jennifer Matthewson
Berkeley Homes (Southern) Limited
Berkeley House
Bay Tree Avenue
Leatherhead
Surrey KT22 7UE

5.0 Environmental Control Measures

The following control measures have been developed from the mitigation proposals described in the Environmental Statement and would be developed in more details with the contractor once appointed, to best reflect the actual methods of working and programming of construction activities. Construction teams would also use the control measures as a guidance whilst completing risk assessments and method statements which would in turn provide the appropriate mechanism for implementation on site.

6.0 Noise and Vibration

WSP Environmental Noise & Vibration Impact Study

An assessment of the impact of noise and vibration during the construction phase has been carried out to assess the likely impact of the construction works associated with the proposed development, including on-site and off-site infrastructure works.

The significance of the noise impact during the construction phase have been determined by comparing the noise levels against the construction noise limit of 70 db. All predicated construction noise levels are below the noise limit and will result in a negligible insignificant impact.

Mitigation

Strict controls on the sequencing of works and providing noise protection would be developed on an activity-by-activity basis. This would include:

- All items of plant operating on site in intermittent use would be shut down in the intervening periods between uses.
- All stationary plant would be located as far as possible from occupied dwellings as agreed with the site manager.
- mortar silos to reduce operating noise
- All plant items brought to site would be properly maintained, provided with effective silencers and operated in a manner as to avoid causing any excessive noise or vibration.

Noisy works i.e.: work that is audible at the site boundary would only be conducted during the normal working hours.

Normal Working Hours

0800 - 1800 Monday to Friday

0800 – 1300 Saturday

Noisy works outside these hours would only be permitted if that work is previously agreed by the site manager with HDC in accordance with any agreed control measures.

Cutting operations or other noisy tasks would be minimised through off-site fabrication wherever practicable.

7.0 Geology and Soils

Loss and/or Destruction of Agricultural Soils

The majority of existing topsoil would remain on site. Topsoil from one area of the proposed development may be transferred for use elsewhere on site subject to meeting the soils criteria demanded by the long term proposals to revert to landscape instead of arable base agriculture. Destruction of soils would be avoided by strictly controlled temporary storage area to ensure that the soil remains adequately oxygenated and that the micro-biological structure is maintained.

Topsoil/Subsoil Stripping & Storage

An efficient earthworks strategy shall be designed which will promote the use of arisings within the development to reduce muck away. There are many benefits to this, not least including:

- Less disruption to local roads-reduced vehicular traffic (specifically tipper trucks)
- Less disruption to the environment-reduced Co2 emissions

Before commencing works on site all areas of work to be disturbed by construction activities will be stripped of topsoil. All topsoil and subsoil stripping will be undertaken by a tracked excavator standing on the soil area to be stripped and then loaded into site or transport vehicles for distribution to designated stockpile locations within the site. The temporary routes between the areas to be stripped and the stockpile locations will be defined in advance of the works commencing. Topsoil and subsoil areas will be situated in different areas of the development site as identified on the Site Logistics Plan (below) to avoid mixing of soils.



Soil stripping would be avoided during periods of heavy rainfall with large areas of stripping undertaken during drier periods. Saturated soils to be retained would be allowed to dry out prior to placement onto stockpiles to prevent damage of the soil structure.

Long-term stockpiles of soil are to be seeded. This is to prevent erosion and weed infestation. These areas will be closely monitored by the Project Team.

We confirm that the above meets and complies with the construction code of practice for the sustainable use of soils on construction sites.

7.1 Water Quality, Drainage and Hydrology

Construction phase operations would be carried out in accordance with guidance contained within the Health and Safety Plan, Method Statements and Waste Management Plan and would consider the following.

- General Guide to the Prevention of Pollution.
- Above Ground Oil Storage Tanks.
- Use and Design of Oil Separators in Surface Water Drainage Systems.
- Works in, near or liable to affect Watercourse.
- Working at Construction and Demolition Sites.
- High Pressure Water and Steam Cleaners.
- Control of Spillages.
- Pollution Incident Response Planning.
 - there would be no pumping to controlled waters without a Discharge Consent obtained from the relevant authority
 - in order to prevent water pollution resulting from worker-generated sewage effluents, portable toilets (for initial site set up works only) and good quality temporary toilet facilities would be provided for construction worker use

The potential for impacts to occur as a result of storage of materials would be minimised by the following measures:

