

NORTHSTOWE PHASE 2 PLANNING APPLICATION

Outline Site-Wide Construction Environmental
Management Plan

August 2014

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Homes and Communities Agency

Northstowe Phase 2

Outline Site-Wide Construction Environmental Management Plan

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CONTENTS

1	INTRODUCTION.....	1
1.1	Background	1
1.2	Site Description.....	1
1.3	The Surrounding Area	2
2	SCOPE OF CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	3
2.1	Background	3
2.2	Phase-specific CEMPs.....	4
2.3	Environmental Management.....	5
2.4	Environmental Inspections.....	6
2.5	Training, Awareness and Competence.....	6
3	CONSTRUCTION WORKS & SITE INFORMATION.....	7
3.1	Construction Programme.....	7
3.2	Construction Hours of Work.....	9
3.3	Construction Site Preparation.....	9
3.4	Construction Site Layout	10
3.5	Construction Site Hoardings.....	11
4	ACCESS ARRANGEMENTS.....	12
4.1	Access and Haul Routes	12
4.2	Construction Deliveries	12
4.3	Public Access during Construction.....	12
5	CONSTRUCTION PLANT & MATERIALS	14
5.1	Construction Plant.....	14
5.2	Construction Materials.....	14
5.3	Storage of Plant and Materials.....	14
5.4	Sustainability	15
6	ENVIRONMENTAL CONTROLS.....	16
6.1	Noise & Vibration	16
6.2	Air Quality.....	17
6.3	Water	21
6.4	Ecology	23
6.5	Landscape & Visual Impact	25
6.6	Archaeology and Cultural Heritage	25
6.7	Lighting.....	26

6.8	Construction Waste.....	27
7	EMERGENCY PLAN.....	29
7.1	General Arrangements.....	29
7.2	Dealing with Spills.....	29
7.3	Unexploded Ordnance	30
8	EARTHWORKS STRATEGY.....	31
9	COMMUNICATIONS.....	32
	ABBREVIATIONS.....	33

List of Appendices

Appendix A – Plan 3 - Application Areas Plan

Appendix B – Plan 4 – Existing Levels & Plan 10 – Proposed Levels

1 INTRODUCTION

1.1 Background

- 1.1.1 This Site-Wide Construction Environmental Management Plan (CEMP) has been prepared to support the Homes and Communities Agency's (HCA) planning application for Phase 2 of Northstowe. The application is for:
1. development of the main Phase 2 development area for approximately 3,500 dwellings, two primary schools, the secondary school, the town centre including employment uses, formal and informal recreational space and landscaped areas, the eastern sports hub, the remainder of the western sports hub (to complete the provision delivered at Phase 1), the busway, a primary road to link to the southern access, construction haul route, engineering and infrastructure works; and
 2. construction of a highway link (Southern Access Road (West)) between the proposed new town of Northstowe and the B1050, improvements to the B1050, and associated landscaping and drainage.
- 1.1.2 For the purpose of the CEMP all elements are referred together as 'the proposed development' of Northstowe Phase 2.
- 1.1.3 The purpose of this document is to outline how the applicant, developers and contractors will manage, and where practical minimise, the impact of the proposed development's construction upon the sites surrounding. The applicant is committed to achieving high environmental standards and working closely with the local community and other stakeholders throughout the development period.
- 1.1.4 Following appointment of a principal contractor, the applicant will submit more detailed sub-phase specific CEMPs which will identify proposed construction activities, plant usage and environmental monitoring plan for each sub-phase of the proposed development.

1.2 Site Description

- 1.2.1 The application site extends to 216 hectares and comprises two parts: the main Phase 2 development area and the Southern Access Road (West), as shown on Plan 3 - Application Areas Plan (Appendix A). Each of the parts is described below.

Main Phase 2 Development Area

- 1.2.2 The area of the main Phase 2 development area is approximately 165 hectares. The area is bordered to the east by the route of the Cambridgeshire Guided Busway, and to the west by Longstanton. The area includes the former Oakington Barracks, which currently comprises of three buildings, with no current use; slabs remaining from demolished buildings; remaining facilities associated with the barracks including sports amenities and green space; and a water tower which is the tallest structure on the site and visible feature in the wider landscape. The area surrounds the existing settlement of Rampton Drift, comprised of 92 properties, originally built as part of the barracks complex, although this area is not included in the application. The wider main Phase 2 development area includes areas of hardstanding and open space associated with the former airfield (much of this currently occupied by agricultural tenants),

farmland including Brookfield Farm and Larksfeld Farm. The area also includes a section of Rampton Road.

1.2.3 To the south of the main Phase 2 development area, and through which its proposed access routes run is land that is identified for future phases of development of Northstowe.

1.2.4 Intervening vegetation results in the site being largely screened from surrounding villages and farmsteads. There are groups of trees throughout the former Oakington Barracks including avenues of mature trees around the barracks complex and leading to the station headquarter building. There are also groups of mature trees in the western corner of the site and around Rampton Drift. These all contribute to the setting of the site and adjacent Longstanton.

Southern Access Road (West)

1.2.5 The area for the Southern Access Road (West) runs from the B1050 to the boundary of Northstowe, as shown on the Plan 3 – Application Areas Plan. This area currently comprises arable fields and extends to approximately 51 hectares. Wilson's Road, a public right of way crosses the area, providing a link from Longstanton towards Bar Hill.

1.3 The Surrounding Area

1.3.1 The area surrounding the site is dominated by agricultural land, with a number of nearby small settlements and villages. In addition to the settlements of Longstanton, Oakington and Rampton Drift, the site is also in proximity with Rampton (approximately 1km to the north west) Willingham (approximately 2km to the north), Cottenham (approximately 2.5km to the west).

1.3.2 To the north of the site is the proposed site of Phase 1 of Northstowe, for which outline planning permission has been granted by South Cambridgeshire District Council (SCDC) in April 2014. The current uses of this site include agricultural fields and Cambridge Golf Club, which closed in August 2013. Enabling works associated with the development have commenced.

1.3.3 To the south of the site, and through which the Southern Access Road (West) will run, is land that is identified for future phases of development of Northstowe.

1.3.4 The A14 runs approximately 3km to the south west of the site. The B1050 Hatton Road/Longstanton western bypass runs from the A14 to a roundabout to the north west of the site.

2 SCOPE OF CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

2.1 Background

2.1.1 The purpose of the site-wide CEMP is to set a framework to manage and mitigate potential impacts of the construction process on the following sensitive receptors surrounding the site:

- air, noise and vibration impacts on residential properties particularly those at Longstanton, Oakington and Rampton Drift;
- minimise dust and sediment impact on surrounding properties and surface waters;
- protection of trees and site arboriculture, in particular Root Protection Zones (RPZ) of trees to be retained;
- containing potential groundwater and chemical contamination which may be encountered during construction; and
- containing debris and mud within the site boundary for the benefit of the surrounding highways.

2.1.2 The potential environmental effects of the proposed Phase 2 development have been assessed and are set out in the Environmental Statement (ES) submitted in support of the application. The ES considers the potential impacts of the proposed development on several aspects of the surrounding environment and details a number of mitigation measures to be implemented during construction in order to minimise the impact of the proposed development on the surrounding environment. These proposed mitigation measures have been incorporated into this document.

2.1.3 This site-wide CEMP sets out the management measures which the applicant will require its contractors to adopt and implement for the construction of the proposed development to avoid, mitigate and manage construction effects on the environment, any existing surrounding communities and new residents of Northstowe.

2.1.4 This site-wide CEMP is a working document that will be updated periodically, in line with relevant legislation and guidance.

2.1.5 This document should be read in conjunction with the following documents submitted in support of the planning applications:

- Waste Strategy including Site Waste Management Plan (SWMP);
- Arboricultural Survey Report and Plans;
- Geo Environmental Assessment and Outline Remedial Strategy;
- Risk Mitigation Plan (RMP); and
- Framework Travel Plan (FTP).

2.1.6 The following documents will be developed following the appointment of a principal contractor and will also complement the provisions made in this document.

