

Construction Environmental Management Plan Phase 1.3

Issue 5: Updated and confirmation of SoS for Phase 1.3

This is a live document and the project team on site will ensure that controls outlined in this document are properly implemented and regularly monitored to ensure their effectiveness

Residential Development at
Fallow Wood View, Freeks' Lane, Burgess Hill, RH15 8DJ

Prepared by
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1. INTRODUCTION

The CEMP is required to implement the core principles of the Local Planning Policies which encompass environmental controls required with due consideration to relevant environmental legislation.

The CEMP seeks to ensure the following criteria are in place during the course of the development:

- Ensure that environmental management, controls and safety procedures that will need to be adopted during the development of the site are in place,
- Thereby providing a tool to ensure the continuous review of any likely environmental; effects as a result of the construction activities.
- Ensure that all enabling, demolition and construction works cause minimum disruption to the local residents and members of the public.

- More specifically, the CEMP aims to:
 - Ensure that relevant mitigation measures are implemented.
 - Ensure that relevant legislation, Government and industry standards, and construction industry codes of practice and good practice standards are implemented.

The current Phases are currently being worked on: Phases 1.5 & 1.6 of the Northern Arc Development at Burgess Hill. With Phase 1.3 scheduled to start Autumn 2024. The sites lie in predominantly agricultural landscape to the immediate north of Burgess Hill. The eastern site (Phase 1.3) lies to the east of Freek's Lane at Lowlands Farm and comprises a number of small fields/paddocks surrounded by woodland. The western two sites (Phases 1.5 & 1.6) lie in arable fields to the east of Isaac's Lane (A273) and are bisected by the route of the Northern Arc Link Road (EBLR).



PHASE 1.3

The work has been undertaken to inform a Reserved Matters Application (RMA) pursuant to outline application DM/18/5114, to consider access, appearance, landscaping, layout and scale with respect to the erection of 247 dwellings and associated car parking, open space and infrastructure, including an extension to Bedelands Nature reserve and provision of the Green Circle and pedestrian/cycle route for Sub-Phases P1.3, P1.5, P1.6.

The aim of the Construction Environmental Management Plan (CEMP) is to set out the responsibilities with regards to compliance with legislation and to implement any mitigation measures. This CEMP details management measures to minimise environmental impact from the construction phase of the development.

The CEMP has been required by the local planning authority, prior to the commencement of the development. A Construction Environmental Management Plan is to be submitted to, and approved in writing by, the local planning authority. The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the Local Planning Authority.

The CEMP forms a framework within which the measures will be implemented throughout the project. This framework provides project-specific management measures and is a dynamic document which should be reviewed if activities or conditions onsite change that may influence management measures.

This document has been developed to avoid, minimise, and mitigate against any construction effects on the environment and surrounding community. It should be considered a living document with reviews being undertaken at set intervals and new information added as appropriate.

For the purposes of this document, the working area is defined as any area where there will be a requirement for temporary or permanent works to facilitate the construction of the development. This includes areas required for access, temporary construction and temporary storage areas.

The CEMP provides details of, but is not limited to, the following:

- i) Communications strategy (including contact details of the site manager)
- ii) A noise mitigation strategy
- iii) A dust mitigation strategy; and,
- iv) Details of the site operating hours, early delivery of the temporary pathways to the sales cabin.

This CEMP summarises the proposed safe coordinated systems of work construction methods and sequencing. It also outlines measures that will be taken to minimise the impact of construction on the local environment and on the surrounding area.

Bellway Homes (South London) Limited, the Client, has appointed a Construction Director.

The Construction Director shall be responsible for:

- Compound Checks;
- Ensuring the required consents are in place before work starts;
- Ensuring environmental and waste requirements are included on requisitions and in subcontracts and orders;
- Ensuring oil, including diesel is stored in properly bunded tanks / drip trays;
- Ensuring Waste Transfer Notes / Special Waste Consignment Notes are checked;
- Reporting incidents and non-conformances;
- Liaising with statutory authorities and the Main Works Contractor as required and ensuring records of communication (including verbal communication) are kept. Statutory authorities should always be accompanied on site visits;
- Ensuring employees and subcontractors receive Induction Training, as appropriate;
- Ensuring personnel needed for audits are available when required; and
- Verifying actions resulting from Corrective Action Requests.

Communications Strategy, Responsible persons and Notice Board

Members of the project team may be assigned specific roles and will be responsible for the correct application of the CEMP. The details of the actions to be taken to implement each aspect of the CEMP will need to be developed and specified by the Contractor in Method Statements of Work instructions.

Contact details of the Site Manager are as follows: Hatib Singhateh and can be contacted through Bellway Homes – South London office – Tel. 01737 785 500

Site notice information boards with site managers details, out of hours contact details, 24 hour telephone number (for comments/complaints), community information and information on the works programme, will be provided at key locations. This information will also display notices on site boundaries to warn of hazards on site such as deep excavations, construction access, etc.

Management Structure and Responsibilities

A summary of the management structure for the site is summarised as follows.

Construction Director - Ensuring Company policies and procedures are followed for all work in accordance with Bellway procedures and health and safety file system.

Contracts Manager - All work in accordance with Bellway procedures and health and safety file system and carry out weekly and monthly safety visual inspection of the development and all aspects of work.

