ENVIRONMENTAL MANAGEMENT PLAN

Priors Hall and associated works including:
Corby Northern Orbital Road [CNOR]
Western Link Road

Dated 1st August 2014

Hewlett Construction Limited
2175 Century Way, Thorpe Park, Leeds LS15 8ZB
Revision Control

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<th>Reason</th>
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<td>Original</td>
<td>11.03.2013</td>
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<td>Reviewed and updated</td>
<td>01.08.2014</td>
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Site Location: Priors Hall, Corty, Northamptonshire

Client: BeLa Partnership Limited

Principal Contractor: Hewlett Construction Limited
2175 Century Way, Thorpe Park, Leeds LS15 8ZB

Brief Description of Works:
- Construction of roads and sewers, paving, and lighting.
- Pumping station and rising main.
- Re-engineering of fill areas.
- Wetland areas.

Hewlett Contract Number: 13026

Document Owner: Allan Miles – Quality and Environmental Manager for Hewlett Construction Limited

Site based Responsible Persons for Hewlett Construction Limited:
- Project Manager – Paul Clayton

Signature of Document Owner
Allan Miles

Signature of Site based Responsible Person
Paul Clayton
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GENERAL STATEMENT

Officially registered through the British Standard Institute, Hewlett Construction Limited has implemented an Environmental Management System which is compliant with BS EN ISO 14001:2004.

Hewlett Construction Limited has an Environmental Policy which is underpinned by Environmental Objectives and Targets. A copy of the current Environmental Policy is displayed at all site offices and can be found on the Hewlett website at www.hewlett.co.uk.

Produced to be contract specific and serve as a point of reference for Hewlett Employees and other Stakeholders this document refers to how environmental performance will be managed on site.

Review for accuracy and continuing suitability is undertaken, normally during the regular site audit and amendments are made where necessary.

Hewlett Construction Limited confirms that it will recognise as a minimum target, the environmental standards prescribed by the client, whilst operating on this project.
1. Contact Details

<table>
<thead>
<tr>
<th>Environment Agency</th>
<th>Incident Hotline</th>
<th>0800 80 70 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment Agency</td>
<td>Flood Warning Line</td>
<td>0845 988 11 88</td>
</tr>
<tr>
<td>Hewlett Construction Limited Head Office</td>
<td></td>
<td>Tel: 0113 232 8000</td>
</tr>
<tr>
<td>Hewlett Construction Limited</td>
<td></td>
<td>Tel: 07931 730 680</td>
</tr>
<tr>
<td>Project Manager: Paul Clayton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hewlett Construction Limited</td>
<td></td>
<td>Tel: 0113 232 8000</td>
</tr>
<tr>
<td>Quality &amp; Environmental Manager: Allan Miles</td>
<td></td>
<td>Mobile: 07738 891 941</td>
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</tbody>
</table>
2. PROJECT DETAILS

2.1 Description of the project – Scope of Works

- Earthworks including re-engineering of fill materials
- Crushing of site won rock.
- Construction of new roads.
- Drainage Works
- Creation of wetlands
- Rising Main with Pumping Station.

2.2 Key Duty Holders

<table>
<thead>
<tr>
<th>Client:</th>
<th>BeLa Partnership Limited</th>
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<tbody>
<tr>
<td>Quality and Environmental Manager</td>
<td>Hewlett Construction Limited, 2175 Century Way, Thorpe Park, Leeds LS15 8ZB. Contact: Allan Miles Tel: 0113 232 8000 Mobile: 07738 891 941</td>
</tr>
</tbody>
</table>

2.3 Programme of works

a. Start Date: February 2013

b. Completion: As per agreed programme(s).

c. Key Milestones:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Projected completion date (as per current programme &amp; subject to development/amendment)</th>
</tr>
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<tbody>
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2.4 Environmental Management Procedures

Hewlett Construction Limited’s Environmental Management Procedures applicable to this contract include:

- EMP001 - Environmental Risk Assessment
- EMP002 - Environmental Aspects & Impacts Procedure
- EMP003 - Purchasing Procedure
- EMP004 - Handling, Storage and Protection Procedure
- EMP005 - Waste Management Procedure
- EMP006 - On Site Refueling Procedure
- EMP008 - Emergency Response Procedure
- EMP010 - Competence, Awareness & Training

2.5 Contract Requirements

2.5.1 Client Specified Environmental Requirements

- Works are to be carried out in compliance with Environmental Legislation and in accordance with the Specification for the Works.

2.5.2 Internal Requirements

Hewlett Construction Limited’s Environmental requirements are detailed in:

- The Environmental Manual
- Environmental Procedures
- Environmental Guidance Documents
- Environmental Toolbox talks
- Induction Training Material

2.6 Existing Environment

Work is generally to be undertaken within the periphery of a disused ironstone quarry.
3. Management of the Works

3.1 Management Structure

3.2 Responsibilities

The Board of Directors

The Board of Directors has overall control over the Company’s affairs. This includes its Environmental Management Systems (EMS), although the day to day management of this function is undertaken by the Company’s Safety and Environmental Department (headed by the Manager of Safety).

Overall responsibility for all environmental related issues lies collectively with the Board of Directors. Responsibility for environmental matters associated with the organisation’s operations lies specifically with the Operations Board.

The Operations Board shall take part in the regular review of the Environmental Management System and the company arrangements that are in place to ensure its application. Members shall attend pre-contract meetings at Head Office, prior to the construction phase of all projects where site-specific environmental matters are discussed.

During the construction phase members of the Operations Board shall attend monthly meetings which shall include a review of the environmental performance of Hewlett and its sub-contractors on every construction site that is ‘live’ at that time.

All Operations Board members shall attend management review meetings where overall environmental performance is reviewed.
Manager of Safety

Responsible for the production, implementation and review of the organisation's Environmental Management System.

All matters concerning environmental management shall be overseen by the Manager of Safety. He will maintain a sound knowledge of Environmental Law and Industry Standards through training and/or research and, using this knowledge, shall provide advice and environmental assistance to Directors and employees of the organisation.

The Manager of Safety shall liaise with the Operations Manager and Contracts Managers to establish training requirements for employees.

The Manager of Safety shall also plan, schedule, carry out and document periodic environmental audits on the organisation’s live construction sites.

The Commercial Manager

The Commercial Manager shall have a prominent role in the selection procedure for suppliers and sub-contractors.

Prior to appointment, the Commercial Manager shall ensure that the sub-contractor has been notified of all site specific hazards that are salient to the operation for which that contractor is being considered.

Upon receipt of the bid the Commercial Manager shall ensure that the sub-contractor has allowed sufficient resource in the bid to minimise any potential adverse environmental impact.

Operations Manager and Contracts Manager

The Operations Manager and Contracts Manager shall work closely with the safety department personnel from the pre-contract stage of a project through to its completion. They shall attend meetings with the client where relevant environmental information shall be collected and passed to the Manager of Safety and Project Managers or other Site Supervisors where appropriate.

Operations and Contract Managers shall ensure that projects are adequately resourced in terms of appropriately trained and competent labour. Training requirements for employees shall also be assessed and arranged following consultation with the Training Manager.

The Operations Manager and Contracts Manager shall attend the pre-contract meetings as well as monthly project progress meetings.

Contracts Managers

Contracts managers will work closely with the Operations Manager and the Manager of Safety to ensure sufficient resources are provided on all construction projects to ensure that all operations that are proposed on site can be carried out with minimal environmental impact.

They will also ensure that adequate resources are provided to reduce the environmental impact where this is practicable.

Contracts Managers shall ensure that Project Specific Risk Assessments and Method Statements are prepared. They shall also attend on-site progress meetings with sub-contractors and assess their environmental performance.
Construction Managers, Project Managers and Site Agents

The Construction Manager/Project Manager shall be responsible for the appropriate allocation of resources on their site to ensure that all operations carried out on site are executed with minimal environmental impact. Such coordination will include the deployment of other site supervisory staff such as Site Agents and General Foremen to specific sections or phases of the project.

Construction/Project Managers shall ensure that site supervisory personnel are aware of their roles and responsibilities as laid out in this document and that they discharge their environmental management duties effectively.

Construction/Project Managers shall work closely with the safety/environmental department personnel from the pre-contract stage of a project through to completion. They shall attend pre-contract meetings as well as monthly progress meetings. They will be responsible for the on-site compliance with this Environmental Management System.

Construction Managers’ and Project Managers’ environmental duties on site include, but are not restricted to:

- Liaise with the client and any other third party to address any site-specific matters.

- Monitor the performance of sub-contractors employed on site in terms of compliance with environmental requirements and competency. Their findings shall be reported during site progress meetings and monthly progress meetings at Head Office.

- When acting as Principal Contractor, Develop the Site Waste Management Plan during the construction phase of the project.

- Ensure environmental incident reporting procedures are implemented where necessary.

Site Supervisors

The Site Supervisor will be responsible for the day to day management of environmental matters on their site (or in their section or phase of a construction project where there is a Construction Manager or Project Manager resident) — Where there is no resident Construction Manager or Project Manager, the Supervisor’s environmental duties will also include those outlined in the previous section headed Construction Managers and Project Managers.

When working on site there are several specific matters to which the Site Supervisor must attend. These include, but are not restricted to, the following:-

- Ensure that all plant, vehicles and work equipment are in good working order. This includes plant/equipment that is brought to site externally (i.e. hired plant). Ensure that regular inspections of plant/equipment are carried out to ensure that the equipment is in good order and is not likely to spill or otherwise release fluids such as fuels and oils, or that exhaust, noise or other emissions are not excessive. Such inspections shall be recorded in the plant and work equipment inspection registers HS 17 & HS 18.
• Ensure that all surface water runoff is controlled so that it does not adversely affect any open water courses, natural habitats or any other existing features or ecosystems.

• Ensure that all surface water accumulations (e.g. rainwater in excavations) are properly managed and that no silted water is allowed to discharge into an open water course.

• Ensure that all discharge consents are in place where appropriate.

• Ensure that all persons new to site receive a site specific environmental risk awareness briefing and are inducted to site by a member of the site supervisory staff. The induction shall outline specific site rules, site specific environmental hazards and any emergency procedures in place.

• Carry out regular on site environmental risk assessments throughout the project duration as new hazards present themselves and monitor and review those assessments that are already in place. A record of these assessments (including a summary of environmental hazards and control measures) shall be made in Section C of the project’s Risk Assessment documents (HS 19).

• Communicate the findings of risk assessments to the operatives (or other personnel) to which they relate.

• Carry out periodic toolbox talks or other relevant environment related briefings on site. Such briefings shall be delivered to the site workforce.

• Ensure that all mandatory prohibition, warning signage and statutory notices are displayed and maintained in good condition.

• Report all environmental incidents, near misses or dangerous occurrences to the safety/environmental department regardless of whether any environmental impact occurred or not.

• Ensure that comments noted on environmental audit reports are addressed and that written confirmation of such is sent back to the author of the report.

• Ensure that waste on site is kept to an absolute minimum and that the waste that is generated is reused or recycled where practicable and to ensure that where waste must be exported from site it segregated appropriately to facilitate recycling elsewhere. Waste data will be logged on the ‘Site Waste Management Plan’ [SWMP].

• Ensure that waste carriers and the recipients of site generated wastes hold the appropriate licenses or exemption certificates.

• Develop the Site Waste Management Plan throughout the duration of the project when Hewlett are acting as Principal Contractor.