- Construction Traffic Management Plan (CTMP);
- Historic Environment Management Plan (HEMP);
- Ecology Management Plan (EMP);and
- Dust Management Plan (DMP).

2.2 Phase-specific CEMPs

2.2.1 Phase-specific CEMPs will be prepared for each sub-phase of the construction works and the construction of the Southern Access Road (West) (from herein the Southern Access Road (West) will be referred to as a sub-phase of the proposed development).

2.2.2 The phase-specific CEMPs will be consistent with the site-wide CEMP and will describe any environmental obligations pertaining to that part of the application site and sub-phase of the proposed development which are not already covered in this document.

2.2.3 The phase-specific CEMPs will include the following general documentation:

- a management structure including an organisational chart showing staff responsible for environmental work, setting out roles and responsibilities;
- details of the nominated environmental manager;
- an internal environmental audit programme, for example ISO 14001;
- an Environmental Risk Register and procedures showing how environmental risks will be addressed;
- procedures for environmental training of site staff;
- procedures for programming, managing and documenting communication of environmental matters;
- procedures for handling external communications, liaison and complaints including the development and maintenance of a clear audit trail;
- procedures for monitoring, recording and disseminating environmental information and performance;
- procedures for addressing non-compliance and corrective actions; and
- procedures for managing major incidents, unexpected occurrences or finds during construction, particularly related to: air quality, cultural heritage (including archaeological finds), ecology, ground quality, noise and vibration and water resources.

2.2.4 The phase-specific CEMPs will include the following documentation in respect of construction works:

- site location and site plan showing site boundaries, position of plant and sensitive receptors;
- description of the works;
- programme of principal construction activities;

- proposed normal working hours;
- outline of works which may require construction activities outside normal working hours;
- equipment and plant to be used;
- vehicular access routes/points including location plan and list of activities for which each access point is to be used;
- method of delivery/removal of materials and plant;
- details of proposed site accommodation;
- personnel access routes/points including location plan and list of activities for which each access point is to be used;
- details of how public right of way and access to property will be retained and managed;
- reference to CTMP; and
- location of secure storage facilities for tools and equipment.

2.2.5 Phase-specific CEMPs will include the following documentation in respect of legal requirements:

- schedule of appropriate environmental legislation and good practice that will be adhered to;
- list of specific objectives and targets that have been imposed by planning conditions and agreed in consultation with third parties; and
- register of permissions and consents required, with responsibilities allocated and programme for obtaining them.

2.2.6 Phase-specific CEMPs will include the following documentation in respect of environmental requirements:

- procedures for monitoring construction processes against project environmental objectives and for appropriate action if thresholds have been breached;
- procedures for reporting spillages/pollution incidents to the relevant authorities;
- procedures for co-ordinating monitoring results to ensure the combined effect of the works in different locations does not trigger threshold levels;
- specific Environmental Risk Register relating to each activity; and
- monitoring proposals including: receptors for which monitoring will be undertaken; frequency; factors against which monitoring results will be analysed; threshold levels, speed of analysis; results distribution list; and actions if thresholds are breached.

2.3 Environmental Management

2.3.1 The contracts awarded for Northstowe Phase 2 will include a requirement on the contractors to comply with the site-wide CEMP and any subsequent phase-specific CEMPs.

- 2.3.2 Contractors will be required to sign up to the Considerate Contractors Scheme (CCS). This is a national initiative, set up by the construction industry. Sites that register with the Scheme sign up to and are monitored against a Code of Considerate Practice, designed to encourage best practice beyond statutory requirements.
- 2.3.3 The scheme is concerned with any area of construction activity that may have a direct or indirect impact on the image of the industry as a whole. There are three main categories under which contractors are assessed: the environment, the workforce and the general public.
- 2.3.4 Contractors will be required to comply with all relevant environmental legislation and to take account of published standards, accepted industry practice, national guidelines and codes of practice appropriate to the proposed development.
- 2.3.5 Due regard shall be given to the guidance and advice given by ISO14001 Environmental Management and CIRIA (Construction Industry Research and Information Association) Environmental Good Practice on Site C692 (Third edition, 2010).

2.4 Environmental Inspections

- 2.4.1 For the duration of the contract, the environmental performance of the contractor will be monitored through site inspections and audits. Daily inspections should be undertaken by a nominated member of construction site staff to determine compliance with the environmental requirements set out in the site-wide CEMP and the relevant phase-specific CEMP, ensuring legal and contractual conformity. These inspections should be supplemented on a weekly basis with inspections by a suitably qualified environmental professional.
- 2.4.2 Records of all inspections carried out should be recorded on standard forms and all actions closed out in a reasonable time. Phase-specific CEMPs will include further details of inspection procedures.

2.5 Training, Awareness and Competence

- 2.5.1 All contractors and subcontractors will be selected with due consideration of qualifications and experience. A baseline level of environmental awareness will be initiated through site inductions. All personnel will be required to attend a site induction prior to starting work on site. Key environmental considerations and objectives will be incorporated into this induction.
- 2.5.2 Toolbox talks (TBT) specific to the construction works will be developed and delivered on an appropriate timescale. Where necessary a TBT will be delivered in the event of an incident or complaint. Training records will be kept in the form of attendance sheets.

3 CONSTRUCTION WORKS & SITE INFORMATION

3.1 Construction Programme

3.1.1 There are six key residential phases initially proposed for the build out of the Main Phase 2 Development Area (shown in Figure 3-1). A final phasing plan will be agreed in advance of commencement with SCDC and CCC. These timescales may vary depending on changes to housing market conditions.

- Sub Phase A (2016-2018): To include secondary school, completion of water park and enhancement of green separation (west);
- Sub Phase B (2017-2019): To include initial residential units adjoining Phase 1, commencement of access road to south (through future Phase 3 area to connect to Southern Access Road (West));
- Sub Phase C (2019-2021): Town centre commences, including initial retail facilities, primary school, completion of Southern Access Road (West);
- Sub Phase D (2021-2023): Residential area to south and construction of town square and sports hub (east);
- Sub Phase E (2023-2026): Residential area established in former barracks area, continuation of town centre, primary school;
- Sub Phase F (2026-2029); Last residential area and completion of town centre and northern sports hub.

3.1.2 Other key land use phasing dates:

- Town centre construction to commence in Phase C and is expected continue to develop up to 2031 dependent on demand for retail and employment uses.
- The Southern Access Road (West) will be constructed between 2017-2020.

