

Construction Environmental Management Plan (CEMP)



DarwinGroup

DG Project Reference:	180731
Project Name:	Hinckley District Hospital Community Diagnostics Centre
Project Address:	Hinckley District Hospital Mount Road Hinckley LE10 1AG
Project Description:	Construction of a two storey (with roof mounted plant) Community Diagnostics Centre with associated hard and soft landscaping.

Status

S1 – Issued for Review

Document Control

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Introduction

This document has been prepared by Darwin Group (DG) to establish a Code of Practice to help DG and its contractors ensure that they undertake their works in the most considerate manner and reduce the impact of the works on the local community.

The measures specified in this document, once approved, shall be implemented prior to commencement of the development, and shall be adhered to during the period of construction. Adherence to this code will demonstrate a positive attitude and commitment towards minimising any potential impact of the development on the wider community and residents, as well as NHS Property Services.

DG offer site awareness training on all site risks, including construction traffic and vehicular risks. As an example, when any new operative arrives at the site for the first time, they will receive a site induction with the Site Manager, who will outline key Health and Safety (H&S) rules across the site, introduce and explain the project drawings relevant to the operative and also to make them aware of any site specific considerations that must be adhered to (i.e. management of the main site entrance considering the proximity to adjacent construction sites).

Management of construction tasks will consider the proximity and nature of other operatives, with security of tools and plant being of paramount importance. Battery-operated tools will be kept secure whilst charging in the site welfare accommodation, the site boundary will be checked daily to ensure no damage has occurred, and plant keys will be kept safely in the locked welfare unit(s) overnight.

Throughout the progression of the project, these messages will be reinforced by way of 'tool-box talks' hosted by the Site Manager, and these will be carried out on a regular basis. If an operative is falling short of the standards required by DG regarding their site safety, then toolbox talks may be administered more regularly, prior to issuing a yellow and red card system being deployed, resulting in the dismissal of an operative from site.

To further ensure the safety of all site operatives and staff, DG's appointed H&S Inspector will be visiting the site on a fortnightly basis, producing audits outlining the site's relative scores on overall H&S, record keeping, general welfare/tidiness, use of plant, use of access equipment etc. These reports are communicated to the wider project team and included in progress meeting packs for discussion with the Client at the monthly progress meetings.

The Construction Manager for the wider project team will also be on site, for a minimum of one day a week, they will provide feedback to the Site Manager on the overall progress of the build and ensure anything highlighted in the H&S reports are being actioned on site, again, to maintain the safety of site operatives & staff, and visitors.

The works at Hinckley & District Hospital, Mount Road will consist of:

- Forming of site boundary – with solid hoarding / heras fencing.
- Set up of site welfare.
- Civils.
- Module installation.
- Internal fit-out, including MEPH services.

- External cladding, including installation of windows & doors.
- Landscaping to the perimeter of the building.
- Demobilisation from site and reinstatement of areas affected by the development.

Welfare facilities will be established and include a two-storey site office consisting of canteen space, meeting room and Site Manager's office, male & female toilets, drying room, material cutting marquee, and storage containers. All vehicular traffic and pedestrian routes will be established using statutory site signage as required (including key information such as the Site Manager's contact details etc.). All management systems will be in place including inductions for personnel on arrival to work, orchestrating and escorting larger and small deliveries, site visitor's booklet etc.

Works to be undertaken by specialist contractors providing separate method statements, under the site management of DG:

- Reduced level dig works, excavations and pouring of concrete foundations/piling.
- Construction of surface water and foul water drainage infrastructure.
- Exterior cladding works incl. laying of brickwork and installation of all windows and doors.
- Full Mechanical and Electrical installation to new building(s).
- Completion of internal fit-out works incl. decoration.
- Associated landscaping works.

All proposed sub-contracting teams are known and familiar to Darwin Group, with foremen/operative team leaders generally enhanced DBS checked, as are all DG staff (from Site Management Team to Quantity Surveyors, etc).

Prior to works taking place a dilapidation survey will be undertaken. This will be done to establish the condition of the highway, footpath, and surrounding area. The survey will be carried out in the presence of a member of the Client's Estates and/or Facilities team. The report will also include the removal of TRO's, temporary signage, barriers, and diversions (where applicable). This report will then be used to see if any remediation works are required following the completion of the project.

Site Location

The site is located on the edge of an urban area of Hinckley, Leicester It is located on Mount Road; an appropriate new build location to provide clinical services to the community.

