

CHAPTER 5: EIA APPROACH

5.1 EIA PROCESS

- 5.1.1 As set out in Chapter 1, EIA is a process through which the likely significant environmental effects of a development proposal can be identified and, where possible, adverse effects avoided or mitigated.
- 5.1.2 The overall aim of this ES is to provide an objective and systematic account of the likely significant environmental effects of the One Horton Heath Project and to assess the ability of the Site and surrounding area, including receptors such as people, flora and fauna, to accept those effects.
- 5.1.3 This chapter describes the methodology adopted for the EIA.

5.2 EIA SCREENING

- 5.2.1 The Wider OPA and OPA Phase 1 both fall within Schedule 2 Section 10(b) of the 2017 Regulations as an *“Urban development project”* in which *“the development includes more than 150 dwellings”*, and *“the overall area of the development exceeds 5 hectares”*.
- 5.2.2 Given of the nature and scale of the Wider OPA and OPA Phase 1, the Applicant concluded that significant environmental effects could arise. As such it was considered that Wider OPA and OPA Phase 1 (the One Horton Heath Project) qualify as EIA development as defined within the regulations. Therefore, a formal Screening Opinion was not sought from the Local Planning Authority (LPA).

5.3 EIA SCOPING

- 5.3.1 In April 2020 an EIA Scoping Opinion was requested from Eastleigh Borough Council (EBC), the LPA in relation to the Wider OPA.
- 5.3.2 As part of the Scoping process, statutory consultees were advised of the proposal and given the opportunity to provide comments in order to assist the LPA in the formulation of their formal Scoping Opinion.
- 5.3.3 In August 2020, EBC issued their formal Scoping Opinion (See Appendix 5.1). As required by the 2017 Regulations this EIA is based upon the Scoping Opinion.

- 5.3.4 Whilst this scope has been established in relation to the Wider OPA proposals, the Applicant considers that it remains appropriate for the assessment of OPA Phase 1, especially given the relationship between the applications and proposed single Environmental Statement approach.
- 5.3.5 Further details of technical consultation directly related to the EIA are provided in the methodology and baseline sections of each topic chapter.
- 5.3.6 In line with the Planning Practice Guidance (PPG), a proportionate approach has been taken with regards to the scope of the ES to ensure focus is given environmental factors likely to be significantly affected by the One Horton Heath Project (Paragraph: 035 Reference ID: 4-035-20170728).¹

5.4 SCOPE OF WORK

Technical Scope

- 5.4.1 Alongside addressing the recommendations made by EBC and associated consultees through the EIA Scoping Opinion, the following technical assessment work has been undertaken:
- Identification of the Site boundary;
 - Identification of the key characteristics of the Site and the establishment of the environmental baseline through a series of desk and field studies;
 - Identification of where there were gaps in the baseline and the further survey work required to address this;
 - Undertaking required further survey work;
 - Consideration of the potential sources and nature of environmental effects through assessment against the established environmental baseline; and
 - Definition of the assessment methodologies to be used in each study area.
- 5.4.2 Part 1, Regulation 4(2) of the 2017 Regulations states that *‘the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors—*
- (a) population and human health;*

¹ <https://www.gov.uk/guidance/environmental-impact-assessment>

(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC(a) and Directive 2009/147/EC(b);

(c) land, soil, water, air and climate;

(d) material assets, cultural heritage and the landscape;

(e) the interaction between the factors referred to in sub-paragraphs (a) to (d).

- 5.4.3 Schedule 4, Paragraph 4 of the 2017 Regulations require an ES to provide “A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.”

Topics scoped into the EIA

- 5.4.4 Table 5.1 provides a list of the topics that have been considered in this EIA, in accordance with the Scoping Opinion dated 12 August 2020.

Table 5.1: Environmental Topics considered in the EIA

Topic	ES Chapter
Socio-Economics	6
Air Quality	7
Transport and Access	8
Built Heritage	9
Ecology	10
Hydrology (including Flood Risk)	11
Noise and Vibration	12
Landscape and Visual	13

- 5.4.5 A series of baseline studies have been undertaken to establish the baseline environment for these topic areas. The baseline and assessment work undertaken as part of preparing this ES is set out within the relevant technical chapters and their technical appendices in Volumes 1a and 2.

