Sea Change Sussex

North Queensway Business Park

Environmental Statement

Non Technical Summary

Project Ref: 26499

October 2012

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Environmental Statement Non Technical Summary

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1 Introduction

1.1 Project Background

1.1.1 An Environmental Statement has been prepared in respect of planning applications by Sea Change Sussex for a development known as North Queensway Business Park. This document is the Non-Technical Summary of the Environmental Statement.

1.1.2 A full planning application for the junction to provide access to the site from Queensway, which includes details of bringing utilities to the site, has already been submitted to Hastings Borough Council (HS/FA/12/00676) and is currently being determined.

1.1.3 A subsequent planning application has been submitted, and which the Environmental Statement has been submitted with, for the preparation of the site to provide serviced development plots for employment use, to include delivery of a new access estate spine road, utility services, foul and surface water drainage, a utility service corridor, vegetation clearance and wider site landscaping.

1.1.4 For completeness, this Environmental Statement addresses impacts from the provision of the serviced development plots, junction and an indicative but realistic level of new employment floorspace that may be provided at the site. This is estimated to be 14,000 square metres of B1 (Business) and B2 (General Industrial) uses. It is also assumed that development will be up to two storeys (8-10m tall, allowing for a sloping roof from ground level). However, the application will not seek consent for these uses and they will be the subject of separate full planning applications.

1.1.5 The site is an area of undeveloped land located on the north western urban periphery of Hastings, but is allocated in the adopted Local Plan (2004) for employment use. The site is located on the Queensway road, a ring-road around the north western edge of Hastings. The site is currently a mix of overgrown scrub, small trees and patches of open grassland. The site slopes steeply away to the south west from its top most point, and is generally level on the lower site furthest from Queensway.

1.1.6 The site is adjacent to the Marline Valley Wood Site of Special Scientific Interest (SSSI)/Local Nature Reserve (LNR). There are nearby residential uses, which include High Beech chalet park that borders the site. On the opposite side of Queensway is a large industrial estate, as well as a new business park to the south.

1.2 Terms and Definitions

1.2.1 For ease of reference the following terms have been used in the Environmental Statement:

- North Queensway – the name of the development site, for which planning consent is being sought that includes the serviced plots as well as the proposed junction onto Queensway.
The junction – is the proposed development under planning application HS/FA/12/00676 currently awaiting decision from Hastings Borough Council, described as ‘Construction of a new junction including a short length of access road to facilitate the future development of the north Queensway land’.

The site – the area within the planning application boundary.

Serviced plots – the three serviced plots that will be created through the provision of the new road, utilities servicing and through protection of habitat. The three plots will be cleared of vegetation as part of development proposals.

Indicative development scenario – this is an assumption on the scale of employment development that may take place on the site following provision of the serviced plots. Development will not exceed 14,000 square meters.

1.3 The Environmental Impact Assessment, Environmental Statement and Related Documents

1.3.1 This Environmental Statement presents the findings of an Environmental Impact Assessment undertaken in accordance with The Town and Country Planning (Environmental Impact Assessment) Regulations 2011, referred to as the ‘Environmental Impact Assessment Regulations’.

1.3.2 Running concurrently with the design process, the Environmental Impact Assessment has sought to identify appropriate design and construction measures and good practice to mitigate potential adverse environmental effects. The Environmental Impact Assessment also seeks to maximise environmental opportunities which might arise as a consequence of the construction and operation of the proposed development. The Environmental Statement records any residual environmental effects that remain after mitigation.

1.3.3 The Environmental Statement comprises the following separate volumes:

- Volume 1: Main Report;
- Volume 2: Appendices; and
- Non-Technical Summary (this document).

1.3.4 The other principal documents submitted as part of the planning application include:

- Design and Access Statement;
- Planning Statement;
- Transport Assessment and Travel Plan; and
- Statement of Community Involvement.
2 Site & Surrounding Area

2.1 The Site

2.1.1 The site, as shown on Figure 1, comprises approximately 7.1 hectares.

2.1.2 The site is located on the north western urban periphery of northwest Hastings to the north of the Queensway road, which forms the site’s southern boundary.