Hinckley is a market town South-west Leicestershire, England. It is administered by Hinckley and Bosworth Borough Council. Hinckley is the third largest settlement in the administrative county of Leicestershire, after Leicester and Loughborough. Hinckley is about halfway between Leicester and Coventry and borders Nuneaton in Warwickshire. Watling Street forms part of the Hinckley/Nuneaton border. Hinckley's suburban districts include Hollycroft, Middlefield, Stoneygate, Wykin, Forest View, West Hinckley, Saxon Paddock, and Druid Quarter. The suburbs of Burbage, Sketchley and Lash Hill are separated from the rest of Hinckley by the railway line.

Project Description

NHS Property Services are the client for the proposed building.

The brief is to utilise appropriate Modern Methods of Construction to efficiently deliver a new modular building for the local NHS Foundation Trust and ICB with the necessary levels of adaptability, durability, and flexibility to ensure that it can be easily and affordably modified to meet changing tenant needs.

The provided DG design meets the client's aspirations through:

- Utilising a modularised design, with each module being completely self-structural, none of the internal walls being load bearing and therefore easily adaptable to future designs.
- Using a modular, built offsite system, design elements can be rationalised, coordinated, and repeated. This reduces the need for multiple construction details.
- A rationalised design allows for a greater level of material efficiency, and therefore a lesser embodied carbon. This includes using fewer materials, reusing existing demolition and strip-out materials, and procuring materials with higher levels of recycled content (where appropriate).
- Ease of re-purposing; the modules can be disassembled with ease and reused on other projects.

The proposed 2-storey building will provide MRI, CT, X-Ray Digital Imaging and Physiological dedicated rooms, and associated support accommodation.



Figure 1: Aerial image showing the Indicative Site Boundary and surrounding area. Note, the proposed area for site welfare sits outside of the red line showing the area of works.

The method of building off-site allows for a minimal disruption and enhanced infection control to ensure the safety of patients, staff, and visitors at all times.

Darwin Group's innovative modular building solutions are manufactured in a highly controlled environment at its state-of-the-art production facilities in Shrewsbury. Our expert, in-house team provides a unique turnkey service that covers all stages of the process: from initial planning and design, right through to engineering and construction. This enables us to effectively manage each project from start to finish, to deliver the necessary healthcare space required. This includes:

- End-to-end project delivery including all design and construction works required to deliver new facilities.
- Detailed understanding of all HTM and HBN design considerations.
- Significantly reduced delivery programmes vs. conventional methods of construction.
- Industry leading thermal efficiency.
- Highly sustainable construction methodology with low running costs, reducing embodied carbon by as much as 90% and waste by up to 98%.
- Highly flexible building solutions, allowing complete adaptability through the building's life.
- Building control, type approval with a design life of 60+ years.

Site Hours and Restrictions

Due care must be taken with any movements that are not within the site compound to avoid all potential disruption to the local highway network or other activities.

The construction hours are proposed as being 7:30am to 6:00pm Monday to Friday and 9:00am to 1:00pm on a Saturday. No noisy works will be undertaken on Sundays or Public Holidays. The term construction activities also include all deliveries to site, and vehicles exiting from site.

Site Security

Our building site will operate 7:30am to 6:00pm with a Site Manager always being present whilst works are ongoing.

Site signage will be erected at the vehicular access point (at the site entrance) displaying the DG logo and is intended to aid 'wayfinding' of the construction site. The signage will also include basic health and safety information along with the Site Manager's contact details and any out of hours contact information. The site address and routing in will be included on all purchase orders along with a copy of the latest site logistics plan.

Health and Safety

All site operatives and visitors will be required to sign in with the Site Manager and be given a site induction on arrival.

The Site Manager is to ensure that all induction and signing in forms have been filled in correctly. If this cannot be produced, for whatever reason, the operative should enter in the box provided a description of their work experience and qualifications. The Site Manager should read this and decide

on whether they are qualified to carry out the work they have arrived on site to complete. If in any doubt they should not be permitted to start work.

Each contractor appointed to carry out works will be expected to produce their own RAMS (Risk Assessment & Method Statements) prior to being on site, allowing the Site Manager adequate time to review and request suitable amendments if required.

Alongside all the checks done prior to a subcontractor starting work, the Site Manager issues and completes the below permits – These are kept on file for the duration of the project.