Topics scoped out of the EIA

- 5.4.6 The Scoping Opinion issued in August 2020 confirmed that the following topics are scoped out of the EIA on the basis of no likelihood of significant effects.

Soils and Agricultural Land

- 5.4.7 Annex 2 of the NPPF defines Best and Most Versatile (BMV) agricultural land as “*Land in Grades 1,2, and 3a of the agricultural land classification*”. As described in in Chapter 2 (Site Description), the Wider OPA Site and OPA Phase 1 Site are almost entirely Grade 3b agricultural land and are therefore not classed as BMV.
- 5.4.8 The Wider OPA Site (including the OPA Phase 1 land) comprises land that is proposed for allocation for mixed-use development in the emerging Eastleigh Borough Local Plan and benefits from extant planning consents for development of a similar scale and nature to the Proposed Development. The principle of the redevelopment of the Wider OPA Site has therefore been demonstrated as acceptable taking into account the associated loss of agricultural land. The loss of agricultural land is a consideration in the Sustainability Appraisal undertaken in relation to the emerging Eastleigh Borough Local Plan.
- 5.4.9 As such, the loss of predominately non BMV land on a site where the principle of development is well established is not likely to result in significant effects agricultural land. This topic is therefore scoped out of the EIA.

Accidents, Fire and Natural Disasters

- 5.4.10 In the absence of recognised guidance on this subject in the context of EIA, a range of sources providing guidance related to the topic has been reviewed, including:
- Cabinet Office National Risk Register (NRR) of Civil Emergencies 2017 Edition²;
 - UK Government Emergency Response & Recovery Guidance³; and
 - International Federation of Red Cross & Red Crescent Societies Disaster and Crisis Management Guidance⁴.
- 5.4.11 A disaster can be defined as “*a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses*”

² Cabinet Office. (2017) National Risk Register of Civil Emergencies. [Online].
<https://www.gov.uk/government/publications/national-risk-register-of-civil-emergencies-2017-edition>.

³ International Federation of Red Cross and Red Crescent Societies, "The Red Cross Red Crescent approach to disaster and crisis management: Position paper," <http://www.ifrc.org/PageFiles/91314/1209600-DM-Position-Paper-EN.pdf> 2011.

⁴ International Federation of Red Cross and Red Crescent Societies, "What is a disaster?," <http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/what-is-a-disaster/> 2017.

that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins".³ An accident can be defined as "an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury"⁵.

- 5.4.12 The location of the Wider OPA Site and the OPA Phase 1 Site within the UK are such that natural disasters are not considered to represent a likely risk to the Proposed Development. For example, it is considered that the likelihood of an earthquake with a magnitude sufficient to cause damage to buildings and/or loss of life occurring and impacting the Wider OPA Site (and OPA Phase 1 Site) is extremely low. Furthermore, the topography of both the Wider OPA Site and OPA Phase 1 Site is not considered to be sufficiently steep such that a major mass movement disaster could arise.
- 5.4.13 Given the nature of the Proposed Development, the potential for either large volume storage or frequent passage / delivery of fuels and chemicals during either the construction phase or following completion, is considered to be low when compared to more industrial development proposals such as chemical works, storage depots, docks, or major highways.
- 5.4.14 The Proposed Development will be designed in accordance with recognised and accepted best practice in terms of highway design, specification of drainage and current building regulations.
- 5.4.15 It is therefore considered that whilst there is always a potential risk that an accident, fire or natural disaster could result in a significant environmental impact, this risk can be appropriately mitigated through embedded design measures and through compliance with statutory design guidelines.

Climate Change

- 5.4.16 As agreed through the EIA Scoping process, the ES does not include a separate chapter on climate change and greenhouse gas emissions. This assessment is primarily achieved through the Wider OPA and OPA Phase 1 Sustainability and Energy Statements (see Appendix 5.3. and Appendix 5.4). The Sustainability Statements include consideration of the impact of the Proposed Development upon carbon emissions. Each technical chapter also considers whether and how climate change could affect the findings of the assessments as set out below.
- 5.4.17 EIA is a key tool for ensuring that future that future development is resilient to the potential effects of climate change and that the proposals do not exacerbate climate change effects on

⁵ Oxford English Dictionary. 2018. [Online]. <https://en.oxforddictionaries.com/definition/accident>.

human or natural systems. The Institute of Environmental Management and Assessment (IEMA) has published an 'EIA Guide to Climate Change Resilience and Adaptation' (2020) which provides a framework for the effective consideration of climate change resilience and adaptation in the EIA process. This guidance states that the scoping of a project, taking into account climate change, should focus on general considerations rather than detailed, quantitative analysis.