Note that the above list is not exhaustive and other environmental matters must also be addressed as site conditions dictate.
General Operatives

Every operative shall receive a site induction which shall take the form of specific environmental risk awareness training.

Operatives shall ensure tools and equipment are without defect prior to their use, maintain them in good condition and report any defects that could potentially cause environmental harm (e.g. fuel leaks) to the Site Supervisor without delay.

Full co-operation with all matters regarding environmental management is required from operatives at all times. Cooperation with Site Supervisors shall be maintained to allow compliance with legal duties.

Any environmental hazard, (or potential hazard), observed on site must be reported to the Site Supervisor so that the appropriate measures can be taken to reduce or eliminate any risk to the environment. Environmental incidents, near misses or dangerous occurrences are to be reported regardless of whether any environmental impact occurred.

If it is believed that a task an operative is required to undertake may present an environmental risk, it is the responsibility of each individual or workgroup to cease task and report their concern(s) to any member of the site supervisory staff.

Procurement Manager

The Procurement Manager is responsible for the procurement of goods and services for use on site.

These goods may include substances that may be hazardous to the environment if accidentally released or otherwise incorrectly managed on site. The Procurement Manager shall request that Material Safety Data Sheets (MSDS) are provided by the supplier so that the substance can be used and stored properly to reduce the risk of spillage, contamination or other potentially harmful release into the environment.

The Procurement Manager shall also endeavour to obtain material from sustainable sources such as FSC Certified Timber Suppliers and suppliers of recycled aggregates. Additionally, the Procurement Manager will make every effort to purchase goods and services locally to minimise haulage distances for delivery purposes.

COSHH Data will be generated by the Procurement Department and copies held on file in the site office.

Environmental Manager

Responsible for ensuring that the requirements of this Environmental Management System are implemented on all live construction sites and at the organisation's other premises.

The Environmental Manager will maintain a sound knowledge of environmental Law and industry standards through training and/or research and using this knowledge shall provide advice and environmental assistance to other employees of the organisation. He will also assist with the periodic review of the Organisation's Environmental System.

He will also ensure that, where appropriate, Environmental Plans (including Site Waste Management Plans) are prepared and implemented on the construction phase of a project. The Environmental Manager will also liaise with Contracts Managers and Site Supervisors to produce task specific environmental risk assessments and method statements for site based work activities.

The Environmental Manager will investigate and record environmental incidents if and when they occur. This will include "near misses" where there is evidence that an uncontrolled event had a clear potential for environmental harm to have been caused, albeit that no harm was caused.

Environmental Managers shall also conduct and document periodic environmental audits on the organisation's live construction sites.
Safety Managers and Inspectors

The Safety Inspector will maintain a reasonable knowledge of environmental law and industry standards through training and/or research and using this knowledge, shall provide advice and environmental assistance to employees of the Organisation.

The Safety Managers and Inspectors shall ensure environmental procedures are effectively implemented and managed during inspections on working sites.

The Safety Managers and Inspectors will produce task specific environmental risk assessments and method statements as well as COSHH Assessments for hazardous substances that may be used by employees of the organisation.

3.3 Environmental Objectives & Targets

SMART (Specific, Measurable, Achievable, Realistic & Time-bound) Environmental Objectives and Targets for the organisation are established to be consistent with the Environmental Policy. These objectives are reviewed for continuing suitability during audits and/or during the management review process.

The Project Manager is responsible for advising the Environmental Manager and Manager of Safety on site-specific objectives and targets as needed. These objectives and targets are reviewed normally during the audit visits. Information from this review is then fed into the monthly progress meeting via the audit report notes.

All objectives and targets are set to be consistent with the Environmental Policy including a commitment to pollution prevention, to compliance with applicable legal and other requirements and to continual improvement. The same considerations are also applied when reviewing objectives and targets.

Objectives and targets set shall identify those responsible for achieving them, along with the means and time scale by which they are to be achieved. Where deemed necessary a separate programme shall be maintained.

Site-specific Objectives & Targets are detailed in Appendix A of this document.

3.4 Environmental Aspects & Impacts

3.4.1 Environmental aspects are those elements of an organisation’s activities, products or services that have potential to cause an environmental impact and each aspect may generate more than one impact. A significant environmental aspect is one that can have a significant environmental impact.

3.4.2 Environmental impacts are the changes that take place, (adverse or beneficial), from the occurrence, (wholly or partially), of any given aspect, (i.e. emissions to air, releases to water, releases to land, use of raw materials and natural resources, energy use, etc).

The register of environmental aspects & impacts is detailed in Appendix B of this document.
3.5 Monitoring Environmental Performance

The Environmental Manager will carry out periodic inspections and leave on site a written report listing any good practice, recommendations, non-conformances or remedial actions that may be necessary. The report shall be discussed with the site supervisory staff before leaving site. These issues will be followed up and resolved as soon as possible by the Project Manager and his team.

Environmental audit frequency may be increased according to performance, scope of works or degree of risk associated with specific tasks being undertaken at the time.

3.6 Liaison between parties on site and key duty holders

Monthly progress meetings will take place at Head Office or on site – all aspects of the project performance will be discussed with the responsible managers.

Liaison and coordination meetings with subcontractors shall be held at regular intervals with the frequency of such meetings dependant on environmental performance, scope of activities or programme progression.

Hewlett Construction Limited shall liaise with the Environment Agency / SEPA, Emergency Services, and Local Authorities etc regarding any affects likely to take place during the works

3.7 On Site Training

Environmental Tool Box Talks will be delivered to all personnel at least once per month and operatives will be made available for on-site training whenever it arises.

Toolbox talks will be delivered by the Site Supervisor. Typically, these will include: (note this list is not exhaustive)

- Spill Control
- Water Pollution
- Silt
- Cement
- Waste management
- Waste storage
- Noise, dust and vibration control
- Tree protection

Any other training or instruction that is considered necessary will be delivered on site by a Hewlett Construction Limited's Manager who has the competence and authority to do so, or by an externally appointed specialist instructor.

Additionally all employees are briefed on the individual task specific method statements & associated risk assessments by the Site Supervisor. If these method statements or risk assessments are amended for any reason then they are re briefed to the relevant employees.

Environmental information may also be cascaded to sites via internal memorandums. Environmental bulletins, information or advice will be emailed to the Site Supervisor for immediate action or response.
3.8 Risk Assessments and Method Statements

A documented task and site specific risk assessment shall be produced by the site supervisory staff for all work activities. The assessment including appropriate control measures shall be briefed to all personnel involved with or affected by the activity. Operatives will be given the opportunity to comment on and suggest amendments to any safe system of work. The site supervisory staff will be responsible for ensuring that all personnel understand the assessment of risk prior to work commencing.

Any environmental hazard, (or potential hazard), observed by operatives on site must be reported to the site supervisory staff so that the appropriate measures can be taken to reduce the risk. This will involve the reporting to site management of observed Ecological changes in the work areas and any suspected Archaeological finds.

It is the responsibility of the Site Supervisor to monitor the environmental arrangements and to manage any amendments as work progresses.

3.9 Spill Prevention and Emergency Arrangements

During induction to site and as part of task specific risk assessments, all personnel shall be made aware of ‘Spill Kit’ locations and how to check and replenish these items if used.

Drip trays/Plant Nappies shall be used and all plant items, [with the exception of motor cars], shall be equipped with spill kits including plant such as portable generators and pumps.

All fuels shall be stored where any spills can be contained. This will be within an impermeable bund, or mobile fuel bowser with a secondary containment system (double skin bund). No fuel or oil will be stored at track locations. Fuel will be brought to the track sites in a purpose built, bunded fuel carrying vehicle in quantities that are proportionate to site usage, (Refuelling of Machinery). In the event of an environmental spill the procedure shall be:

- STOP WORK immediately
- If spillage is flammable, remove or extinguish all possible sources of ignition.
- Identify the source of pollution and if possible isolate the source.
- Contain the spillage – use earth/sand to construct a bund around the spill to stop it spreading or where available use the spill kit.
- Contact the Project Manager immediately.
- Put on appropriate PPE.
- Protect sensitive areas (e.g. watercourses or surface water drains – use drain covers or use earth/sand to construct a bund).
- Clean up the spill. Use absorbent granules/pads to mop up spills. Large pools of oil or spills which cannot be absorbed should be removed using a gulper.
- Dispose of all contaminated materials (soil/absorbent materials) correctly – those containing substances such as oil, diesel or paint will be hazardous waste.
- Never hose a spill into the drainage system. Always use absorbent materials.
The Site Supervisor shall take all reasonable measures to ensure that:

- Any release is contained and that harm to human health and the environment is minimized, both within and beyond the site boundary.
- Once the release has been contained, any environmental damage is appropriately remedied (with advice from the Environment Agency / SEPA as required).
- Contaminated clean up materials are handled, stored and disposed of as hazardous waste in accordance with the Hazardous Waste Regulations.
- Environmental incidents are fully investigated. Such investigation (with help from the Environment Manager or Manager of Safety) shall determine:

  (i) Whether the incident is of a ‘major’ or ‘minor’ nature. (All incidents requiring action beyond site boundaries shall be classified as ‘major’).

  (ii) The cause of the incident

  (iii) If existing emergency procedures are adequate or need revising.

- An Environmental Complaint/Incident Report is completed and issued to the Manager of Safety.
- Any pollution incident classified as ‘major’ is reported to the relevant regulatory authority (Environment Agency / SEPA), the Client and the Manager of Safety as soon as possible.
- Sub-contractors working on behalf of the organisation are made aware of the contents of this procedure and that they are required to comply with its provisions.
### 3.10 Pollution Hazard Schedule

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<tr>
<th>POLLUTION HAZARDS</th>
<th>POLLUTION CONTROL MEASURES</th>
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<tbody>
<tr>
<td>Fuel leaks from plant and work equipment.</td>
<td>Drip trays/Plant Nappies to be placed beneath static plant. Plant/work equipment regularly inspected for defects and records of such inspections to be recorded in the appropriate register (HS 17 or HS 40) Plant to be properly serviced and maintained.</td>
</tr>
<tr>
<td>Fuel spillage during Refuelling operations</td>
<td>Designated refueling area to be established on site Fuel tanks to be fitted with locks and delivery hose to be kept within bunded tank area when not in use Spill kit to be provided and kept close to fuel tank Drip bund to be formed below filler hose Protective barrier or bund to be installed to prevent impact damage to fuel tank</td>
</tr>
<tr>
<td>Pollution from concrete delivery wagon or washout process</td>
<td>Bespoke washout area to be established on site with suitable containment system in place</td>
</tr>
<tr>
<td>Pollution from accidental release of hazardous substances</td>
<td>All hazardous substances to be properly stored in appropriate containers in such a manner as to prevent damage or accidental spillage</td>
</tr>
<tr>
<td>Dust &amp; Noise from construction activities</td>
<td>See section 2.14</td>
</tr>
<tr>
<td>Silt pollution from stockpile run-off and whilst working in open watercourses</td>
<td>Potential run-off from stockpiles should be mitigated against by shaping and lightly compacting, [topsoil will not be compacted], materials. Stockpiles should be positioned at locations where potential run-off does not threaten watercourses or drains Shallow cut-off ditches should be excavated around stockpiles to intercept any migration of silt, where necessary. Silt will also be contained by sandbag dams, straw bales, silt fencing or a combination of these measures. Whilst working in open watercourses, sandbag/gravel bag dam(s) will be constructed at appropriate locations across the direction of flow to intercept any silt generated during site activities. [See also Appendix D, page 28, Ground and Surface Water and Working in or near Water].</td>
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</tbody>
</table>
Potential pollutants include:

Gas Oil (plant fuel) - estimated weekly consumption unknown at this point
Concrete – estimated quantities unknown at this point
Silted water (surface water run-off and pumped groundwater) – quantities unknown at this point
Other hazardous substances (various) – estimated quantities unknown at this point

3.11 Waste Management & Housekeeping

A high standard of housekeeping shall be maintained at all times – the Project Manager and Site Supervisor will monitor this throughout the project. All waste & packaging will be disposed of as it is generated. Litter will be unacceptable and all personnel will be reminded of the requirements during induction.