- storage compounds (for the storage of construction materials or temporary stockpiling of excavated soils) would be located away from surface watercourses and drains and/or bunded as appropriate
- drums and barrels would be stored in a designated bunded safe area within the compound
- all drums and barrels would be fitted with flow control taps
- all drums and barrels would be properly labelled
- all haul roads on the site and approaches would be regularly cleaned to prevent the build up of debris/silt
- surface water treatment measures will be deployed across the phase of works, including; silt settlement tank/pond, treatment beds etc
- areas of bare soil would be kept to a practical minimum to reduce silty runoff

The potential for impacts to occur as a result of disturbance of silt would be minimised by the following measures:

- all roads and hardstanding's would be kept clean and tidy to prevent the build up of oil and dirt that may be washed into a watercourse or drain during heavy rainfall (including regular sweeps with mechanical sweeper)
- the use of water sprays to reduce dust or wash down construction areas would be carefully regulated to avoid washing substantial quantities of silt etc, into surface water drains. Where large quantities of gravel, mud or other such material required cleaning, the area would be swept prior to any subsequent hosing down.
- regular drainage and gulley inspections to be made to ensure these are clear of excessive silt.
- Storage of soils will be confined to designated areas identified on the Site Logistics Plan.

- Principle construction tarmac traffic routes will be constructed as an early stage operation to reduce the risk reduce silt run-off generated by vehicle movements.
- Site traffic movements will be confined to designated routes, following defined temporary Haul Roads
- Construction deliveries, staff and visitors shall generally follow the Primary Route to the Site, which is A24, Worthing Rd, Church Lane, Kensett Avenue

The potential for impacts occur as a result of contamination of water by wet cement or concrete would be minimised by the following measures:

- manholes and catchpits would be covered to prevent concrete/cement ingress
- concreting at watercourse culvert sites would be closely supervised to prevent concrete contamination of the watercourses
- the washing of any concrete mixing plant or ready mix lorries would be carried out so as to prevent effluent from cleaning from being allowed to flow into any watercourse or drain

The potential for impacts to occur as a result of contamination of water by oil or other liquids would be minimised by the following measures:

- Storage compounds for fuels, oils or other liquid chemicals would be sited away from surface water drains. They would have an impermeable base and bund with a capacity of 110% and would not drain directly in to the surface water drains
- small plant such as pumps would be equipped with drip trays
- drums and barrels would be stored in a designated bunded safe area within the site compound
- all drums and barrels would be fitted with flow control taps
- all drums and barrel would be properly labelled

The potential for impacts to occur as a result of contamination from accidental spillages would be minimised by the following measures:

- emergency response procedures would be established to deal with instances of leakages or spillages of potentially contaminating substances
- spill kits would be located on sites near to stored chemicals and within the works compounds
- staff would be trained in the use of spill kits

In addition, the following measures would be implemented to minimise potential impacts on ground water during earthworks:

- prior to pumping from excavations permits to operate pumps would be issued to the pump operator, indicating the point of discharge and all other necessary control procedures
- Subsoil would be exposed for a minimum length of time after topsoil strip. Cut-off trenches, where necessary, would be excavated to prevent excessive silt run-off
- topsoil/vegetation along watercourses would be retained to aid attenuation and sediment infiltration

Any risk of contamination of groundwater resulting from piling would be controlled through adequate casing of the piles, selection of suitable concrete mixes with short

curing periods and localised control of the groundwater level should this prove necessary.

Consents would be required from the Environment Agency under the Water Resources Act 1991 for temporary discharges or construction works affecting controlled watercourses. Applications for consents would be made to the Environment Agency in accordance with these requirements and works would be undertaken in accordance with any conditions imposed.

Finally, the compound has been fitted with a petrol interceptor on the SW outfall as a last line of defence to capture any contaminants which may have found their way into the drainage system.

8.0 Air Quality and Emissions / Dust Management

Particular care would be required to maintain dust emissions at a practicable minimum when working in the vicinity of residential properties and environmentally sensitive areas. Best practice mitigation would be required during dry conditions. Dust reduction measures would include:

- careful management of earth stockpiles
- sheeting of vehicles transporting materials to and from the site
- limiting the speed of general vehicles within the site to 10mph
- surfacing of the haul roads as soon as possible in the programme
- haul roads to be regularly cleansed
- provision of wheel washing facilities at access points into local roads (to prevent mud from getting on the public highways)
- visual monitoring would be carried out at sensitive locations on a daily basis

By using effective dust mitigation techniques, including good site planning, the potential for dust emissions to arise at a construction site and impact to surrounding receptors can be minimised.