- Confined Space Permit.
- Electrical Permit.
- Excavation Permit.
- Hot Works Permit.
- Ladder Use Permit.
- Mobile Scaffold Tower Permit.
- Scissor Lift Permit.
- MEWP/Cherry Picker/ Telehandler Permit.
- Roof Permit.
- Health & Safety – Dust.
- Health & Safety – Weather.
- Health and Safety – Lighting.

Preparation before works is important, however not all accidents can be avoided or foreseen, and it is imperative that all Near Misses and Accidents are reported to prevent similar incidents going forward.

To further ensure the safety of all site operatives, DG's appointed H&S inspector will be visiting the site on a fortnightly basis, producing audits outlining the site's relative scores on overall H&S, record keeping, general welfare/tidiness, use of plant, use of access equipment etc. These reports are communicated to the wider project team and included in progress meeting packs for discussion with NHS Property Services at monthly progress meetings.

The Construction Manager for the wider project team will also be on site, for a minimum of one day a week. They will provide feedback to the Head of Project Delivery on the overall progress of the build and ensure anything highlighted in the H&S reports are being actioned on site, again, to maintain the safety of site operatives.

Contractor Parking

Contractor parking will all be located within the confines of the site. Designated areas will be set-up to ensure parking of vehicles is done so in an orderly manner and to maximise the available space for safe transporting of materials, etc.

Traffic Management and Deliveries

All deliveries must be called in to notify the Site Manager at least 30 minutes prior to arrival on site to ensure safe access is available. All deliveries will be met at the site boundary by a member of the site management team. Prior to any works commencing on site, a Traffic Management Plan is produced to ensure that vehicle accidents are prevented, by effective management of transport operations throughout the duration of the construction programme. The impact on the adjacent site(s) should be minimal.

A forklift or telehandler operated by competent operative will be used to transport materials from the delivery vehicles either into the building or to a designated point for materials storage within the site.

The unloading and loading of vehicles will always strictly take place within the site curtilage. Prior to the commencement of modular install, a copy of the contract lifting plan will be made available to, and reviewed with, all parties of the project team.

Unloading and loading of vehicles will always take place within the site compound and not on the public highway. Under no circumstances will restrictions on site access be undertaken in a way that leads to displaced parking or vehicles waiting on the street or hospital access roads.

Wheel Cleaning

A jet wash will be available to all vehicles on site, to prevent the deposition of mud on the highway, as and when required. In addition to this a road sweeper and wheel wash station will be utilised as necessary if debris off site is significant.

Welfare

During construction, several provisions will be made available to the site workers, and measures of protection will be put in place to maximise safety. We will be utilising a two-story site welfare unit, incorporating an office, canteen & drying room.

Within the site welfare facilities, site personnel will have access to hot and cold-water supply for drinking, the use of kettle, microwave and fridge within the canteen space, and a table and chairs for seating during breaktime. The male and female toilet facilities are all complete with hot and cold water for washing of hands, and moisturising hand creams/antibacterial/viricidal handwash will be replenished as necessary.

There will be a dedicated pedestrian entrance into site, and everyone will be required to wear PPE equipment, unless in the noted 'safe zone' which includes the site office, the associated welfare units, and a small area close to these units, which is clearly marked with pedestrian barriers. To further reinforce safe practice, individuals will be warned of the dangers of vehicle movement in the site, and this will be communicated prior to an individual starting on site.

To gain access to site, contact will need to be made with the Site Manager as these gates will be always locked to ensure security. Deliveries will only be accepted during the pre-agreed time periods. Public access to site will not be permitted at any time. During any pre-arranged walkarounds with NHS Property Services staff, the Site Manager or a member of the project team must be available to escort the Staff and visitors safely around the construction site.

A Fire Assembly Point will be located outside to main access gates to site. The Assembly point will be noted and displayed in the site office cabin.

Storage of Materials

There will be a clearly defined storage area within the site for the storage of materials.

No storage of plant and materials will take place outside the site boundary. All plant will always be secured within the boundary of the site and appropriately demobilised when not in use. For example, keys removed, the vehicle locked, and isolation keys removed to prevent unauthorised use.

Storage containers will be provided as part of the site set up, and materials will be stored in these where possible to avoid them being on show on the site, to try and avoid the site becoming a target for theft or nuisance.