- 5.4.18 There are significant uncertainties in the magnitude, frequency and spatial occurrence of climate change projections and information, which make it difficult to assess the impact of climate change in relation to a specific project. IEMA guidance notes that EIAs consider specific sites, whereas climate change models are prepared at a regional or national scale, thus adding uncertainty when with predictions on such a small area.
- 5.4.19 The EIA refers to, and relies upon, UKCP18 to conduct a high-level assessment of climate risk. In line with IEMA guidance, the impact of climate change on the Proposed Development has been assessed by way of a potential future baseline scenario and presented within an additional section of each technical chapter. Utilising climate change projections (see Appendix 5.2), the EIA qualitatively assesses how potential climate change may alter the predicted effects of the Proposed Development. It is unlikely that completely new direct impacts will arise as a result of climate change based on the current conditions, but the geographic spread or scale of potential impacts might be changed when considered against the future baseline conditions.

Health and Safety

- 5.4.20 The Wider OPA Site and the OPA Phase 1 Site are not located within or near any sites identified in zones for the Health and Safety Executive (HSE). Such zones are established around major hazard sites and pipelines for the purposes of consultation with the HSE upon any potential risks presented to either a proposed development or existing sites.
- 5.4.21 Therefore, significant effects related to Health and Safety associated with major hazard sites were not considered likely to result from the Proposed Development. Health and safety impacts arising as a result of topic specific impacts (e.g. Transport and Access) are considered as appropriate within the respective chapters.

Waste

- 5.4.22 It is estimated that the Wider OPA could potentially generate up to 33,403 tonnes of construction waste not including waste material associated with cut/fill operation. Based upon an indicative phasing strategy and an even distribution of waste generation this equates to approximately 2,226 tonnes of waste each year from the Wider OPA.

- 5.4.23 It is estimated that the OPA Phase 1 proposals could potentially generate up to 4,644 tonnes of construction waste not including waste material associated with cut/fill operation. Based upon an indicative phasing strategy and an even distribution of waste generation this equates to approximately 1,161 tonnes of waste each year from OPA Phase 1.
- 5.4.24 Any waste arising from the construction will be separated into key waste groups. If space is available then suitable areas will be provided within the construction site(s) for the separation of materials for recycling (e.g. timber, metals, packaging, hardcore etc.). If there is not space, this may instead be undertaken off-site by a suitable waste contractor.
- 5.4.25 The re-use of demolition waste on site, where possible, will further reduce traffic movements, and the air quality impacts associated with these, as a consequence of exporting and importing spoil and wastes.
- 5.4.26 In accordance with the EIA Scoping Opinion, a specific waste chapter is not incorporated into the ES. However, in accordance with the EIA Regulations, the Proposed Development description, upon which the EIA is based, includes estimated volumes of waste associated with construction activities (Construction, Demolition and Excavation waste) and the operational phase of the development (Municipal Solid Waste, Commercial Waste) (see ES Chapter 3).

Ground Conditions

- 5.4.27 Previous assessment of the Wider OPA Site (including the OPA Phase 1 Site) or part thereof, including two desk studies provided in support of the Wider OPA and OPA Phase 1 planning applications, indicate the Wider OPA Site and the OPA Phase 1 Site to be of low risk or of minor adverse effect significance.
- 5.4.28 Appropriate design of the Proposed Development and management of construction process will minimise risks associated with the contamination of the ground and controlled waters and the mobilisation of any contaminants that may already be present.
- 5.4.29 It is considered that the Proposed Development can be accommodated without adverse effect on the ground conditions. As such, significant effects in relation to ground condition are not considered to be likely and, in accordance with the EIA regulations, scoped out of the EIA.

Mineral Resources

- 5.4.30 The British Geological Survey (BGS) and borehole data available indicates predominantly clay bedrock at the Wider OPA Site with some surface deposits of Alluvium. River Terrace surface

deposits are shown along the west boundary of the Wider OPA Site however it appears that most if not all of these deposits are outside the Wider OPA Site and OPA Phase 1 boundaries.