Site Manager - All work in accordance with Bellway procedures and health and safety file system and carry out daily, weekly and monthly health and safety task as set out in in the health and safety procedures systems for all contractors working on site.

Assistant Site Manager - All work in accordance with Bellway procedures and health and safety file system and carry out duties as prescribed by both Contracts and Site Manager.

Other Site Supervision - All subcontractors will be expected to provide adequate supervision for their

The Site Manager will be present on site as far as is practicable at all times whilst construction work is being carried out on site. They are responsible for the day-to-day health and safety issues on site. If for any reason the manager must leave the site for short periods of time, then a Competent Person will be appointed to attend to health and safety issues during their absence. Lines of communication for health and safety are shown in the Company Health & Safety Policy, a copy of which is held on site. Details of health and safety training and experience is held at Head and the Divisional Office.

Contact details for each Role can be supplied upon request. A Health and Safety Officer will also be appointed, who will be responsible for ensuring that all health and safety measures are upheld throughout the construction period.

Bellway Homes (South London) Limited, the Client, has requested this CEMP to demonstrate that the Developer and or their Agents are aware of their roles, duties and responsibilities with respect to the Construction (Design Management) Regulation 2015 and in particular, Part 3 Regulation 8 General duties. Construction will be undertaken in a manner that secures the health and safety of any person affected by the project.

2. CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

This statement has been developed by Bellway and will be adopted by the Main Works Contractor. Any revisions to this plan shall be agreed, approved by the Build Director and recorded. This Statement shall be a live document, which shall be continuously reviewed to take into account additional environmental information encountered during the detailed design and construction phase. It shall allow for the inclusion of any further conditions and amendments that arise from the granting of consents or legitimate concerns of Third Parties.

All personnel and sub-contractors working on the project shall perform their duties in accordance with the requirements of the statement. The Site Team shall report regularly to the Area Build Manager on the status and effectiveness of its implementation.

Staff areas (Site Compound, Project Office and Welfare Facilities) will be provided on site.

It is the aim of Bellway Homes to construct this site in such a way as to alleviate any risks as far as practical to both site operatives working on the project and visitors or members of the general public including children.

General Site Rules

1. All persons report to the Site Manager on arrival at site to sign in and receive induction training.
2. Head protection must be worn at all times when on site, except when in site accommodation or as directed by the Site Manager.
3. High visibility clothing must be worn at all times when on site, except when in site accommodation or as directed by the Site Manager.
4. All personnel working on or having access to the site will wear safety footwear.
5. Personal Protective Equipment shall be worn as required for all specific activity or as identified through Risk Assessments and Method Statements.
6. Defecating and urinating in houses under construction or anywhere on site other than in the toilets provided is strictly forbidden.
7. Damaging or misusing any plant or equipment will not be tolerated.
8. Site speed limit is 10 mph.
9. Work areas are to be kept clean and tidy and debris placed in the skips provided.
10. All ladders must be secured when in use.
11. No person may alter scaffolding unless competent and authorised by the Principal Contractor to do so.
12. All persons on site have a duty to report any accident, incident, near miss or dangerous occurrence to the Site Manager.

13. Only 110V electrically powered tools will be used on site. RCD's will also be used where appropriate.
14. Parking of vehicles is only allowed in the areas specified.
15. The canteen and toilets must be kept clean at all times.
16. Smoking is only allowed in the designated areas (not in site cabins or plots
17. under construction)
18. All persons on site are required to co-operate with site management on all matters concerning health and safety.
19. No person will be allowed to work alone on site.
20. Operators of plant and equipment must provide evidence of training and competence in the safe use of such plant and equipment and be authorised by site management.
21. No persons under the age of 18 will be authorised to work on site without prior written agreement and risk assessments being undertaken by the employer
22. The above rules will be brought to the attention of the workforce during induction training

Consultation with Workforce

Bellway Homes Ltd have a duty to consult with people on site. Therefore a notice must be displayed advising all operatives on site to consult the Site Manager about any problems they have regarding health and safety. All persons working on / visiting the site will be given a site-specific safety induction prior to entering the construction zone. Further relevant information will be passed on via 'Toolbox Talks' and/or displayed on the site notice board. Prestart meetings will be held with subcontractors and weekly site meetings will also be used as a forum to discuss Health & Safety issues relating to the site.

On Site Training and Induction

Site Managers - It is Bellway's company policy that Site Managers receive training in the following:

1. CDM Regulations
2. Bellway H&S Policy & Procedures Induction
3. 5 Day Construction Skills Safety Management
4. Scaffold Appreciation
5. Excavation Safety (as required)

6. Temporary Works
7. NVQ Level 6 where required
8. First Aid at Work
9. Specialist training will also be carried out for lifting operations and as site operations dictate.

Operative Training: All operatives must have:

- 1 Induction to the site including site specific arrangements
- 2 Induction into their safe system of work (provided by their employer/supervisor)
- 3 Operatives carrying out specialist duties as follows will require proof of relevant training:
 - Scaffolding, including the erection of Tower Scaffolds as required
 - Operating any plant or equipment as required
 - Face fit testing for face masks (required for operatives in contact with timber or silica dusts)
 - Lifting operations, slinging as required
 - Banksman as required
 - Excavations as required
 - Entry into confined spaces as required Copy certificates of training must be obtained and filled in Section 4 of the Construction Phase Health and Safety Plan.

