

CODE of CONSTRUCTION PRACTICE

**Priors Hall Zones 2 & 3
Minerals Extraction**

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REPORT

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Prepared by:

RPS

Kitty Clifford
Senior Planner

Sherwood House
Sherwood Avenue
Newark
Nottinghamshire
NG24 1QQ

T +44 1636 605 700
E kitty.clifford@rpsgroup.com

Prepared for:

Urban & Civic plc

Mike Nelson
Project Director

The Visitor Centre - Dollman Farm
Dollman Road
Houlton
Rugby. CV23 1AL

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Contents

1	INTRODUCTION	1
2	SCOPE OF COCP	3
3	PURPOSE AND IMPLEMENTATION OF THE COCP	4
4	CONSTRUCTION PRINCIPLES	6
5	SITE LAYOUT AND OPERATIONS	11
6	ENVIRONMENTAL MITIGATION	19
7	EMERGENCY PLANNING AND INCIDENT REPORTING	39
8	MONITORING AND REPORTING	41
9	CONCLUSIONS	42
10	LIST OF ASSOCIATED DOCUMENTS	43

1 INTRODUCTION

1.1. This Code of Construction Practice (CoCP) has been prepared on behalf of Urban and Civic Corby Ltd. ('the Client') to support the planning application for mineral (limestone) extraction for use as a building material within Priors Hall Zones 2/3 Urban Extension, Corby ("the application site"). The application site is situated within the wider Priors Hall Park Urban Extension, east of Corby.

1.2. The application to extract minerals from the site is made subsequent to an application for Outline planning permission for a mixed-use urban extension, which was submitted to East Northamptonshire and Corby Borough councils in July 2019 under references 19/00351/OUT and 19/01219/OUT.

1.3. The description of the development which this CoCP supports is:

'Phased extraction of minerals (limestone) and re-use on site to facilitate the development of the Priors Hall Zones 2 and 3 urban extension (outline application reference: 19/01219/OUT). Works to comprise:

- *removal and temporary storage of overburden;*
- *extraction of limestone;*
- *processing of minerals on site to form appropriately sized/ quality building material;*
- *transportation of material within site to development area where it is required;*
- *backfilling of extraction zones to original levels with engineered fill, overburden and excess clay from earthworks surcharge process elsewhere on site'.*

1.4. The Priors Hall site lies to the north-east of Corby and is 264.5 hectares in area. In 2017 the Client purchased the partially developed Priors Hall site, which is made up of three Zones, the first of which (Zone 1) has largely been built out. The overall site lies partly within Corby Borough (CBC) (Zones 1 and 2) and East Northamptonshire (ENC) (Zone 3). Historically, much of Zone 2 and some of Zone 3 (south) has been quarried for ironstone and subsequently restored.

1.5. It is proposed that the extraction of the minerals will take place during the development of zones 2 and 3 following the submission of a separate planning application for these works. Two possible areas of potential mineral excavation have been identified:

- Area A – 1.95 Ha with a limestone mining volume of 27,614m³ - north west of Zone 3 – area for future allotments/ formal open space; and
- Area B – 2.25 Ha with a mining volume of 31,588m³ - site of planned 'KP4 gateway' landscaping scheme

- 1.6. The benefits of the proposed extraction are significant. Extraction of the existing minerals resource at this stage, prior to development will ensure that an important mineral resource is not neutralised by the wider Priors Hall scheme. It will also have substantial sustainability benefits as it will significantly reduce the need to import building materials on site via HGV. A cycle of sustainable natural resource use will be maintained within the site resulting in no waste material. All excavated material will be utilised within the development and excess material from the earthworks scheme will be used to backfill the extraction areas.

2 SCOPE OF CoCP

- 2.1. The purpose of this CoCP is to provide relevant details of operational measures for the extraction of the minerals in so far as they relate to potential environmental effects, including: methodology, safety measures, access, haulage routing, construction compound options, and specific constraints such as habitats etc.
- 2.2. The CoCP is based on design information available at the time of the application and is a 'living document', subject to refinement, amendment and expansion as necessary as the project design process develops.
- 2.3. The CoCP reflects construction industry best practice and responds to the Design Code in place for this development by incorporating the principles of sustainable development and management of the environment.
- 2.4. This CoCP is to be made available to all involved in the construction processes relating to this site and is required to ensure that the excavation works are organised and delivered in a manner that safeguards any potential harmful impacts.
- 2.5. The CoCP also outlines any documents that the contractor(s) will be required to develop to detail the management systems that will be put in place to comply with this CoCP.

3 PURPOSE AND IMPLEMENTATION OF THE CoCP

Purpose of the CoCP

- 3.1. The CoCP sets out a series of proposed measures and standards of work which the client will require its contractors to adopt and implement throughout the construction period to provide effective planning and management measures to control potential impacts on people, businesses and the natural and historic environment; and provide the mechanisms to engage with the local community and their representatives.
- 3.2. These measures include strategies, control measures and monitoring procedures for managing the potential environmental impacts of constructing the project and limiting the disturbance from excavation activities as far as reasonably practicable. It covers the environmental aspects of the excavation phase that may affect the interests of residents, businesses, the general public and other sensitive receptors in the vicinity of the construction site.
- 3.3. The term 'construction' in this circumstance includes all site preparation, material delivery, extraction, processing, excavated material deposit, waste removal and all related engineering and construction activities as defined in the planning application.
- 3.4. The CoCP incorporates legislative requirements, current guidance and best practice measures to define the standards of construction practice that will be implemented. However, compliance with the measures contained in this CoCP will not absolve the contractor or subcontractor from compliance with all legislation and byelaws relating to their construction activities.

Implementation of the Code

- 3.5. The provisions of the CoCP will be incorporated into the contracts for the construction of all the works authorised by the planning consent. All contractors, subcontractors and their suppliers will be required to observe the relevant provisions of the CoCP.
- 3.6. The CoCP will be implemented during the planning and undertaking of construction works through the construction method statements as developed by the Principal Contractor. The method statements will be site-specific and set out how the commitments made in this CoCP will be implemented.
- 3.7. In addition to meeting the commitments in the CoCP, the Principal Contractor will be required to sign up to and implement the Considerate Contractors' Scheme (CCS). The scheme is a voluntary Code of Considerate Practice which seeks to minimise disturbance caused by construction to the immediate neighbourhood and the environment.

Training and Competence

- 3.8. The works will be carried out by staff of the Principal Contractor, MAPA Group Ltd. All members of staff are experienced and have been deemed competent to carry out the works required of them. A responsible person will be appointed to each job who will supervise all works and be responsible for quality and safety. Apprentices and young workers will be supervised at all times and are not permitted to carry out tasks for which they have not been trained to carry out.

Supervision

- 3.9. Suitably qualified and experienced personnel will be appointed by the Principal Contractor to supervise the main construction works. This will include professionally qualified environmental management staff, with relevant experience in the environmental disciplines included in this CoCP.

4 CONSTRUCTION PRINCIPLES

Construction Health and Safety

- 4.1. The Client is committed to promoting a positive safety culture within all organisations involved in the planning, design and construction of Priors Hall. The Health and Safety Executive (HSE) as the enforcing authority for health and safety on construction sites will be notified of all construction works prior to their commencement on site. The Client has appointed a site wide Principal Designer under the Construction Design and Management (CDM) Regulations, and all main contractors will have the role of Principal Contractor.
- 4.2. Health and safety issues will be an agenda item at regular project co-ordination meetings between the Project Manager and the contractor's nominated representatives. All contractors will be required to demonstrate a satisfactory safety record and safety management system. All construction workers must have received safety awareness training, including training approved by the Construction Skills Certification Scheme (CSCS) scheme and be in possession of CSCS registration cards.
- 4.3. The Contractors will maintain a register of accidents, incidents, near misses and complaints. Contractors failing to maintain the required safety standards may be excluded from the approved tender list for future work.
- 4.4. All works will be carried out in accordance with the requirements of all relevant legislation and regulations in force at the time the works are undertaken.

Vehicle/plant safety

- 4.5. All company vehicles and plant are subject to planned maintenance and inspection programmes. Staff responsible for vehicles and plant will carry out daily and weekly checks to ensure continued roadworthiness. All drivers will comply with road traffic regulations and the Highway Code. All loads will be securely fastened to the vehicle by competent persons prior to any travel.

Personal Protective Equipment (PPE)

- 4.6. All site workers will wear hard hats, safety boots, safety glasses, cut 5 gloves and hi-visibility clothing at all times; other items of PPE such as dust masks, goggles and ear protection are available to be worn when necessary.

First Aid

- 4.7. It is the responsibility of the Principal Contractor to ensure adequate first aid provision for its staff. Suitable first aid equipment and/or the provision of an appointed person at the minimum. An Appointed Person is a person provided by the employer to take charge of the situation (e.g. to call an ambulance) if a serious injury/illness occurs in the absence of a first aider. The Principal Contractor will ensure sufficient first aid cover for sites under their control.