5.4.31 The nature and extent of the bedrock and Alluvium are such that they have no economic use.

5.4.32 Further details are provided in the supporting Mineral Resource Assessment.

Odour

5.4.33 In line with The Institute of Air Quality Management (IAQM) guidance on the assessment of Odour for Planning, the Proposed Development, and activities associated with it, are not considered to generate significant odour emissions. During construction, standard mitigation measures set out in the CEMP will ensure any potential odorous activity is suitably controlled so ensure that no significant impacts are arise.

5.4.34 As residential developments, the Wider OPA Site and the OPA Phase 1 Site, once occupied, would be potential sensitive receptors to odours originating from sources in the surrounding area, such as sewage treatment works, intensive animal rearing, waste management sites and some industrial processes. However, the immediate surrounds are not characterised by these features, with the nearest source emitter of note being Eastleigh Sewage Treatment Works located 1.75km west at the nearest point. Given the localised nature of odour pollution exposure from external sources is not considered to be significant at the Wider OPA Site or the OPA Phase 1 Site and therefore odour is scoped out of the EIA.

Archaeology

5.4.35 Due to lack of known significant archaeological remains on the Wider OPA Site (including the OPA Phase 1 Site) which may be affected by the Proposed Development, the Wider OPA Site and the OPA Phase 1 Site are unlikely to contain any archaeological remains that would constrain or prevent development. The Proposed Development can be accommodated without significant environmental effects on the archaeological resource. As such, significant effects related to archaeology are not considered to be likely.

5.4.36 A Heritage Desk-Based Assessment is provided in Appendix 9.1. In terms of archaeology, the archaeological potential of the Wider OPA Site (including the OPA Phase 1 Site) has been established and below ground impacts associated with the Proposed Development have been discussed. The report will inform further discussions with the archaeological advisor to EBC with regard to any further work or mitigation which may be required.

Geographic Scope

- 5.4.37 The geographic scope of the EIA includes the physical extent of the Wider OPA Site and the OPA Phase 1 Site, as shown on the Wider OPA Site Boundary Plan (Figure 1.1) and the OPA Phase 1 Site Boundary Plan (Figure 1.3). However, for individual topic chapters the geographic scope extends beyond both the Wider OPA Site and the OPA Phase 1 Site where necessary to ensure current environmental conditions and the manner in which impacts are likely to be generated are properly considered. Where identified and relevant, such impacts have been assessed as part of the EIA. This is set out and explained as appropriate in each of the topic chapters.
- 5.4.38 The geographical extent of the EIA also considers the potential implications of related and un-related development activities, that could be taking place concurrently with the application, and any other land required for development specific infrastructure outside the current site boundary.

Temporal Scope

- 5.4.39 The timing and phasing of the Proposed Development is not currently fixed. However, it is anticipated that construction of the Wider OPA will commence in 2021 and continue to 2035 (representing a 15 year construction period). It is anticipated that development would be undertaken on a rolling programme of site preparation and construction, allowing earlier phases to be completed and occupied while subsequent phases are constructed.
- 5.4.40 As shown on the Indicative Phasing Plan (Figure 1.2), in the first phases of the construction, necessary site-wide infrastructure, including the Link Road, Internal Distributor Road, Sustainable Drainage Systems and Strategic Green Infrastructure, will be implemented.
- 5.4.41 OPA Phase 1 will be first residential parcel to be delivered as part of the Wider OPA and there will be six additional residential phases to be delivered over 15 years. The on-site primary school, Phase 1 of the principal Local Centre, formal sports provision and the allotments are anticipated to be delivered in the first five years of construction and the second phase of the local centre, including the commercial and retail uses, is anticipated to be delivered from Year 5 through to completion of the OPA development.
- 5.4.42 First occupation in OPA Phase 1 is expected in late 2022/early 2023.
- 5.4.43 The EIA will consider impacts arising from both construction and operational phases. The Proposed Development is designed as a permanent provision and therefore a demolition phase is not applicable.

5.4.44 Unless stated otherwise within a technical chapter, the EIA assesses the effects of the Proposed Development arising during the anticipated construction phase and the occupation phase and is based upon the following scenarios:

- Baseline/Future Baseline + OPA Phase 1 with the Link Road delivered concurrently and completed by occupation of 100 units of OPA Phase 1
- Baseline/Future Baseline + the Wider OPA (assuming the Link Road and OPA Phase 1 have been delivered)*
- Baseline/Future Baseline + the Wider OPA (assuming the Link Road and OPA Phase 1 have been delivered)* + Cumulative Development

* when assessing the Wider OPA, scenario 1 is not re-assessed. The 'baseline' when assessing the Wider OPA includes OPA Phase 1 and the Link Road.