2.1.3 The approach along Queensway from the north towards the location of the proposed development is relatively unspoilt with tall trees and shrubs screening all residential and employment development on either side of the road. This is aided by the land falling away to both sides of the road meaning the buildings (and proposed site) are mainly below road level.

2.2 The Surrounding Area

2.2.1 The nearest other use to the site is the High Beech chalet park. This is immediately to the north west of the site. It consists of single storey low density chalets that are currently in use for holiday and residential purposes. Associated with the chalet park is the Sussex Edwardian Hotel (formally the High Beech Hotel).
2.2.2 A residential cul-de-sac of two storey houses, High Beech Close, adjoins the north eastern corner and part of the western boundary of the site, with further houses to the north.

2.2.3 The site is bounded to the south by Queensway. To the south of the road are Castleham and Conqueror Industrial Estates that run the entire length of the site. One of the access points to Castleham industrial estate is around 250m on the opposite side of the Queensway from the proposed North Queensway access point. Further south on Queensway, around 350m from the proposed site entrance is Queensway South (Enviro21 Innovation Park). This development is partially complete and includes high-quality manufacturing units and ‘The Exchange’ a restaurant and conference facility.

2.2.4 To the west of the site is countryside. Immediately to the west and wrapping round part of the site boundary is the Marline Valley Wood SSSI. Much of the woodland is also identified as an Ancient or Semi-natural Woodland. The SSSI is also identified as the Marline Valley Woods LNR.

2.2.5 Further to the west is the High Weald Area of Outstanding Natural Beauty (AONB), at its nearest which is 640m from the site boundary.

2.2.6 The site itself is a mixture of overgrown scrub, small trees and patches of open grassland. There are no buildings on the site at present and it is understood that the site has not been previously developed. The site slopes steeply away to the south west from its top most point, and is generally level on the lower site furthest from Queensway. As indicated in Figure 1 the site contains a small area of ancient woodland and Tree Preservation Area, and which is to be retained as part of the development.
3 Proposed Development

3.1 Description of Proposed Development

Introduction

3.1.1 The proposed development consists of the following elements:

- Development of the access junction on Queensway, for which a full detailed application has been submitted to the Council, application number HS/FA/12/00676; and
- Preparatory works to ready the site for employment development. To include an estate spine road through the site, utility services, foul and surface drainage and clearance of three areas as serviced plots for development, and maintaining and reinforcing site boundaries;
- Future development of the employment uses at the site, which will be based on an indicative development scenario and will not exceed 14,000 square metres of employment floorspace in buildings up to about 8-10m in height, which will require separate full planning applications to be submitted in the future.

This planning application

3.1.2 The proposed development covered by this planning application comprises a new access road through the site, surface and foul water drainage and utilities services to each of the three development plots. The application will also include details of where vegetation will be cleared to make space for the new development plots and further survey. In addition, in order to help mitigate both environmental and visual impacts of future development of the site, agreement will be sought on reinforcing / enhancing the boundaries of the site and the road corridor.

3.1.3 Plans have been prepared for the planning application that show the site red line boundary, development plots and location of the access spine road. There are also plans showing the boundary reinforcement and the landscape elements of the site periphery as part of the application, these are:

- Development Plot Plan: Site location plan and red line boundary showing the parcels of development land, Figure 2;
- Landscaping plan that shows the landscape buffers and areas of border maintenance and reinforcement, Figure 3.
Figure 2: Development plot plan

Figure 3: Landscape plan
3.1.4 The brief description of the development is: infrastructure and preparatory works including road and footpath construction, surface and foul water drainage, utility services and vegetation clearance.

3.1.5 Development will involve provision of the road through the site, connecting to the new junction with Queensway, and the associated infrastructure for the three serviced plots. The three serviced plots are:

- Plot 1: directly to the west of the main access junction and the spine road. This plot is closest to the Marline Valley Woods SSSI, as well as being along the frontage with Queensway. The northern edge of the plot borders the High Beech chalet park.
- Plot 2: directly to the north east of the main access junction and east of the main spine road for much of its length. This plot also is close to Queensway and the retained area of Ancient Woodland.
- Plot 3: the northern-most plot extending towards the residential area to the north as well as being adjacent to Queensway for all of south eastern boundary.