Considerate Constructors Scheme

- 4.8. The Client will expect Contractors to register the site with the Considerate Constructors Scheme. The scheme is to include the following elements:

Considerate

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

Environment

- 4.10. Noise from construction operations and all other sources is always to be kept to a minimum. Efforts should be made to select and use local resources wherever possible. Attention should be paid to waste management and the avoidance of pollution. Recycling and the use of recycled materials is encouraged.

Cleanliness

- 4.11. The working site is always to be kept clean and in good order. Safety barriers, lights and warning signs are to be maintained in a clean and safe condition. Surplus materials and rubbish should not be allowed to accumulate on the site or spill over into the surroundings. Dirt and dust from operations should be kept to a minimum.

Good Neighbour

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

Respectful

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

Safe

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

Responsible

- 4.15. To ensure that everyone associated with the site understands implements and complies with this Code.

Accountable

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

Construction Workforce

- 4.17. If applicable, the Principal Contractor will be encouraged to use local sub-contractors during the construction phase of the project. There will be an ongoing programme of training and awareness through site notices, briefings and toolbox talks. The number of construction workforce on the site at any one time will be dependent on the construction programme and phasing.

Protection of Existing Features

- 4.18. The planning and carrying out of the works will take account of existing neighbours, trees and hedgerows to be retained, watercourses and other sensitive features. Appropriate protection measures and liaison will ensure that disturbance is kept to a minimum. Several key principles have been identified to achieve this objective:

- To have full consideration of existing and new neighbouring communities in all aspects of works to minimise disturbance and nuisance during excavation works;
- To ensure that all safety measures are always undertaken and to ensure that the areas are maintained in a clean and tidy way as far as is possible.
- To ensure that haul roads are maintained to prevent excess noise and dust and that wheel washing and/ or road sweeping is provided where necessary to prevent mud being deposited on local roads.
- To survey existing features prior to the start of works and to notify developers and contractors of any mitigation or protected measures which may be necessary.
- To ensure that site traffic use agreed routes to and from the main highway network and to consider phased traffic hours to avoid creating congestion during peak periods.

Public and Community Liaison

- 4.19. One of the main purposes of this CoCP is to ensure that disturbance to neighbouring users is kept to a minimum. However, it is inevitable that some disturbance or disruption will occur from time to time, for instance as a result of periods of noisy work. An open and robust communication process is essential to ensure that any complaints or enquiries can be dealt with efficiently and to help provide neighbours with advanced information on the works which may affect them.
- 4.20. A planned Communications Programme will be put in place which will include community contact points (for emergencies and for general enquiries) and a feedback consultative process. The Client will operate a single 'helpline' number for complaints and enquiries for all works at Priors Hall. Calls received by the helpline operator will be logged and any affected developer or contractor will be notified

for appropriate action. The helpline number will be published and notified to all neighbouring users in the locality.

- 4.21. Prior to the commencement of each phase of works or in advance of works which are particularly likely to give rise to disturbance, the Client or Contractor shall notify users likely to be affected by the works of the nature and duration of the work to be carried out together with a contact name and telephone number during working and out of working hours. Notices shall, wherever practicable, be sent to all affected neighbours at least two weeks prior to commencement of the relevant works. The Client or Principal Contractor will consult with the local authority on the addresses to be included in the notices.
- 4.22. It is also proposed that the management teams encourage the development of Community Liaison Groups that will have regular meetings (the frequency will be dependent on the level of activity and any particularly controversial issues). These events enable representatives from the community to be briefed on progress, to discuss any issues of common concern and to resolve any disputed issues.
- 4.23. All communications and public relations relating to community liaison will seek to achieve best practice status. The Client or Principal Contractor will maintain and periodically issue communications programme performance data to the local authorities. Any performance issues will be discussed with the local authorities and any corrective actions agreed.

Liaison with Statutory Bodies

- 4.24. The Client and Contractor shall consult in advance with the relevant statutory bodies on the arrangements for each stage of the works. Regular meetings will be arranged for the key statutory bodies, including the planning authorities, environmental health authorities, highway authority, Environment Agency and Natural England (as appropriate). These meetings will ensure that appropriate measures for traffic management, noise mitigation, flood mitigation and drainage, ecological management and other construction management issues can be planned and monitored as the works proceed.

Emergency Arrangements and Procedures

- 4.25. Any incidents are to be immediately reported to the Principal Contractor site supervisor. The method for raising the alarm in an emergency will be shouting, hand signals, and over the walkie talkie/radios the assembly point will be at the front access gates. In the event of an emergency, workers will then proceed to the designated assembly point.
- 4.26. First aid facilities are held within a site welfare van and all work vans. All site vehicles are to be equipped with a First Aid box, the nearest medical facilities are in Corby Urgent Care Centre and Kettering General Hospital (KGH).

Covid-19 Guidelines

- 4.27. All members of site are to implement and maintain the guidance given in the Principal Contractor Covid-19 guidance document which is available in the site file. The site supervisor will enforce these guidelines as much as possible. Timings and breaks will be staggered, and extra hand washing facilities will be available. Due to the nature of the works 2m social distancing should not be a problem.

Site Inductions

- 4.28. Any personnel who are visiting or working on site will have to go through the site induction and also sign the daily site brief.

Accident/Incident Reporting Procedure

- 4.29. The Principal Contractor has a duty under the current edition of the Reporting of Injuries, Diseases and Occurrences Regulations (RIDDOR) to report specific injuries and incidents to the enforcing authority. The purpose of this procedure is to ensure that this duty is fulfilled and that all accidents are investigated.

Site Contacts Details

MAPA Group	
Company Director - Paul Wills	07850 173792
Works Manager - Shaun Anderson Responsible for front end works	07885 121608
Site Supervisor - John Gibson Responsible for day to day site activity, enforcing corona guidelines, security, manpower, welfare, visitors, deliveries.	07860 748135
Senior Foreman - Ivan Druce 2 nd in command to the site manager, coordinates plant and machine activity on site.	07757 424063
URBAN AND CIVIC POINT OF CONTACT	
Associate Project Manager - Rob Millar	07736 274009

5 SITE LAYOUT AND OPERATIONS

- 5.1. The application site sits within the wider Priors Hall site, east of Corby, owned by Urban and Civic who act as the Master Developer. The wider Priors Hall urban extension site lies within Corby Borough (CBC) (Zones 1 and 2) and East Northamptonshire (ENC) (Zone 3). Historically, much of Zone 2 and some of Zone 3 (south) has been quarried for limestone and subsequently restored
- 5.2. The parcels to which the application relates are contained primarily within Zone 3 (East Northamptonshire). The proposed areas of extraction are as follows:
- Area A (1.95ha) – north west of Zone 3 – area for future allotments/ formal open space; and
 - Area B (2.25ha) – site of planned 'KP4 gateway' landscaping scheme.
- 5.3. Zone 3, within which Areas A and B are located, is situated to the north east of the existing Zone 1 development immediately to the east of the existing Lloyds data centre. It is bound to the North by Kirby Lane and a belt of woodland planting, beyond which (by some 500m) lies the listed Kirby Hall. Zone 3 is bisected by the Willow Brook which runs west-east through the site. An area of woodland known as Badgers Wood is located south of the brook. The site of a former Roman Villa has been identified in the central part of Zone 3. Beyond Zone 3 to the south, are two Local Wildlife Sites running north-south on either side of Zone 2.
- 5.4. Extraction, subsequent backfilling and making good will be undertaken one parcel at a time, on a phased basis, so as to maintain a steady flow of building material without the need to create large stockpiles. U&C envision that the process will become an (early) element of the construction works involved in developing Zones 2 and 3.
- 5.5. Works are anticipated to comprise the following:
- The topsoil will be stripped with a dozer or motor scraper.
 - The subsoil overburden will be stripped.
 - The 360-excavator moving in a methodical pattern will dig into the stone and load the crusher.
 - The crusher will process the stone into agreed sizes.
 - The shovel loader will clear the processed piles from the belts.
 - As the digging and crushing process moves along the area behind will be backfilled.
 - A second excavator will load the dump trucks with excess material and overburden.

- The dump trucks will dump in the extracted area.
- A dozer will push the back fill out and a roller will compact in engineered layers.
- The Engineer will take and record all measurements.
- Once extractions in agreed areas have been completed the area will then be graded and reinstated.