General Training: Anyone who is exposed to a hazard identified by a risk assessment, COSHH assessment, manual handling assessment, or noise assessment must be given copies of relevant parts of those assessments. They should be informed of the nature of the hazard, the risk involved, and the control measures required. They should receive training in the use of control measures (where necessary) especially in the use of protective clothing and equipment.

Security Arrangements

Minimum requirement: The Site Manager or their nominated representative will check the perimeter fence ensuring all is secure before locking the site before leaving. Manned CCTV will be installed as minimum during the duration that Bellway are PC on the development, and this will monitor the compound and storage areas. If required, a Security Guard will be based on site out of working hours (actual hours of cover will be regularly reviewed and altered as deemed necessary). The guard will carry out regular patrols and record details in the site security logbook.

First Aid

A qualified first aider will be present on site at all times and ensure the first aid box is available and adequately stocked.

Reporting of Accidents and Dangerous Occurrences

The Site Manager will ensure all accidents are recorded in the site accident book and the appropriate action taken. The Site Manager will also ensure adequate first aid equipment is kept on site at all times. Reporting of RIDDOR Information (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) The Site Manager will ensure all accidents, ill health and dangerous occurrences which need to be reported to Health and Safety Executive (over 7 days absence from work not including the day of the accident) are reported to their Contracts Manager and Regional Health and Safety Manager without delay and a Bellway Accident Report Form must be completed and forwarded to Claire Birkhead electronically. This information is to be sent to the divisions' Construction Secretary to upload onto Sharepoint without delay.

Arrangements for Monitoring and Review

The Site Manager or delegated other will carry out a Daily Safety Inspection at the start of each working day which will include walkways, temporary stairwell protection, heras fencing and hoarding.

Safety inspections will be carried out regularly (at least monthly) by Bellway's safety consultants. A report of these inspections will be held on site. Site Managers must attend to all matters mentioned in a timely manner as advised and advise their line manager what action has been taken on their monthly health and safety return. Non-conformances should be notified to the relevant sub-contractor via the Non-Conformance Form or via the safety consultant's report.

A copy report will be forwarded to the Construction Director and Contracts Manager. They will ensure that the remedial action required has been taken. All accidents will be investigated to ensure lessons are learnt and preventative measures are taken to ensure similar occurrences are prevented. Safety Consultants will visit the site monthly and carry out an audit of the site.

Health Risks

Manual Handling

Kerbstones to be lifted and fitted mechanically. Paving flags over 20kg to be fitted mechanically (900mm x 300mm paving slabs to be used).

Artstone to be reduced in size, fitted with lifting aids to allow for mechanical handling. Bags of materials to be ordered in small units to aid handling. Plasterboards to be moved mechanically whenever possible Weyroc Flooring to be moved mechanically whenever possible in units. USE OF HAZARDOUS SUBSTANCES COSHH assessments must be available for all hazardous materials on site.

Reducing Noise and Vibration

Plant / Equipment used on site will be checked to ensure the noise suppression equipment is maintained in good repair. Equipment will be selected where possible with low levels of vibration.

Exposure to UV Radiation

Warning notices to be displayed outlining the hazards of working in the sun. A high factor sun block to be provided in the site toilet block.

Programme of Construction Works

It is anticipated that the construction works for the site could be approximately 24 months, commencing Spring 2023 for Phases 1.5 & 1.6. Phase 1.3 scheduled for December 2024.

The programme of works will consist of the following;

- Enabling works comprising perimeter fencing/security provisions, site compound and access works;
- Site clearance, ground investigation and initial service works;
- Sub infrastructure works, ground works and foundations;
- Construction of superstructures;
- External works such as car parking, landscaping/planting; and Construction of the site will be in phased approached.

Method of Construction

The proposed houses and apartments will be built using timber frame (houses) and traditional (apartments) methods of construction methods and facilitated by telescopic forklifts and mobile crane contract lifts as required.

Construction phase works will include;

- Hoarding and Security of the site
- The establishment of the welfare compound for the construction phase of the project
- Soft strip and enabling works
- Removal of material and underground obstructions (if encountered)
- Foundations
- Drainage works
- Construction of dwellings in a progressive manner
- Roofing works
- Internal works
- Service connection works
- Pre completion testing
- Soft & Hard Landscaping works
- Programmed handovers and occupation

A Construction Phase Health & Safety and Environmental Plan will be prepared for this scheme and will include the following details;

- Organisational chart and responsibilities
- Health & Safety and Environmental monitoring
- Generic Risk Assessment
- Method Statement checking process
- Site Specific Plans i.e. lifting plans, temporary works, pollution prevention
- Accident and incident investigation
- Emergency arrangement

The information in the above-mentioned document will highlight the safety checks and procedures that should be in place during the construction of this development. All personnel will be inducted into this document.

Hours of Work

The proposed operating hours are outlined below. During construction period it may be necessary in exceptional circumstances to work outside the prescribed working hours. Should this occur the hours and duration of these works will be subject to consultation with the Local Authority/Council.