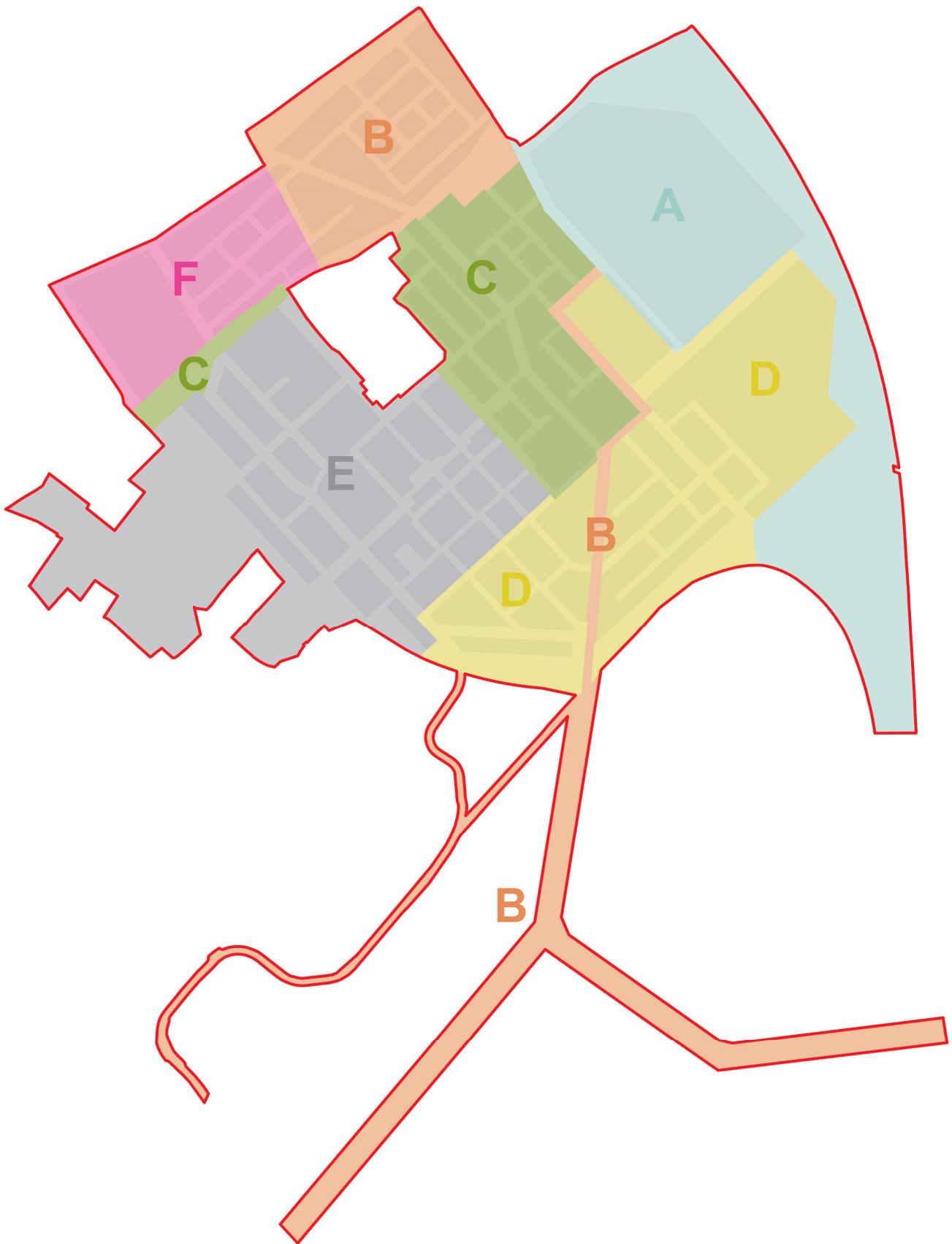


Figure 3.1 Location of proposed construction sub-phases of Northstowe Phase 2

3.2 Construction Hours of Work

3.2.1 Working hours during the construction phase would be limited to:

- 07:30hrs – 19:00hrs Monday to Friday
- 07:30hrs – 13:00hrs Saturday; and
- no noisy activities on Sundays and Bank Holidays

3.2.2 One hour start up and shut down time is anticipated to be needed in addition to the core working hours outlined above.

3.2.3 No continuous 24-hour activities are envisaged and there will be no Sunday or Bank Holiday working unless otherwise agreed with SCDC beforehand. Some instances may occur when specific activities, such as long concrete pours, are unable to be stopped within the core working hours or it may be unsafe to do so. In these instances out of hours working will be required and the council will be notified of any such occurrences.

3.2.4 The contractor will obtain consents from SCDC under the Control of Pollution Act (COPA) 1974 Section 61, which will further define the hours of work on the construction site. These arrangements may be varied by agreement with the relevant local authority in accordance with COPA.

3.3 Construction Site Preparation

3.3.1 Site preparation works will be required prior to any construction. For the proposed development this will include the activities set out in the following section.

Establishment of site compounds

3.3.2 Prior to commencement, construction site compounds will be established. The location(s) of the compounds will be determined by the applicant upon appointment of a principal contractor. The initial site compound is likely to be in the vicinity of the B1050.

3.3.3 The structures are likely to be comprised of portable cabins, which will work as a focal point for general site management including deliveries and visitor information. Welfare facilities for the construction workforce will also be provided along with meeting space. These facilities are also likely to be comprised of portable cabins.

3.3.4 Further site offices are likely to be required in each of the individual sub-phases, details of which will be given in the relevant phase-specific CEMP.

3.3.5 Onsite parking will be required for construction workers within close proximity to the site offices. The definitive location of the parking area will be decided prior to commencement of construction and detailed in the phase-specific CEMPs. Suitable drainage features will be included to minimise and manage sediment and potential contaminants.

3.3.6 Facilities that will be provided for the storage of construction materials are discussed in section 5.3.

3.3.7 Lighting arrangements during the construction works are discussed in section 6.7.

3.3.8 For the construction of the Southern Access Road (West) it is assumed that construction will begin from the western end near the B1050 and a construction compound will be provided on

the eastern side of the B1050. The means of temporary access will be agreed with the Highway Authority but is likely to require temporary traffic signals on the B1050 or use of an existing access point within the land in HCA control.

- 3.3.9 Further details on the site compounds will be established upon appointment of the principal contractor at which point this CEMP should be updated. Details of any phase-specific compounds will be include in the relevant phase-specific CEMP.

Demolition of buildings

- 3.3.10 All buildings that are currently on the site will be demolished except for:

- the Water Towers - Building no. 51;
- the listed pillboxes;
- Officers' Mess - Building no. 2, a Georgian style building surrounded by dense planting with main access from an avenue of mature lime trees. This building is proposed to be converted into a primary school;
- the Guard's House - Building no. 7, which is planned to become a new local pub; and
- part of the former barracks' road layout will be retained.

Site remediation

- 3.3.11 Site investigations have identified the potential for contamination to exist on site. An Outline Remediation Strategy has been prepared for the site and is submitted in support of the planning application. Detailed Remediation Strategies will subsequently be prepared to accompany reserved matters applications. Validation Report will be produced to demonstrate that remediation has taken place.

- 3.3.12 The outline Remediation Strategy identifies the need for and methodology for remediation of:

- contaminated soils (organic and inorganic);
- asbestos;
- radiological contamination;
- groundwater contamination;
- ground gases; and
- unexploded ordnance (UXO).

Earthworks

- 3.3.13 Earthworks involving cut and fill are required to enable land raising and re-profiling of the site for sustainable drainage purposes. Further details on the Earthworks Strategy are given in section 8 of this document.

3.4 Construction Site Layout

- 3.4.1 As far as reasonably practicable and appropriate, the site layout and appearance will be designed using the following principles:

- sites at prominent locations will be screened;
- all sites will be fully secured;
- existing features will screen the sites where appropriate;
- storage sites, fixed plant and machinery equipment and temporary offices will be located to limit environmental impacts, as far as reasonably practicable, and having due regard to neighbouring accommodation, as far as allowed by the constraints of the site;
- site lighting will be located and directed so as not to intrude into occupied residential properties, sensitive areas or constitute a road hazard;
- security cameras will be sited and directed so that they do not intrude into occupied residential properties; and
- site plant and facilities will be powered from mains electrical sources, where practicable.

3.5 Construction Site Hoardings

3.5.1 Much of the construction site will be located within the secure perimeter fence of the former Oakington Barracks. As far as reasonably practicable the visual intrusion of construction sites on nearby residents and users of local facilities and amenities will be contained and limited. The detailed arrangements with regards to the site hoardings will be subject to approval from SCDC.

3.5.2 The hoardings will accord with the following principles:

- the standard hoarding will be of suitable height, plywood faced, timber framed hoarding suitably painted;
- the hoarding will be increased in height and possibly altered in form to enhance acoustic performance and minimise visual intrusion for specific locations;
- suitable measures will be used for tree protection;
- where reasonably practicable existing walls, fences, hedges and earth banks will be retained;
- notices will be displayed on all site boundaries, to warn of hazards on site such as deep excavations, construction access, etc;
- appropriate sight lines/visibility splays will be maintained to ensure safety of both vehicles and pedestrians is preserved; and
- temporary fences may be used in certain areas, such as for short term occupation of sites.

3.5.3 Both the applicant and the contractor will take reasonable steps to ensure site security measures are in place to prevent the illegal disposal of waste at the site.