The Extraction Works

- 5.6. It is anticipated that the limestone can be excavated directly, using large tracked excavators into dump trucks or broken using a “ripper” attachment on an excavator or on the back of a dozer. The objective is to fragment the rock to a size suitable for loading and transporting to the onsite plant for further processing, and to do it in a way which is safe and minimises environmental impacts.
- 5.7. Once the material has been removed from the ground, it will be transported to the onsite processing plant (mobile crushing units and screening units) via site vehicles (dumper truck).
- 5.8. The main elements of the aggregate processing will be the breaking up of the rock into smaller sizes and fractions to meet the grading requirements, of engineered fill material, in accordance with the specification for Highway Works. In simple terms large pieces of rock will be reduced to smaller sizes using mobile crushers and screening units.
- 5.9. No material will need to be brought on to site to complete this process. A cycle of sustainable natural resource use will be maintained within the site resulting in no waste material. All excavated material will be utilised within the development and excess material from the earthworks scheme will be used to backfill the extraction areas.
- 5.10. Extraction of the limestone should be limited to areas that are not to be developed; i.e. structures, archaeological areas and areas of significant ecological interest (e.g. retained hedgerows). Currently 4 No. areas have been identified for possible extraction which coincide with potential limestone and no development.
- 5.11. Area B (identified as 2.25 Ha) has appropriate ground investigation data to confirm the thickness of limestone that maybe available for quarrying, whilst Area A has been identified as a potential area but which require further investigation to confirm the thickness of limestone present.

Site Working Hours

- 5.12. Mon to Fri 0730 to 1800 and Sat 0730 to 1700. Contractors are permitted a period of 30 minutes before and after the working day to start up & close down activities (movement to place of work, unloading & maintenance) but does not include the operation of plant or machinery. No work is to take place on Sundays or Bank Holidays.

Welfare Facilities

- 5.13. Welfare facilities are provided via a welfare porta-cabin conforming to Schedule 2 of CDM regulations 2015. This consist of hot/cold running water, heating, tables, chairs with facilities to heat food i.e. Microwave. All welfare facilities are to be kept in a clean and good working condition.

Site Security

- 5.14. A hard standing will be located where all plant vehicles will be parked. All vehicles have coded keys, immobilisers and trackers, and no fuel will be left on site. All plant will be fuelled in the mornings prior to starting works and in the afternoons leaving the vehicles with low fuel amounts when parked overnight. If damage does occur, there is an option to bring in a security guard and security patrol for night times/out of hours. Access points from Kirby Road have been fenced off and will deter the public in gaining site access.

Site Access Points and Site Layout

- 5.15. U&C will provide safe access and egress to the site via the causeway. Principal Contractor staff will ensure safe access and egress is maintained for themselves and other contractors/users in the area they are working in. Good standards of housekeeping will be maintained by all staff. Warning notices and barriers will be deployed as required. Debris will be cleared away on a regular basis and the site left safe, clean, and tidy at the end of each shift or task. The access arrangement is shown on the accompanying '*Minerals Extraction Application Key Plan Including Site Plan Compound and Access Schematic Arrangements*' plan produced by RPS (ref:019934-RPS-MI-XX-DR-C-0705 P01).
- 5.16. The site compound will be initially located directly to the north of the eastern section of Mining Area B, it is anticipated that the site compound will be moved throughout the works upon the completion of the extraction in some areas and the need to mine in other areas. If the compound is located in close proximity to Willow Brook, it will be ensured that a 10m buffer zone will be maintained.
- 5.17. It is proposed that the site compound (both initially and future positions) will comprise of a welfare unit, site office unit, parking for cars and vans, a fuel bowser and spill kit. The site compound will be approximately 2,500sqm in area.
- 5.18. Access and egress points are to be closed at all times when not in use. No members of the public or other contractors will be permitted access to working areas without prior consent. An exclusion zone is to be maintained at all times, there should be no reason to go onto adjacent sites or land areas not within the agreed area.

Soil Management and Reinstatement

- 5.19. The management of soil outlines the methodology for the storing and reinstating of soils. Guidance contained in the Department for Environment, Food and Rural Affairs' (Defra's) *Construction Code of*

Practice for the Sustainable Use of Soils on Construction Sites (updated 14 June 2018) has been used in the preparation of this strategy and should be considered when carrying out any soils related works.

- 5.20. Soil reinstatement is the reverse of soil stripping, with topsoil being replaced over subsoil. Care must be taken to ensure that soil horizons are replaced to the correct thickness (with an allowance of up to 20% to account for settlement).
- 5.21. Where small areas of topsoil need to be reinstated around installed infrastructure, machinery of a suitable size should be used, whilst adhering to the principles and methodology set out here. In this method, the subsoil will be replaced first, with the excavator travelling on the subsoil and reapplying topsoil by gradually depositing it on the subsoil. The deposition is to be carried out by loose tipping and a toothed digger bucket is to be used.
- 5.22. The soil is replaced in strips above the base layer to recreate the original soil profile. The topsoil is replaced on the previously de-compacted subsoil. First, the initial strip width and axis is to be demarcated. The width of the strip is determined by excavator boom length less the stand-off to operate – no wider than 5m widths. A wide bladed bucket should be used to spread the soil (the use of a toothed bucket must be avoided in this case).
- 5.23. The dump truck should reverse to the edge of the current strip and tip the lowest layer, without the wheels riding onto the strip. The dump truck must not drive away until all the soil is deposited within the strip, without spillage over the basal layer. To achieve this, assistance from the excavator to 'dig away' some of the tipped soil may be required.
- 5.24. The tipped soil should be spread to the full thickness required, by the excavator utilising the digging, pushing and pulling action of the bucket. Each load must be spread before another is tipped. The process should be repeated along the strip until it is completely covered with the required depth of the soil layer.

Aftercare and Biosecurity

- 5.25. There is the potential for disease, pathogens and harmful/non-native weed transfer between different areas of the land (i.e. a biosecurity risk). The movement of soil resource is considered as a main cause of disease, pathogen and weed transfer, due to the transfer of soil from infected to uninfected areas.
- 5.26. To avoid the spread of invasive non-native species, pests and pathogens during the soil working stages of construction, and to ensure legal compliance with the Control of Pesticide Regulations 1986 and COPR (Amendment) Regulations 1997, all applications of herbicide shall be undertaken in strict accordance with the COSHH regulations and shall be applied in accordance with the Food and Environment Protection Act (FEPA), by licensed operators at the manufacturer's recommended rates.

- 5.27. The Contractor shall be responsible for the safe and proper storage, application and disposal of any herbicides used and shall comply with all relevant legislation, Statutory Instruments and Codes of Practice. Herbicides are not to be left unattended unless placed in a securely locked container.

Waste Regulations

- 5.28. In line with Defra's *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* (updated 14 June 2018), uncontaminated soil arisings that do not leave the site of origin are not considered to be waste (unless they are regarded as surplus to requirement after the development has been completed).
- 5.29. If the soil can be 'fully recovered' and appropriately reused on another site (e.g. BS 3882 certified topsoil reused for another landscape project), it can be dealt with using the relevant exemption within the *Environmental Permitting (England and Wales) Regulations 2007*. The main exemptions relevant to soil reuse are Paragraph 7 (Land Treatment – Agricultural Land) and Paragraph 9 (Reclamation or Improvement of Land – Non-agricultural Land).
- 5.30. These exemptions have to be notified to the Environment Agency and the notifications need to be accompanied by proof of benefit and a pollution risk assessment. Alternatively, the soil should be taken to an appropriately permitted treatment facility for recovery or, as a last resort, be disposed of at landfill. If the surplus soil is sent to landfill it will be subject to landfill tax.
- 5.31. Where soil or organic ameliorants are considered to be waste, they are subject to waste management controls and an environmental permit or exemption needs to be in place.

Restoration Strategy and Management

- 5.32. The following will cover the restoration of the limestone extraction pits:
- Following the decommissioning of the pits, any imported hardstanding material (including bases and sub-bases) within the site shall be excavated and removed from the site to the nearest appropriate recycling facility. Any contamination is to be contained and not allowed to spread to existing ground;
 - During the removal of hardstanding material, care is to be taken around planted on-site vegetation, as illustrated in the soft landscape design, and for any vegetation off-site. BS 5837:2012 *Trees in Relation to Design, Demolition and Construction* is to be referred to for the protection of existing trees;
 - The subsoil will be deep tine cultivated, using a crawler or four-wheel drive tractor, drawing a winged, deep tine cultivator to a depth of 600mm at 1000mm centres, so as to achieve a good heave across the full width of the site;

- Work will be carried out in dry conditions, and as far as practical at right angles to Willow Brook to the south. Any extraneous material brought to the surface will be removed to a local recycling centre with stones picked to approximately 75mm. Works for the replacement and spreading of the topsoil to an even depth will be carried out following the fine grading of subsoil;
- Topsoil will be spread using agricultural machinery, crawler or four-wheel drive tractors. Topsoil will be spread to give a uniform depth over the areas shown in Appendix EDP 1, to avoid the formation of depressions that could hold water, and to grade to the proposed levels;
- The spreading depth of topsoil will be 150mm, in accordance with BS 3882:2015. The overall depth of topsoil on the site must not be greater than 300mm, to ensure the topsoil does not become anaerobic. BS 3882:2015 *Specification for Topsoil* is to be referred to, in particular Section A.3;
- All topsoil areas within the site, including areas not affected by construction operation, will be ploughed and cultivated to ensure that all stones, rubble, vegetation and other extraneous material larger than 75mm in any direction are removed from site to a suitable recycling centre;
- The topsoil will be worked to a fine tilth by rotovator or harrowing to not less than 100mm depth. If soil has become compacted prior to seeding, it will be necessary to work to a fine tilth prior to seeding; and
- When importing topsoil into the site, disease and pest free material as near as practicable to that on-site will be used.