Official site working hours would be:

- Monday – Friday 08.00am – 06.00pm
- Saturday 09.00am – 01.00pm
- Sunday/Bank Holiday No work

In order to maintain these working hours, contractor(s) will require a period of 30mins before and at the end of the working shift to start up and close down the works activities.

Ecological Management Plan

(ref 551594jc09Aug21FV01_EMP) sets out the mitigation measures for protection of ecological features throughout the wider site. This plan should be referred to for full details, but the measures relevant to plots P1.5 and P1.6 are summarised below.

Hedgehog

Precautionary Vegetation Clearance

During site clearance, removal of dense vegetation and tall grass should be undertaken in two phases, by cutting to 30cm in the first instance, then to ground level after that. The vegetation should be checked for mammals between these two cuts. Should any hedgehogs be found, they should be moved to a suitable area of habitat that is not subject to clearance.

Dormouse

Hedgerows will be retained where possible, and protected with HERAS fencing.

Where sections of hedgerow removal are required, to minimise the impact of this removal on dormice the following measures will be implemented. Given the protection afforded to dormice, the below works will be undertaken under a European Protected Species Mitigation Licence (EPSML) from Natural England.

The following conditions will apply to the removal of vegetation under the EPSML:

- Prior to clearance, the vegetation will be checked for evidence of dormice by a licenced dormouse ecologist;
- Vegetation clearance of above ground dormouse habitat will be carried out using handheld tools only;

- If required, single stage active season clearance will be carried out in a staged manner with up to 50m² (0.005ha) strips cleared each day towards retained habitat;
- Where capture and / or handling of dormice (including release) are necessary, this will be completed only by the Named Ecologist or Accredited Agent;
- Provision will be made for prompt assistance to deal with any injured dormouse. Any injured or dead dormice will be reported to Natural England; and
- Where active dormice are discovered during works and it is possible to allow them to move independently to safe habitats, outside high-risk work areas, this will be the first course of action.

Toolbox Talk

Following the granting of the EPSM licence and prior to any works being undertaken on site that could impact up on dormice, a toolbox talk will be provided to the site team by the EPSM licence holder or accredited agent.

The toolbox talk will cover:

- A summary of survey findings with regard to dormice and the site;
- The legal protection afforded to dormice and an introduction to the EPSM licence that has been granted;
- A description of the mitigation measures that need to be implemented and followed at all times;
- Signs to look out for with regards to dormice including a description of dormice; and
- Actions that will need to be taken should evidence of a dormouse be found or their presence suspected.
- A record of this talk will be kept and all attendees will be asked to sign that they have understood the measures discussed. A subsequent toolbox talk will be provided to any new site members and/or at the start of a new work phase/stage.

Maintaining Habitat Connectivity

Where gaps in hedgerows are proposed, this will be done in such a way that retains aerial, connection (dormouse hop overs). Therefore, allowing dormouse to continue to move uninhibited around the site.

The dormouse hop-overs will use a trellis/pergola system arching/spanning over the gap. Hedgerow species, matching those already present on site, will then be encouraged to grow along and through

the trellis to recreate a continuous link. Additional planting of fast-growing climber species such as honeysuckle will be planted where required at this hop over points.

Compensatory hedgerow planting, will also be provided on site. These will be provided mostly within location and will connect directly into hedgerows where dormouse have been found.

Reptiles

Previous surveys confirmed reptile presence within the very eastern edge of plot P1.5 only, with none recorded in P1.6, with the majority of the habitat being sub-optimal. The EMP details the translocation method to be followed should the eastern strip of plot P1.5 require clearance.

The remainder of the two plots are now currently active construction sites, however should any grassland areas within P1.6 require clearance, this should be undertaken in a controlled, phased manner, as follows:

Vegetation will be cut with hand-held strimmers or brush cutters to a height of 100 – 150mm. After a period of >24 hours, a second cut will be conducted, to ground level. A SQE will supervise this second cut.

The vegetation cut will be conducted during periods when reptiles are active (typically March to October).

Bats

Under current proposals, no known roosts are to be lost by developing plots P1.3. The key foraging and commuting features (predominantly hedgerows and boundary trees) are largely to be retained.

If any additional trees require removal, these should be subject to an inspection by an SQE to check for potential roosting features. The SQE will then advise whether the tree can be removed or whether further mitigation is required.

Lighting can negatively affect bats' behaviour, therefore construction works will follow the following guidelines:

Works at night only to be permitted under exceptional circumstances;

If any construction lighting is required, it should be directional, downward facing and shielded (e.g. through use of hoods and cowls), to point away from green features such as hedgerows, trees and areas of landscaping, and be subject to curfew controls and movement sensors (1 minute timer) where possible.

Nesting birds

To mitigate against any impacts upon birds associated with the development proposals, the clearance of any vegetation such as hedgerows, trees or scrub will be undertaken outside of bird nesting season (taken to run from March to August inclusive) or after a SQE has checked the area and confirmed absence. Any nests recorded by the ecologist would be protected until they are no longer active.

Badgers

Pre Construction

A pre-construction and a check thereafter for badger setts has been undertaken. Currently there are no known badger setts within the site (i.e. whether they are active or disused). If a Badger Sett occurs this can be retained and will be protected with Heras fencing to create a suitable buffer, as advised.

if an active sett is recorded, the ecologist will advise on suitable plan of monitoring to confirm level of use.