Landscape Strategy

3.1.6 The landscape plan covers the reinforcement and the maintenance of the site boundaries, including maintenance of tree borders and protection of some of habitats on-site.

3.1.7 Landscape plans include a buffer strip is to be retained around the perimeter of the site separating the edges of development plots from the red line boundary. This will provide protection to designated habitats as well as allow for vegetation and mature trees to be retained and planted to screen the site and provide a noise and visual impact buffer.

3.1.8 Between Plot 1 and the SSSI a 15m wide buffer will be retained. This will protect the SSSI from the direct impacts of the construction and operation of development on this plot, as well as providing necessary space for managing surface water runoff impact on the woodland.

3.1.9 A narrower buffer of around 5m will be retained between the other development plots and nearby residential development, including the High Beech chalet park. This will provide natural screening of the development site for residents.

3.1.10 A 5m buffer will also be provided between the development plots and area of identified as ancient semi-natural woodland that falls within the site.

3.1.11 Between the development site and Queensway a band of mature trees will be retained and enhanced. This will visually screen the site from the road and protect the character of Queensway.

3.1.12 The application does not include the design of development within the three plots. Developers of the plots will submit their own full planning application for the design and construction of employment uses at the site based on their specific requirements. This will include the need for detailed proposal for on-plot earthworks, the plots to make them suitable for development. This means matters such as on-plot lighting, landscaping, sustainable
construction and visual impact are not part of the current application and will need to be addressed in future planning applications as necessary.

**Indicative development scenario for employment development**

3.1.13 For the purposes of the Environmental Impact Assessment and to ensure future effects of development are properly considered an indicative scenario has been established for the site that future development will not exceed. This indicative scenario is up to 14,000 square metres of commercial/industrial floorspace (within use classes B1 and B2). It is also assumed for the purposes of the Environmental Impact Assessment that development will be up to two storeys (i.e. 8-10m tall, allowing for a sloping roof).

**Quantum of development**

3.1.14 The development is of 7.1 hectares gross area. However, the net developed area of the plots will be around 4.2 hectares, in addition, the estate spine road will be developed through the site. The remainder of the site will be protected as a landscape buffer, which will also incorporate environmental mitigation features.

**3.2 Consideration of Alternatives**

3.2.1 The Environmental Impact Assessment Regulations require an Environmental Statement to describe the main alternatives considered by the applicant, indicating the reasons for the choice made, taking into account the environmental effects.

3.2.2 The principle of employment development is already set for this site. The site is allocated for employment uses under policy E1 of the Hastings Local Plan 2004. Therefore, the principle of employment development at the site has already been tested through the plan making process, including independent examination by the Planning Inspectorate.

3.2.3 The site is also one of the last undeveloped areas designated for employment in the Hastings Local Plan and therefore its development is important for supporting economic growth in the area with few alternatives available.

3.2.4 This means the alternatives to employment development have not been considered.

3.2.5 The iterative process of designing the layout of development was guided by the Environmental Impact Assessment process. Therefore, alternative testing has been an implicit part of the evolution of the proposed scheme. However, for some issues there was limited scope to consider alternatives. For instance, the access point from Queensway was largely set though the need to protect vegetation and the topography of the site.

**3.3 Construction programme and management**

3.3.1 An important element in the control of potential adverse environmental effects during the construction phase will be in the implementation of a Construction Environmental Management Plan (CEMP). This will outline the arrangements and management practices to be adopted to minimise the environmental effects of construction and which will be agreed
3.3.2 For construction at this site maintaining the quality and quantity of water draining from the site into the adjacent woodlands is essential. Therefore, the CEMPs will address these issues and include stringent controls on water management during construction.

3.3.3 The key construction activities are likely to include:

- **Junction and access road**
  - Vegetation clearance;
  - Construction of the proposed new junction on Queensway; and
  - Highway works.

- **Access road, drainage and utility services**
  - Site clearance and removal of scrub and vegetation as agreed;
  - Earthworks for the road; and
  - Excavation to install utilities, drainage works, on site circulation routes and landscaping.