5.4.45 The above scenarios are necessary to demonstrate the impacts, effects and necessary mitigation required to deliver the separate elements of the Proposed Development.

Cumulative Scope

5.4.46 The Planning Practice Guidance: Environmental Impact Assessment (Planning Paragraph: 024 Reference ID: 4-024-20170728: Revision date: 28/07/2017) states the following in relation to the assessment of cumulative effects:

'Each application (or request for a screening opinion) should be considered on its own merits. There are occasions, however, when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a proposed development. The local planning authorities should always have regard to the possible cumulative effects arising from any existing or approved development.'

5.4.47 Schedule 4 of the 2017 Regulations requires that the cumulative effects of the Proposed Development should be included within the ES. Usually cumulative effects are considered in three categories - incremental, accumulative and cumulative:

- Incremental effects relate to small changes over time by numerous developments potentially giving rise to significant impact. These are incorporated into the baseline and each assessment describes whether the Proposed Development would cause a significant effect or cause another incremental change.
- Accumulative effects relate to multiple effects from a single development, which may give rise to a potentially significant impact upon a receptor.

- Cumulative effects relate to multiple developments giving rise to significant effects at a receptor. For example, a number of projects in proximity to each other may give rise to significant landscape and ecological effects cumulatively.

5.4.48 The potential cumulative effects of the Proposed Development in association with other committed developments both during the construction phase and following completion are included where relevant as required by the EIA Regulations.

5.4.49 The assessment of accumulative effects aims to identify potential impacts on receptors arising from multiple effects. An analysis has been undertaken into specific receptors or receptor groups to identify any predicted residual effects across all of the assessments within this ES. Where one receptor or group of receptors are predicted to experience multiple effects, consideration has been given to the interaction of these effects and whether significant accumulative effects are likely to arise as a result. Further details are presented in Chapter 15.

5.4.50 Table 5.2 shows existing and approved schemes of a significant size (e.g. 80+ units, 1,000sqm non-residential development) in the vicinity of the Site (circa 5km) which are potentially concurrent with the Proposed Development that are considered to have the potential to give rise to significant cumulative effects. These committed schemes form the basis for the assessment of potential cumulative effects taking into account the availability of information at the time of assessment.

5.4.51 As part of the Scoping process, the list has been verified and amended in line with the LPA's and other stakeholder comments.

Table 5.2: Schedule of Committed Development

Site Address	Application Reference	Outstanding Residential Units (at March 2018) / Non-Residential Floor space	Local Authority	Approximate Distance from Site Boundary (km)	Timing Assumptions
Allington Lane, Burnetts Lane and Bubb Lane access	O/14/75735 and O/16/79354	N/A	EBC	0	Concurrent with the Proposed Development
Chalcroft Business Park,	F/18/83945	10,541m ²	EBC	0.025 (Adjacent)	Currently undecided. Planning committee date of 06/02/2019

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Burnetts Lane, West End					
Land off Botley Road, West End, Southampton	O/15/76418 F/19/85439	100 units plus 30 units	EBC	1.5	All 100 units (Phase1) expected to be delivered by 2021/22.
Land at Hedge End North, Winchester Road, Botley, Southampton (north west Boorley Green)	O/15/75953	680 units	EBC	1.5	Predicted to deliver 463 units by 2022
Land to North and East of Boorley Green, Winchester Road, Botley, Southampton SO32 2UA	O/12/71514 F/19/86233	842 units (outstanding) plus 68 units	EBC	1.7	First occupation achieved in Feb 2017. All 1330 total net dwellings of original application expected to be completed by 2023/24.
Pembers Hill Farm, Mortimers Lane, Fair Oak, Eastleigh SO50 7EA	O/15/77190	242 units	EBC	1.7	Expected completion by 2023/24
Land west of Woodhouse Lane	O/18/83634	605 units	EBC	2	Expected commencement in 2023/24
Land South of Maddoxford Lane, Boorley Green, Botley, Southampton, SO32 2DB,	F/19/84937	86 units	EBC	2.4	If positively determined in 2020, allowing for discharge of conditions, expected commencement in 2021/22 and completion in 2022/23
Land to the south of Maddoxford Lane and west of Westfield, Boorley Green, Botley, SO32 2DB	F/19/85178	104 units	EBC	2.5	If positively determined in 2020, allowing for discharge of conditions, expected commencement in 2021/22 and completion in 2022/23
Southampton International Airport, Mitchell Way, Eastleigh,	F/19/86707	Runway extension	EBC	2.7	Runway extension expected to be operational by April 2021