If it is confirmed that a sett is in use, and due to its location it cannot be retained within the proposed development, the sett will be closed under licence from Natural England. A suitably qualified ecologist will apply for the licence, following Natural England guidance depending on how the sett is classified.

Protection during Construction

As badgers are mobile creatures, additional precautionary measures will be employed on site during construction, these include:

Prior to these works all contractors will be given a specific ecological toolbox talk, from a suitably qualified ecologist (SQE), on the protection afforded to badgers, their ecology, including sett identification and field signs. Contractors will also be made aware of the potential sett location, which will also be clearly marked with hazard tape;

Any trenches or deep pits within the development site that are to be left open overnight will be provided with a means of escape should a badger enter. The simplest method for this would be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water;

Any trenches/pits should be inspected each morning to ensure no badgers have become trapped overnight. Should a badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, by forming a temporary sett;

The storage of topsoil or other 'soft' building materials on site should be given careful consideration. Badgers will readily adopt such mounds as setts. So as to avoid the adoption of any mounds, these should be kept to a minimum and any essential mounds subject to daily inspections with consideration given to temporarily fencing any such mounds to exclude badgers.

The storage of any chemicals/liquids on site should be well away from the boundaries, and contained in such a way that they cannot be accessed or knocked over by any roaming badgers;

Fires should only be lit in secure compounds away from areas of potential badger activity and not allowed to remain lit during the night; and

Food and litter should not be left within the working area overnight.

Hedgerows

The majority of the hedgerows are to be retained.

All retained hedgerows will be protected in accordance with the recommendations within the AIA Doc Ref:

1680-KC-1-5&1-6-YTREE-TreeSurvey&ImpactAssessment-Rev0

1680-KC-1-3-YTREE-TreeSurvey&ImpactAssessment-Rev0

Construction Access Strategy

Bellway take over as Principal Contractor duties from the first day and in order to access the site, a construction traffic access strategy has been considered. The access routes for all construction traffic will be as follows:

All construction traffic will approach and leave site via Issacs lane from the A23 motorway. Then, onto Eastbridge Avenue (EBLR) leading to Phase 1.3.



This is to ensure that construction traffic and its potential impacts to the surrounding area are carefully managed, the remainder of this report identifies the various protocols and controls that will be put in place to ensure high levels of safety and to minimise disturbance to residents.

The route is:

on the A23

Follow A2300 to A273

7 min (3.6 mi)

Bellway - Fallow Wood View Phase 1.5 &1.6

Isaac's Ln, Burgess Hill RH15 8RA

Bellway – Fallow Wood View Phase 1.3 via Eastbridge Avenue (EBLR)

Freeks Ln, Burgess Hill, RH15 8DJ

AA New Build Directional Signs will be provided at strategic junction points along the route from the A2300 to the site access.



The anticipated number, frequency and types of vehicles to be used during construction is set out below:

Description	Vehicle Type	Approximate frequency of deliveries/collections
Enabling/site set up	12m rigid truck	5 per week
	7.5m rigid truck	
Drainage/Foundation	Muck away	5 per week
	Aggregate truck	
Ground floor slab/oversite complete	Concrete mixer truck	25 per week
	7.5m truck	
Supers	12m rigid truck	10 per week
	Lorry/Flatbed	
Roofing works	7.5m truck	15 per week
	Lorry/flatbed	
Façade works	7.5m truck	15 per week
	Lorry/Flatbed	
Internals	Lorry/Flatbed	10 per week
Finishes	7.5m truck	10 per week
External works	12m rigid truck	5 per week
	7.5m truck	
Landscaping works	12m rigid truck	2 per week
	7.5m truck	

The Construction Site Access Plan is attached as Appendix 1. It details the provision of compounds for construction workers & groundwork, construction & delivery traffic routes through the site. Parking for visitors will be available immediately to the right of the site compound. The concrete haul roads will allow the proposed development to be occupied in phases. The construction access to the site will be permanent to Phase 1.3.

Construction Travel Management

During construction works, our regional office contact details will be affixed on entrance to site. Our Customer Services Team will provide support to our site team regarding any traffic issues raised by

the local community. The impact of road-based construction traffic will be reduced by identifying clear controls on vehicle types, hours of site operation and routes for heavy goods vehicles (HGVs). Construction workforce will be encouraged to use of sustainable modes of travel, such as car sharing, to reduce the impact of workforce travel on local residents and businesses. Roles and Responsibilities

Detail of measures to prevent mud from vehicles leaving the site during construction

Roads will be kept free of debris and dirt as necessary, by sweeping or hosing down. Vehicles exiting the site with any waste or dust attached, that could subsequently transfer to the local roads, will be obligated to pass a jet wash to minimise transfer of dust and waste onto the local network. The jet wash area will be situated adjacent to the Manned Site Gates. The operative manning the gates will carry out a dual role of operating the jet wash.

Measures to Control Dust, Noise and Vibration during the Construction Period

Chemicals and hazardous materials such as fuels and lubricants may be stored on site during the construction phase of the project. These include but are not limited to:

- Fuels
- Oils
- Lubricants
- Paint and coating
- Adhesives and resins
- Solvents
- Compressed gases
- Cements and binders

Measures will be developed, implemented, maintained and monitored in order to comply with the Water Resources Act (1991) section 85 and associated Regulations.