- **Employment development**
  - Earthworks and installation of foundations including use of piling;
  - Construction of building structure, cladding and glazing and internal walls and partitions;
  - Installation of fixtures, fitting and building services;
  - Plot specific utility connections; and
  - Plots specific landscaping, lighting and drainage works.

3.3.4 It is anticipated, subject to receipt of planning permission, that construction is expected to start in 2013 and be completed by 2015. For the purposes of this assessment it has been assumed that first occupation of the scheme could be in 2014. The exact timing of development will be dependent on the market demand for employment land and developers coming forward to occupy the plots and their applications being considered. It is likely that occupation of some plots will take place prior to completion of the whole site.
4 Assessment of Effects

4.1 Introduction

4.1.1 This chapter summarises the findings of the Environmental Impact Assessment.

4.1.2 The scope of the Environmental Impact Assessment was agreed with Hastings Borough Council based on an Environmental Impact Assessment Scoping Report prepared by Peter Brett Associates. As a result the following provides a summary of the potentially significant environmental effects of the proposed development. Effects have been considered during the construction and operation of the proposed development.

4.1.3 A summary of the assessment methodology is now presented. The detailed methodology is provided in Chapter 5 of Volume 1 of the Environmental Statement.

Establishing Baseline Condition

4.1.4 A range of site surveys and data collection exercises have been used to identify environmental conditions at the site. Surveys have been undertaken over several years as the planning of the proposed development and where surveys are considered to have become dated these have superseded or corroborated by up-to-date surveys. The surveys undertaken are reported in each of the topic chapters of Volume 1 of the Environmental Statement.

Assessing Construction Effects

4.1.5 The Environmental Impact Assessment has assessed the potentially significant environmental effects that could occur during the construction phase. These effects will vary substantially during the construction process therefore judgements have been made to ensure that reasonable worst case effects are tested through consideration of the processes most likely to lead to significant effects.

4.1.6 Construction effects should be temporary, although due to the extent of the construction works required could occur over approximately three years. Construction effects could also be intermittent, i.e. they will not occur at one place throughout the duration of the construction works.

4.1.7 In judging the significance of construction effects it has been assumed that the construction mitigation measures identified and the proposed CEMP are fully implemented (as it is expected would be required by a suitable planning condition).

Assessing Operational Effects

4.1.8 To provide a robust assessment and one that is generally consistent between topic chapters, the Environmental Impact Assessment has focused on assessing the environmental effects of the full, completed development. Therefore the Environmental Impact Assessment has generally assessed the likely effects in 2015, the year the development is proposed to be completed and fully occupied/operational.
4.1.9 This approach ensures that maximum exposure is considered as well the full environmental effects of development itself, development proposed through both the current and existing planning application for the site and the Queensway junction. In addition, an indicative scenario for the future uses on the site is included in the assessment. Where worst case effects could occur during an earlier year (e.g. air quality effects need to be considered during the year of first occupation as background air quality can be improving) then such an assessment has been undertaken and this is reported in the relevant topic chapter.

Assigning Significance

4.1.10 Effects have been assessed against the significance criteria provided in Table 5.1. The significance of effects has been identified following the implementation of mitigation and enhancement measures.

Table 1: Generic Significance Criteria

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<td>Severe</td>
<td>Only adverse effects are assigned this level of importance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of international, national or regional importance. A change at a regional or borough scale site or feature may also enter this category.</td>
</tr>
<tr>
<td>Major</td>
<td>These effects are likely to be important considerations at a local or borough scale but, if adverse, are potential concerns to the project and may become key factors in the decision-making process.</td>
</tr>
<tr>
<td>Moderate</td>
<td>These effects, if adverse, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.</td>
</tr>
<tr>
<td>Minor</td>
<td>These effects may be raised as local issues but are unlikely to be of importance in the decision-making process.</td>
</tr>
<tr>
<td>Not Significant</td>
<td>No effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error.</td>
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4.2 Ecology & Nature Conservation

4.2.1 A detailed ecology baseline for North Queensway has been established by desktop and field surveys undertaken by Applied Ecology Limited over the period 2006-2012. North Queensway adjoins Marline Valley Woods SSSI along its western boundary, a protected site which is especially important for its Ancient Woodland and ghyll stream. No part of North Queensway carries statutory or non-statutory wildlife designation, but a small area of woodland in the south of the site has been recently added to the Ancient Woodland Inventory.