Segregated walking routes, public footpaths & roadways shall be maintained effectively with road sweeping employed as necessary.

It shall be our target to reduce the amount of waste being sent to landfill by implementing a hierarchy of control and segregating the waste on-site. The Project Manager shall consolidate all transfer and consignment notes and record the information within the site environmental plan. We shall endeavor to recycle whatever cannot be re-used and when ordering materials, order recycled products wherever practicable.

Tools & equipment shall not be left unattended & shall be stored in the designated area. All waste skips, bins and segregation areas shall be sited away from buildings and temporary site offices, in the event of an accidental fire or fire caused deliberately, this may reduce the risk of fire spreading to other properties and creating nuisance smoke to the atmosphere. Water used to suppress such fires and potentially become ‘run-off’ would also be easier to control.

Hewlett will obtain the Site Waste Management Plan from Iberdrola and implement that plan on site. Hewlett will provide to Iberdrola the details of Waste Carrier Licences, copies of transfer notes and/or consignment notes for all materials removed from site that are disposed of by means other than through Iberdrola waste streams. Such information will allow Iberdrola to fulfil their Duty of Care. The Site Manager will ensure that the plan is implemented and will be responsible for its day-to-day management.

The Site Waste Management Plan is included in Appendix C of this document. The options for waste on this site are illustrated as follows:
Eliminate the waste.

Every effort will be made to eliminate the waste produced at source. Control measures will include: Avoiding packaged materials where practicable - Ordering correct quantities - Avoiding damage by handling and storing correctly

Reduce the amount of waste produced.

This includes planning to reduce over ordering of materials, providing suppliers with sufficient information to supply correctly, avoiding damage or deterioration from poor handling or storage methods.

Re-use

Only dispose of waste/arising, which cannot economically or practically be re-used or recycled. Materials such as timber for shuttering can readily be re-used.

Repair

Where practicable, damaged or malfunctioning materials or work equipment shall be repaired or made good so that they are once again fit for purpose.

Recycle.

Waste will be segregated on site to allow for recycling off site. Additionally, materials that are recycled shall be procured for use on site where practicable and where the specification permits.

Dispose.

Waste that cannot be reused, repaired or recycled practicably shall be disposed of responsibly and in compliance with the organisation’s Duty of Care obligations. All waste shall be removed from site by a licensed waste carrier to a licensed waste site

3.12 C.O.S.H.H & Storage of

It is anticipated that all materials likely to be used in these works are substances / fuels etc, all in daily use by experienced competent Contractors and the control precautions are well understood.

COSH& Assessments will be produced for any hazardous materials used on site. These will include concrete, gas oil, cement, oils & greases. COSHH assessments shall be appended to relevant risk assessments and briefed to those people involved with or affected by the task, by the Site Supervisor. All fuels or materials which could cause an environmental incident shall be stored where any spills will be contained. This will be within an impermeable bund, or mobile fuel bowser with a secondary containment system (double skin bund).

Wherever possible substances will be substituted with non-hazardous alternatives and where this is not possible HCL shall apply the hierarchy of control measures as outlined in the “Control of Substances Hazardous to Health Regulations 2002”.

The quantity of any flammable material stored on site shall be kept to a minimum to reduce the potential for fire hazard. No fuels shall be stored in any area where surface run-off migrates directly into storm water drains.

All materials shall be stored in stockpiles of reasonable gradient to prevent collapse. The storage area shall be fenced off and secured to exclude trespassers when not in use.
All waste materials shall be stored in suitable skips/containers etc. All flammable waste skips shall be stored at least 10m from any adjacent buildings. The storage area shall be fenced off and secured to prevent unauthorised access. The site team shall only stack recovered and waste material awaiting transport within the site or the site compound and shall not obstruct the access the any other part of the site.

3.13 Asbestos

Any suspected asbestos containing materials, (ACM’s), located on site will be isolated, initially by being fenced and covered with sand/visqueen to avoid potential fibre release. Samples will be sent for testing, (testing using Microscopy), at an ACAS accredited laboratory to determine asbestos presence, type and percentage content.

Any asbestos removal shall be undertaken by an approved licensed asbestos contractor.

3.14 Dust & Noise Mitigation

Airborne dust generated by site operations will in general be controlled by damping down with water.

Various techniques will be adopted across the site to reduce the production of dust. These techniques are listed in Appendix D, page 26 under 'Site Control of Dust and Potential Contaminant Migration' and include vehicle speeds, material dump heights and road cleanliness.

Each specific task carried out on site will have its own method statement and will detail measures to be taken for that specific task to reduce the production of dust. It may be that one measure alone will be sufficient for a task or it may require a series of measures to ensure that dust is kept to an acceptable level.

On a local basis, bespoke dust suppression systems will be used.

All dust suppression methods using water will be done in a controlled manner in order that sufficient water is used to suppress the dust but not excessive quantities that causes run off.

All the site team will be aware of the care needed to minimise the production of dust and will be informed of this in various forms from site inductions, risk assessment instructions, tool box talks and general supervision instruction on site.

The project management team will monitor the performance of the measures implemented as part of the original method statements and will be reviewed if required to ensure dust is kept at an acceptable level.

The associated COSHH assessments shall be made available to all operatives involved with or affected by the work. Appropriate PPE shall be worn in accordance with the task specific risk assessment.

Appropriate plant & equipment shall be utilized to ensure that site noise is kept to a minimum. All work equipment shall be adequately maintained to avoid unnecessary noise and be fitted with appropriate working silencers and noise insulation where available. No plant shall be left idling when not in use. Plant shall be sited in such a position so as not to enhance noise pollution to neighbours. Operatives shall be reminded of the requirement to keep noise down to an acceptable level during their site induction.

Due to the types of the proposed works to be undertaken HCL shall choose methods of work and equipment which shall reduce the potential exposure of operatives to excessive noise.

PPE shall be provided and enforced should the noise levels exceed 80 and 85 dba respectively.

The Project Manager will monitor noise levels during the works at various locations around the site.
3.15 Ecology:

Site Management and Site Operatives should be aware that some species are protected by law, [for example bats, great crested newts, red squirrels, water voles, otters, badgers and birds], along with their habitats.

It is important to understand that certain construction and civil engineering works may have a marked effect on the ecology of an area. Wherever possible and practicable, measures should be put in place to minimize the negative effects of human activity on the environment. Site operatives should be encouraged to have a heightened awareness of the environment in which they are operating and should report any avoidable and potentially damaging activity.

Where possible and practicable, work should be programmed to avoid, for example, the disturbance of birds during their nesting season.

Site management should be aware of and follow the guidance of any Ecological Site Surveys and call on the assistance of an ecologist where this is considered necessary. This assistance may take the form of an ecological watching brief, demarcation of 'no work' zones and the provision of alternative habitat. [See Appendix D for site specific ecological issues].

Excavated soils should, as far as possible, be removed and stored in such a manner as to maintain their physical reuse value and should not be allowed to deteriorate.

3.16 Landscape:

Site Management and Site Operatives should be aware that some landscapes and areas are protected by law and that some areas are considered to be visually sensitive to changes.

Care should be taken to ensure that minimal areas of soils are disturbed and that stockpiles are positioned at locations which cause as little visual impact as possible.

The removal of vegetation, hedges and trees should be kept to a minimum with tree protection zones being fenced so as to avoid damage to tree root systems.

3.17 Archaeology:

Site Operatives should be made aware of the potential for previously unknown archaeology to be uncovered. It is important that site operatives monitor changes in soil colour, content and nature which might be indicative of archaeological remains.

Some sites may require an archaeological watching brief to be undertaken.