The following list shows measures that will be put in place to prevent pollution and would conform to the best practice policy proposed by the Environment Agency (EA) via the Pollution Prevention Guidelines (PPG's):

- The handling, use and storage of hazardous materials to be undertaken in line with the EA's PPG (i.e. PPG2 – Above Ground Oil Storage Tanks);
- Adequate bunded and secure areas with impervious walls and floor for the temporary storage of fuel, oil, and chemicals on site during construction;
- Drip trays to collect leaks from diesel pumps or from standing plant;
- Oil interceptor(s) fitted to all temporary discharge points and for discharge from temporary oil storage / refuelling areas;
- Development of pollution control procedures in line with the EA's PPG's, and appropriate training for all construction staff;
- Provision of spill containment equipment such as absorbent material on site.

There is a potential that hazardous waste will be stored on the site and therefore it must be stored in accordance with the EA's PPG2 as as not to cause any water/land contamination.

PPGs are based on relevant legislation and reflect current good practice. Although some of the pollution prevention guidance documents have been withdrawn/archived, the information detailed in some of the document are still good practices for pollution prevention. The following PPG's are listed below:

- PPG2 – Above ground oil storage tanks. Provides information about storing oil in above ground storage tanks, for new installations and existing tanks. The guidance is for small to medium size commercial oil storage. It gives advice on choosing, installing, using, and maintaining oil tanks and how to deal with spills.
- PPG3 – Use and Design of oil separators in surface water drainage systems. Provides information about choosing and using oil interceptors to comply with environmental law and prevent pollution. It gives information about choosing, installing and maintaining an oil separator. Oil separators can be fitted to surface water drains to protect the aquatic environment.
- PPG7 – Refuelling facilities. It includes guidance on planning, designing, operating and maintaining fuelling facilities, plus information on storing other related, non-fuel products and dealing with environmental incidents.
- PPG 13 – Vehicle Washing & Cleaning. Provides information on how to comply with the law and prevent pollution when washing and cleaning vehicles. It includes advice on dealing with waste management and storing and using chemicals.
- PPG26 – Drums and intermediate bulk containers. Gives information to store and handle drums and intermediate bulk containers (IBC's). It provides advice on choosing drums and IBC's,

designing storage areas, delivery and handling, maintenance, dealing with spills and waste management.

The Environment Agency incident hotline number is 0800 807 060

Fuels and oil

All fuel and oil will be stored in accordance with the Control of Pollution (oil Storage) (England) Regulations 2001 and they will be handled in such a way that risk of pollution is minimised, this will include: Fuel and oil storage tanks and will be locked when not in use.

Storage areas will not be located within 10m of the watercourse or highway drainage gully.

Mobile bowsters will be bunded and will comply with the aforementioned Regulations and locked when not in use.

Drums will be stored in bunded areas with a minimum capacity of 25% of the total volume contained within the bund, or 110% of the largest container, whichever is greater. Drums will be maintained in good condition, fitted with lids and labelled to indicate the contents.

Trained operatives only will carry out refuelling of plant and equipment.

Static combustion engine plant (i.e. compressors, lighting sets) will be integrally bunded or placed on drip trays.

Plant will be regularly checked for leaks and will be regularly maintained.

Spills kits will be provided within close proximity to fuel and oil storage areas and operatives will be trained in their use. Spills drill to be carried periodically.

Another key issue to consider is the creation of dust during construction. To restrict dust, a number of measures will be implemented.

In dry weather, water suppression will be used to dampen down dust and prevent dust from migrating to neighbouring areas. Equally during winter conditions gritting will be carried out by the contractors.

Unwanted materials will be loaded to a waste skip as soon as practicable, so that a good standard of housekeeping is maintained. Netting attached to the hoarding fence will also act as a barrier.

The potential environmental impacts associated with constructing vehicle movements are to be addressed through the strategy by way of:

- Minimising traffic movements where practicable;
- Minimising fuel consumption through the use of local materials and sub-contractors;
- Implementing noise and dust reduction strategies throughout the construction process

Noise Management

All workers on site will be made aware of the need to keep noise and disruption to a minimum from plant, radios and vehicles. Site managers will ensure this is conveyed as part of the initial site induction and is maintained with good site management. Should any noise levels become unacceptable tool box talks will be used to ensure all site personnel are aware of environmental constraints.

All subcontractors will be responsible for monitoring and implementing prevention methods.

As part of the revision to this document, planning has requested confirmation “*what the noisiest activities are and how the noise will be monitored and controlled*”. The paragraph was written to address the condition but due to value sensitivity being Negligible for 1.5 & 1.6 as the properties that were surrounding the site have been demolished or ear marked for demolition (vacant) as part of the Northern Arc masterplan. It was deliberately vague.

Value / Sensitivity	Receptor type definition for noise
High	Residential, educational buildings, medical facilities
Medium	Hotel, community facilities and places of worship
Low	<i>Commercial buildings (e.g. offices)</i>
<i>Negligible</i>	<i>Farmland, industrial premises</i>

However, the construction works noisiest would be site clearance and ground works. The calculation method of BS 5228 takes account of the duration of an activity per hour, the “on-time”; and the attenuation of sound due to the effects of distance, ground attenuation and barrier effects.