4.2.2 North Queensway supports a range of semi-natural habitats, notably: semi-natural broadleaved woodland; semi-improved, infrequently managed neutral grassland; and substantial areas of mixed woody and bramble scrub. Scrub and woodland habitats within the site are known to support dormice, and the habitat supports a range of relatively common
breeding birds, two subsidiary badger setts, foraging and commuting bats (mainly pipistrelle species), and a moderately-rich assemblage of terrestrial invertebrates. No ponds supporting great crested newts are present within 250m of the site, and reptiles, which were present in large numbers have been captured and re-located off site.

4.2.3 No impacts on the SSSI or Ancient Woodland are anticipated as a result of the proposed North Queensway spine road construction. Overall habitat loss to the new road is relatively small scale (0.55ha in total), and is assessed as an ecological impact of minor adverse significance. Minor adverse ecological impacts as a result of spine road construction are also anticipated in relation to dormice, bats, breeding birds and terrestrial invertebrates, and species specific sensitive site clearance measures will be implemented to reduce residual impacts to a negligible one. The only anticipated operational impacts of the spine road relate to a minor adverse impact on badger due to an increased risk of road injury, and a moderate adverse impact on bats resulting from road lighting. An appropriate lighting strategy will reduce the operational impact on bats to one of neutral-minor adverse significance.

4.2.4 Design of the development plots has allowed for an undeveloped buffer around the sites boundary and, with the exception of temporary habitat loss within the buffer due to construction of an infiltration trench, a minimum stand-off of 15m from the SSSI will be provided. However, damage, disturbance and changes to drainage and hydrology during vegetation clearance and drainage construction could result in impacts of moderate adverse significance on the adjoining SSSI and Ancient Woodland. This impact will be reduced to one of minor adverse significance by adopting a range of appropriate site protection, drainage and best practice construction methods.

4.2.5 Permanent habitat loss resulting from site clearance within the development plots represents a loss in proportional terms, with predicted impacts affecting semi-natural broadleaved woodland (33% loss within the site boundary), semi-improved grassland (95% loss), dense woody scrub (78.3% loss), broadleaved plantation (74% loss) and bramble (65% loss). Residual impacts on semi-natural and plantation woodland, and dense woody scrub will be reduced to one of minor adverse significance as a result of new native tree and shrub planting within the retained buffer area.

4.2.6 Site clearance within the development plots will result in the loss of two subsidiary badger setts, together with impacts on dormice, and all other protected animal species receptors. A range of species specific sensitive site clearance measures will be implemented to minimise the impact on protected species, with no resulting residual impacts being higher than minor adverse significance.

4.2.7 Potential impacts associated with future building construction and operation within the development plots cannot be confirmed at this stage as details of development type (beyond the constraint of B1/B2 use), building size, location and construction methods are not known. However, it is considered entirely feasible that by designing, developing and implementing a range of SSSI sensitive drainage and site protection measures that the impact of the buildings should be negligible to moderate adverse significance.
4.3 Hydrology

4.3.1 The investigation and assessment of hydrology and flood risk, including foul drainage, and the effect of these on water quality matters at the site has been completed.

4.3.2 This is based on a site-specific Flood Risk Assessment (FRA), which identifies that the site is not significantly affected by flooding. The FRA includes a new outline surface water drainage strategy for the site to show how surface water from the site will be managed to ensure that water quality, flood risk and sewerage systems are not compromised.

4.3.3 It has been identified that the most important hydrological consideration at the site is the hydrogeological connection between the site and Marline Stream within the Marline Woods SSSI.

4.3.4 The construction of the proposed development has the potential to cause short-term impacts on water quality and hydrogeological flow patterns. In response to which a suite of mitigation measures that will be implemented into the construction phase (and specified in the CEMP) to reduce the construction impacts have been identified.