Contractor Visitor Safety

- 5.33. Any visitors to site will require an induction and will be escorted on site at all times during their visit. The Principal Contractor will liaise with other contractors' staff on a day to day basis and ensure they are aware of the risks present during works. Staff and contractors will not leave any area of work in a dangerous condition presenting risks to themselves or other contractors or visitors to the working area. All tools and equipment will be cleared to secure storage at the completion of each shift. Scaffold, ladders, and any other access to height will be made inaccessible in order to prevent where possible any security risk of theft/damage.

Parking

- 5.34. Staff and contractor parking will be provided in designated areas within the worksite. Staff, contractors and visitors will be encouraged to make use of public transport (where available) or carpooling arrangements to minimise the traffic impacts associated with the excavation works.

Traffic Routing

- 5.35. Plant vehicles only will be permitted on the working area of the site. Access and egress points are to be closed when not in use. No contractors or members of the public will be permitted access to the works areas. The agreed exclusion zone is to be maintained at all times.

Wheel Washing Facilities

- 5.36. All reasonable measures will be put in place to avoid the deposition of mud and other debris. Such measures will include, where appropriate:
- Hardstanding at the access and egress points will be cleaned at appropriate intervals: Vehicle wash down points will be provided to clean vehicle wheels at each main access from the site;
 - The use of mechanical road sweepers combined with water sprays for the suppression of dust to clean the hardstanding, the roads and footpaths in the vicinity of the site;
 - The correct loading of vehicles and sheeting of loads where necessary to avoid spillage during their journeys; and
 - Wheel washing and road sweeping effectiveness will be kept under review and, if appropriate, an adjustment to the balance among these measures may be implemented.

Temporary Signage

- 5.37. Temporary signage will be erected as necessary to ensure that, as the extraction works proceeds, contractors and visitors are able to find their way around the development. Temporary signs will be replaced with permanent signs as soon as reasonably practical.

Fire Prevention and Control Measures

- 5.38. The Contractor will undertake full risk assessment of their working practices to ensure adequate control measures are in place to prevent and combat fire. This will include;
- Defined safe access and egress routes;
 - Way finding and emergency egress signage;
 - Muster points;
 - Operatives trained in use of fire extinguishing equipment suitable for defined tasks; and
 - Fire alarms and regular fire evacuation drills.

Working at Height

- 5.39. Falls from height remain the single biggest cause of work-related deaths in the United Kingdom. There will be no jumping from vehicles and staff must always use the access steps and handrails provided. Prior to any working at height, workers will comply with the associated Risk Assessment Method Statement (RAMS).

Refuelling Procedure on Site for Plant Machinery and Equipment

- 5.40. Fuel for all equipment is carried in explosive proof metal containers. Plant and machines will be refuelled in a designated refuelling area ensuring that the correct fire and spillage equipment is to hand. Fuel is transferred from the proprietary containers by certified fuel transfer unit or through a funnel into the machine tank. Caution will be exercised to prevent overfilling and spillages will be cleared up immediately. Smoking is not permitted in any of the company vehicles at any time, including during operation of plant equipment and machines on or off clients' premises.

6 ENVIRONMENTAL MITIGATION

6.1. Environmental impacts are controlled by current legislation and guidance, to which the Contractor will be required to conform as a minimum. The discussion of each environmental aspect includes reference to relevant legislation applicable to that topic. The lists are not exhaustive, and the Contractor should ensure compliance with all relevant legislation for the work that they are undertaking.

Waste

6.2. The Client is committed to minimising waste by adopting site practices including a site wide waste minimisation scheme that maximises material use and keeps waste to a minimum. There are several waste management principles that will be adhered to for waste management throughout construction, these include:

- Ensuring that all contractors are contractually obliged to participate in the waste minimisation scheme. Details of contractor's proposals for waste minimisation must satisfy the scheme's requirements which will be enforced by the Project Manager, and contractors' full co-operation will always be required;
- Reduction of materials wastage through good storage and handling;
- Entering into agreements with suppliers for disposal and recovery of their products;
- Recycling green waste on site or planning for off-site recycling;
- Ensuring that all suppliers of materials provide returnable or recyclable packaging, wherever reasonably practicable;
- Providing waste minimisation induction courses for site personnel; and
- Regular toolbox talks throughout the construction phase to maintain awareness.

6.3. In line with Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (updated 14 June 2018), uncontaminated soil arisings that do not leave the site of origin are not considered to be waste (unless they are regarded as surplus to requirement after the development has been completed).

6.4. If the soil can be 'fully recovered' and appropriately reused on another site (e.g. BS 3882 certified topsoil reused for another landscape project), it can be dealt with using the relevant exemption within the Environmental Permitting (England and Wales) Regulations 2007. The main exemptions relevant to soil reuse are Paragraph 7 (Land Treatment – Agricultural Land) and Paragraph 9 (Reclamation or Improvement of Land – Non-agricultural Land).

- 6.5. These exemptions have to be notified to the Environment Agency and the notifications need to be accompanied by proof of benefit and a pollution risk assessment. Alternatively, the soil should be taken to an appropriately permitted treatment facility for recovery or, as a last resort, be disposed of at landfill. If the surplus soil is sent to landfill it will be subject to landfill tax.
- 6.6. However, if the use of the materials will occur in excess of one year from being stored, a time limit has to be agreed with the Environment Agency. The decision relating to the length of storage will be made within the context of the extant planning permission or agreed programme of works.
- 6.7. Where or organic ameliorants are considered to be waste, they are subject to waste management controls and an environmental permit or exemption needs to be in place.

Air Quality and Dust Management

- 6.8. The excavation works will be planned and carried out in a manner that minimises the generation of dust, fumes and atmospheric pollution. The main potential sources of particle emissions during excavation activities include:
- Excavation works;
 - Haulage routes, vehicles and construction traffic;
 - Materials handling, storage, stockpiling, spillage and disposal;
 - Site preparation and restoration after completion;
 - Earthworks and Remediation;
- 6.9. The following subsections identify the specific measures that may be employed by the Contractor to manage air quality risks from the works:

General Management

- No burning of any materials may take place anywhere on site.

Aggregates

- Vehicles carrying loose aggregate and potentially dusty materials to and from the site will always be sheeted; and
- On-site aggregate handling and mixing will be carried out in controlled areas to minimise dust.

Contaminated Material

- Care must be taken when handling known or potentially contaminated materials to generate the minimum of dust and to prevent the spread of mud and dirt and airborne dust;
- Vehicles carrying contaminated material to off-site licensed tips will be fully sheeted; and

Equipment and Vehicles

- Ensuring that all excavation plant and equipment is maintained in good working order and not left running when not in use; and
- Use of dust-suppressed tools for all operations.

Earthworks

- Completed earthworks will be sealed, covered or vegetated as soon as is practicable; and
- Dampening of exposed soil, if necessary, using sprinklers and hoses, or planting if longer term exposure is envisaged;

Wind Sensitive Activities

- Use of wind break netting screens around materials and vehicle loading / unloading areas, as well as exposed excavation and materials handling operations;
- Avoidance of particle generating activities during period when wind direction and / or high wind speeds may carry particles into sensitive areas; and

Road

- The Contractor shall take effective measures to prevent material being deposited on highways by traffic from the site or from other land in use for the purposes of the excavation works;
- The Contractor shall remove without delay from highways any mud, dirt or debris which may have arisen from or be due to the excavation of the works and shall employ enough labour, and suitable plant for this purpose;
- An appropriate speed limit on roads within the site will be established and enforced, to limit dust nuisance due to vehicle movements; and
- Appropriate routing of excavation works traffic will be agreed with the Local Authority prior to excavation activities commencing.

Exhaust Emissions

- Engines will be shut off when vehicles and plant are not in use; and

- Exhausts of vehicles or plant used for excavation should be positioned at a height to ensure appropriate dispersal of exhaust emissions.

Odour

- Appropriate measures will be adopted by the Contractor to avoid the creation of statutory nuisance from odours.

Monitoring and Liaison

- Particle emissions monitoring may be appropriate during certain phases of the works and will be discussed in consultation with local authority environmental health officers.

Noise and Vibration Management

- 6.10. The principles and methods set out below will be implemented to ensure adequate control of noise and vibration.
- 6.11. In general, the construction works with the greatest potential to generate noise are initial earthworks to grade the site, the creation of foundations and the construction of new roads.