4 ACCESS ARRANGEMENTS

4.1 Access and Haul Routes

- 4.1.1 Construction vehicles will access the Phase 2 development initially through Phase 1 (to construct the secondary school and initial homes) during the period of time until the Southern Access Road (West) enables connection to the proposed haul road (that utilises the existing airfield perimeter road).
- 4.1.2 Once the Southern Access Road (West) is complete, all construction vehicles will access the development from the A14 at Bar Hill, and the Southern Access Road (West).
- 4.1.3 From the roundabout junction of the Southern Access Road (West) and the Primary Road through the future Phase 3 of Northstowe (to the south of Longstanton Road), a construction haul route will be provided using the existing western perimeter road. This will be only for construction vehicles and will enable a separation of construction and operational traffic during the build out of the development.
- 4.1.4 In order to reduce the import and export of material and hence the number of vehicle trips to and from the site, emphasis will be placed on re-using material on-site. Following appropriate testing, material suitable for re-use on-site will be stockpiled and incorporated into the construction process for roads, car parking areas and soft landscaped areas.
- 4.1.5 A CTMP will be developed once a principal contractor is appointed to ensure there is no access to the site for construction vehicles from local roads and will set out management measures to mitigate the effects of vehicles on the highway network.

4.2 Construction Deliveries

- 4.2.1 Details of the routing of construction vehicles and visitors to the site will be agreed with the Highway Authority and Cambridgeshire County Council (CCC).
- 4.2.2 All construction traffic entering and leaving the site will be closely controlled. Vehicles making deliveries to the site or removing material will travel via designated routes, which have been previously agreed with CCC/SCDC.
- 4.2.3 Measures will be taken to review and reduce where possible the numbers of construction vehicles accessing the site during peak hours, by adopting such measures as 'just in time' deliveries.
- 4.2.4 Areas for loading and unloading will be agreed prior to commencement of construction.
- 4.2.5 Wheel washing facilities will be located on site to lessen the impact of dust and debris on surrounding highways. These will be located away from areas of environmental sensitivity and be designed and managed so as to not cause impact to the environment.

4.3 Public Access during Construction

- 4.3.1 A comprehensive, permeable network of walking routes is proposed throughout the completed development and segregated cycleways will follow the corridor of primary and secondary roads.
- 4.3.2 During construction the existing Public Rights of Way (PRoW) across the site will be maintained as far as reasonably practicable. Where PRoW are required to be diverted, this will be done so

in consultation with the local authority. Details of PRow and any diversions will be given, where relevant, in subsequent phase-specific CEMPs.

- 4.3.3 Public access will be restricted as such to avoid contact with potentially unsafe areas and hazards such as the barracks area.

5 CONSTRUCTION PLANT & MATERIALS

5.1 Construction Plant

5.1.1 The plant and equipment that will likely be utilised during the construction phase may include

- scrapers,
- dozers,
- 360° excavators,
- backhoe loaders,
- dumpers,
- dump trucks,
- rollers and
- compressors.

5.1.2 Concrete crushers / sorters / ridders would be needed to crush the remaining concrete pads and sort/grade materials from demolition and excavation.

5.1.3 Other heavy equipment may also be required during the construction of buildings including lifting plant, cranes and fork lift trucks. Precise details of the nature and quantity of plant and machinery for each sub-phase are unknown at this stage but will be defined in the subsequent phase-specific CEMPs.

5.2 Construction Materials

5.2.1 The construction materials required will likely be those normally associated with a development of this nature, including items such as bricks, windows, rooftiles, blockwood, bulk timber, timber trusses, ready mixed concrete, plasterboard, dense bitumen/ stone macadam, concrete kerbing and sub-base crushed concrete. Where possible, materials will be sourced locally.

5.3 Storage of Plant and Materials

5.3.1 Secure, hard-standing space will be designated alongside loading and unloading areas for the initial storage of plant and materials. Due to the size of the proposed development, additional localised storage areas will be introduced, in line with the phasing of the development, to reduce the movement of plant and materials around the site. Details of this will be included in the phase-specific CEMPs.

5.3.2 All hazardous substances (including liquids and solids) will be stored within impermeable, bunded areas, to remove the risk of migration to groundwater or a nearby watercourse to the satisfaction of the Environment Agency (EA). The measures proposed will assist in avoiding or minimising the potential for contaminants and suspended solids to migrate to surface and groundwater, reduce localised flood risk, and protect water quality and the ecosystems the water resources support.

5.4 Sustainability

5.4.1 The proposed development will adhere to sustainable principles which are outlined in the Sustainability Statement, submitted in support of the applications, which include:

- encouraging the sustainable use of materials in construction;
- minimising the use of potable water during construction;
- promoting the use of renewable resources and the creation of sustainable energy; and
- reducing emissions of greenhouse gases.

5.4.2 Measures which will be adopted to encourage sustainable construction will include:

- giving preference to the use of locally sourced materials;
- use of recycled materials and aggregates, particularly in the construction of roads, footpaths, cycleways and hard landscaping;
- a Materials Management Plan will be prepared following the approach in CL:AIRE Development Industry Code of Practice to ensure sustainable re-use;
- sourcing timber used in construction from sustainable sources, which includes verifiably sustainably managed forests (sources registered with the Forest Stewardship Council (FSC), Pan European Forest Certification or the UK Woodland Assurance Scheme);
- use of rainwater from attenuation facilities for irrigation and dust suppression;
- providing environmental awareness training for staff involved in construction; and
- comply and register with the CCS.

5.4.3 Full details of the measures to be adopted are given in the Sustainability Statement.

6 ENVIRONMENTAL CONTROLS

6.1 Noise & Vibration

- 6.1.1 The construction noise impacts predicted in the ES indicate that unmitigated noise levels would have a significant effect (ranging from slight to substantial) within 200m of the works, with the highest noise levels experienced closer to source. The predicted noise levels are based on a possible worst case, unmitigated scenario, and it should be noted that construction noise tends to fluctuate and is usually of fairly short duration.
- 6.1.2 Beyond 200m from the works, construction noise impacts are expected to be negligible. The majority of the proposed works will occur in excess of 200m from local settlements.
- 6.1.3 General construction management measures will be put in place to limit environmental effects from the construction phase, including:
- Best Practicable Measures (BPM) (as outlined in Section 72 of COPA will be employed in order to minimise noise and vibration levels throughout the period of the works;
 - recommendations and good practice as shown BS 5228 'Code of practice for noise and vibration control on construction and open sites' (2009) would be adopted; and
 - the measures set out in BS 5228 will include the following as appropriate:
 - construction works will be confined to the normal working hours as prescribed by SCDC;
 - careful selection of plant, construction methods and programming. Only plant conforming with relevant national or international standards, directives and recommendations on noise and vibration emissions will be used;
 - construction plant will be located, as far as is reasonably practicable, away from adjacent occupied buildings or as close as possible to noise barriers or site hoardings where these are located between the plant and the buildings;
 - static and semi-static plant/equipment will be fitted with suitable enclosures where practicable;
 - personnel will be instructed on BPM to reduce noise and vibration as part of their induction training and as required prior to specific work activities;
 - when plant is not being used, it will be shut down and not left to idle;
 - vehicles will not wait with engines running;
 - where practicable, all audible warning systems and alarms will be designed to minimise noise. Broadband reverse alarms will be fitted to all vehicles;
 - local residents will be consulted in advance of the works commencing; and
 - localised mobile screening will be used where reasonably practicable to reduce the noise levels from handheld tools such as concrete saws;

- 6.1.4 Consents under Section 61 of COPA will be obtained for the construction works. The works will be carried out in accordance with the conditions of the consent.
- 6.1.5 The contractor may agree with the SCDC that for certain activities not anticipated to be noise sensitive, such as site investigation and site set-up, a Section 61 consent will not be necessary. In any event BPM will be applied to all activities.
- 6.1.6 Noise and vibration monitoring will be agreed in advance with the local authority, as part of the Section 61 consent application. The results of any noise and vibration monitoring will be made available, as required, to SCDC. Access to the application site will be facilitated at all reasonable times for inspection and/or noise measurements by the local authority environmental health officer, following appropriate site specific induction and/or health and safety training.