4.3.5 With regards to the operation of the development a range of surface water management mitigation measures have been identified. These include a catchpit chamber, oil interceptors, bio-retention areas, swales and an infiltration trench. With the implementation of the proposed mitigation measures it is anticipated that the development will not have any significant adverse effects and that any residual effects can be managed.

4.3.6 Hydrogeological flow patterns will be maintained with the introduction of an infiltration trench at the lowest point of the site which will accept treated surface water flows from the proposed development. Groundwater monitoring carried out since 2007 sets a robust baseline against which further monitoring during operation can be carried out. The potential to affect water quality at the site and downstream within the Marline Stream within the adjacent SSSI is therefore minimised by the mitigation and monitoring proposed.

4.4 Landscape and Visual

4.4.1 The landscape and visual impact assessment of the proposed development was undertaken in accordance with accepted guidance.

4.4.2 A study of the landscape and visual components of the site and the local area was undertaken through desktop study and field visits. This identified the main landscape and visual receptors and resulted in a baseline appraisal, against which landscape and visual impacts could be assessed.

4.4.3 The main landscape and visual implications of the proposed development and their potential impacts were identified and mitigation has been developed alongside the landscape strategy in order to minimise these impacts. Comparing the sensitivity of the receptors to the
magnitude of predicted change then allowed the significance of these impacts to be assessed.

**Landscape Impact**

4.4.4 The site is located adjacent to Marlne Valley SSSI and 0.65km away from the High Weald AONB Boundary. A small area of woodland within the site, which will be protected and retained is contained on the Ancient Woodland Inventory. Similarly trees within the area protected by the Tree Preservation Orders will be protected and retained.

4.4.5 The predicted residual landscape impacts of the development are relatively localised in scale and restricted to the site and its immediate environs. The most notable change will be the location of buildings within the site, but the landscape effect will be limited by the scale of the potential buildings and landscaping proposed as part of the development.

4.4.6 The overall significance of landscape impacts will be moderate adverse during construction and minor and adverse once the proposed development is complete.

**Visual Impact**

4.4.7 The visual influence of the proposed development has been assessed as relatively limited for medium and long distance views. This is due in part to undulating topography of the area, existing vegetation across the landscape including dense woodland, built form surrounding the site and the distance of the receptors from the site.

4.4.8 Upon completion of the proposed development the built form will be visible from nearby receptors. However, proposed planting and landscape of the site will help to assimilate the proposed development into the adjoining landscape and surrounding built form.

4.4.9 The residual visual impacts of the development are relatively localised in scale. As mentioned above, with good design, sensitivity with regards to location and materials for built form, together with the implementation of the landscape proposals, the visual effect of the proposed development will be largely mitigated, with effects varying dependent on the location between minor and major adverse during construction, reducing to not significant to moderate adverse upon completion.

**Ground Conditions**

4.5.1 The ground conditions baseline has been established from the information contained within the technical appendices and supplementary ground and surface water quality monitoring.

4.5.2 The site is underlain by clays, mudstones, sands and sandstones of the Hastings ‘Beds’ Formation. The majority of the site lies on a Non-productive Strata (formerly non aquifer) namely Wadhurst Clay Member. Secondary A (formerly Minor) Aquifers lie beneath the eastern part of the site (Lower Tunbridge Wells Sand Member) and western part of the site (Sand in Wadhurst Clay).
4.5.3 According to the Environment Agency, the site is not located within the catchment area of any groundwater abstraction points. From the topography of the site, it is considered likely that surface water runoff from the site falls towards the low ground and the Marline Stream to the northwest. Given the variable permeability of the underlying ground, it is likely that surface water infiltration rates vary across the site. In areas where near surface sandy horizons are present, surface water infiltration would be expected to be relatively rapid. Underlying lower permeability horizons may force groundwater back to the surface along spring lines, such as that observed in the base of the Marline Valley approximately 200m to the northwest of the site.

4.5.4 The Wadhurst Clay Member is susceptible to slope instability, not only in man-made cuttings but also in shallow natural slopes. During the ground investigations a single slip surface was noted within one of the trial pits excavated within the Wadhurst Clay Member in the centre of the site. Where present these features represent zones of weakness where the shear strength of the soil has been weakened to a ‘residual’ condition and movement along zones of weakness can be activated or reactivated. These zones of weakness can be reactivated by changes in stress patterns within the soil, such as surface loading or excavations, resulting in further ground movements in particular where pre-existing shear surfaces daylight in excavation or cut slopes.