3.18 Water Quality and Private Water Supplies:

Where work is to be undertaken near existing watercourses or public/private water supplies and before any work commences, contamination booms and silt traps should be positioned so as to contain any accidental spillage of contaminants. These should be maintained for the duration of the works.
<table>
<thead>
<tr>
<th>Objective</th>
<th>Target</th>
<th>Measurement</th>
<th>Action</th>
<th>By whom</th>
<th>By when</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Minimisation and Sustainability</td>
<td>1. Reduce the amount of waste being sent to landfill by implementing a hierarchy of control and segregating the waste on-site</td>
<td>Consolidate all transfer and consignment notes and record all information on the Site Waste Management Plan</td>
<td>Communicate the Site Waste Management Plan (SWMP) to all staff and review the plan every 3 months or where a significant change takes place</td>
<td>Environment Audits will be carried out quarterly and records maintained throughout the project</td>
<td></td>
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<tr>
<td></td>
<td>2. Recycle whatever cannot be used and when ordering materials, order recycled products wherever possible.</td>
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</tr>
<tr>
<td>Environmental training</td>
<td>1. All newly appointed site based operatives are to be formally inducted and given Environmental Awareness Training</td>
<td>Compare number of new starts against number of inductees (Induction will normally be within 5 weeks of appointment.</td>
<td>Arrangements to be made to book operatives onto scheduled Safety and Environmental Induction sessions Inductions to be delivered by members of the Safety Department at least once per calendar month</td>
<td>Manager of Safety</td>
<td>Training records to be maintained throughout the year and reviewed monthly</td>
</tr>
<tr>
<td></td>
<td>2. Environmental Tool Box Talks will be delivered to all staff to suit the activity at least once per month and minimum of 60% of all ground workers to be made available for on-site training whenever it arises</td>
<td>This will be measured by the size of the workforce in relation to the employees attending the site tool box talk/training</td>
<td>Time should be set aside before the activity takes place in order to prevent any adverse impact due to lack of knowledge or poor understanding of the work activity</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>3. Environmental staff are to attend formal Environmental Training Courses/seminars</td>
<td>Staff directly employed to cover environmental issues will attend at least 1 course/seminar within a 12 month period in order to continually improve their environmental knowledge</td>
<td>Courses/seminars are to be forecasted and booked in order to cover gapped areas of competence/awareness</td>
<td>Manager of Safety</td>
<td>Training records to be maintained throughout the year and reviewed monthly</td>
</tr>
<tr>
<td>Aspect</td>
<td>Impact</td>
<td>Severity of impact</td>
<td>Likelihood of impact</td>
<td>Risk factor after mitigation</td>
<td></td>
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<tr>
<td><strong>Emissions to Air</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of road vehicles by staff, site personnel and Haulage Contractors.</td>
<td>Increased emissions to air of exhaust gasses and chemical asphlatiotes - increased use of fuel leading to depletion of finite resources. Release of ozone depleting gasses leading to global warming, climate change, atmospheric pollution and health hazards to human, animal or plant life.</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>General emissions from site operations during construction works</td>
<td>Dust, noise, fumes, smoke or odour may cause nuisance to neighbours. Significant air pollutants may cause a negative effect on human, animal or plant life and may cause a negative effect on structural materials.</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Dust migrating off site during excavation works</td>
<td>Windblown dust causing air pollution, potential health hazard and nuisance. Fugitive emissions of dust or particulates may have negative effects on human, animal or plant respiration.</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Use of surface and concrete breaking equipment and heavy mobile plant</td>
<td>High concentrations of vibration may cause disruption to local wildlife habitats, adjoining structures and cause a nuisance (breach of duty of care).</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Excavation of contaminated ground</td>
<td>Release of VOCs and noxious gasses may contribute to air pollution and potential harm to human, animal or plant life.</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Storage or use of chemicals or other hazardous materials on site (e.g. paints, oils or fuels)</td>
<td>If not stored correctly this may lead to release of ozone depleting gasses and aerosols leading to global warming or acid rain.</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Accidental fire</td>
<td>Release of noxious gasses presenting a nuisance, health hazards or primary air pollutants including CO₂ and NOₓ</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Discharge to Water</td>
<td>Consumption of landfill space - negative impact upon amenity and potential pollution of soils through leachate - increase in landfill tax.</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Disposal of contaminated soil or other special waste to landfill during construction work</td>
<td>Use of a transfer station to sort general waste will reduce the amount of landfill space used and may have a positive impact on the environment.</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Transport of general, site or canteen waste to waste transfer station</td>
<td>Use of a transfer station to sort site generated waste will reduce the amount of landfill space used and may have a positive impact on the environment. Incorrect use of segregation may result in contamination of unsealed ground, site litter, additional transfer costs and a breach of our duty of care</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Use of segregation system for site generated waste materials</td>
<td>Proper storage of site materials will reduce the amount of damage - incorrect storage may result in over ordering materials, depletion of finite resources, stock losses, quality losses and increased disposal costs. Potential damage to tanks causing spillage and contamination of unsealed land - breach of legislation</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Management of waste transfer documentation</td>
<td>Potential legislative/duty of care breach</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Local Environment &amp; Community Issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General emissions from site operations during construction works</td>
<td>Dust, noise, fumes, smoke, lighting (out of hours working) or odours may cause nuisance to neighbours and breach our duty of care</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Deliveries of materials and disposal of spoil &amp; wastes from site.</td>
<td>Potential for disruption to members of the public and local businesses and an increase in the volume of traffic on the local highway</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Business operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy consumption - Use of electricity and fuels for lighting, IT &amp; welfare facilities</td>
<td>Excessive use of natural resources - depletion of finite resources - Global warming &amp; climate change - potential depletion of ozone layer</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Use of paper during printing - plans, documents, bulletins etc.</td>
<td>Potential for excessive use of renewable resources - increase in waste disposed to landfill sites. Loss of natural habitat and species decline - Logging practices create carbon emissions and global warming</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Cleaning of office &amp; site welfare units - Use of chemicals and cleaning agents - Resource use - water</td>
<td>Water polluting chemicals/substances are causative of biological damage; local water quality is impacted as well as the possibility of adversely affecting animal species</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Implementing a &quot;Green Purchasing&quot; system when sourcing materials</td>
<td>Giving preference to those materials that would cause least harm to the environment has a positive impact and reduces the adverse effect from manufacture, use &amp; disposal</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>
Site Waste Management Plan

Document, if required, is the responsibility of the Client with input from Hewlett Construction Limited.
APPLICABLE ENVIRONMENTAL PROCEDURES FOR Priors Hall; CNOR and Western Link Road

Site Specific Considerations:

Site Fencing:

Fences will be erected around the work zones to protect members of the public from inadvertent or unauthorised access to these zones.

This fencing will also protect animals from accessing work areas where there may be potential for them to sustain injury.

Environmental Tool Box Talks and Environmental Induction:

All site operatives and personnel will be given a general Environmental Awareness and Management Talk within the Site Induction process.

General topic Tool Box Talks, [with site relevance], will be given throughout the contract to reinforce environmental awareness.

Environmental Tool Box Talks are to represent 25% of the total number of Tool Box Talk presentations.

Protection of Trees and Shrubs:

All works that are to be undertaken in close proximity to trees and shrubs, [which are to be retained under the development scheme], will be carried out in such a manner as to have full consideration of the recommendations of British Standard 5837:2012 – Trees in relation to design, demolition and construction.

Before any soil engaging implements are used on site it will be necessary to identify and delineate tree and shrub root areas from which construction activities will be excluded. These ‘Root Protection Areas’ [RPA] will be determined as follows:

1. All root protection areas will be agreed with the client at site level.
2. The radii of root protection areas will be determined in accordance with the formulae noted in Clause 4.6 of BS 5837 together with Annex C and Annex D.
3. No root system will be assumed to be symmetrical.

Where construction activities are unavoidable within the root protection areas, only construction plant with the least practical mass will be used and such plant will only access and operate within the RPA whilst positioned on temporary ground protection measures, for example, wooden ‘bog mats’.

Root Protection Areas will be fenced using freestanding ‘Heras’ fencing panels, with adjacent panels being ‘double clipped’ and secured within a freestanding surface base plate or foot. Stabilizer struts, or similar, will be installed to secure the Heras fencing in the vertical plane. Stabilizer struts will be installed at frequencies determined by site conditions. Fencing integrity will be monitored on a daily basis.
Once established the root protection area fencing will remain in-situ and unchanged other than with the agreement of the client.

Root protection area fencing will exhibit all-weather notices with wording ‘CONSTRUCTION EXCLUSION ZONE – NO ACCESS’ or similar wording, at intervals determined by site conditions.

Where it is judged that access to the works, or the performance of the works, requires that tree surgery is required this will only be undertaken after consultation with the client. Any resulting surgery deemed appropriate will only be undertaken by a competent tree surgeon.

Accidental damage to tree stems will be reported to the site management immediately and any remedial works will be undertaken by a competent tree surgeon.

It is recommended that additional soils, [topsoil], is not placed over existing soils in the root protection zones as this can inhibit tree root activity and cause stress in any affected tree. No fires should be lit near woodland and cigarettes should be fully extinguished after use.

**Consideration to the users of adjacent land:**

Site personnel are to allow unrestricted access to adjacent areas, either by members of the public, land owners and farmers and his/her operatives.

Site plant operatives are not to leave any items of plant unattended in such a manner as to restrict access to these areas.

Site operatives will be reminded that there is a potential for site activities to affect the behaviour of livestock / wild animals in adjacent areas / fields.

Site personnel will restrict their activities to agreed areas of the site and will not enter private land or woodland.

**Archaeology and Cultural Heritage:**

It may be unlikely that any previously unknown archaeological materials are uncovered, but if this is not the case and archaeological items are unearthed, then all work will cease, the area will be temporarily fenced off and advice will be sought from the client as to how the situation should be advanced / handled.

Operatives will be advised, during Site Inductions / Toolbox Talks, how to recognise in-situ materials that might have possible archaeological interest / value.

Such locations may exhibit features such as:-

- Dry Stone Dykes.
- Grassy humps and lumps in the ground contours.
- Concentrations of Stones
- Changes in vegetation, soil texture or soil colour.
Finds can include:

- Burned of blackened material.
- Brick and tile fragments.
- Coins or pottery.
- Bone fragments or skeletons.
- Timber joists or post holes.
- Brick or stone foundations.
- In-filled ditches.

No materials, thus identified, will be site processed or removed from the site until an archaeological competent person has advised as to how the situation is to be handled.

**Biosecurity:**

Construction works of this nature can have consequences for the local agricultural and forestry environments, whether these environments are pasture - grazed by livestock, or arable land, forestry or ancient woodland.

There may exist within the soil or vegetation, diseases and other organisms that attack crops or livestock or trees and that can be easily spread by human activities.

Site operatives should be separated from and avoid all interaction with farm livestock or wild animals.

Cleaning down of plant within certain zones is particularly important where invasive species are known to exist.

The containment of excavated vegetation is also important in limiting the spread of grass weeds into adjacent arable land and tree diseases within forests and woodland.

**Control Measures:** It will be impressed upon site operatives, at induction, the importance of good housekeeping within the site boundaries and the necessity to contain all activities within the agreed site boundaries.

**Site Control of Dust and Potential Dust Migration:**

In order to reduce the risks associated with the works in respect of dust and contaminant migration, the following processes may be used/implemented on site, as required:-

During the excavation, processing and loading of any materials the following measures will be taken to minimize dust generation:

1. Material discharge heights should be kept to a minimum;
2. Vehicle speeds will be restricted;
3. All Lorry bodies to be checked for lodged excavated material before accessing public road;
4. Keep stockpile levels less than 3 metres;
5. All Lorries to be sheeted,
6. Road cleanliness to be continually monitored with any deleterious materials being dealt with immediately.
**Dust Control Measures:**

Site management will determine at the outset the methods of working for the site and the type of plant to be employed. A factor in this decision making will be how to minimize dust generation through method of working choices.

Site Dust Levels will be visually monitored by site management throughout the contract both within work areas and at boundary points, with the appropriate dust reduction/control/suppression measures being implemented as and when required.

It will be incumbent on site management to ensure that the condition of all vehicles leaving site is such that they are clean and will not deposit deleterious materials on the public highway.

Site control of dust will be discussed at site induction and operatives will be reminded as to how they can minimize the generation of dust.

**Control of Noise and Vibration:**

Noise levels should be kept to a minimum wherever possible. This can be achieved by choice of plant with low decibel output, no excessive revving of engines, the use of acoustic screens where appropriate, switching off engines when not in use and other such measures.

Every effort will be made to minimise the amount of vibration emitted from the work areas. This may be controlled by operation timing and choice of plant. Vibration monitoring will be undertaken where deemed necessary.

**Control Measures:** Site management will determine at the outset the methods of working for the site and the type of plant to be employed. A factor in this decision making will be how to minimize noise and vibration generation through method of working choices.

Site generated noise pollution will be monitored by site management on an on-going basis with background noise levels checked at the outset and at monthly intervals, as required.

Monitoring will be undertaken at specific site and non-site locations agreed with the client, [if requested].

Additional monitoring will be undertaken as deemed necessary during the contract, for example when a new type of operation is commenced.

Site control of noise and vibration will be discussed at site induction and operatives will be reminded as to how they can minimize the environmental impacts in respect of noise and vibration.
Dealing with Asbestos:

It is unlikely that asbestos containing material will be found on this site but if asbestos containing materials are found, all work will cease and the client will be informed immediately.

Any suspected asbestos containing materials, (ACM’s), located on site will be isolated, initially by being fenced and covered with sand/visqueen to avoid potential fibre release. Samples will be sent for testing, (testing using Microscopy), at an ACAS accredited laboratory to determine asbestos presence, type and percentage content.

Site operatives are not expected to undertake asbestos removal or double bagging. This will only be undertaken by an accredited asbestos removal contractor.

A systematic approach to the asbestos testing, [using microscopy], of made ground, site-won top soil and sub-soil would normally follow the location of asbestos contamination on any site, with levels greater than 0.1% asbestos regarded as being significant.

Where elevated levels of asbestos are identified, [>0.1%], a mobile decontamination unit will be positioned at the entrance/exit of the fenced contaminated area. If the asbestos material cannot be safely double bagged, it will be loaded, along with the surrounding ground, into a covered skip or lorry and disposed of to a registered hazardous landfill facility.