Best Practicable Means

- 6.12. During the works, Best Practicable Means (as defined in Section 72 of The Control of Pollution Act 1974) will be employed to minimise noise and vibration from the excavation operations and equipment. Furthermore, Contractors will adhere to the guidance given in BS 5228: 1997 (Clause 10, Control of noise and vibration) and BS 5228: 1992 Part 4. These practices and methods will be a contractual requirement.
- 6.13. The contractor would be required to follow Best Practicable Means to reduce the noise impact upon the local community including the following;
- All construction plant and equipment should comply with EU noise emission limits;
 - Proper use of plant with respect to minimising noise emissions and regular maintenance. All vehicles and mechanical plant used for the purpose of the works should be fitted with effective exhaust silencers and should be maintained in good efficient working order;
 - Selection of inherently quiet plant where appropriate. All major compressors should be 'sound reduced' models fitted with properly lined and sealed acoustic covers which should be kept closed whenever the machines are in use and all ancillary pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers;
 - Machines in intermittent use should be shut down in the intervening periods between work or throttled down to a minimum;

- Plant and equipment such as flatbed lorries, skips and chutes should be lined with noise attenuating materials. Materials should be handled with care and be placed, not dropped. Materials should be delivered during normal working hours;
- All ancillary plant such as generators, compressors and pumps should be positioned so as to cause minimum noise disturbance, i.e. furthest from receptors or behind close boarded noise barriers. If necessary, acoustic enclosures should be provided and/or acoustic shielding;
- Construction contractors should be obliged to adhere to the codes of practice for construction working given in BS 5228 (BS), 2014b) and the guidance given therein regarding minimising noise emissions from the site; and
- Reference should be made to the Building Research Establishment, BRE 'Pollution Control' guidelines, Parts 1-5 (BRE, 2003).

Working Hours

- 6.14. It is recommended that the compound on site for material deliveries would need to be located away from noise sensitive properties
- 6.15. Adherence to the agreed working hours will ensure that any noise and vibration emanating from the excavation works will be limited to specific times during the week (see Section 4). Work outside these core hours will only be permitted if that work is agreed in advance with the relevant local authority. If work outside these core hours is permitted, monitoring of excavation noise and/or vibration will be considered in the management of these operations.

Plant and Equipment

- 6.16. The Contractor will employ measures as necessary to control noise and vibration at source through:
- the careful selection of plant and equipment -only plant that conforms to the relevant EU noise emission standards will be used;
 - regular maintenance of machinery;
 - effective acoustic enclosures, temporary screens and barriers; and
 - for plant used intermittently, turning off such plant between uses.
- 6.17. Contractors will have regard to the location of noise sensitive properties in siting all stationary plant.

Excavation Works Traffic

- 6.18. Plant vehicles only will be permitted on the working area of the site. Access and egress points are to be closed when not in use. No contractors or members of the public will be permitted access to the works areas. The agreed exclusion zone is to be maintained at all times.

Liaison with Authorities

- 6.19. The Principal Contractor will liaise with the relevant local authorities throughout the period of works.

Ecology and Landscape

- 6.20. The Client will nominate a suitably qualified person in order to implement specialist ecological measures including watching briefs, destructive searches, pre-clearance site checks, certification procedures and site briefings.

- 6.21. The Contractor will comply with the provisions of the following relevant legislation in respect of ecological resources:

- Wildlife & Countryside Act 1981;
- Protection of Badgers Act 1992;
- Conservation (Natural Habitats &C.) Regulations 1994; and
- Countryside and Rights of Way Act 2000.

- 6.22. Standards of dust, air and water pollution control, as set out elsewhere in the CoCP will be applied at all construction sites to protect adjacent wildlife habitats.

- 6.23. The Contractor shall implement a programme of ecological watching briefs for all works near sensitive areas, including vegetation clearance, tree felling etc. The detailed requirements for watching briefs are specified in the relevant sections below.

- 6.24. The Contractor shall implement a certification procedure to allow ecologists to survey sensitive and potentially sensitive areas before works start, allowing mitigation or protection measures to proceed before construction works commence.

Site Personnel Briefing

- 6.25. All site staff will be briefed in respect of protected species and sensitive habitats present within the development area. This will include:

- Details of the species/habitats present;

- The significance of their presence;
- Legislative context and requirements;
- Where they are most likely to be encountered; and
- Correct procedures to be followed should they be found during works.

6.26. A suitably qualified person (to be included within the construction management staff) will be available on-call to respond to any such unanticipated finds.

6.27. Special fencing to highlight these special areas of habitat and protected species will be erected on-site to notify all contractual staff of their whereabouts.

National Statutory Designated Sites

6.28. Due to the localised nature of the potential effects, it is considered highly unlikely that the proposed extraction works will have any direct effect on any statutory designated sites.

6.29. Weldon Park SSSI is at its closest point at a distance of approximately 620 m, beyond an active development site on the south side of the A43, with the Old Quarry Ponds LWS providing a buffer to the works, and with the A43 road forming a barrier to the majority of faunal, amphibian and reptile species movement. Cowthick Quarry SSSI, at a distance of 1.9 km from the Site, is designated wholly for its geological features. There are not anticipated to be any direct or indirect effects on this site as a result of the proposed works.

6.30. Due to the distance of the sites from the excavation areas and the temporary nature of the excavation activities, it is not considered any mitigation measures regarding construction activities are required.

Non-Statutory Designated Sites

6.31. Corby Old Quarry Gullet LWS/LGS and Priors Hall (west) LWS/LGS are situated to the west of Zone 2, whilst Corby Old Quarry Ponds LWS is situated to the east. Both the existing LWS boundaries and the anticipated revised extents (Corby OQPW boundary currently under discussion with the Northamptonshire Wildlife Trust) are situated outside the current Application Site and a distance from the areas of extraction and storage, with the closest activity relating to vehicular access between the working areas and as such, there are not anticipated to be any direct effects on these designated sites as a result of the proposals. There are, however, anticipated to be indirect effects from increased disturbance as a result of noise associated with the works, as well as the potential for dust deposition which may impact the habitats and fauna they support. In addition, there is the potential to adversely impact on water quality of the associated ponds, with possible pollution events occurring. This would affect the survival of both floral and faunal species occurring within the waterbodies, as well as the quality of the habitat as a whole.

- 6.32. The remaining non-statutory designated sites are all located at a distance of at least 500 m from the Site boundary. At this distance from the Site the temporary indirect effect from increased disturbance as a result of lighting and noise will be negligible on each of the sites and as such not considered to be relevant.
- 6.33. The proposed extraction works will be carefully controlled in terms of their potential environmental impacts through implementation of best practice methodology. Appropriate controls will be followed in order to reduce potential environmental impacts. The control of construction noise, vibration and air quality will be undertaken in accordance with BS 5228:2009-1 – Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1 Noise, and BS 5228:2009-2 – Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 2 Vibration. Contractors will also comply with provisions of the Control of Pollution Act 1974. Standard practices will be utilised to manage the use, storage and release of hydrocarbons and chemicals. Adherence to these best practice methodologies will minimise the impact of noise and the risk of pollution events on the designated sites.
- 6.34. Strict control of the haul routes will be enforced by the contractor with no vehicular movements within the 10 m buffer zones to the LWSs.

Vegetation

- 6.35. In support of the planning application submission, the client has included an arboricultural survey and Arboricultural Impact Assessment to identify all trees, hedgerows and vegetation to be protected, those to be removed and any measures/working methods necessary to safeguard any retained trees, hedgerows or vegetation.

Root Protection Areas

- 6.36. As the majority of tree roots are found in the upper metre of soil, development works, including for example even shallow excavation and soil compaction can adversely affect the health of trees in close proximity. Trees differ in their tolerance to root loss or disturbance, according to their age, species and/ or condition. All protection works within this document are in accordance with BS5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations*'
- 6.37. Based on the tree survey data, RPAs have been determined for every retained tree as shown in the Tree Survey. The RPAs are designed to protect at least a functional minimum of tree root mass in order to ensure that the trees survive the construction process. The RPA has been used to inform the Construction Exclusion Zone (CEZ), the area to be protected during development by the use of ground protection and specialised construction techniques.

Sequenced Methods of Construction and Tree Protection

- 6.38. An on-Site meeting will be held if required, with all relevant parties; including the developer, Site Arboriculturist, Architect and LPA representative. The purpose of this meeting is to record Site features including tree condition, to agree tree works (detailed below), to reaffirm the permanent, and any temporary, accesses, location of Site storage, the location of ground protection barriers and the timing of Site operations.
- 6.39. All tree work is to conform to BS3998:2010 'Tree Work' and to current arboricultural best practice. Tree works are to be undertaken by a professional and specialist arboricultural contractor, who carries the appropriate experience and insurance cover and following formal approval from the LPA. No specific tree works are proposed. However, crown lifting to 2.5 m maybe required prior to the installation of tree protection fencing once the fence line has been marked out.
- 6.40. Tree protection barriers will be erected in order to exclude the CEZ from significant construction activity. All excavation work and storage will be undertaken from outside of any RPA. It is the responsibility of everyone engaged in the excavation and storage process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.
- 6.41. Inside the exclusion area of the development the following shall apply:
- No mechanical excavation without approval from the LPA;
 - No excavation by any other means without Arboricultural Site supervision;
 - No hand digging without a written Method Statement having first been approved by the Site Arboriculturist;
 - No ground level changes whatsoever;
 - No storage of plant or materials;
 - No storage or handling of any chemicals;
 - If 360-degree excavators are to be used during construction, at no time is the excavating arm to encroach over the position of the protection barriers;
 - No vehicular access; and
 - No fires should be lit within 10 metres of the nearest point of the canopy of any retained tree;
 - No equipment, signage, fencing, tree protection barriers, materials, components, vehicles or structures shall be attached to or supported by a retained tree.