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The Mount Hospital, Church Road, Bishopstoke	O/12/71007 F/13/73226 F/14/75061 F/17/80513	53 units (outstanding)	EBC	2.8	Phase 1 has been completed with the remaining 53 of 217 total outstanding dwellings projected to be completed by 2022.
Land to the North and East of Winchester Street, Botley	O/18/83698	375 units	EBC	2.8	Due to commence in 2023/24 with 38 units expected to be completed by Sept 2024
Land at Woodhouse Lane and to the North and East of Botley Village, Eastleigh	CS/17/81226	Construction of a bypass for Botley, providing a connection from Station Hill (A334/A3051 junction) to Woodhouse Lane	HCC	3.3	Granted 22/11/2017. HCC are currently progressing with the detailed design of the scheme, and will be looking to start the improvements to Woodhouse Lane in 2019. Works to construct the bypass are likely to follow on in 2020/21
Land off St Johns Road, South of Foord Road, Hedge End, Southampton SO30 4DG	F/15/76804	109 units	EBC	4	Construction started. Developer has confirmed the build out rates, resulting in completion by 2021.
Serenity, Heath House Lane, Hedge End, Southampton, SO30 0LE	F/19/86829	107	EBC	4	If positively determined in 2020, allowing for discharge of conditions, expected commencement in 2021/22 and completion in 2022/23
Land west of Waylands Place and north of Peewit Hill Close, Hedge End, SO31 1DJ	F/17/80651	106 units	EBC	4.2	Expected to be delivered in full by 2024.
Land at Park Farm/North Stoneham Park Stoneham Lane, Eastleigh, SO50 9HS	F/19/86946	15,731sqm	EBC	4.3	If positively determined in 2020, allowing for discharge of conditions, expected commencement in 2021/22 and completion in 2023/24

Land south of Chestnut Avenue north Stoneham Park, Chestnut Avenue, Stoneham Lane, Eastleigh	O/15/76023 F/17/81167 F/17/81165 F/19/87086	868 units (outstanding) plus 18 units, 39 units and 65 units	EBC	4.5	Development commenced on site with the delivery of 728 units by 2024 at a build out rate of circa 150 dwellings per annum. 18 unit scheme expected completion by 2021/22. 39 unit scheme expected completion by 2021/22.
Land South of Bursledon Road, Bursledon, Southampton	O/15/77121 F/18/82322	178 (outstanding)	EBC	5	Completions began in 2019 with full delivery expected by 2021/22
Eastleigh Police Station, 18-24 Leigh Road, Eastleigh, SO50 9DG	F/19/85332	2,686sqm	EBC	3.4	Expected commencement in 2021 upon s106 agreement and completion in 2022/23

NOTE: – the scope of committed developments for the purposes of the Transport Assessment (TA) have been established and agreed with the LPA and Highway Authority via the TA scoping process based upon a separate criteria (e.g. through the inclusion of Local Plan allocated sites and other highways commitments). The assessment of cumulative effects in the Transport, Noise and Air Quality chapters in the ES are based upon the committed schemes agreed for the TA to ensure consistency with the agreed transport modelling.

* Committed developments considered within the TA and Transport assessment beyond the criteria for the committed developments within the EIA but used for the assessment of traffic related impacts and effects.

The Baseline

5.4.52 The assessments are based on the comparison of qualitative, and where possible quantitative, predicted impacts against current or recent baseline environmental conditions. Any significant changes expected in future baselines due to environmental trends are described qualitatively, or in certain cases calculated as quantitative future baselines, to allow meaningful future year assessment. These future year baselines can take account of cumulative developments not yet built but in the planning system. Where relevant these approaches are explained in further detail in the relevant technical chapters.