Compliance samples should be taken from the periphery and base of the excavation and tested to confirm that the physical limit of the contamination has been found and that all hazardous asbestos have been removed. Only the loading machine should be allowed within the contaminated area and would normally be under the control and direction of an asbestos contractor’s personnel.

All operatives within the contaminated area need to wear full RPE. The loading machine will be cleaned down to the satisfaction of the asbestos contractor’s representative before it is released from the contaminated area.

In circumstances where it is not possible to immediately dispose of the material off site and it is imperative that the area is cleared, then the asbestos contaminated material may be stockpiled on site, in a well delineated, [fenced], dedicated zone, being placed on an impervious membrane, [visqueen with taped joints], and covered with wet sand or sheeted in order to restrict the generation of airborne asbestos fibres.

All data relating to the location, test results, waste disposal records, clearance sign-off of all ACM will be recorded/tabulated and submitted to the client.

Control Measures: Site operatives will be advised at induction that in the unlikely event of asbestos being found on this site, all work is to stop, the site secured and site management is to be advised immediately.
Chemically Contaminated Areas:

In the unlikely event that chemical contamination is found on site, all work will cease and the client will be informed. Any contaminated ‘Hot Spots’ will be investigated and delineated to locate their outer bounds through chemical testing and olfactory evidence. Chemical testing will be undertaken in accordance with any remediation strategy and the chemical contamination limits associated with the sites use.

Any contaminated material that is stockpiled on site, [away from any watercourse and root protection area] and pending bioremediation or other treatments, off site], will be within a well-defined designated area.

Stockpiles will be placed on an impermeable membrane, [visqueen with sealed joints] and will be shaped to shed water. This water will be collected within a visqueen lined ditch running around the periphery of the stockpile area and drained into storage tanks prior to testing and suitable disposal. No water or silt from these stockpiles will be allowed to enter a watercourse.

Control Measures: Site operatives will be advised at induction that in the unlikely event of chemically contaminated soils being found on this site, all work is to stop, the site secured and site management is to be advised immediately.

Prior to any aggregates being imported onto site, whether they are for temporary works or are to form part of the permanent works, they shall be chemically tested to prove that they are inert and compliant with the site specification and that no inadvertent contamination of the site will take place. Chemical testing will include metals; loss on ignition; total sulphur; water soluble sulphate; Oxidisable sulphides; Total potential sulphates; pH; cyanide (total); cyanide (free); PAH’s (16); TPH (speciated) and BTEX. This list is not exhaustive.

Contaminated Soils- Accidental - Site Generated:

All site working locations will have at their disposal an impermeable plastic sheet approximately 4m x 10m, [visqueen or similar]. Should there be an accidental spillage of, for example, hydraulic oil or diesel, then the contaminated soils / materials will immediately be excavated and placed on the impermeable sheet, over-digging as required, so as to contain the contaminant. Streams / water courses in the vicinity will be immediately checked for contamination and absorbent booms deployed as required. The location of the spill will be recorded. Depending on the extent of the excavation required to remove the contaminated materials, compliance sample[s] should be taken from the void as follows: [1] Minimum of one sample from the base of the excavation; [2] base and down grade side[s] of excavation; [3] four sides and base of excavation. These should be tested for TPH and PAH, leachate and solid. The contaminated material will be removed from site as hazardous waste.

The Environmental Agency / SEPA will normally be advised by the client, as necessary.

Site management will also report the incident, [as soon as is practically possible], to the Environmental Manager for Hewlett Construction, who will forthwith investigate the incident, determine if it is appropriate to continue working or apply restrictions to the continuance of working, pending issuing a report into the incident, [with recommendations or actions taken], which will be issued to interested parties.
**Invasive Species:**

Where invasive species such as Japanese Knotweed, Giant Hogweed and Himalayan Balsam are identified, then work in that area will cease, no materials what-so-ever will be removed from the suspected affected area and the area will be securely fenced.

The Client will be informed immediately.

No further work will be undertaken at the suspected contaminated area until interested parties, [Environment Agency / SEPA and the client], have dealt with the issue.

Any plant working in the area on discovery of invasive species will be cleaned down before removal from the contaminated area.

Any materials previously removed from the area will be checked for plant material content.

**Control Measures:** Site operatives will be advised at induction that in the unlikely event of invasive species being found on this site, all work is to stop, the site secured and site management is to be advised immediately.

**Excavated Materials:**

Soils, stones and vegetation should be processed in such a manner as to maintain their reuse value.

This will involve the proper separation of soil types, [topsoil, sandy subsoil, clays, silts and so on] and made ground materials. Soil materials should be placed in stockpiles and these stockpiles shaped/dressed to shed water.

**Control Measures:** Plant operators and banksman will be advised to correctly separate different soils and materials, where this is possible and practicable, so as to ensure maximum reuse of these materials.

**Spill Kit Locations:**

All plant on the site, whether mobile or stationary, will have with it a spill kit. A number of spare spill kits will be held on site so that stocks at working locations can be replenished as required.

Plant stood for long periods will be parked on plastic sheeting, or have drip trays / plant nappies placed underneath them. Such items of plant will be located away from drains and water bodies.

**Control Measures:** Plant operators will be asked to ensure that the item of plant they are operating has a spill kit with it and that the operator is aware of where to find a visqueen sheet in case of emergency.

Plant operatives and haulage contractors will be encouraged to seek immediate assistance should their item of plant or vehicle become the cause, or has the potential to become the cause of a contamination event.
Refuelling of Machinery:

**Control Measures:** Site Plant Operators will be informed at induction of the following measures and procedures which relate to the refuelling aspects of plant operations on this site.

These measures will be put in place and enforced by site management at all levels.

Fuel will be brought to site and discharged into a purpose built, secure, (lockable), labelled, bunded fuel tank, in quantities that are proportionate to site usage.

**No 45 gallon drums will be allowed on site for fuel storage.**

Static fuel tanks will be located where there is no risk of water inundation, (flood), or ground settlement. Fuel storage tanks will be located where there is a low risk of accidental impact damage.

Tanks will be positioned in an easily accessible location and over an impermeable bunded base in order to retain inadvertent spillage.

Tanks may be covered to shed rainwater and to curtail the accumulation of water within the outer bund.

Machines to be refuelled will be positioned in front of the tank on a bed of sand or similar absorbent material, allowing for spills to be dealt with quickly and completely.

Machines will not be refuelled within 50 metres of a water body or a watercourse or drain.

**Plant will only be refuelled at designated locations agreed on site**

All valves, [trigger type with automatic cut-out], and hoses, [when not in use], will be stored within the lockable bund of the tank.

Small plant will be filled using jerry cans and will be placed on ‘plant nappies’.

Spill Kits will be available at all refuelling locations and with all items of plant.

Plant items will be inspected daily for oil and fuel leaks and all outcomes recorded on the plant log. Any potential environmental risk(s) associated with any item of plant will immediately be brought to the attention of site management.

Used Spill Kits and any fuel / oil contaminated materials will be disposed of as hazardous waste in a covered site compound container.

The site will maintain a sufficient store of spill kits and granules and have adequate covered skip capacity for contaminated soils should there be a serious spill.

All lubricating oils should be stored in a lockable site compound container and monitored for any leakage.

All used/contaminated Spill Kits, spent grease cartridges, spent aerosol cans, rags, granules etc are to be treated as Hazardous Waste and placed in the main compounds waste skips for appropriate disposal.
Groundwater and Surface Water Run-off and Working in or near Water:

Care will be taken when working near existing watercourses so as to avoid the discharge of silt into the water flow or to un-necessarily disturb the bed of the watercourse.

Surface water run-off will not be allowed to enter a watercourse directly, but will be intercepted and filtered before it is discharged into an open watercourse or drain. Interception and filtering may be undertaken with the use of silt fencing; inter-linked straw bales; sandbag dams [filled with gravel]; or low bunds. Interception may take place at the periphery or at locations within the work area. Subdivision of the work area to intercept and filter any run-off is useful in reducing the potential for water flow build up.

Water pumped out of excavations will be discharged into temporary, surface, receiving pond(s) where suspended solids will be allowed to settle out. Temporary ponds can be constructed using soil bunds/straw bales or similar, overlain with an impermeable membrane, [for example visqueen]. Depending on the volumes of water to be managed, a series of surface, bunded ponds may be required. Post solid settlement, the ponded water will be discharged, [pumped using a low volume pump, (2 inch)], into open watercourses or drains. The suction rose will not be placed in the bottom of the temporary ponds, but suspended in the water so as not to suck up or disturb the settled solids. At the point of discharge into an open watercourse the bed and embankments will be protected against erosion by the placement of large stones. Silt socks may be used at the point of discharge. Immediately down gradient of the discharge point, sandbag dams will be placed across the water channel to intercept and settle any silt inadvertently generated during the pumping exercise. An absorbent boom will also be floated across the channel at this point to intercept any contaminants. Before a temporary pond is emptied, the surface of the water will be checked for oils and this removed using absorbent materials. Water pumped out of excavations where concrete has been placed may have to be tested to assess its alkalinity, before any discharge into the water environment is undertaken.

Stockpiles should not be placed near watercourses or drains, [within 30m], to avoid silt run-off being washed into the drainage system. Where appropriate a shallow, blind, cut-off ditch should be excavated at the base of the stockpile to intercept any immediate silt flows, with monitoring / maintenance taking place at frequent intervals, or as and when required.

Any contaminated water will be contained on site in tanks or lagoons whilst chemical testing is undertaken to evaluate either disposal into the public sewer, [thus meeting the chemical acceptance criteria and flow/volume requirements], through a trade effluent agreement or tankered off-site to a licenced facility, for disposal.

Work within or near watercourses should be undertaken in such a manner as to minimize bed disturbance and bankside vegetation removal. Typically such work will be undertaken as follows:

Before any work is undertaken in the vicinity of a watercourse, a contamination control measure will be put in place downstream of the work zone. An absorbent ‘boom’ will be floated across the full potential flow width of the burn. Where, because of the nature of the burn bed, or varying flow spread, it is not possible to fully float such a boom, a low wall of sandbags, [filled with gravel], will be placed across the watercourse to form a shallow pool, sufficient to float the boom.

During construction work and any disturbance within the bed of the watercourse, it will be necessary to form a low level sandbag dam(s) across the stream, downstream of the work zone. Such a dam(s) will facilitate the containment of any silt which may be inadvertently generated during the construction work within or near to the stream.
Control Measures: Site management will ensure at the outset that no works are commenced before provision is made to deal with, store and filter, any surface water run-off from the site or waters removed from excavations.

Prior to the commencement of works on site, water samples will be taken from watercourses deemed to have an influence on the site, [up-gradient of the site], or be influenced by the site; [at a point where they pass the site and at a location(s) down-gradient of the site]. These samples will be chemically tested and the data used as a baseline for future water testing comparisons. The pH values of these samples will also be logged. All samples will be tested at a UKAS Accredited Laboratory.

The pH value of waters discharged from site and passing the site will be monitored daily using a pH meter device. Waters will not be discharged from site if the pH value is greatly at variance with that of waters in the natural environment at the point of discharge.

Chemical testing of site waters will be undertaken on a monthly basis and compared with the baseline data.

- Concrete Wash-Off Materials:

Where concrete is to be delivered to site, a provision of a facility for the catchment of 'wash-off' water and concrete residues from the delivery vehicle/concrete skip/other site plant, will be made.