- 6.42. Following the authorised tree works, tree protection fence, will be erected in accordance with BS5837:2012 that comprises 2 m tall welded mesh panels on rubber feet. The fence panels should be joined together using a minimum of two anti-tamper couplers, installed so they can only be removed from inside the fence.
- 6.43. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabiliser struts mounted on a block tray. The fencing is to be positioned at the edge of the RPA, and where ground protection is present, at the edge of the ground protection.
- 6.44. Once the tree protection barriers have been properly erected in position, they are to be considered fixed, and are not to be removed or altered in any way without prior approval from the Site Arboriculturist and the LPA.
- 6.45. Weather-proof signs shall be fixed to the outside of the walls with words such as 'CONSTRUCTION EXCLUSION ZONE – NO ACCESS AND NO STORAGE OR WORKING WITHIN THIS AREA'.
- 6.46. All operatives and other relevant personnel are to be informed of the role of the exclusion barriers and their importance. A copy of the TPP will be displayed on-Site at all times during the construction process.
- 6.47. It may be necessary to remove part of the existing vegetation from under the canopy of the tree or remove overhanging branches prior to erecting the fencing. Any works of this nature are to be carried out by hand. The position of the barriers is to be marked out with biodegradable marker paint on-Site and agreed with appropriate representatives from the LPA and the Site Contractor.
- 6.48. The barriers will be erected prior to any works on-Site in the vicinity of all retained trees, including enabling works or the delivery of machinery, materials, plant or equipment to the Site or any adjacent land. The barriers will remain in situ until final completion or until a time agreed by the LPA and Contractor.

Temporary ground protection measures

- 6.49. In the unlikely event that it is required, the Contractor, Site Arboriculturist, and the LPA will liaise over measures for vehicular or pedestrian access for extraction operations to be located within a tree's RPA. In such a case, a combination of barriers and ground protection should be adopted to form the CEZ. The objective is to minimise soil compaction.
- Example 1 - For pedestrian movements only, a single thickness of scaffold boards places either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g.) 100 mm depth of woodchip), laid on to a geotextile membrane

- Example 2 - For pedestrian-operated plant up to a gross weight of two tonnes, proprietary inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane; and
- Example 3 - For wheeled or tracked construction traffic exceeding two tonnes gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected

6.50. The Ground Guards temporary road system can be used on construction sites to protect virgin ground from erosion and damage by construction vehicles. Ground Guards are usually installed as a construction 'haul' roadway consisting of a parallel track of 2.4 m x 1.2 m panels with a 1.2 m space in between. Where a temporary 'haul' roadway must pass near to trees, the following extra precautions must be taken in order to spread the loading applied to the track way:

- Edge rails of 200 x 50 mm sawn timber or un-treated sleepers should be installed where the track way will pass over exposed retained tree RPA's. These should be installed on either side of the track way using either 50 x 50 x 500 mm timber stakes or 500 mm steel pins spaced at 1.5 m intervals;
- A layer of geotextile membrane should then be laid over the area of ground to have the track way installed upon it;
- A base layer of Ground Guards should be laid over the top of the geotextile membrane at least three boards wide between the installed timber edging;
- A minimum layer of at least 150 mm deep coarse, preferably green wood chippings should be laid as a compressible layer over the top of the Ground Guards; and
- The twin surface Ground Guard track way can then be laid over the top of the wood chippings.

Trees of Ecological Merit

6.51. Any trees of ecological merit which will be lost as a result of the works will be replaced with an appropriate native species in accordance with the landscape and ecological strategies.

Birds

6.52. The proposed extraction works are not anticipated to result in the loss of any hedgerow or trees. However, the grassland within both the Application boundary and the surrounding areas also provide opportunities for ground nesting birds including a small number which are protected and notable species and there is potential for direct adverse effects on nesting birds that are permanent in nature

as a result of such clearance. Under the WCA (1981, as amended) it is an offence to disturb nesting birds during the nesting bird season (March-August, inclusive).

- 6.53. In addition, works being carried out within proximity to nesting birds may impact them indirectly, depending on the works being carried out, and the species of bird affected. Noise and vibration disturbance effects may result in birds being repeatedly flushed off nests, causing disruption to feeding activity, or even abandonment of nests. This is considered to be a temporary impact.
- 6.54. Further to the potential direct effects on birds whilst they are actively nesting, the removal of suitable vegetation will result in the direct loss of available bird nesting habitat, as well as a loss of foraging opportunities, connectivity, shelter and cover from predators.
- 6.55. Given the extent of habitat loss and potential disturbance of nesting birds, the impact to birds during the proposed works is considered to have a moderate adverse effect that is, therefore, significant at a local level
- 6.56. Where practicable, removal and management of the grassland at the Site will be undertaken outside of the main nesting bird period (i.e. only within the months September to February, inclusive). Where necessary, management of the ground, such as regular cutting following a check by a suitably qualified ecologist, prior to the commencement of works will be undertaken to discourage nesting activity. If these works cannot be restricted to within this period, an Ecological Watching Brief will be maintained during the main bird breeding season to ensure that no nesting birds are adversely affected. This will entail checking all suitable habitat for nesting birds due to be removed, and a buffer of at least 10 m beyond that area by a suitably qualified ecologist prior to the commencement of works. If, during the Ecological Watching Brief, birds are found to be within the area due to be cleared or the buffer zone, measures to prevent any disturbance to breeding birds, including the cessation of tree and vegetation clearance, or works in areas close to breeding sites until the birds have completed breeding, will be put in place until the chicks have fledged. Regular checks will be undertaken by the ECoW, as required, through the nesting bird season.

Great Crested Newts

- 6.57. Zone 2 has previously been cleared of GCNs and comprised sub-optimal habitat for this species. For reasons discussed above, GCNs are considered to be absent from land to the north of the Willow Brook (North). There are, therefore, not considered to be any direct adverse effects on GCNs as a result of the proposed extraction works. However, use of the haul road has the potential to result in increased dust deposition within the GCN receptor areas/LWSs as well as the potential for pollution events to occur. Therefore, any potential indirect impacts are anticipated to have a minor adverse effect which is non-significant.
- 6.58. All works will be carefully controlled in terms of their potential environmental impacts through implementation of best practice methodology as discussed above, minimise the impact of noise, dust and the risk of pollution events to adjacent habitat.

Reptiles

- 6.59. No reptiles have been recorded at the locations of the proposed extraction areas, however, small populations of both grass snake and common lizard have been recorded in and around a ruderal/scrub mound in between Badger Wood and OQPW and within nearby grassland habitat to the south of the Willow Brook. Any movement of machinery in and around suitable habitat identified to support reptile populations has the potential to have a direct adverse impact on reptiles through potential injuries or fatalities, which would constitute an offence under English law.
- 6.60. Given the extent of suitable habitat and the populations identified, the potential impacts are considered to have a minor adverse effect, which is, therefore, not significant.
- 6.61. An on-going awareness for the potential presence of reptiles within the wider Priors Hall site will be maintained and where appropriate the ECoW will undertake watching briefs and habitat manipulation works to minimise the risk of conflict between reptiles and the potential haul routes across the Site. Where possible key habitats will be avoided under the extraction scheme until mitigation has been applied as part of the earthworks and development project.

Bats

- 6.62. Security lighting of the site compound may be required and has the potential to adversely impact upon bat activity within certain areas of the Site, particularly the areas of greatest habitat suitability including woodland edges and the Willow Brook corridor. However, this would only be a temporary deterrent to foraging and commuting bats in a concentrated area, and not across the wider Site.
- 6.63. It is anticipated that during the main active bat season (April-October, inclusive), works will generally cease, or be winding down before dusk when bats emerge and will not begin before dawn when bats return to roosts. Therefore, generally additional artificial lighting will not be required, and there are not anticipated to be any negative effects upon bat foraging and commuting behaviour from noise across the site since works will not coincide with the timing of bat activity.
- 6.64. In certain circumstances, for example, in late autumn or early spring when daylight hours are limited but weather conditions may be suitable for bats to be active, there may be a brief overlap between bat activity and on-Site works. During this period, lighting may be required (including machinery headlights) to enable the works to progress, and this along with any associated noise, may temporarily alter bats foraging and commuting activity across an area of the Site. However, the combined effects of lighting and noise from the works during these occasional circumstances would only be a temporary deterrent to foraging and commuting bats in a concentrated area, and not across the wider Site and this is not anticipated to have any adverse impact upon bats.
- 6.65. Placement and lighting of any Site compound will consider the proximity of suitable bat foraging and commuting habitat. Any lighting will be functional and directional and kept to the minimum required for

safety and security. Retained vegetated habitats, including woodland edge, LWSs and the Willow Brook corridor will remain unlit.