6.2 Air Quality

Vehicle and plant emissions

- 6.2.1 Vehicle and plant emissions will be controlled by implementing the following measures:
- engines of all vehicles, mobile and fixed plant on site are not left running / idling unnecessarily;
 - using low emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices;
 - using ultra low sulphur fuels in plant and vehicles;
 - plant will be well maintained, with routine servicing of plant and vehicles to be completed in accordance with the manufacturer's recommendations and records maintained for the work undertaken;
 - all vehicles, including off-road vehicles, will hold current MOT certificates, where required due to the age of the vehicle, (or to be tested to an equivalent standard) and that they will comply with exhaust emission regulations for their class;
 - siting haul routes and operating plant away from potential receptors such as houses, schools and hospitals;
 - avoiding the use of diesel or petrol powered generators and using mains electricity or battery powered equipment where practicable;
 - maximising energy efficiency (this may include using alternative modes of transport, maximising vehicle utilisation by ensuring full loading and efficient routing);
 - all commercial road vehicles used in construction must meet the European Emission Standards pursuant to the EC Directive 98/69/EC (commonly known as Euro standards) of Euro 3 during any works;
 - impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas (if long haul routes are required, these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the Local Authority, where appropriate);
 - produce a CTMP to manage the sustainable delivery of goods and materials; and

- implementation of the FTP that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

Dust management and monitoring

- 6.2.2 A DMP will be developed and implemented alongside the phase-specific CEMPs. Dust control procedures will be implemented to avoid as far as is reasonably practicable the emission of dust and other particulates that would adversely affect the air quality to ensure there is no significant deterioration of current air quality as a result of the works.
- 6.2.3 An EMP will be implemented to minimise the impact of dust and debris on nearby habitats.
- 6.2.4 The emission of dust and other particulates will be controlled by implementing the following measures:

Communications

- development of and implementation of a stakeholder communications plan that includes community engagement before work commences on site;
- display of the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager; and
- display of the head or regional office contact information.

Site Management

- recording all dust and air quality complaints, identify cause(s), taking appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- making the complaints log available to the Local Authority when asked;
- recording any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in the log book; and
- holding regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It will be important to understand the interactions of the off-site transport/ deliveries which might be using the same strategic road network routes.

Monitoring

- undertaking daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the Local Authority when asked. This will include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of site boundary, with cleaning to be provided if necessary.
- carrying out of regular site inspections to monitor compliance with the DMP, recording inspection results, and making an inspection log available to the local authority when asked.
- increasing the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

- agreeing dust deposition, dust flux, or real-time PM₁₀ continuous monitoring locations with the Local Authority. Where possible, commencing baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Further guidance is provided by the Institute of Air Quality Management (IAQM) on monitoring during demolition, earthworks and construction.

Preparing and Maintaining the Site

- planning site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;
- erecting solid screens or barriers around dusty activities or the site boundary so that are at least as high as any stockpiles on site;
- fully enclosing site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- avoiding site runoff of water or mud;
- keeping site fencing, barriers and scaffolding clean using wet methods;
- removing materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site, cover as described below; and
- covering, seeding or fencing stockpiles to prevent wind whipping.

Operations

- only using cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems;
- ensuring an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate;
- using enclosed chutes and conveyors and covered skips;
- minimising drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and
- ensuring equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- avoiding bonfires and burning of waste materials.

Demolition

- soft stripping inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust);
- ensuring effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be

directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground;

- avoiding explosive blasting, using appropriate manual or mechanical alternatives; and
- bagging and removing any biological debris or damping down such material before demolition.

Earthworks

- re-vegetating earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- using Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and
- only removing the cover in small areas during work and not all at once.

Construction

- avoiding scabbling (roughening of concrete surfaces) if possible;
 - ensuring sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensuring that appropriate additional control measures are in place;
 - ensuring bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overflowing during delivery; and
 - for smaller supplies of fine powder materials ensuring bags are sealed after use and stored appropriately to prevent dust.
- **Trackout**
 - using water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use;
 - avoiding dry sweeping of large areas;
 - ensuring vehicles entering and leaving sites are covered to prevent escape of materials during transport;
 - inspecting on-site haul routes for integrity and instigating necessary repairs to the surface as soon as reasonably practicable;
 - recording all inspections of haul routes and any subsequent action in a site log book;
 - installing hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned;
 - implementing a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable);

- ensuring there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and
- access gates will be located at least 10m from receptors where possible.

6.3 Water

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

- the handling, use and storage of any hazardous materials will be undertaken in line with the EA's PPG (e.g. PPG2 Above Ground Oil Storage Tanks);
- adequately bunded and secure areas with impervious walls and floor will be installed for the temporary storage of fuel, oil and chemicals on site during construction;
- drip trays to collect leaks from diesel pumps or from standing plant will be installed;
- oil interceptor(s) will be fitted to all temporary discharge points and for discharge from any temporary oil storage/ refuelling areas;
- development of pollution control procedures in line with the EA's PPG, and appropriate training for all construction staff;
- provision of spill containment equipment such as absorbent material on site;
- restrictions will be placed on the use of machinery near adjacent water bodies;
- treatment of any runoff from construction areas with elevated suspended solids prior to discharge. Approval will be obtained from the EA for any discharges to controlled waters. Treatment measures could include perimeter cut-off ditches, settlement lagoons, overland flow and/or settlement tanks;
- wheel wash facilities will be provided for vehicles moving to and from the application site at all entry and exit points. Silty water from wheel-washes will require appropriate disposal to prevent unacceptable levels of suspended solids entering any nearby surface water bodies. As noted above, any disposal of surface water generated on site during construction to controlled waters will require consent from the EA. Wheel washing facilities will be located as far from surface waters as possible;
- if dewatering is required on any part of the application site, pumped groundwater will be disposed of appropriately according to the EA PPGs;
- the reseeded of cleared land will be undertaken as soon as practicable, to minimise exposed land and the entrainment of sediment by overland flow and this can be managed by ensuring construction plant/ materials are stored on hardstanding surfaces where possible. Where this is unavoidable, the Contractor will ensure any compacted soil is loosened as soon as possible following completion of the works; and
- attenuation ponds will be constructed during the first sub-phase and used to attenuate and store run-off from the site during construction to prevent contamination of surface and groundwater.

Site drainage

- 6.3.2 Surface water will be controlled via temporary Sustainable Urban Drainage Systems (SUDS) and discharged to existing surface water drains
- 6.3.3 Foul water will be discharged to sewers where possible and relevant permissions will be obtained from the sewerage or statutory undertaker. If not accessible then temporary arrangements may be put in place; that may include mobile toilets / sealed cesspits. However, given the construction programme of this development; provision of connection to the foul sewer will be prioritised.
- 6.3.4 Site drainage will meet the requirements for effluent and flood risk standards required by the sewerage undertaker.

Control of pollution to surface water

- 6.3.5 During construction protection measures to control the risk of pollution to surface water will be adopted. These will include:
- any containers of contaminating substances on site will be leak-proof and kept in a safe and secure building or compound from which they cannot leak, spill or be open to vandalism. The containers will be protected by temporary impermeable bunds with a capacity of 110% of the maximum stored volume. Areas for transfer of contaminating substances will be similarly protected;
 - all refuelling, oiling and greasing will take place above drip trays or on an impermeable surface which provides protection to underground strata and watercourses and away from drains as far as reasonably practicable. Vehicles will not be left unattended during refuelling;
 - only construction equipment and vehicles free of oil/fuel leaks which could cause material contamination will be permitted on site. Drip trays will be placed below static mechanical plant;
 - all wash down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses and will comply with EA's PPG 13;
 - EA PPG 23 will be followed when carrying out maintenance of structures over water. As far as reasonably practicable, only biodegradable hydraulic oils will be used in equipment working in or over watercourses;
 - appropriate measures to be taken to protect erodible earthwork surfaces; and
 - the emergency plan will be followed, as detailed in section 7 of this document, in the event of a spill that could cause contamination to surface water bodies.