4.5.5 In relation to the proposed commercial development, the data collected during the ground investigation has not revealed any evidence of significant soil or groundwater contamination. In the absence of a potential on site source the risk of significant soil contamination is considered to be very low based upon the works carried out to date. No significant contamination of surface water samples taken from the Marline Stream has been recorded.

4.5.6 There is considered a minor adverse potential effect to slope stability during construction works where mitigation measures will be implemented as part of the design of construction techniques. Mitigation measures will be required as part of the design of the development. Proposed structures and the drainage strategy for the site will take due regard of the potential impact of pollution with respect to the sensitivity of the underlying geology and adjacent ecological receptors. Mitigation measures will be incorporated in to the design of the development in this respect.

4.5.7 In light of the sloping nature of the site it is envisaged that earthworks will be required in order to prepare level development platforms and construction of the new spine road. Some form of moisture conditioning (drying) or treatment may be necessary to achieve suitable compaction densities prior to construction. In this connection lime or cement stabilisation may be considered.

4.5.8 A CEMP will be prepared to document the environmental management procedures during construction. The following construction mitigation measures will be incorporated into the CEMP as appropriate:

- measures to be adopted to mitigate the risk to ground and surface waters associated with contaminated surface water run-off arising from the operation of construction vehicles and general construction activities;
mitigation measures to be designed into the proposed development in order to ensure that the risk of pollution incidents to ground/surface water is minimised;

- a programme of monitoring to identify possible effects of construction on the baseline conditions as part of the Surface Water Management Plan; and

- further assessment of the risk from soil gas.

4.5.9 The residual effects are considered to be generally not significant provided suitable mitigation and protective measures are adequately incorporated into the design of construction activities and as part of the completed development. There is likely to remain a minor adverse residual risk in relation to the quality of ground/surface water from potential pollution incidents during the operation of the development. The design of mitigation measures will however be carefully considered in order to ensure that the impact of such risks are low.

4.6 Transport

4.6.1 The Environmental Statement considers the potential significant effects arising as a result of the proposed development with respect to transport. The assessment summarises technical work that was completed to assess the environmental effects of development related traffic in a Transport Assessment, submitted as a standalone document with the planning application.

4.6.2 The magnitude of effects and receptor sensitivity has been compared to estimate the significance of the effects resulting from the development proposals.

4.6.3 In order to reduce the residual effect of the development proposals, a number of mitigation measures are to be implemented. These include an uncontrolled pedestrian crossing point located approximately 60m south of the site access to facilitate pedestrian movements across Queensway, and a new footway on the eastern side of Queensway which will link to the existing footway and the Public Right of Way running north-south to Castleham Road. The new footway link will enhance permeability to the commercial area to the south, the local bus stops, the Church Wood Drive Superstore and general Castleham area bus routes.

4.6.4 A Travel Plan has also been prepared to help manage the employment travel that will be created as part of the future development of the site.

4.6.5 Two potential mitigation schemes have been considered at the Sedlescombe Road / Junction Road and The Ridge / Junction Road junctions that would achieve nil-detrimenr or better.

4.6.6 The assessment of the effects has concluded that the development will leave no residual effects in terms of transport.

4.7 Noise & Vibration

4.7.1 A noise and vibration assessment has been undertaken to determine the likely impacts associated with the proposed development.
4.7.2 Consultation was undertaken with Hastings Borough Council to agree the survey and assessment methodologies.

4.7.3 A noise survey was undertaken in June 2012 to establish the existing noise climate at the site and surroundings.

4.7.4 A qualitative noise and vibration assessment was undertaken for the construction phase of the development in accordance with recommendations in British Standard 5288. It is expected that with mitigation in place, the temporary effects due to construction noise and vibration would be moderate and adverse.

4.7.5 A computer noise was prepared to determine the likely noise impact due to the proposed operational development traffic.

4.7.6 The effects arising from the operational proposed development traffic would be classified as not significant upon sensitive receptors surrounding the site.