Badgers

- 6.66. There are currently no badger setts at, or within 30 m of the proposed extraction areas. There is, however, the potential for new setts to be dug prior to works commencing on-Site.
- 6.67. There is also the potential for this species to venture onto the Site during the earthworks and there is, therefore, the direct risk of harm to them should they fall into pits or trenches left open overnight during the works.
- 6.68. Strict control of the use of haul routes will be applied. No haul route will be pass within 30 m of an active badger sett unless an appropriate licence from Natural England has been obtained and appropriate mitigation measures applied. Since the extraction works will run in conjunction with the proposed earthworks and development proposals for the Site, any mitigation measures will be co-ordinated.
- 6.69. As the proposed extraction works are to be phased, prior to the commencement of each phase, a suitably qualified ecologist will undertake a check for badger setts within the working area, including extraction site and haul routes, and land within 30 m. In the event that an active badger sett is identified appropriate surveys and monitoring will be undertaken in order to establish the status of the sett and appropriate avoidance or mitigation applied.
- 6.70. Furthermore, during the works, no open trenches or pits will be left uncovered or alternatively without a mammal ramp or graded sides overnight to prevent badgers becoming trapped.

Otters

- 6.71. The Willow Brook is considered to be suitable to provide a commuting corridor for otter between more suitable foraging areas, particularly as it offers connectivity to other waterbodies within the area that would be suitable to support otters and are known to provide foraging opportunities. In addition, otter have been recorded using the ponds within OQPW. There is, therefore, the potential for otter to venture onto Site during the proposed earthworks and to become trapped within any temporary excavations and trenches created as part of the works and left open overnight.
- 6.72. The proposed works have the potential to create pollution events. Spillages may have acute short-term impacts but can also cause long-term chronic damage to productivity and diversity of the habitat, adversely affecting otters through the loss of prey and bioaccumulation of contaminants. Pollutants such as oil or petrol would also reduce waterproofing properties of the otter's fur.
- 6.73. During the works no open trenches or pits should be left uncovered or alternatively without a mammal ramp/graded sides overnight to prevent otters becoming trapped. Best practice measures (as

discussed above) will minimise the risk of pollution events to the existing pond and watercourse during the construction phase.

- 6.74. All works will be carefully controlled in terms of their potential environmental impacts through implementation of best practice methodology to minimise the impact of noise, dust and the risk of pollution events to adjacent habitat.

Brown Hare and Harvest Mice

- 6.75. The vegetated habitats at the Site are considered suitable to support these species. The loss of grassland will result in the direct loss of habitat suitable to support brown hare on the Site, however, they are highly mobile and, if present, will disperse to suitable off-Site habitats. Any noise and vibration disturbance of the works will also cause brown hare to disperse if present at the Site. The effect of the construction works on hares as a result of noise and vibration disturbance will be temporary in nature.
- 6.76. Harvest mice are known to occur within the grassland habitat within the LWSs, however, other habitat within the Site may also support them, including the open grassland. The loss of this grassland habitat during the works will result in harm or injury to individuals of this species, coupled with the noise disturbance during the works they have the potential to disturb mice in adjacent habitats.
- 6.77. During the construction phase of works, no open trenches or pits should be left uncovered or alternatively without a mammal ramp/graded sides overnight to prevent this species from becoming trapped.

Invasive Species

- 6.78. Works in proximity to the Willow Brook have the potential to further spread Himalayan balsam both on-Site and into off-Site habitats. This would cause a moderate adverse impact, significant at a Local level
- 6.79. Management of this species is on-going as part of current works on-Site. A buffer will be maintained to the proposed extraction works which will minimise the risk of machinery coming into contact with this species. Prior to works commencing in Area A, closest to the Willow Brook, a walkover will be undertaken to identify the location of any plants and appropriate working methodologies and disposal of invasive species applied to prevent its spread.

Ground Conditions and Contamination

Contaminated land principles and procedures

- 6.80. The site is predominantly greenfield and as such contamination is not expected to be encountered.
- 6.81. Detailed method statements will be prepared by the Contractor, which will include control measures to ensure that the works do not release contaminated material into the air or into surface or ground

waters and that the handling of any contaminated material does not pose a risk to the health of workers or neighbouring communities.

6.82. Measures which will form part of the handling and control methods for contaminated material include:

- Personnel safety measures will be included in the Contractor's health, safety and environmental management plan, including suitable levels of PPE for site operatives, the provision of decontamination facilities and suitable environmental control measures to be adopted during site works. The plan will also identify the known locations and details of any on site contamination; sampling and testing during the works to classify earthworks into Unsuitable, Landscape Formation Material and Residential Material (in accordance with the Earthworks and Remediation Strategy);
- Sheeting and watering of areas of ground disturbance to reduce the risk of dust and airborne particulates;
- Sheeting of all vehicles carrying contaminated material;
- Special protection measures for works near watercourses and other sensitive locations;
- Use of dust suppression techniques during development to minimise off-site impacts; and
- Implementation of suitable site management procedures for the identification and disposal of buried ordnance finds (should they be encountered).

Procedure for Encountering Unanticipated Contaminated Material

6.83. It is not anticipated that any contaminated material will be encountered due to site being green field throughout history. However, despite this the Contractor will include in the method statement and management plans a procedure for handling unanticipated finds of contaminated material. Measures which are likely to form part of that procedure include:

- A watching brief and ongoing sampling /testing during excavation works to ensure that contaminated material is identified when encountered;
- Regular briefing, toolbox talks and formal training for site staff to ensure that potentially contaminated material is identified;
- Notification procedures, both within the site management hierarchy and with statutory bodies, as appropriate; and
- 'On call' contractual arrangements with specialist remediation contractors to ensure an efficient response to such finds (e.g. in the case of ordnance being encountered).

Quarry Reinstatement

- 6.84. On completion of the limestone extraction the resultant excavation will be required to be backfilled. As part of the extensive earthworks being undertaken at the Priors Hall site, large volumes of clay materials are being excavated, transported and placed as engineered fill. As part of the quarrying activities it is proposed that the clay material as part of the ongoing earthworks works is utilised as the fill material within the resultant quarry excavations.
- 6.85. Compliance testing of all earth works materials required to achieve formation levels shall be carried out by the Earthworks Contractor at a UKAS accredited testing laboratory. Testing at a frequency of 1 no. suite of tests to be undertaken per 2,500m³ of single class material type, or a minimum of 3 samples per material type (as defined in SHW) imported.
- 6.86. The performance of fill material placed at the beneath roads can be ensured by placement of the fill to an Engineered (End Product Specification) i.e. 95% of maximum dry density and less than 5% air voids. Within Public Open Space areas (grassed areas) materials can be placed to a method specification in accordance with the Specification for Highway Works.

Water Quality, Drainage and Flood Protection

Flood Protection

- 6.87. The Contractor will be responsible for ensuring that the works are planned, sequenced and carried out in a manner that does not increase the flood risk to the site or to areas downstream and upstream of the site.
- 6.88. This will be achieved through the preparation of a comprehensive and coordinated construction water quality and flood risk management plan prepared in accordance with the advice in the National Planning Policy Framework and National Planning Policy Guidance. The Plan will be prepared in consultation with the Local Authority and the Environment Agency (EA) and will be subject to Local Authority approval.
- 6.89. The following principles will be contained in the Contractor's flood risk management plan:
- Wherever possible, permanent flood attenuation works will form an early stage of each phase of the works to ensure that any construction flood risks are mitigated at the start of each phase;
 - In all cases, existing surface water drainage features will not be filled in or removed until new or replacement surface water drainage is in place;
 - The Contractor will also ensure that earthworks, aggregates and other materials are not allowed to infiltrate and clog watercourses and surface water drainage features;

- Contractors will be required to obtain approval from the EA to their site-specific proposals for surface water protection measures to be adopted during excavation works.