Control of pollution to groundwater

- 6.3.6 The aforementioned PPG and construction best practice will ensure that any oils, hydrocarbons or hazardous materials stored on site will not leak onto the ground surface and thereby ensure that there is no pathway for contaminants to affect groundwater. These techniques will also ensure that surface water bodies and associated ecosystems are protected due to possible permeable nature of soils on site enabling migration between these bodies and the groundwater.

- 6.3.7 The emergency plan will be followed, as detailed in section 7 of this document, in the event of a spill that could cause contamination to groundwater bodies.
- 6.3.8 Protection measures to control the risk of pollution to groundwater will be consistent with the Groundwater Regulations 1998. Where reasonably practicable, the use of materials that could pollute groundwater will be avoided. This will include special consideration for the use of substances contained within List I and II of the Groundwater Regulations SI 1998/2746 (Groundwater Directive: 80/68/EEC).

6.4 Ecology

- 6.4.1 An EMP will be developed and implemented by the applicant upon appointment of a principal contractor. The EMP will detail measures to manage the risk of adversely affecting flora and fauna on and within the vicinity of the site, including method statements in the event protect species such as badgers or bats are encountered and how potential ecological watching briefs or additional survey requirements would be accommodated in the programme.
- 6.4.2 The EMP will be consistently applied through all phase-specific CEMPs.

Wild mammals

- 6.4.3 Any deep holes and trenches will be covered overnight and planked escape routes provided for any wildlife that may fall in. In addition, any hazardous liquids that are held on site will be stored in a secure lock-up. To avoid unnecessary harm to wild mammals, any burrows that are encountered during site clearance works will be excavated sensitively, using hand tools where possible. Excavation will also ideally not occur between March and May inclusive, when female red fox and cubs may be below ground.
- 6.4.4 These measures are not applicable to badger setts, as activities associated with badger setts will be subject to specific mitigation, in accordance with a Natural England licence.
- 6.4.5 Should badgers be found on or within the vicinity of the site, works that could cause of potential disturbance will be stopped and the Ecological Clerk of Works notified. The EMP will set out this process in further detail.

Nesting birds

- 6.4.6 Clearance of potential breeding bird habitat (vegetation and structures) will ideally occur outside of the main breeding bird season (March to August inclusive). If this is not possible, a suitably qualified ecologist will check for the presence of breeding birds prior to the commencement of any clearance or construction activities. Where any active nests are found, a buffer zone (of at least 5m radius) will be implemented until the young have fledged and left the immediate area around the nest.
- 6.4.7 Larger buffer zones (the radius would be dependent on the species concerned and the specific factors on site at the time) will be implemented around breeding sites for species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), which will only be lifted when then young are independent. A suitably qualified ecologist will advise on the extent of buffer zones and define when the buffer zone may be lifted.
- 6.4.8 As nesting occurs at other times of the year, vigilance will be applied during clearance works at any time of the year.

- 6.4.9 Should nesting birds be found on or within the vicinity of the site, works that could cause of potential disturbance to the nesting birds will be stopped and the Ecological Clerk of Works notified. The EMP will set out this process in further detail.

Invasive species

- 6.4.10 Section 14(1) of the Wildlife and Countryside Act 1981 (as amended) makes it illegal to plant or otherwise cause to grow in the wild any plant which is included in Part II of Schedule 9 of the Act.
- 6.4.11 No invasive species, as defined by the Act, have been recorded at the site. However, if invasive plant species, are recorded prior to construction, they will be treated and removed from the site in an appropriate manner in accordance with relevant legislation and guidance.
- 6.4.12 During construction, mitigation measures will be implemented as necessary to prevent the establishment of invasive plant species. A general strategy will be to establish a viable vegetation cover quickly, before invasive plant species can become established. Any invasive species that colonise an area during construction will be removed and disposed of as required.
- 6.4.13 Any imported soils will be subject to appropriate control processes to ensure they are free of any seeds/roots/stems of any invasive plant covered under the Wildlife and Countryside Act 1981 (as amended).
- 6.4.14 The EMP will ensure an Invasive Species Management Plan is developed for each phase-specific CEMP if relevant.

Tree protection

- 6.4.15 All retained trees will be protected in accordance with BS 5837: 'Trees in relation to design, demolition and construction', with further details outlined in the arboricultural report submitted with the planning applications. Adherence to the measures outlined in these standards and arboricultural assessment will ensure the long-term preservation of retained trees.
- 6.4.16 All works to trees or felling would be carried out in accordance with BS 3998: 'Tree work – Recommendations'.
- 6.4.17 Trees will be protected through the establishment and maintenance of RPZs. The shape of the RPZs and their exact locations will depend upon arboricultural considerations and ground conditions although they will incorporate the crown and the majority of the root system. The location of practice fencing will be confirmed once detailed plans are finalised and the relevant phase-specific CEMP will be updated with this information.
- 6.4.18 Prior to any onsite demolition or construction in the vicinity of any retained tree protective measures and the RPZ for that tree must be in place.
- 6.4.19 The tree protection fencing/barriers once erected will not be moved or relocated without written approval. At the end of the construction period the fencing will be removed.
- 6.4.20 To guarantee protection to retained trees, contractors will be required to adhere to the following in accordance with the Arboricultural Survey Report and Plans:
- the protective tree fencing surrounding the RPZs shall be maintained throughout the relevant development phase/sub-phase;
 - no materials, machinery, temporary structures, chemicals or fuel shall be stored within the RPZs;

- no excavations or increases in soil level within the RPZ should be permitted without prior approval;
- care should be taken to ensure that wide or tall loads or plant with booms, jibs and counterweights do not come into contact with retained trees. Any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banks person to ensure that adequate clearance from trees is maintained at all times;
- material that will contaminate the soil such as concrete mixing, diesel oil and vehicle washing must not be discharged within 10m of the tree stems;
- fires must not be lit in a position where their flames can extend to within 5m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction; and
- any landscaping within the RPZ must avoid soil disturbance. Therefore re-grading and rotavators are not permitted.

6.5 Landscape & Visual Impact

6.5.1 The following measures relevant to landscape and visual impact will be implemented, where possible:

- maximising the retention and protection of existing tree and vegetation where possible and in accordance with the parameter plans;
- use of well-maintained fencing and hoardings to prevent unwanted access to the construction site, to provide noise attenuation, screening, and site security where required;
- use of different types of fencing and hoarding to minimise visual intrusion;
- painting the side of hoardings facing away from the site, and to keep them free of graffiti or posters;
- retaining existing walls, fences, hedges and earth banks for the purpose of screening as far as reasonably practicable;
- designing lighting to avoid unnecessary intrusion onto the adjacent buildings and other land uses;
- protecting all trees, whether statutorily protected or not within or in the vicinity of the site, in accordance with BS 5837: 'Trees in relation to design, demolition and construction'; and
- replacement of any trees intended to be retained by a suitably sized tree to the approval of SCDC.

6.6 Archaeology and Cultural Heritage

6.6.1 A HEMP will be developed and implemented by the applicant upon appointment of a principal contractor. The HEMP will present a methodology for undertaking monitoring of early stage works which, subject to health & safety considerations in respect of contaminated land and

UXO, will minimise the impact of these activities on known archaeological remains and correspondingly allows the greatest possibility of identifying areas of hitherto unknown survival.

6.6.2 The HEMP will detail measures to manage the risk of adversely affecting historic resources, including reporting any potential finds and how potential archaeological investigations or recording would be accommodated in the programme.

6.6.3 The HEMP will be consistently applied through all phase-specific CEMPs.

6.7 Lighting

6.7.1 It is anticipated that the key potential sources of lighting during construction phase will include the following:

- floodlight and security lighting associated with temporary car parking areas for workers, the secure compound adjacent to the northern boundary and any perimeter fencing/hoarding
- security and health and safety lighting associated with working areas, (e.g. where equipment is stored and safety hazards may be present)
- the potential for fugitive light spill and glare from internal lighting associated with site offices and welfare facilities.
- lighting required for operational purposes associated with construction when working during the late afternoon in the winter period (including light from headlamps of vehicles).