Activity	Proposed Plant Details	BS 5228 Source Data Table Reference (Noise level @10m in brackets in dB(A))
Site Clearance		

Breaking out Hard materials	Hand-held Pneumatic Breaker x3	C.5 Ref no. 6 (95)
Excavation	Wheeled Excavator (17t) x2	C.5 Ref no.11 (73)
Tree cutting	Pneumatic Circular Saw	D.7_79 (75)
Removal/Delivery of Materials	Lorry	C.2_34 (80)
Construction of Earthworks (including Drainage)		
Earth moving	Bulldozer (134kW, 24t x3 (Cat D6)	C.5_15 (83)
Dumping rubble	Articulated Dump Truck (194kW, 25t) x3	C.5_16 (81)
Dumping rubble	Dumper (75kW) x3	C.4_4 (76)
Excavation	Tracked Excavator x8	C.5_18 (80)
Construction of Road Pavement		
rolling	Road roller (95kW, 22t)	C.5_19 (80)
Compaction	Vibratory Roller (12t)	C.5_21 (80)
Compaction	Vibratory Compactor (Asphalt	C.5_29 (82)
Paving	Asphalt Paver (+tipper lorry 112kW, 12t hopper) x2	C.5_30 (75)
Road sweeping	Road sweeper	C.4_90 (76)
Removal/Delivery of Materials	Lorry	C.2_34 (80)

Dust Generation

The production of dust emissions will be minimised and/or controlled in order to reduce the impact on local residents, members of the public, construction personnel and ecological receptors. When making assessments the site management team will consider the Control of Pollution Act 1974, Planning Policy Guidance, The Local Planning Authority Environmental Health section Construction Site Guidelines, 2006, and the requirement of the Control of Substances Hazardous to Health (COSHH).

The following activities have been identified to have the potential for dust generation:

- Concrete Crushing – Dust screens and water suppressants systems on the crusher will be used. Crushed stock piles will also be kept regularly damp.

- All subcontractors will be responsible for ensuring method statements include these prevention methods. Bellway Homes will ensure that hoses will be able to reach all areas of dust creation prior to works commencing. Tarmac construction service roads will be established early during the build phase which will form part of the permanent roads to the development.

Site Clearance:

- Bag and remove any biological debris
- Cover, seed or fence stockpiles to prevent wind whipping

Earthworks:

- Avoid scabbling (roughening of concrete surfaces) if possible;
- Avoid carrying out any earthworks during dry weather if reasonably practicable having regard to programme and contracting arrangements for the relevant works or provide and ensure appropriate use of water to control dust.

Construction:

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out unless required for a particular process;
- Mix large quantities of cement, grouts and other similar materials in enclosed areas remote from site boundaries and potential receptors;
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and
- For small supplies of fine powder ensure bags are sealed after use and are stored appropriately to prevent dust.

Trackout:

- Ensure any vehicles arriving and leaving site are securely covered to prevent escape of materials during transport;
- Routinely clean public roads and any access routes using wet sweeping methods; and
- Avoid dry sweeping.

General Mitigation Measures:

- Ensure regular cleaning of hardstanding surfaces using wet sweeping methods;
- Display the head or regional office contact information, and the name and contact details of person(s) accountable for air quality on the site boundary;
- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site;
- Log all air quality complaints, identify the cause(s), take appropriate measures to reduce emissions in a timely manner, and record all measures taken. Make the complaints log available to the Local Authority when requested;
- Carry out regular on-site and off-site inspections to monitor dust soiling effects, with cleaning to be provided if necessary. Increase the frequency of inspections when activities with a high potential to produce dust are being carried out;
- Erect barriers around the site, any dusty activities and stockpiles (the last of which should be covered);
- Screen areas of the building, where dust producing activities are taking place, with debris screens or sheeting;
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- Remove materials that have a potential to produce dust as soon as possible, unless they are being re-used. If they are to be re-used, on site covers should be used;
- Ensure all vehicles switch off engines when stationary, so that there are no idling vehicles;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine sprays on such equipment wherever possible; and Avoid bonfires and the burning of waste materials.
- It is important that attention is paid to any construction activity that takes place in close proximity to the site boundary, potentially at the closest location to sensitive receptors.

Dust Monitoring

The dust monitoring requirements are usually split in three categories as follows:

- **Negligible/Low risk** category sites- should not normally be necessary to undertake any quantitative air quality monitoring, although in some circumstances it may be applicable to undertake occasional surveys in the vicinity of the site boundary at least once on each working day.

- **Medium risk category sites-** should normally be adequate to undertake surveys of dust flux over the site boundary, and/or dust deposition/soiling rates around the site at nearby receptors, although this may have resource implications, and an approach based on continuous particulate matter monitoring may be preferred
- **High risk category sites-** normally be necessary to supplement the monitoring for medium risk sites with monitoring of ambient PM concentrations. It is recommended that priority be assigned to the measurement of PM10, as emissions of dust from construction sites are predominantly in the coarser fractions.