Responsible Construction Practices

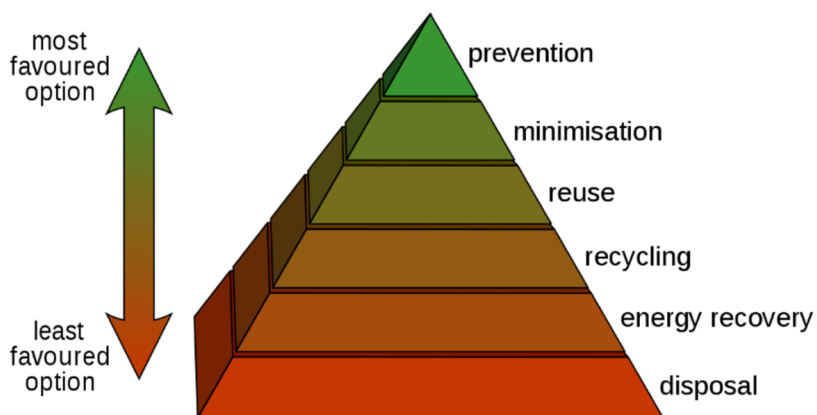
DG manages all construction sites internally via Site Managers who are aided by the Construction Manager, the Head of Project Delivery and the relevant level of design staff based on the complexity of the scheme, and the systems within. DG hold relevant accreditation re: ISO 14001 and membership of appropriate professional bodies, such certification can be provided to the client upon request.

Hauliers

All hauliers are CLOCs or FORS accredited.

Waste

DG will manage waste through identification of waste streams, this will allow informed decisions on prevention, minimisation, re-use, recycle, diversion from landfill (such as incineration etc.) or disposal of waste on site as per the waste hierarchy.



DG and the subcontractors on site will ensure waste is stored away from drains, boreholes, wells and controlled waters. Containers shall be in good condition and where required, covered to prevent dust and litter being blown out. If there is any likelihood of stored waste contaminating the surrounding environs, then all required measures will be taken to ensure no contamination occurs – such as fluorescent tube coffins or containment bunds.

Before waste is treated and/or removed from site, all waste contractors must provide the Site Manager with; Environmental Permits (mobile plant licenses), Waste Carriers Registration Certificates or any environmental exemption permits.

As part of the surveys prior to starting on site, DG require that a specialist soil investigation takes place, and if contaminated ground is found, measures recommended by a specialist consultant will be incorporated into site set up.

In the event of contaminated ground being found when DG are on site, then works will cease whilst further ground investigation is instructed, and recommended measures implemented.

The site team, and where applicable, subcontractors will ensure the required separation and removal of all inert/non-hazardous waste is recorded and documented. These documents must be kept for a minimum of two years.

The site team will ensure the removal of all hazardous waste is recorded on Hazardous Waste Consignment notes, and these documents must be kept for a minimum of three years.

Furthermore, the contractor engaged for disposal of waste is required to provide a record, through 'Wastebbox' or a similar online portal, of waste streams and landfill diversion, which can be monitored by DG.

Noise, Dust or Fumes

DG will take the necessary precautions in respect of noise, dust and fumes caused by the works and will comply with *The Noise at Work Regulations 2005*, *The Control of Substances Hazardous to Health Regulations 2002 amended* and *The Personal Protective Equipment at Work Regulations 1992*.

Additional Guidance:

- *The Health & Safety Executive Publications IND(G)127(L) "The Control of Noise at Work Regulations" 2005*
- Noise is covered by the Noise at Work Regulations 2005 and the Health and Safety at Work Act.
- British Standard Code of Practice — British Standard 5228-1: 1997 Code of Practice for Noise Control on construction and demolition sites gives advice on methods of reducing noise nuisance on construction sites and contains some advice on the protection of workers from the health risks of noise.
- The HSE Guidance IND(G) 127 - Noise in Construction and the CITB Construction Site Safety Notes (GE700 Module 8) - Control of Noise both provide useful sources of information on the control and assessment of noise in construction.
- Institute of Air Quality Management - "Guidance on the assessment of dust from demolition and construction" Version 1.1 2014 which provides detailed information regarding dust control measures in construction.

All tasks and work activities will be planned and arranged to take the above standards into account. The Contracts Manager must ensure that information on the noise level of any plant, which he/she is intending to hire or purchase, is obtained, and considered before hiring or purchase takes place. They will, in conjunction with any relevant sub-contractor required to use or work near such plant, ensure that any static plant to be installed on site, or in the workshop, is planned to be in a position which takes account of the effects of noise on workers, the public or the end users of the facility.