Inherent Mitigation

- 5.4.53 Mitigation is defined as a measure that is additional to the project proposed. Measures that design out significant effects and which form an inherent part of the project proposed are known as inherent mitigation. For example, many environmental constraints, such as flood risk, must be designed out of a project for it to be viable and it would be impractical to consider the project without such measures in place.
- 5.4.54 Where relevant, best practice measures, such as the implementation of a CEMP, Drainage Strategy and Dust Management Plan etc., have been included as inherent mitigation. This approach ensures that standard best practice measure and industry standards are accounted for within the assessments on the assumption that construction will adhere to these standards. As such this is not considered as additional mitigation.
- 5.4.55 Where this approach has been taken it has been stated in the relevant chapters and carried through into the mitigation summaries to ensure that any required assumed measures are suitably conditioned.
- 5.4.56 Inherent mitigation is therefore included in the assessments as part of the scheme and taken into account in the assessments.

5.5 EIA PARAMETERS & METHODOLOGY

Project Parameters

- 5.5.1 In order for the significant environmental effects to be identified and assessed, it is necessary to clearly identify all the components of the Proposed Development.
- 5.5.2 As the Wider OPA planning application has been made in outline, the ES assesses the construction and operation effects of the Wider OPA proposals using the identified outline parameters which allow some flexibility for development within defined limits.
- 5.5.3 The parameters comprise land-use, access, building heights, green infrastructure and proposed levels. These parameters identify the maximum extent of development in order to assess the worst case development scenario. In other aspects, such as the main access routes, these are the minimum fixed points that will be delivered. This allows inherent flexibility for future applications within these parameters. This is the 'Rochdale Envelope'.
- 5.5.4 An indicative development phasing plan is also included.

5.5.5 As the OPA Phase 1 planning application is being made in full with detailed designs available, these designs form the basis of the EIA parameters for OPA Phase 1.

5.5.6 The EIA parameters therefore comprise the project descriptions, including development quantum, and design parameters specified in Chapter 3 – The Proposed Development.

Impact Assessment Guidance

5.5.7 The assessments presented in the ES consider the potential for significant environmental impacts to affect the baseline conditions as a direct/ indirect result of the Proposed Development.

5.5.8 A description of the aspects of the environment likely to be significantly affected by the Proposed Development is a requirement of the EIA Regulations. The baseline conditions are defined as the existing state of the environment and how it may develop in the future in the absence of the proposals and with certain committed developments included. In order to forecast potential future effects it is necessary to make predictions. To ensure that predictions are as accurate as possible, a description of the methods used to assess the effects of the Proposed Development is also required by the EIA Regulations.

5.5.9 Unless specifically stated otherwise, the assessments have been undertaken in accordance with best practice guidelines published by the relevant professional bodies. Each technical chapter in this report provides full details of the baseline and assessment methodology employed for that topic area alongside terminology used in the context of that technical discipline.

5.5.10 Where there is no topic specific guidance available, a generic framework of assessment criteria and terminology has been developed to enable the prediction of potential effects and their subsequent presentation. The development of this framework has drawn upon the experience of Savills and project team of undertaking EIA.

Generic Assessment Framework

Receptor Sensitivity & Impact Magnitude

5.5.11 Significance of environmental effects is determined through considering the sensitivity of a receptor to change and the magnitude of the likely change.

5.5.12 Receptors are those aspects of the environment sensitive to changes in baseline conditions. The sensitivity of a particular receptor depends upon the extent to which it is susceptible to such changes.

5.5.13 Impact magnitude is determined by predicting the scale of any potential change on the baseline conditions. Where possible, magnitude is quantified; however where this is not possible a fully defined qualitative assessment is undertaken. The assessment of magnitude is carried out taking account of any inherent design mitigation in the proposal that forms part of the development description.

Table 5.3: Receptor Sensitivity & Impact Magnitude

Receptor		Impact	
Sensitivity to Change		Magnitude of Change	
Very High	VH	Very High	VH
High	H	High	H
Medium	M	Medium	M
Low	L	Low	L
Very Low	VL	Very Low	VL
Negligible	N	Negligible	N

Effect Significance

5.5.14 As shown in Table 5.4, the effect significance is determined by combining the predicted magnitude of impact with the assigned sensitivity of the receptor. Table 5.5 sets out the broad definitions of significance. The definition of the level of significance at which a *significant* effect arises is provided within the topic method section of each chapter of the ES. Unless stated otherwise within a technical chapter, effects of moderate significance or above are considered to be significant in EIA terms.