6.7.2 Mitigation measures to be implemented include procedures to ensure effective liaison with the neighbouring properties, adjacent residents and local community through newsletters, letter drops (when construction activities are likely to affect local residents) and information boards. Moreover, temporary lighting will be kept to the minimum required for the activity (meeting health and safety requirements) and lighting will be located and directed away from the residential properties where possible.

6.7.3 The practical and aesthetic functions of lighting can become a source of intrusiveness, friction and even adverse health effects (headaches; fatigue; stress and circulating circadian rhythm effects) for others.

6.7.4 The measures required during construction will be installed and arranged with reference to current health and site safety requirements and lighting design best-practice, to provide low impact lighting schemes. The impact of any obtrusive light effects on the nocturnal environment will be reduced by the application of the following measures:

- adhere to best practice measures as recommended by the Institute of Lighting Professional (ILP), CIRIA, Health and Safety Executive (HSE) and International Commission on Illumination (CIE) guidance;
- consultation with SCDC and feedback from any nuisance issues from, public liaison activities;
- the use of temporary works lighting will be minimised in terms of frequency and duration wherever possible;

- confine lighting to the task area (using horizontal cut-off optics and zero floodlight tilt angles);
- orientate floodlights away from any dwellings;
- use lower power security lighting where possible (and ensure minimal horizontal/vertical light spill);
- operate a curfew and minimise the duration of any floodlighting;
- operating during normal working hours (where 24 hour working is not required);
- specify the lowest powered light sources possible;
- no luminaires must be allowed to emit light above the horizontal plane;
- plant lighting needs to be shielded from view by the neighbouring dwellings and sensitive habitats;
- use the site cabins etc. to provide shielding of the lighting from beyond the Site;
- minimise the height of lighting columns; and

The EMP will set out controls to minimise the impact of lighting on sensitive species and nearby habitats.

6.8 Construction Waste

- 6.8.1 A Waste Strategy has been prepared for the site and is submitted in support of the planning application. With regards to construction waste, it is anticipated that any non-hazardous generated material may be reused on-site for landscaping or other purposes, therefore only minimal volumes of non-hazardous material may require disposal off-site. Hazardous materials, such as asbestos will be disposed off-site in an appropriate manner.
- 6.8.2 The alignment, location, level and grading of the proposed development has been designed to minimise unnecessary excavation volumes. It has also been designed to enable flexibility in the landscaping, so that it can accommodate the changes in spoil volumes that may arise when site conditions differ from those assumed during the design. Both these approaches should enable all excavation waste (including treated soils except where it remains hazardous) to be reused on-site where conditions allow. It is expected that only minimal volumes of material may require disposal off-site.
- 6.8.3 The amount of demolition to be carried out on-site and subsequent wastes arising from these demolitions are considered to be minimal. Additionally, it is expected that these materials will be able to be retained on-site for landscaping and base layers for new hard standing and roads.
- 6.8.4 A preliminary SWMP for the proposed development is being submitted with the planning application (as part of the Waste Strategy). This forecasts the type and quantity of waste that will be produced on the proposed development and sets out how waste might be managed so that it is reused, recycled, or disposed of appropriately. The SWMP is a live document and will be updated during the duration of the project by the applicant and the contractor to record the movements of waste, how it will be managed and to encourage better waste management practices.

- 6.8.5 To reduce waste production during the construction phase the contractors will employ modern methods of construction such as prefabrication of units and products off-site as described by the Waste and Resources Action Programme (WRAP).
- 6.8.6 As part of the SWMP referred to above the contractor will have to monitor waste arisings and management practices. Auditing and measurement will enable more effective management of waste through the setting of performance targets for recycling and segregation and monitoring subcontractors on all the sites.
- 6.8.7 A log will be maintained of all materials that come on to site, and details will be obtained from the waste disposal company of the exact amount of waste materials removed from site. Details will also be provided outlining the recovery/disposal actions for the specific waste streams
- 6.8.8 Waste receptacles will be monitored by the contractor to ensure that contamination has not occurred, results will be recorded.
- 6.8.9 The contractor will continually review the type of surplus materials being produced and change the site set up to maximise reuse or recycling and the use of landfill will be the last option.
- 6.8.10 The contractor will also visit any waste transfer facility to ensure that we are effectively discharging 'Duty of Care'. They will also periodically follow waste transfer vehicles to their final point of disposal to monitor compliance. Details of these visits will be recorded for audit purposes.
- 6.8.11 The phasing of the proposed development allows the opportunity for the Construction, Demolition and Excavation (CD&E) wastes to be reused or recycled on-site in subsequent stages of the development. The SWMP will ensure such opportunities are maximised as the preferred option for dealing with waste arising from the site.

7 EMERGENCY PLAN

7.1 General Arrangements

- 7.1.1 A set of standardised emergency response procedures will govern the management of environmental incidents. Contractors will be required to adhere to and implement these procedures and ensure that site operatives are familiar with the emergency arrangements.
- 7.1.2 The emergency procedure detailed in each phase-specific CEMP will contain emergency phone numbers and the method of notifying local authorities and statutory authorities. Contact numbers for key personnel will also be included.
- 7.1.3 Toolbox talks and regular drills will be carried out for staff in the use of emergency spill prevention materials.

7.2 Dealing with Spills

7.2.1 A site drainage plan will be kept on each of the worksites showing the water interests in the vicinity of the application site. This plan will include the location of both foul water drains and surface water drains. Spill kits will be kept on each of the worksites. The precise contents and capacity of the spill kits will depend on the detailed inventory of products that will be stored and handled on the application site, however they are likely to contain:

- oil-absorbent granules;
- string;
- floating “booms” or “sausages”;
- gloves;
- absorbent mats;
- knives;
- drain covers;
- shovels; and
- polythene sheeting and bags.

7.2.2 The spill kits will be clearly marked, sign-posted and held close to the area where materials are stored and handled.

7.2.3 A number of specialist spill contractors will be identified that can be called upon should this be required to manage a major spill.

7.2.4 In the event a spill occurs the following actions will be taken:

- when a spill occurs the site manager will be informed immediately;
- in dealing with the spillage the personal safety of the site-workers and the general public will not be compromised;

- where required to stop or contain the spillage work will be halted;
- the cause of the spillage will be stopped;
- the spill will be contained. Particularly pathways to any drains and water courses will be blocked as soon as possible;
- the spilled materials will be removed and disposed of in accordance with the waste regulations; and
- the EA will be informed, where appropriate.

7.2.5 In the event of major or complicated spills, the site manager will assess the incident and, if appropriate, request a specialist spill contractor to attend the site.

7.3 Unexploded Ordnance

7.3.1 A RMP has been developed for the proposed development. This plan details the following measures to be implemented as necessary:

- UXO awareness induction;
- non-intrusive surveys;
- target investigations; and
- explosive ordnance disposal.