Where personnel are required to work in situations where high levels of noise are likely to be encountered, the Construction Manager will ensure that full information is obtained on the levels and frequencies of noise. Any measures to reduce noise levels to below levels considered to be safe must be planned or, if this course is not practicable, suitable hearing protection equipment must be identified and provided for use by site personnel.

Regular monitoring of noise levels and frequencies will be planned as required.

Instruction and training will be provided to supervisors and operatives required to work in premises, or with plant, which is likely to result in exposure to high noise levels.

The safe system of work to be adopted whenever noise is a potential problem is:

- Carry out a written noise assessment to establish levels and frequencies of noise for individual items of plant and machinery.
- Consider if works can be re-programmed when the noise problem will no longer be present.
- Consider alternative methods of working.
- Provide suitable noise control mechanisms and personnel protective equipment.
- Ensure suitable warning notices are clearly displayed around the affected area.
- Regularly monitor noise levels and frequencies.
- Give advice on noise control measures.

Legalisation covering Dust Hazards and Fumes include The Health and Safety at Work Act 1974, The Control of Pollution (Amended) Act 1989, The Management of Health and Safety at Work Regulations 1999 etc. Where applicable the Air Quality Standards Regulations 2010 are to be considered also.

All tasks and work activities will be planned and arranged to take the above standards into account.

Where personnel are required to work in situations where dust and fumes are likely to be encountered, the Site Manager will ensure that suitable PPE is provided and worn and any measures to reduce the levels of the dust and fumes are taken. The Site Manager will also ensure that any other workers on site are clear of the affected areas and that the general public are kept clear at all times.

All sub-contractors visiting site will be checked to ensure that all of their operatives are fully trained to complete the tasks set out in their RAMS.

Abrasive Wheels

DG will comply with *The Provision and Use of Work Equipment Regulations 1998*, *the Personal Protective Equipment at Work Regulations 1992* and *The Control of Substances Hazardous to Health Regulations 2002 (amended)* Additional Guidance: The Health & Safety Executive Guidance Notes HS (G) 17 "Safety in the Use of Abrasive Wheels" and HS (G) 18 "Portable grinding machines: Control of Dust". Cutting blades and discs are only to be changed by trained and certified operatives.

Storage of Fuel, Oils & Building Chemicals

Containers must be stored within a Spill Nappy (or similar), bund or any other suitable secondary containment system (SCS). All containers must be in a safe place to minimise the risk of damage and locked-off when not in use.

For oil tanks, intermediate bulk containers and mobile bowsters the SCS must be able to hold:

- Where one container is being stored – a minimum of 110% of the total volume.
- Where more than one container is being stored – a minimum of 110% of the largest container's storage volume, or at least 25% of the total volume (whichever is greater).
- For drum storage, the interceptor tray must be able to hold at 25% of the total storage capacity of the drums.

Bunded areas must be made impermeable to water and oil. The base and walls must not be penetrated by any valve, pipe or opening that is used for draining the systems. For further guidance on bund construction and other requirements, please refer to CIRIA publication (construction of

bunds for oil storage tanks, R163) and Environment Agency Pollution Prevention Guidelines 2 and 6.

Areas used to store fuel/oil and other potential contaminants are required to be noted in the site logistics plan.

Fire & Explosion Risk from Chemicals on Site

DG will produce a fire management plan, which will be updated as the site develops. The plan will include fire escape routes, muster points, firefighting equipment alarm locations and will be clearly displayed on notice boards. Muster routes and procedures will be explained during the induction process for both workers and visitors. Regular fire drills will take place during the works.

DG will remove all potentially combustible materials, such as packaging from construction materials, from the working area as soon as possible after their use. Good housekeeping will considerably reduce the fire risk. During hot work, i.e., welding, cutting of metal, etc., the surrounding area must be cleared of any potential sources of ignition or adequately screened. A permit to work requirement must be assessed prior to hot works commencing on site.

DG will take all necessary precautions to avoid fires on site during the construction works in accordance with fire precautions regulations. Smoking is not permitted on site other than at client approved smoking areas, if applicable. No smoking within the site cabins.

The relevant provisions of The Regulatory Reform (Fire Safety) Order 2005 must be followed. Emergency procedures must be covered at the site induction along with relevant site signage and assembly points etc. Please refer to the fire drill procedure and emergency escape route plan.

All Contractors and Sub-contractors will be made aware of the location of all suitable and sufficient firefighting equipment in the building and shared welfare facilities.

Appendix A: Proposed Site Logistics Plan

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