The potential for dust to arise during the groundworks, earth moving and excavation stage of the construction is highly weather dependent. If carried out in dry weather, increased water spraying may be required to ensure the surface material remains damp. In wet weather greater attention would be paid to vehicle cleaning to ensure significant quantities of mud are not trafficked onto local roads, which once dry can become a significant source of dust.

Throughout the construction period, care would be taken to ensure the adequate control of dust from vehicles delivering and removing materials to and from the site. Drop heights, when loading and unloading materials, would be minimised. All dusty loads would be sheeted appropriately. Dried mud and dust carried onto roads by lorries and other machinery can be a significant source of dust. The Site Manager would ensure that the hard surfacing of heavily used areas and adjacent public roadways are regularly cleaned.

Once the actual building of the development commences there is less potential for significant emissions of dust from the site, although emissions may still arise from the storage of dusty materials. Generally, storage compounds shall be screened, both for security and to prevent wind whipping. In addition, there are certain construction activities that are inherently dusty and would require additional controls eg stone or

brick cutting. Such activities may require local screening or the activities may be limited to certain areas or time periods in order to limit impacts.

Specific measures to prevent dust would include the following practices:

- the provision of easily cleaned hard standings for vehicles (to include the areas close to the site access)
- the regular cleaning by brushing and water spraying of heavily used hard surfaced area
- the provision of wheel washing facilities or high-pressure hose to ensure all vehicles leaving the site are in a satisfactory state of cleanliness
- Dusty materials stockpiles and dusty activities such as stone cutting and grinding to be sited away from the site boundary and/or effectively screened where practicable. All machinery associated with cutting and grinding will be fitted with dust suppressors.

9.0 Ecology

A detailed Ecology Enhancement and Management Plan has been prepared for each phase of the development, which details the habitat creation and enhancement that will be undertaken within each Phase. The management prescriptions within each Ecology Enhancement and Management Plan follow those presented within the *Habitat Creation and Ecology Management Plan* prepared for the whole development site. In addition, the measure included in the management plans, the following avoidance and mitigation methods will be adhered to:

- All retained trees will be protected by appropriate fencing
- All retained species rich hedgerow will be protected by appropriate fencing as necessary;
- Habitat manipulation techniques will be employed prior to works to ensure all areas are free of reptiles, all works within this area will be supervised by the project ecologist
- All vegetation that is to be removed will be done so under the supervision of the project ecologist to ensure nesting birds are not unduly disturbed

A retained Ecological Clerk of Works will be readily available during the construction of the compound area to provide advice, undertake inspections, and assist with the review of any specialist RAMs assessments.

10.0 Waste Management

Detailed proposals would be drawn up for dealing with waste arising from the construction of the project within a site waste management plan.

These would include:

- storing and reusing earthwork materials and general arisings to negate the export or import of inert materials
- reduction of site generated waste through waste minimisation, segregation and recycling initiatives
- identification, storage and management of potentially contaminated materials
- appropriate methods of waste disposal linked to a robust waste disposal audit trail

- All topsoil and subsoil would be handled and stored carefully to minimise the potential for damage to the soil structure. A detailed method statement would be produced clearly identifying correct stripping, soil handling, storage, placement and programming requirements to avoid compaction and moving the material in unsuitable weather conditions
- where possible, construction arisings would be reused within the site as structural or non-structural fill
- where practicable, all concrete and redundant road pavements would be transported to a dedicated crushing and recycling facility for re-use on the project or within the local area
- detailed procedures and guidance would be developed and implemented through the construction process to minimise the import of non-sustainable raw materials and for identifying opportunities for re-using or recycling waste
- site office wastes would be collected in separate containers to maximise the opportunities for recycling, this would include can, bottle and paper banks
- Waste is managed through the Project Waste Management Plan (PWMP) as discussed previously in this document.

12.0 Light Pollution

The installation of floodlighting for safe working and security in connection with the construction process will be carefully planned so as not to cause disruption to neighbouring properties or habitat.

Although it is essential to maintain a safe standard of lighting for operational and security purposes, the effects of the lighting should be given consideration when positioning lighting, in order to avoid light pollution to sensitive receptors.

The following criteria should be followed when erecting safety and/or security lighting:

- Is the lighting necessary?
- Could security be achieved in other ways?
- Will the light affect others?
- Do the lights need to be on at all times?