4.7.7 Noise limits for fixed plant associated with the proposed development have been set at the nearest receptors, in accordance with the relevant British Standard. Achieving these limits will mean that complaints from residents due to fixed plant will be unlikely and impacts not significant.

4.8 Air Quality

4.8.1 An air quality assessment has been undertaken to identify the effects of the proposed development, assuming an indicative development scenario, during construction and operation. Air quality in proximity to the site is currently very good; Hastings Borough Council has declared one AQMA along the A259 approximately 3.5km south of the site, however, this is unlikely to be affected by the proposed development.

4.8.2 The construction works have the potential to create dust and the site is considered as medium risk under relevant guidance, with the surrounding area of high sensitivity. During construction a package of mitigation measures will be applied to minimise the potential for dust deposition and elevated fine matriculate matter concentrations. With these measures in place the overall impacts during construction are judged to be not significant.

4.8.3 The operational impacts of increased emissions arising from traffic generated by the indicative development scenario have been assessed. Concentrations of have been predicted at existing human health receptors in the surrounding area, and oxides of nitrogen concentrations and nitrogen deposition have been predicted at the worst-case location within the SSSI. Road traffic impacts at both human health and ecological receptors are predicted to be not significant.

4.8.4 The cumulative construction and operational impacts of the adjacent Queensway South development, and the operation of the Bexhill to Hastings Link Road have been considered, and are judged to be not significant.
4.9 Other effects

4.9.1 Volume 1 of the Environmental Statement also identifies some topics where there may be environmental effects but the significance of these effects is more limited and less detailed assessment is appropriate. The coverage of these topics in this way is determined through the scoping process as part of preparatory stages of the Environmental Impact Assessment. For North Queensway these topics are archaeology, socio-economic effects and microclimate.

Archaeology

4.9.2 A desk-based report was prepared on the potential for archaeology at the site and in addition a geophysical survey for buried remains was undertaken for accessible parts of the site. The desk-based survey allowed identified features on the site to be incorporated in buffers and landscaping area and therefore not directly affected by development. The survey also allowed a programme of additional works that may be required at more detailed stages to be set out.

4.9.3 Overall, the significance of impacts on archaeology will have minor beneficial impacts due to the retention of features on site and that archaeological investigation and reporting on the site should help add to the historical understanding of the area.

Socio-economic

4.9.4 The proposed development will help delivery of one of the last remaining sites allocated for economic growth in the Hastings Local Plan. Development is important to the creation of new jobs and the North Queensway site and meeting the objectives for economic development in Hastings.

4.9.5 The works proposed as part of this development, including the new junction onto Queensway and the provision of plots for development will act as enabler to growth. As noted the current economic conditions make self-build and attractive options for local businesses.

4.9.6 The provision of these large serviced plots will enable development to proceed more rapidly than could be expected from other options of waiting for a single developer of the whole site. The length of time the site has been allocated could be an indicator of this. The size of the plots means there is flexibility of future use, but they are large enough to accommodate the identified needs of manufacturing businesses.

4.9.7 Therefore, it is likely that the proposed development would have moderate beneficial impact on the economy of the Hastings and the provision of new employment opportunities during its operation. In addition, the construction of the development will result in a temporary minor beneficial impact for jobs created at this stage.
Microclimate

4.9.8 Due to the proposed height of buildings on the site and the maintenance of buffer zones around the edges of the development plots it is not anticipated there will be any microclimate effects related to wind, solar heating or overshadowing.

4.10 Impact Interactions

4.10.1 There is the greatest potential for impact interactions during the construction of the proposed development. Impact interactions are likely to be experience by occupiers of residential dwellings immediately adjacent to the site, who may be subject to a temporary moderate and adverse impact from noise and visual effects.

4.10.2 However, once operational the impact interactions are likely to be reduced and become not significant.

4.10.3 The Marline Valley Woods SSSI may also experience impact interactions from development. These will relate to possible changes in water quality and quantity changes that support features of the designated site. During construction these impacts may lead to minor adverse impacts. The potential for impacts remain during operational phases although the significance of impacts will depend on development type and mitigation measures in place. Effect could range from not significant to moderate.