Surface and Ground Water Protection Controls

- 6.90. The Contractor's Flood Risk Management Plan will set out the surface water features to be protected and the required controls and protection measures to be adopted during excavation works.
- 6.91. In planning and carrying out any excavation works; precautions will be taken to secure protection of watercourses and water in underground strata against pollution.
- 6.92. The Contractor will obtain the appropriate licences from the EA and the relevant statutory undertaker for discharges to watercourses, sewers or groundwater in accordance with relevant statutory provisions.
- 6.93. In order to limit pollution from silt, cement and other potentially polluting materials, several measures will be implemented, including:
- The washout from any mixing plant, or the cleaning of any lorries must not be allowed to flow into any drain or watercourse. Any residue shall be removed from the site and either recycled or disposed of at a suitably licensed waste management facility;
 - Site roads must be regularly maintained and kept free from deposits in order to prevent silt, oil or other materials entering any drain or watercourse;
 - Any lorry wheel cleaning facilities shall be securely constructed with no overflow and effluent shall be contained for proper treatment and disposal;
 - Before any discharge of water is made from the site, adequate provisions, such as development lagoons, must be made to ensure that pollution will not occur. The local EA office shall be consulted in order to obtain approval.
- 6.94. In order to prevent pollution from oil and chemicals;
- All fuel and chemical storage must be either in double skinned storage tanks or sited on an impervious base within a bund and secured. The base of the bund walls must be impermeable to the material stores and of sufficient capacity to contain 110% of the volume of the largest tank, or 25% of the total capacity of all tanks, whichever is the greater;
 - Filling and refuelling must be strictly controlled and together with any oil storage tanks, should be confined to a location remote from any watercourse or drain;
 - Leaking or empty drums must be removed from the site immediately and taken to an appropriate facility for treatment and disposal;

- All valves and trigger guns shall be as resistant to unauthorised interference and vandalism as possible and should be turned off and securely locked when not in use;
- The capacity and contents of any tank shall be clearly marked on the tank and a notice displayed requiring that valves and trigger guns be locked when not in use;
- Any tanks or drums shall be stored in secure containers or compounds. These must be kept locked when not in use;
- Before any tank is removed or perforated, all contents and residues must be emptied by a competent operator for safe disposal;
- Pipes may contain significant quantities of oil or chemicals, and shall be capped, or valves closed to prevent spillage; and
- If any pollution occurs, then the Contractor shall advise the EA and the Local Authority immediately and take prompt action to minimise the impact and prevent re-occurrence.

Local Authority Maintenance Access

- 6.95. Access for the Local Authority to functioning surface water drainage ditches and watercourses will always be maintained during the works, as necessary for the protection of surrounding areas from flood risks. The access routes, which may change from time to time to suit the requirements of the works, will always remain free from fixed obstructions.
- 6.96. A regular liaison arrangement will be established between the Client, Contractors and the Local Authority to ensure it is kept informed of details of site arrangements, as appropriate. The liaison arrangements will include reviews of proposals prior to formal submission and the establishment of key points of contact for regular communications and for emergency situations.

Heritage and Archaeology

- 6.97. If applicable, the client will provide Contractors with a plan showing the location of all known archaeological sites.
- 6.98. The proposed development is located approximately 200m west of the western boundary of Deene Park, and approximately 1.2km west of the Listed Buildings that form its core. The tree belt that defines the eastern boundary of Zone 3 provides a strong visual buffer between the proposed development and Deene Park (Photo 1). Furthermore, The Rookery woodland provides a further area of screening. There is no obvious association (visual or otherwise) between Zone 3 and the Park, or its principle historic buildings. This includes the Grade I Listed Deene Hall, which is located 1.3km to the east of Zone 3. Consequently, the important elements of the physical surrounds and experience of Deene Park will not be altered by the proposed development, and its heritage significance will remain unharmed.

- 6.99. The buried remains of a Roman villa are located beyond the proposed development. Appropriate mitigation measures were agreed as part of the HMSP to ensure that the significant archaeological remains relating to the Roman villa are retained within an Archaeological Preservation Area as agreed with the Council.
- 6.100. No development relating to minerals extraction is proposed within the Archaeological Preservation Area (APA) which will be retained as an area of green space. As such, the proposed development will not adversely impact upon any archaeological remains within the APA.
- 6.101. It should be noted that there is an existing woodland strip that separates the APA from extraction Area B. This strip will ensure that no construction vehicles are able to either access or cross the APA. In addition to this buffer, it is proposed that additional protection will be provided to the APA in the form of a temporary fence, which will be erected between the extraction area and the woodland. The purpose of this fence will be to prevent access within this area and to avoid any form of disturbance to the remains.
- 6.102. All site operatives will be briefed regarding the importance of the APA and the need to avoid and not disturb this area.
- 6.103. As detailed within the application documentation, no hydrological impacts are expected as a result of the proposals. The Ground Investigation Report prepared by Shadbolt (Issue v2 November 2018) outlines that the closest borehole (CP-2010) extended to 5.5m BGL with no water strikes observed. The maximum excavations proposed on site are 4m in depth; therefore, it is not anticipated that any water will be encountered during excavation works.
- 6.104. The water table lies below the depth of the proposed works and the recent trial holes and archaeological investigation in Area B were all undertaken without encountering any waterlogging or presence of ground water. Therefore, it is not anticipated that there will be any hydrological impact on the APA as a result of the excavations.
- 6.105. Throughout the proposed works, the Contractor will ensure compliance with the provisions of the Heritage Statement submitted as part of this application.

7 EMERGENCY PLANNING AND INCIDENT REPORTING

- 7.1. The Principal Contractor will have a duty under the current edition of the Reporting of Injuries, Diseases and Occurrences Regulations (RIDDOR) to report specific injuries and incidents to the enforcing authority. The purpose of this procedure is to ensure that this duty is fulfilled and that all accidents are investigated.

Environmental Incident Recognition

- 7.2. The site induction will include environmental incident recognition. Briefing topics will include:
- Uncontrolled discharge/spillage of polluting substances such as concrete and harmful solids etc. into the ground, watercourses and sewers;
 - Release of particulates into the atmosphere (e.g. smoke, dust) / water (e.g. silt);
 - General ecological, archaeological and environmental awareness;
 - Storage of substances and maintenance of plant and machinery;
 - Location of emergency response equipment (e.g. spill kits) and responsibility for their use; and
 - Legislation and responsibilities.

Emergency Planning

- 7.3. Systems, procedures and equipment will be put in place for emergency planning, including:
- Provision of adequate spillage containment materials to stop and contain pollution, including spill kits, earth for bunding etc;
 - Provision of a site drainage plan identifying the location of existing and proposed surface water drainage;
 - Contact numbers for the Environment Agency and essential local emergency services;
 - Appointment of a site 'emergency pollution control response team' to respond to pollution incidents; and
 - All site staff will be trained in the use of emergency response equipment.

Incident Control and Reporting

- 7.4. Incident control procedures will be developed and provided to all staff working on site. A Method Statement and Risk Assessment will provide further details regarding the procedures relating to accidents and injuries on site.

Site Rules

- 7.5. All persons are to report to the site supervisor on arrival to site. Covid 19 compliance will be enforced on site. Hard hats, hi-visibility vests and safety footwear are mandatory while working on site.

- 7.6. All persons working on the site to attend a Safety Induction Briefing (including emergency procedures) by the site supervisor daily, prior to commencing with works. These will be supplemented, by a Toolbox Talk on a subject matter selected by the site supervisor and relevant to the works.
- 7.7. A set of site rules will be displayed within the site office developed to set the minimum standard to be adopted by all contractors and sub-contractors. A Method Statement and Risk Assessment provides further details regarding site rules.

8 MONITORING AND REPORTING

- 8.1. Monitoring is a vital process in ensuring the effectiveness of the CoCP, with any non-conformities against and deficiencies within the CoCP being identified, investigated and remedied. Should any deficiencies be identified, the CoCP will be updated to ensure the document continues to fulfil its objectives. To ensure the CoCP remains current, it will be updated by the client at least every six months during the excavation process to incorporate changes in legislation, standards, plant, processes, etc.
- 8.2. Regular environmental audits of the excavation works will be undertaken by the Contractor or an external consultant to ensure compliance with the CoCP. All audits will be documented in an Audit Report, a copy of which will be retained on site for inspection.
- 8.3. A Non-Conformance Report will identify any non-conformance and the required corrective action. The report will allow subsequent audits to monitor the performance of the corrective action and then sign off the corrective action request once it has been successfully implemented. All completed Non-Conformance Reports will be held on site in a designated file by the Developer.

9 CONCLUSIONS

- 9.1 This Code of Construction Practice provides a set of specific 'rules' for the management of excavation activities related to extracting minerals from the Priors Hall site. It is a critical document which provides the necessary assurance that the works will be managed with appropriate sensitivity to the potential impacts on the community and the local environment.
- 9.2 In this context 'management' refers both to how the works are carried out but also to how communication is undertaken, i.e. to provide information on progress and to respond to queries and complaints as they arise.
- 9.3 The CoCP is subject to Local Planning Authority approval prior to the commencement of any works and the commitments set out herein are mandatory upon all developers and contractors which work on the sites from which minerals are proposed to be extracted at the Priors Hall site.

10 LIST OF ASSOCIATED DOCUMENTS

10.1 Code of Construction Practice will be supplemented by a number of other documents that have, or will have, been prepared by the Developer, Contractor and environmental consultants. The CoCP should be read alongside these documents, which will be submitted in support of the planning application. Such documents are likely to include:

- Full Application Plans
- Planning Statement
- Geotechnical Assessment
- Ecological Statement
- Heritage Statement
- Dust Impact Assessment
- Noise Impact Assessment
- Flood Risk Assessment
- Arboricultural Survey / Impact Assessment
- Method Statement / Risk Assessment
- Restoration Aftercare Statement

10.2 It should be noted that this list is not exhaustive and will depend upon Contractor appointment. Works may also be subject to separate authorisation from respective bodies such as Natural England, the Environment Agency and Local Highway Authority.