Control Measures: The type of catchment facility will be at the discretion of site management, but will typically be either a shallow sump excavated within the site periphery, [but away from any watercourse], lined with two layers of visqueen, [perpendicular to each other], into which wash-off materials can be discharged; or an 8 cubic yard skip, lined with visqueen into which the truck operator can 'wash off' his vehicle hopper.

Wash-off materials will be kept to a minimum, allowed to dry out after discharge and removed from site by a registered waste carrier for appropriate disposal/recycling.

Under no circumstances will concrete waste or wash-off water be discharge near to, or into a watercourse.

Wind Blown Materials:

All lightweight materials, [such as packaging], which may become airborne in wind gusting conditions will be managed in such a way as to remove this potential hazard from the work area and any such materials will be placed in covered waste skips in the site compound area.

Control Measures: Site operatives will be instructed to place packaging materials in the appropriate waste skip at the earliest opportunity.
Waste Minimalization:

The following procedures will be followed to minimize material wastage;

- [1] The quantity of materials brought to site for incorporation into the works shall be as precise as reasonably possible;
- [2] Materials will be ordered in full loads where possible;
- [3] Materials will be sourced locally where possible to minimize transport needs;
- [4] Materials will be stored within a fenced area to minimize accidental damage;
- [5] The necessity for material handling will be kept to a minimum thus reducing the potential for damage;

Waste Disposal:

Waste skips, [covered and lockable where necessary], will be located in the main compound area and will not generally be placed elsewhere on the site. Wastes are to be segregated wherever possible, [for maximum recycling and reuse], when placed in the site waste disposal area. Skips will be labelled to accommodate different waste streams and to assist in correct segregation.

For some waste materials it will be necessary to dispose of them directly to a landfill or recycling site. If material is to be disposed of off-site then the Landfill and Transfer Station operating permits along with Carrier Licences will be checked before any material is removed from site and Landfill/Transfer Stations will be furnished with any chemical/WAC test material data before any waste material is delivered to their premises. All of this data will be made available to the client.

Foul water from the site welfare units will be piped into a storage tank located above ground and adjacent to the welfare facilities. This tank will be emptied by an authorised waste disposal contractor for appropriate disposal at a registered waste disposal outlet.

Disposal data will be incorporated into the Site Waste Management Plan].

Control Measures: Site operatives will be advised at induction as to the location of waste skips and of waste segregation and management processes.

Site operatives will receive a Tool Box Talk on waste reduction and waste management.

Site management will ensure that site waste is managed correctly and that all waste contractors have the necessary licences and permits and that these are current.
Ecology:

General Comments:

Site operatives will be advised to report any unusual ecological activity in the work areas they consider worthy of note, to their line manager for further investigation by a competent person.

Operatives will be requested to ensure that all duct/pipe ends are capped when not actively being worked upon and where this is not possible that egress is maintained for small animals.

Excavations left overnight or longer, will be ramped at one end to allow for egress.

Birds

Site operatives will be reminded that it is an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly disturb wild birds whilst they are nest building, or at a nest containing eggs or young, or disturb the dependant young of such birds. Whilst certain birds are scheduled under some Acts of Parliament, emphasis will be placed on the notion that all birds should be treated so as to minimize the effect of the works on their life cycle.

It is noted that site operations will be undertaken and continue through bird nesting seasons.

The timing of site operations should be managed in such a way as to remove any risk to nesting birds, including ground nesting birds, and such considerations will apply between February and August.

Appropriate exclusion zones around confirmed nest sites may have to be established following consultation with the client's environmental advisor and / or other interested parties.

Whilst site activities may discourage ground nesting birds from establishing nests in the work affected areas, site management and site operatives will monitor their areas for such activity and report to the client or ecologist, any activity judged worthy of note.

Reptiles

Site operatives will be reminded that it is an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly kill or injure or take reptiles.

The only native reptile species likely to be found on or near the site are: Slow Worms; Common or Viviparous Lizard and Adders.

Whilst preparation of the site will have removed any suitable habitat for reptiles, site management and site operatives will monitor their areas for reptile activity and report to the client or ecologist, any activity judged worthy of note. In some circumstances, the erection of newt fencing may have to be considered.
Badgers:

Site operatives will be reminded that it is an offence under the Protection of Badgers Act 1992 to intentionally or recklessly damage a badger sett or cause a dog to enter a badger sett, or for a person to kill, injure or take a badger. Excavation or interfering with a badger sett is only allowed under licence.

Site management and site operatives will monitor their areas for badger setts and badger activity and report to the client or ecologist, any activity judged worthy of note.

Bats:

Site operatives will be reminded that under the Conservation (Natural Habitats etc) Regulations 1994, Bats have European Protected Species status and that it is an offence to deliberately or recklessly kill, injure or take a bat or deliberately or recklessly disturb or harass bats, or damage, destroy or obstruct access to a breeding site or resting place of a bat.

It is unlikely that the works will be affected by any surrounding bat populations, however, site management and site operatives will monitor their areas for bat activity and report to the client or ecologist, any activity judged worthy of note.

Water Voles:

Site operatives will be reminded that it is an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection.

Site management and site operatives will monitor their areas for water vole activity and report to the client or ecologist, any activity judged worthy of note.

Otters

Site operatives will be reminded that under the Conservation (Natural Habitats etc) Regulations 1994, Otters have European Protected Species status and that it is an offence to deliberately or recklessly kill, injure or take an otter or deliberately or recklessly disturb or harass an otter, or damage, destroy or obstruct access to a breeding site or resting place of an otter.

A European Protected Species (EPS) Derogation Licence for otters can be obtained in certain circumstances, provided that any authorised action will not be detrimental to the maintenance of the population of the species in their natural range.

Site management and site operatives will monitor the situation on site for the presence of otters within or near to their work zones and report to the client or ecologist, any activity judged worthy of note. In some circumstances, the erection of fencing may have to be considered.
Great Crested Newts

Site operatives will be reminded that it is an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly injure or damage or disturb a great crested newt. Great crested newts also have European protected Species status and are included in the UK Biodiversity Action Plan.

Great crested newts can be translocated under licence, and such translocation commenced on this site in 2008. This work has been carried out by, and is maintained by, an ecologist employed by BeLa Partnership Limited. Priors Hall site is known to support over three thousand newts.

Site operatives will be reminded at induction, and during Tool Box Talks, of their responsibilities with regards to Great Crested Newts. Site operatives will be asked to report to their line manager of to the ecologist, any damage to the newt fencing erected on site, and ‘pitfall traps’, so that repairs or newt recovery can be undertaken.

Site operatives will be informed that although great crested newts have been translocated on site, it is possible that they may still inhabit the wider site. Site operatives will be asked to report any newt sightings to the ecologist, and to be vigilant during vegetation removal and during the removal of hedgerows or log piles, which may be used by newts as a refuge.

Site management will liaise with the client and the ecologist when planning works within 500 metres of suitable newt habitat, and also when vegetation removal is planned.

Site operatives will be reminded at induction and during the delivery of environmental Tool Box Talks of the need to report persistent or recurring ecological activities near to or within their work zones, to site management so that ecological advice can be sought.

Fire Risk:

There are no circumstances where open fires will be permitted on site. The use of gas burners, welders and other hot work will be closely monitored and only allowed under a ‘Hot Work Permit System’.

All site operatives including haulage contractors will be informed that the site is a no smoking zone, [except for designated located] and be briefed about putting out cigarettes fully before disposing of them.

Traffic Management:

All drivers collecting materials from or delivering materials to the site will be informed of the traffic management plan is devised to minimize as far as is possible, disruption to the local environment.
On-going Tasks:

It will be incumbent upon the site management to check, or have checked the following, on a Regular basis:

Ecology and archaeology,
Monitor any groundwater discharge quality;
Dust control measures;
Noise levels;
Weather forecasts;
Condition of plant in respect of leaks;
Condition of Lorries in respect of leaks;
Compliance with traffic management plan;
Condition of site roads and public roads for cleanliness

[This list may not be exhaustive.]
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN: BIODIVERSITY
CORBY NORTHERN ORBITAL ROAD
Delta-Simons Project Number: 14-0117.14
Dated: July 2014

1.0 BACKGROUND TO THE PROJECT

1.1 Context and Purpose
Delta Simons has been instructed on behalf of the BeLa Partnership to provide a section on Biodiversity as an Appendix to the Environmental Management Plan (March 2013) provided by Hewlett Construction Ltd, the principal contractor for the Corby Northern Orbital Road (CNOR) scheme (the 'Site'). This Biodiversity section specifically covers the second phase of works for the scheme currently being undertaken. The previous phase of works was completed in 2009.

1.2 Scheme Overview
In 2008 the proposals for the Corby Northern Orbital Road (CNOR) route were as follows:

- Remodelling of Steel Road Roundabout (roundabout 1) at the junction with the A43;
- Dualling of the Steel Road (Road 1);
- Re-modelling of the existing Birchington Road roundabout (roundabout 2);
- New dual carriageway (Road 2) link to roundabout 3 west of the existing Morrison's depot;
- New roundabout (roundabout 3) immediately north-west of the Morrison's depot;
- New dual carriageway (Road 3) to new roundabout 4 in the western portion of Rockingham Speedway land;
- Dual carriageway link road (road 4) on existing Mitchell Road; and
- New roundabout (roundabout 5) to form a junction between road 4 and Phoenix Parkway.

The recession halted progress of the works such that in 2009 works had progressed up to completion of a bridge over the Willow Brook, and whilst preparation works had been undertaken to the land beyond it, and south of Mitchell Road, no works recommenced until 2013. This remaining section of the CNOR route, the extension, is centred at Ordnance Survey Grid Reference SP 902 911. Currently the Site comprises mostly bare ground with a number of spoil heaps supporting aggregate and a single wood pile. Immediately east of the
A6116 (Phoenix Parkway) is an area of encroaching rank grassland and ephemeral ponds, which are dry.

It is understood from the engineers drawing (D2e Drawing 3081((I)009 Rev A), provided by the Client, that the proposed CNOR extension scheme has been revised with roundabout 4 being realigned to provide a more effective connection into the Rockingham Motor Speedway site.
2.0 LEGISLATION

2.1 Birds
All wild birds are protected under Section 1 of the Wildlife and Countryside Act (WCA) 1981 (as amended). Subsection 1(1) makes it an offence to intentionally kill, injure, or take any wild bird; take, damage or destroy the nest of any such bird whilst it is in use or being built; or take or destroy an egg of any such wild bird. It is, furthermore, an offence to either intentionally, or recklessly, disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird. The law covers all species of wild birds including common, pest or opportunistic species.

2.2 Amphibians
All amphibians are protected under the WCA 1981 (as amended), with some species also protected under the European Habitats and Species Directive (92/43/EC), enacted in the UK through Annex IV of the Habitats and Species Regulations 2010 (as amended). All amphibians are protected from keeping, transporting, selling or exchanging. This means that in practice reasonable measures must be taken to avoid their incidental mortality.

The Great Crested Newt (GCN) is protected under Schedule 2 of the Habitats Regulations and Schedule 5 Sections 9(1) and 9(4) of the WCA 1981 (as amended). It is an offence to deliberately or recklessly kill, injure, capture or disturb these species or, to obstruct access to, damage or destroy areas where they live or breed. The legislation applies to all stages of the life cycle including eggs, larvae and juveniles. It should be noted that GCNs spend the majority of their lives on land, venturing up to 500 m (but more usually 250 m) from their breeding ponds and as such any ground works within 500 m of a breeding pond could have an adverse effect on GCNs.