The proposed development site has been classified as having a medium risk of dust soiling. Therefore, suitable dust monitoring, as specified above, should be undertaken during the relevant stages of construction to ensure that:

- The construction activities do not give rise to any exceedances of the air quality objectives for PM10 or PM2.5.
- The agreed mitigation measures to control dust emissions are being applied and are effective.
- Any high levels of dust is attributed to specific activities on site to ensure that appropriate corrective measures take place.

The implementation of the specific mitigation measures given above within a CEMP will ensure that any potential adverse impacts from construction dust during all construction stages are avoided. It is noted by the IAQM that, through the use of effective mitigation, the effects of dust from construction activity will normally not be considered significant.

Construction Traffic and Plant

The following BAT should be implemented during the construction phase.

- All vehicles should switch off engines when stationary, no idling vehicles;
- Minimise the movement of construction traffic around the site;
- Maximising efficiency (this may include alternative modes of transport, maximising vehicle utilisation by ensuring full loading and efficient routing);
- Vehicles should be well maintained and kept in a high standard of working order;
- Avoid the use of diesel or petrol powered generators by using mains electricity or battery powered equipment where possible; and
- Locate plant away from boundaries close to residential areas.

Completed Development

Operational Traffic

The report has demonstrated that the predicted net traffic increase as a result of the revised proposals for the phases is unlikely to result in a detrimental pollution impact upon the local road network and the current pollution levels. Therefore, it is not anticipated that mitigation measures will be required. However, the transport statement prepared for the same application confirms that a travel plan was secured as part of the already approved development and was drafted to support development of up to 246 dwellings.

It adds that the measures and targets set out within the established Travel Plan remain appropriate. Also, that a number of enhancements to pedestrian and green links have been secured as part of the wider development to support more active travel.

Additionally, measures are currently being implemented to ensure the low emission strategy is being given to provision of an electric car club vehicle for use by the whole development.

Building Emissions

Any boilers being used on site should be highly efficient low NO_x boilers, ideally with emissions < 40 mgNO_x/kWh and any CHP plant should ideally meet the following minimum emissions standards:

- Spark ignition engine: 250mgNO_x/Nm³;
- Compression ignition engine: 400mgNO_x/Nm³;
- Gas turbine: 50mgNO_x/Nm³

This will ensure that any additional NO_x contributions associated with proposed heating strategy are kept as low as possible and compliance to relevant regulations

Site Suitability

This proposed development site is likely to fall within APEC A for site suitability. In accordance with the exposure criteria in Table 3.6, means that there should be no air quality grounds for refusal and the local air quality should be suitable to safeguard the health and amenity of new residents.

Residual Effects and Conclusions

A construction dust assessment has been undertaken for the four stages of construction activities associated with the proposed development in accordance with IAQM guidance on the assessment of dust from demolition and construction.

Mitigation measures have been proposed for construction traffic and stationary plant associated with the proposed development. Following the successful implementation of the suggested mitigation measures, the residual effects of construction dust and emissions from construction plant/vehicles upon the local area and sensitive receptors although adverse, will be temporary and considered to be 'not significant'.

The predicted net traffic associated with revised proposals for the 3 phases is unlikely to have a detrimental pollution impact on the local transport network and the current pollution levels. Any operational plant effects should be reviewed and assessed, if required, at the appropriate stage, when all the required detailed plant technical information is available.

Whilst the site will not be registered with the Considerate Constructors Scheme, Bellway Homes will work to achieve the best practice measures under the Code.

Enhancing Appearance

Constructors should ensure the sites appear professional and well managed

- Ensuring that the external appearance of the sites enhances the image of the industry
- Being organised, clean and tidy
- Enhancing the appearance of facilities
- Raising the image of the workforce by their appearance

Respecting the Community

Constructors should give utmost consideration to their impact on neighbours and the public.

- Informing, respecting and showing courtesy to those affected by the work
- Minimising the impact of deliveries, parking and work on the public highway
- Contributing to and supporting the local community and economy
- Working to create a positive and ensuring impression, and promoting the Code

Protecting the Environment

Constructors should protect and enhance the environment.

- Identify, managing and promoting environmental issues
- Seeking sustainable solutions, and minimising waste, the carbon footprint and resources
- Minimising the impact of vibration, air, light and noise pollution
- Protecting the ecology, the landscape, wildlife, vegetation, heritage and water courses

Securing everyone's Safety

Constructors should maintain the highest level of safety performance.

- Having systems that care for the safety of the public, visitors and the workforce
- Minimising security risks to neighbours
- Having initiatives for continuous safety improvement
- Embedding attitudes and behaviours that enhance safety performance

Caring for the Workplace

Constructors should provide a supportive and caring working environment.

- Providing a workplace where everyone is respected, treated fairly, encouraged and supported
- Identify personnel development needs and promoting training
- Caring for health and wellbeing of the workforce
- Providing and maintaining high standards of welfare

A formal complaints procedure will be developed and the procedure will include the following:

- Date of complaint
- Time of complaint
- Nature of complaint
- Actions or Investigation carried out with updates
- Communication updates with the complainant

The Site Manager will be the first point of contact with respect to any complaint and will carry out all investigations and respond to external complaints.

3. Appendices

Appendix 1: Construction Site Access Plan Drawing and Site Compound layout