8 EARTHWORKS STRATEGY

- 8.1.1 The principal aim of the earthworks strategy is to identify areas of land re-profiling and associated work that will be necessary to prepare the site prior to implementation of the development parcels (i.e. estate roads, buildings, open spaces, swales, ponds etc) and identify areas of Phase 2 that need raising above the 1 in 200 year flood level (including the allowance for climate change) in order to provide flood protection to the new development as well as the surrounding areas. It will also enable the development parcels to be drained to the surface water attenuation ponds (as detailed in the Flood Risk Assessment and Drainage Strategy). Plan 4 and Plan 10 (Appendix B) illustrate the existing and proposed levels across the site and have been produced in conjunction with this summary.
- 8.1.2 It is proposed that the majority of the Phase 2 area will be predominantly at existing ground level plus construction / development platform depth. Levels will remain as existing relative to tie in levels of any retained landscape and ecology features.
- 8.1.3 Land raising will be required in the north east corner of Phase 2 to bring levels above calculated flood levels as well as tie in to the Phase 1.
- 8.1.4 Earthworks Strategy for the Southern Access Road (West) will follow the same strategy, with the carriageway being at or about ground level plus construction.
- 8.1.5 The construction of the proposed bridge crossing the Southern Access Road (West) will be built on an earth embankment with side slopes of 1:4 up to the proposed design level of the bridge.
- 8.1.6 Substantial amounts of cut are required for the new attenuation ponds. It is proposed that arisings will be re-used to fill the areas identified above (provided suitability of soil allows).
- 8.1.7 Any material arising from existing buildings or hardstanding areas that are demolished or broken up will be crushed and re-used on site wherever feasible.
- 8.1.8 It is proposed that arisings from plots will be re-used within the plot in line with plot/phase development.
- 8.1.9 Topsoil will be stripped and stored separately for later re-use within the proposed development and landscaped areas. Any contaminated spoil will be removed to an appropriately licensed landfill for disposal.
- 8.1.10 Following completion of construction activities, all disturbed land will be reinstated in accordance with the landscape strategy and to the satisfaction of SCDC.
- 8.1.11 The relevant sections of appropriate industry guidance will be followed where practicable, including BS 6031: Code of Practice for Earthworks for the general control of site drainage, Site handbook for the construction of SUDS (C698), BS 3882 'Specification for topsoil and requirements for use' and Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009)

9 COMMUNICATIONS

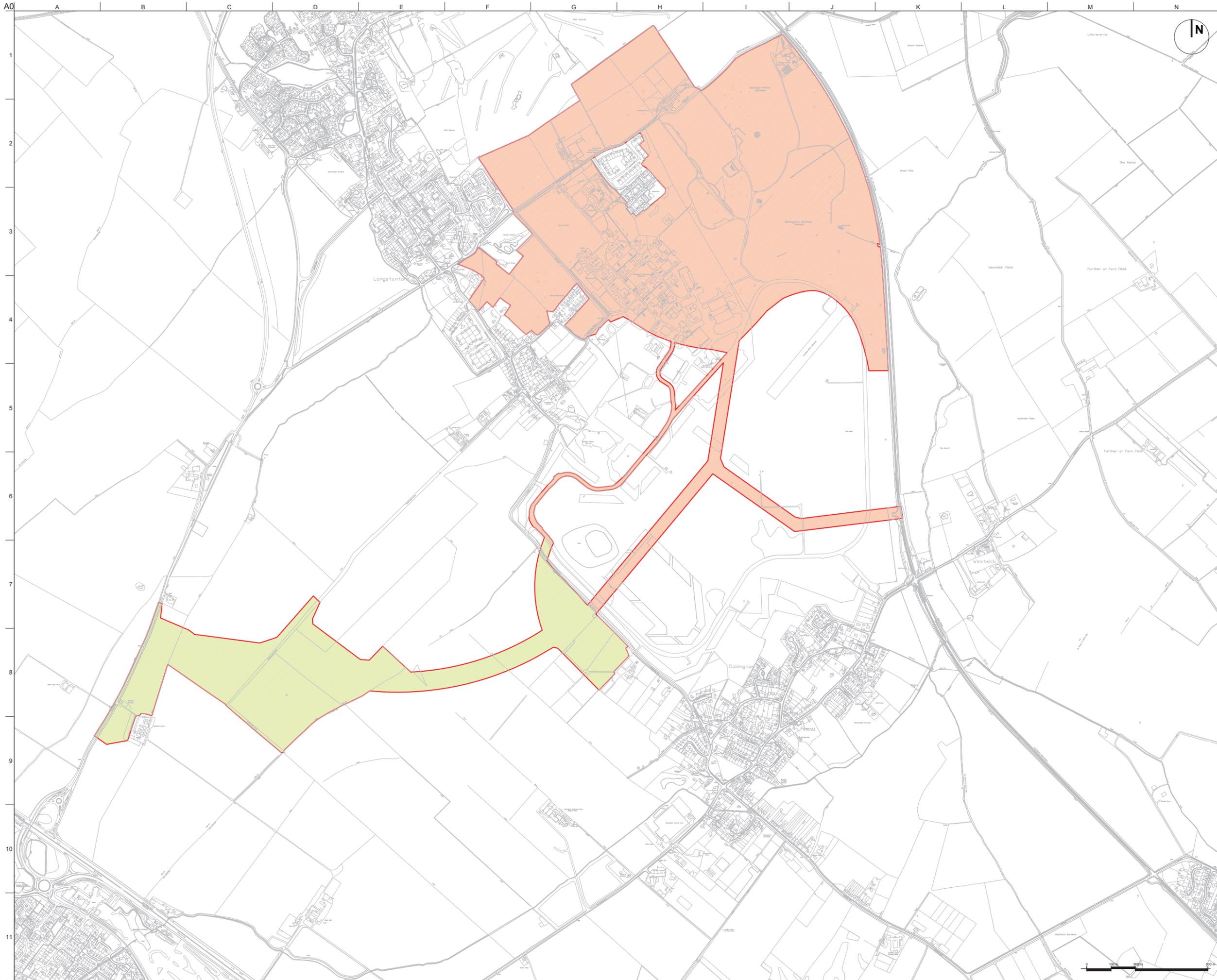
- 9.1.1 Communication with the local community, SCDC and other relevant stakeholders will be undertaken at an appropriate level and frequency. The phase-specific CEMPs will detail planned community consultation activities and publicity arrangements. This will include details of the available communication channels/points of contact for members of the public to contact the project team.
- 9.1.2 The phase-specific CEMPs will include consultation logs with details of those notified about the works (including the date) and arrangements for future proposed communications and dates.
- 9.1.3 In the event that a complaint is received the works will be investigated immediately to identify the root cause and the appropriate steps to mitigation the works. Toolbox talks will also be held if deemed necessary to ensure further complaints are not received. An investigation report and/or incident report will be written and sent to the site manager. Where necessary the relevant regulator will be contacted. Phase-specific CEMPs will include further details of the complaints response procedure.
- 9.1.4 Relevant statutory authorities are:
- Environment Agency;
 - Natural England;
 - South Cambridgeshire District Council; and
 - Cambridge County Council.

ABBREVIATIONS

BPM	Best Practicable Means
BS	British Standards
CCC	Cambridgeshire County Council
CCS	Considerate Constructors Scheme
CD&E	Construction, Demolition and Excavation
CEMP	Construction Environmental Management Plan
CIE	International Commission on Illumination
CIRIA	Construction Industry Research and Information Association
COPA	Control of Pollution Act
CTMP	Construction Traffic Management Plan
DMP	Dust Management Plan
EA	Environment Agency
EC	European Commission
EMP	Ecology Management Plan
ES	Environmental Statement
FSC	Forest Stewardship Council
FTP	Framework Travel Plan
HCA	Homes and Communities Agency
HEMP	Historic Environment Management Plan
HSE	Health and Safety Executive
IAQM	Institute of Air Quality Management
ILP	Institute of Lighting Professional
ISO	International Standards Organisation
PPG	Pollution Protection Guidelines
PRoW	Public Rights of Way
RMP	Risk Mitigation Plan
RPZ	Root Protection Zone
SCDC	South Cambridgeshire District Council
SUDS	Sustainable Urban Drainage Systems
SWMP	Site Waste Management Plan
TBT	Toolbox Talk
UXO	Unexploded Ordnance
WRAP	Waste and Resources Action Programme

APPENDIX A

Plan 3 - Application Areas Plan



LEGEND

- PHASE 2 - MAIN PHASE 2 DEVELOPMENT AREA
- PHASE 2 - SOUTHERN ACCESS ROAD (WEST)

Issue	Date	By	Chkd	Appd
A	22.08.2014	BC	NW	NW

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Job Title
**NORTHSTOWE
 PHASE 2 PLANNING APPLICATION**

Drawing Title
APPLICATION AREAS PLAN

Scale **1:5,000 @ A0**

Discipline **URBAN DESIGN**

Drawing Status
FOR PLANNING

Job No 230781-21	Drawing No PLAN 3	Issue A
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