2.3 Reptiles
All six native species of reptiles are protected under the 1981 WCA (as amended), from deliberate or reckless killing or injury. As such, all reasonable steps must be taken to avoid their incidental mortality when carrying out works.

2.4 Bats
All bats and their roosts are protected under Section 9 of the WCA 1981 (as amended) and Annex IV of the Habitats and Species Regulations 2010 (as amended).

It is an offence, either deliberately or recklessly, to destroy, damage or obstruct access to any bat roost, or to disturb a bat using such a place. It should be noted that a roost is protected whether or not bats are present and any activity or works affecting a roost, even
when bats are absent, are likely to require a Natural England European Protected Species Licence (EPSL).

2.5 Badgers

Badgers *Meles meles* and their setts are protected under the 1992 Protection of Badgers Act. Under this Act it is an offence to wilfully kill, injure, take, possess or cruelly ill-treat badgers, or to attempt to do so. It is also an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a sett, or to disturb an occupied sett, either by intent or negligence. When interpreting the Act, Natural England defines a sett as any structure within an area used by badgers that shows signs of having been occupied by badgers within the last 12 months.
3.0 BASELINE INFORMATION

3.1 Baseline Conditions for Ecology

This Section provides the baseline conditions for the Biodiversity of the Site for the CNOR. Tables 1 and 2 identify ecologically sensitive areas associated with the CNOR.

Table 1: Designation Baseline

<table>
<thead>
<tr>
<th>Designation Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td>No internationally designated sites are located on or within close proximity to the CNOR.</td>
</tr>
<tr>
<td>National</td>
<td>No nationally designated sites are located on or in close proximity to the near to the CNOR.</td>
</tr>
<tr>
<td>Regional</td>
<td>No regionally designated sites are located on or in close proximity to the near to the CNOR.</td>
</tr>
<tr>
<td>County</td>
<td>Brookfield Plantation Local Wildlife Site (LWS) is situated approximately 500 m to the north of the Site beyond Gretton Brook Road. It comprises woodland habitat complemented by calcareous/neutral grassland ride system and a pond. Corby Tunnel Quarries LWS, situated approximately 1 km to the north-west of the Site. It comprises calcareous grassland with seasonally wet areas and scrub habitat.</td>
</tr>
</tbody>
</table>

Table 2: Habitats and Species Known to be Present on or within Close Proximity to the Scheme

<table>
<thead>
<tr>
<th>Flora/Habitats</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spoil</td>
<td>There are two substantial stockpiles of earth at the Site. No signs of mammal activity have been recorded to be associated with either to date.</td>
</tr>
<tr>
<td>Rare Ground</td>
<td>These areas comprise broken/ crushed concrete together with engineered bare ground.</td>
</tr>
<tr>
<td>Woodland and Scrub</td>
<td>There is an area of broadleaved woodland to the south of the Site on the former Tata Steelworks land.</td>
</tr>
<tr>
<td>Watercourses</td>
<td>The Willow Brook crosses beneath the CNOR route.</td>
</tr>
<tr>
<td>Ponds</td>
<td>Eight ponds are located within close proximity to the scheme. These include two Attenuation Ponds (AP1 and AP2), four Receptor ponds (CNOR1, 2, 3 and 4), and two ponds that are off-Site within the Tata Land, and land to the north-west of the Site (Crackerjack warehouse). See Figure 1.</td>
</tr>
</tbody>
</table>
## Fauna

### Bats
The trees on-site are not considered suitable to support roosting bats. Two bat transect surveys carried out on the 30th June 2014 highlight low levels of common pipistrelle *Pipistrellus pipistrellus* foraging on the southern and northern woodland CNOR boundaries. Noctule bats *Nyctalus noctula* were recorded foraging above Attenuation Pond 1 and along the northern woodland boundary. No evidence to indicate roosting activity was recorded on either of the transects undertaken. Further activity surveys in relation to the CNOR will be undertaken in September 2014 and on an annual basis.

### Badger
A number of both active and disused badger *Meles meles* sets are present to the north and south of the proposed road scheme with main sets identified within the Tata Steelworks land to the south of the Site, and within the woodland immediately south-west of the Rockingham Motor Speedway (see Figure 1).

There are no active badger sett entrances within 30 m of any proposed major earthworks within the revised CNOR extension footprint and, therefore, with appropriate mitigation in place, the construction works are not anticipated to cause disturbance or damage to any active badger sets. The closest badger sett to the footprint of the works is at a distance of 35 m away.

### Great Crested Newts
Monitoring surveys were undertaken on six ponds within the Site boundary:
- AP1 – Medium population with 48 GCN recorded.
- AP2 – Large population with 109 GCN recorded.
- CNOR2 – Small; population with 1 GCN recorded.

*CNOR1, 3 and 4 were all dry at the time of surveys.*

*The Tata land pond and warehouse site pond were not surveyed as access had not been granted.*

### Riparian Mammals
The length of Willow Brook that runs north to south through the CNOR Site boundaries was surveyed on the 3rd July 2014. No signs of water *Arvicola amphibius* or otter *Lutra lutra* were recorded on-site. It was noted that extensive mammal tracks were present on either side of the stream banks, they were predominately deer slots, whilst occasional badger prints were noted.

### Reptiles
In relation to the CNOR, 190 reptile tins were put out on the 18th and 19th June 2014. After five survey visits nine common lizards *Zootoca vivipara* and a single grass snake *Natrix natrix* have been recorded on the on the slope east of Attenuation Pond 1 and to the north of Attenuation Pond 2. It was also noted that two juvenile GCN were found at Attenuation Pond 1 and 2 beneath the tiles.

### Nesting Birds
A single ringed plover *Charadrius hiaticula* nest was recorded nesting within the Site boundary on the gravelled car parking area in May 2014. All chicks have fledged.
4.0 REQUIRED ACTIONS, CONTROLS OR MITIGATION

The following mitigation principles will be applied by Hewlett Construction Ltd. as principal contractor:

Δ All works will be carried out under a watching brief by the Ecological Clerk of Works (ECoW) (or other designated ecologist), in areas known to have protected species or other ecological interest, particularly during the vegetation clearance and earthworks operations and during habitat creation operations, where appropriate;

Δ In advance of on-Site works the ECow (or other designated ecologist) will identify and highlight sensitive ecological areas as shown in Figure 1. Staff and machinery movement will be restricted in these areas. A pre-commencement toolbox talk will be given to the relevant contractors, and they will be given the contact information for the ECow on-Site ecologist. Exclusion zones shall be established so that these features (and any new ones noted) are not inadvertently damaged during construction;

Δ Restriction of plant and personnel to within the working area;

Δ Avoidance of unnecessary damage to terrestrial habitats, for example movement of heavy plant during construction will avoid areas where trees are to be retained in order to prevent root compaction and accidental damage. Areas of vegetation and trees to be retained will be clearly identified and fenced where appropriate, with a minimum of orange rope fencing, or with Heras fencing for root zone protection in accordance with the Tree Survey Plans (Clarkebond 01/09). In addition, signage will be erected on the fencing outlining its role;

Δ Any vegetation (e.g. trees, rank grassland) clearance which takes place within the bird nesting season (peak season, March-July, inclusive) will be checked by the ECow for breeding birds prior to removal. An Ecological Inspection Certificate will be issued by the ECow to permit the vegetation clearance;

Δ The ECow will monitor the Site daily to check areas for potential ecological constraints, e.g. new badger setts, damaged newt fencing. All Site staff will be made aware of any new ecological constraints and will contact the ECow or Site foreman should they discover any wildlife within the construction zone;

Δ Tool Box Talk posters detailing protected wildlife (for example photographs of GCN and badger setts) are displayed within work cabins and site compounds, with the contact details for the ECow on-Site ecologist provided on the posters, and they will be retained until works are complete;

Δ Where an ecological watching brief is required, which is considered to be the case in the following circumstances:

Delta-Simons Environmental Consultants Limited
3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR. Switchboard: 0870 0400 012
• When works are to be undertaken in any areas of biodiversity protection (see Figure 1);
• When vegetation clearance works are to be undertaken;
• When signs of mammal digging or a new badger sett is found within 30 m of the works;
• If any works need to be undertaken outside of the construction zone footprint; or
• If any rubble, log or debris piles require dismantling.

Then a Site note will be taken by the ECOW (or other designated ecologist) to record the activity;

△ Pre-construction surveys and monitoring have been undertaken and will continue to be required. Areas of ecological mitigation and management include the previous production of four receptor ponds for great crested newts; and

△ Other areas of ecological mitigation which have been, or are being, incorporated into the scheme are:
   △ Bat box locations for enhancing the site for bats locally; and
   △ Mammal fencing (still going through detailed design).

The following Method Statements Documents have been produced and will be in place for works within areas which have known ecological constraints (see Appendix I):

△ Breeding Birds;
△ Badgers (non licenced);
△ Great Crested Newts (non-licensed); and
△ Great Crested Newts (non-licensed) - destructive search of the debris on the construction compound triangle.

With regards to works being undertaken near to water, the Environment Agency (n.d.). Pollution Prevention Guideline 5: Works in, Near or Liable to affect Watercourses¹ must be followed.

Delta-Simons is providing specialist ecological input during the construction phase of the scheme, and will report to BeLa directly. Contact details for key ecological staff can be found in Table 3, below.


Delta-Simons Environmental Consultants Limited
3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR. Switchboard: 0870 0400 012
Table 3: Contact Details

<table>
<thead>
<tr>
<th>Overall Scheme Ecologist</th>
<th>Ecological Specialists</th>
<th>Phone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Main office contact for general ecology enquiries and staffing)</td>
<td>Delta-Simons</td>
<td>Dr Charlotte Sanderson 07884498315, Pete Morrell 07824445051, Jon Spencer 07580 111946</td>
</tr>
<tr>
<td>Bat Specialist (contact overall project ecologist in emergency)</td>
<td>Delta-Simons</td>
<td>Dr Charlotte Sanderson 07884498315, Pete Morrell 07824445051, Jon Spencer 07580 111946</td>
</tr>
<tr>
<td>Badger Specialist (contact overall project ecologist in emergency)</td>
<td>Delta-Simons</td>
<td>Dr Charlotte Sanderson 07884498315, Pete Morrell 07824445051, Jon Spencer 07580 111946</td>
</tr>
<tr>
<td>Great Crested Newt Specialist (contact overall project ecologist in emergency)</td>
<td>Delta-Simons</td>
<td>Dr Charlotte Sanderson 07884498315, Pete Morrell 07824445051, Jon Spencer 07580 111946</td>
</tr>
</tbody>
</table>

The Ecological Specialists will:

- Δ Carry out pre-construction checks and surveys;
- Δ Provide a specialist input on ecological issues;
- Δ Input into the CEMP and environmental design;
- Δ Produce fortnightly progress reports that will be sent to Northants County Council (NCC); and
- Δ Will report any ecological concerns to Will Everitt and Paul Clayton of Hewlett Construction Ltd. and Warren Jones of BLa. If a protected species is disturbed or at risk of harm then NCC and Natural England will also be informed.