Table 5.4: Effect Significance

Criteria			Receptor Sensitivity				
			VH	H	M	L	VL
Impact Magnitude	Positive	VH	Substantial	Substantial	Major	Moderate	Moderate
		H	Substantial	Major	Moderate	Moderate	Minor
		M	Major	Moderate	Moderate	Minor	Minor
		L	Moderate	Moderate	Minor	Minor	Minor-Neutral
		VL	Moderate	Minor	Minor	Minor-Neutral	Minor-Neutral
	Negligible		Neutral	Neutral	Neutral	Neutral	Neutral
	Negative	VL	Moderate	Minor	Minor	Minor-Neutral	Minor-Neutral
		L	Moderate	Moderate	Minor	Minor	Minor-Neutral
		M	Major	Moderate	Moderate	Minor	Minor
		H	Substantial	Major	Moderate	Moderate	Minor
		VH	Substantial	Substantial	Major	Moderate	Moderate

Table 5.5: Definition of Significance

Significance	Definition
Substantial	These effects represent key factors in the decision-making process. They are generally, but not exclusively associated with sites and features of national importance and resources/ features which are unique and which, if lost, cannot be replaced or relocated.
Major	These effects are likely to be important considerations at a regional or district scale but, if adverse, are potential concerns to the project, and are likely to be important in the decision making process.
Moderate	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.
Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision making process. Nevertheless, they are likely to be relevant in the detailed design of the project.
Neutral	Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

5.5.15 As required by the EIA Regulations, the likely significant effects of the Proposed Development are described as:

- Adverse or beneficial
- Direct or indirect
- Temporary or permanent
- Reversible or irreversible
- Cumulative

5.5.16 Adverse effects are generally undesirable and result from negative impacts. Beneficial effects are generally desirable and result from positive impacts.

5.5.17 Each effect will have a source originating from the development, a pathway and a receptor. Effects which operate in this direct way are regarded as direct effects. Effects on other receptors via subsequent pathways are regarded as indirect effects.

Initial & Residual Effects

5.5.18 As stated previously, the EIA process enables the likely significant effects of a proposed development to be identified so that, where possible, adverse effects predicted to arise as a result of the proposal can be avoided or mitigated through the adoption of suitable measures known as additional mitigation. Additionally, enhancement measures can be incorporated to maximise the beneficial effects of the development. The adoption of mitigation and enhancement measures results in initial and residual effects. These can be defined as:

- Initial Effects: Effects occurring as a result of the Proposed Development prior to the adoption of any additional mitigation or enhancement measures.
- Residual Effects: Effects occurring as a result of the Proposed Development taking into account the adoption of identified additional mitigation or enhancement measures.

5.5.19 Additional mitigation and enhancement is defined as a measure that is additional to the Proposed Development as initially proposed. Measures that design out significant effects that form an inherent part of the proposal, known as inherent mitigation, are considered in the initial impact. For example, many environmental constraints, such as flood risk, must be designed out of a project for it to be viable, and it would be impractical to consider the project without such measures in place.

EIA Assumptions & Limitations

5.5.20 The following key assumptions have been made in preparing the ES:

- All legislative requirements will be met. Therefore, any standard guidance which is provided to ensure minimum legal compliance is not considered to constitute mitigation in the EIA and has not been taken into account.
- The assessment of effects prior to the adoption of mitigation measures assumes that the Proposed Development will be constructed in accordance with industry standard techniques. Such techniques are not considered as mitigation.
- Where further assumptions have been made for individual topic assessments these are identified within the relevant topic chapters.
- Any limitations or uncertainties associated with impact prediction or the sensitivity of receptors due to the absence of data or other factors will give rise to uncertainty in the assessment. Any such limitations are referred to in the relevant technical chapters of the ES.

Technical Chapter Structure

5.5.21 Each technical specialist has prepared their technical chapter to comprise of:

- Methodology used including assumptions and limitations;
- Baseline analysis;
- Prediction of potential impacts;

- Mitigation and/or enhancements proposed; and
- Evaluation of residual impacts.

5.5.22 Where appropriate and necessary, detailed information or baseline studies are presented in the appendices of the ES (Volume 2) and referred to as relevant within the specific chapter.