Ecological Clerk of Works

The ECoW will monitor Site ecological issues as detailed in the CEMP and:

- Δ Undertake daily monitoring of the amphibian fencing to ensure that the fencing is in good condition and fit for purpose;
- Δ Ensure amphibian fencing is appropriately signed to warn Site staff not to damage or store material against the fence and that no stockpiles are placed next to or on top of amphibian fencing. The ECoW will ensure that the Site foreman removes any material next to the fencing that could reduce its effectiveness, and will report any defects to the sub-contractor responsible for repairing and maintaining the amphibian fencing; and
- Δ Undertake regular monitoring of the areas in the vicinity of known (and former) badger sets, within and immediately adjacent to the construction Site area. If new, previously unknown, badger sets are discovered then the ECoW will fence off a suitable exclusion zone and install appropriate signing. The ECoW will then

Delta-Simons Environmental Consultants Limited

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monitor badger activity within the exclusion zone and will advise Hewletts / BeLa if a Natural England Development Licence is required.
1.0 General information

This document provides advice on the legislative and compliance requirements together with the Site methodology to be followed with the regards to the Corby Northern Orbital Road (CNOR) vegetation clearance (removal of trees, scrub and rank grassland) during the construction period. This is in accordance with the legal commitments under the Wildlife and Countryside Act (WCA) 1981 (as amended) in relation to breeding birds. This document describes the methodology that will be adopted by all the staff involved in Site clearance prior to commencing vegetation removal.

2.0 Species Protection Legislation

Birds are afforded variable protection and levels of conservation status on a species by species basis, with the inclusion of a number of species on the following legislation or lists of conservation concern:

- WCA 1981 (as amended);
- EC Birds Directive 1979;
- UK Biodiversity Action Plan (1995) lists of globally threatened or declining species; and
- Royal Society for the Protection of Birds (RSPB) red and Amber Lists of species conservation concern.

The most significant general legislation for nesting birds lies within Part 1 of the WCA 1981, under his legislation it is an offence to:

- Kill, injure or take any species of wild bird;
- Take, damage or destroy the nest of any bird species while the nest under construction or in use; and
- Take, damage or destroy an egg of any wild bird.

The WCA 1981 (as amended) constrains any kind of development works from occurring that could have a detrimental effect in relation to nesting birds. Offences against breeding birds (for example the destruction of a nest or an incubating birch) are punishable by fines up to £5000 per offence, and may include prison sentences of up to six months.

3.0 Potential Impacts

The peak bird breeding season generally occurs from the beginning of early March until late July. However, as a precaution a nesting bird check will be required of all areas of vegetation proposed for clearance from March - August (inclusive). The length of the nesting bird season is dependent on the species of bird and weather conditions. Thus it is assumed that there is potential for birds to be breeding within the vegetation along and adjacent to the CNOR route during this period.

Proposed works will include the removal of trees and ground vegetation within close proximity to the CNOR works.

4.0 Vegetation Clearance

The Ecological Clerk of Works (ECoW) will undertake a nesting bird check the day before the
works will commence. If any active nests are found then a buffer zone will be created around the nest location using brightly coloured tape. The ECoW will estimate the time period until all chicks have fledged and will return to check the nest after this time has passed. The buffer zone will remain in situ until the ECoW is content that all chicks have fledged the nest. The location of the nest will then be relayed to the Site supervisor and the contractor supervisor.

A toolbox talk will be given by the ECoW to all staff involved in vegetation clearance works prior to the start of any works.

The following characteristics help to define an active nest:

- A nest containing eggs;
- A nest containing young;
- Bird incubating eggs;
- Adult birds carry food items to a nest;
- A nest that is under construction; and/or
- Alarm calling or agitated adults associated with a nest.

If a nest is discovered during the Site clearance by a contractor all works should cease. The Site supervisor as well as the ECoW should be contacted. The ECoW will check the nest and confirm whether or not it is active. If confirmed active work will only continue once a buffer zone large enough to ensure that the nest will not be disturbed has been created around the nest site. The buffer zone will be marked out using bright coloured tape as previously stated and will be left in place until the ECoW confirms that all chicks have fledged the nest.

5.0 Contact Details

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1.0 General information

This document provides advice on the legislative and compliance requirements together with the Site methodology to be followed in regard to the Great Crested Newt (GCN) *Triturus cristatus* and construction of the Corby North Orbital Road (CNOR). This document describes the methodology that will be adopted by all of the contractors involved in the CNOR construction works.

2.0 Legislation and Policy

The great crested newt is protected under European law through Annexes II and IV of the EC Habitats Directive (Council Directive 92/43/EEC). Protection is given to all life stages (e.g. adults, sub-adults, larvae, and eggs). This is implemented into UK law under section 41 of the Conservation of Habitats and Species Regulations, 2010 where it is listed as a European protected species under Schedule 2, which in summary makes it an offence to:

- **Δ** Deliberately take (capture), injure or kill a great crested newt. (In a court, ‘deliberately’ would probably be interpreted as someone who, although not intending to take, injure or kill a great crested newt, performed the relevant action, being sufficiently informed and aware of the consequence his/her action will most likely have;
- **Δ** Deliberately disturb a great crested newt in a way that would affect its ability to survive, breed or rear young, hibernate or migrate or significantly affect the local distribution or abundance of the species;
- **Δ** Damage or destroy a breeding site or resting place of a great crested newt;
- **Δ** Possess or control any live or dead specimen or anything derived from a great crested newt; and
- **Δ** Intentionally take or destroy the eggs of a great crested newt.

The GCN is also given full protection under Section 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended) through its inclusion on Schedule 5. In summary, the legislation makes it an offence to:

- **Δ** Intentionally or recklessly take (capture), injure or kill a GCN;
- **Δ** Intentionally or recklessly disturb a GCN;
- **Δ** Intentionally or recklessly damage or destroy, or obstruct access to, any structure or place which a GCN uses for shelter or protection or intentionally or recklessly disturb a great crested newt while it uses such a place; and
- **Δ** Possess or advertise/sell/exchange a GCN (dead or alive) or any part of a GCN.

The WCA 1981 (as amended) constrains any kind of development works from occurring that could have a detrimental effect in relation to GCN. Offences against GCN are punishable by fines up to **£5000 per offence**, and may include prison sentences of up to six months.

3.0 Potential Impacts

The Temporary Amphibian Fence (TAF) has been in location for over five years and has potential to degrade or to be damaged by the proposed construction activities. Thus it is assumed that if TAF is damaged there is potential that GCN may enter the construction...
area. Furthermore, it should be noted that breeding GCN were present in substantial numbers within the two attenuation ponds to the south of the Rockingham Motor speedway in spring 2014.

4.0 Earthworks and Construction

The fence line will be walked and checked daily by the Ecological Clerk of Works (ECoW) or a suitably trained ecologist. Any minor damage will be repaired immediately, substantial damage will be reported to Hewletts, the principle contractor and BeLa the Client, and will be repaired within a 24 hour period.

All Site operatives, including contractors and sub-contractor staff, will receive a toolbox talk by the ECoW or a Natural England GCN licensed ecologist. The briefing would include details of the legal protection of GCN, the precautionary methods of working, tips on identification of GCN and procedures to follow should the species be discovered during works.

If any works need to be undertaken outside of the construction zone footprint (e.g. within any vegetated habitat on either side of the road footprint), or if any rubble or piles of material that have been stored within the working area require dismantling the ECoW must be informed before any works commence. The ECoW will assess the potential risk posed to GCNs and will determine whether or not supervision of the works along with a precautionary approach, for example hand digging/dismantling rather than the use of machinery, is adequate to prevent harm to GCNs, or if works must cease and a European protected Species Licence be applied for from Natural England.

If a GCN is found at any time during construction, all works must cease immediately and the ECoW will make an assessment of the situation and determine whether or not a licence would be required before work can proceed. Both Natural England and Northants County Council will be informed and, guidance will be sought from Natural England.

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1.0 Background Information

This document provides advice on the legislative and compliance requirements together with the methodology to be followed in regard to the Great Crested Newt (GCN) Triturus cristatus and destructive search and clearance of debris from the construction compound triangle adjacent to the Corby North Orbital Road (CNOR, the ‘Site’). This document describes the methodology that will be adopted by all of the Hewlett contractors involved in the clearance of debris from this area.

2.0 Legislation and Policy

The GCN is protected under European law through Annexes II and IV of the EC Habitats Directive (Council Directive 92/43/EEC). Protection is given to all life stages (e.g. adults, sub-adults, larvae, and eggs). This is implemented into UK law under section 41 of the Conservation of Habitats and Species Regulations, 2010 where it is listed as a European protected species under Schedule 2, which in summary makes it an offence to:

- Deliberately take (capture), injure or kill a great crested newt. (In a court, 'deliberately' would probably be interpreted as someone who, although not intending to take, injure or kill a great crested newt, performed the relevant action, being sufficiently informed and aware of the consequences of his/her action will most likely have);
- Deliberately disturb a great crested newt in a way that would affect its ability to survive, breed or rear young, hibernate or migrate or significantly affect the local distribution or abundance of the species;
- Damage or destroy a breeding site or resting place of a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt; and
- Intentionally take or destroy the eggs of a great crested newt.

The GCN is also given full protection under Section 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended) through its inclusion on Schedule 5. In summary, the legislation makes it an offence to:

- Intentionally or recklessly take (capture), injure or kill a GCN;
- Intentionally or recklessly disturb a GCN;
- Intentionally or recklessly damage or destroy, or obstruct access to, any structure or place which a GCN uses for shelter or protection or intentionally or recklessly disturb a great crested newt while it uses such a place; and
- Possess or advertise/sell/exchange a GCN (dead or alive) or any part of a GCN.

The WCA 1981 (as amended) constrains any kind of development works from occurring that could have a detrimental effect in relation to GCN. Offences against GCN are punishable by fines up to £5000 per offence, and may include prison sentences of up to six months.

3.0 Potential Impacts

There is no amphibian fencing around this area such that GCNs can access it from land to the
south off-Site, and also from land to the north of the CNOR, where a breeding population is
known to be present, by crossing beneath the Willow Brook bridge. There is, therefore, the
potential for GCNs to be sheltering beneath the debris that has been left on this parcel of land
adjacent to the Site compounds. If the debris is not cleared under an appropriate method
statement during the active season for GCNs (April- mid-October, inclusive, although weather
dependent), there is the potential for hibernating GCNs to be injured or harmed.

4.0 Method Statement

- The clearance of the debris from the triangular area will be undertaken before the GCN
  hibernation period this year (mid-October onwards), and ideally as soon as possible in
  order to minimise the likelihood of GCN’s being found during the works;
- The Ecological Clerk of Works (ECoW) or GCN licenced ecologist will give a tool box
  talk to all contractors involved in the clearance works, outlining the legislation pertaining
  to GCN’s, how to identify them, the procedure to be undertaken to minimise the risk of
  harm to GCN’s, if present, and the procedure to follow if any are found;
- All works will be undertaken under the supervision of the ECoW or GCN licenced
  ecologist;
- All debris will be removed by hand and taken away from the Site on the day of
  clearance;
- Before each piece of debris is removed it will first be checked beneath for the presence
  of GCN’s;
- Should a GCN be found works will stop immediately and the ECoW/ Ecologist will make
  an assessment of the situation and determine whether or not a licence will be required
  before work can proceed. Both Natural England and Northants County Council will be
  informed and, guidance will be sought from Natural England.

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