



The Sizewell C Project

6.3 Volume 2 Main Development Site Chapter 28 Health and Wellbeing Appendices 28A - 28C

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Volume 2, Appendix 28A – Health Technical Note 1 – Occupational Health Service Description

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Plates

None provided.

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None provided.

1. Introduction

1.1 Technical note objective

- 1.1.1 This technical note outlines the proposed on-site occupational health service which will be accessible for everyone engaged in the construction of the Sizewell C Project. The technical note draws from and builds upon the experience, success, lessons learned and best practice set during the past construction of the London Olympic Park and construction currently underway at Hinkley Point C (HPC) in Somerset.
- 1.1.2 The on-site occupational health service will form a committed action, to be secured in the Section 106 agreement, and would be delivered in accordance to the overarching principles established within this technical note.
- 1.1.3 The objective of this technical note is to set out an initial scope for the service, which has been designed to address any potential change in local healthcare demand directly attributable to the construction workforce of the Sizewell C Project.
- 1.1.4 For the purpose of assessment, this scope informs the professional judgment on the significance of impact upon local public healthcare capacity; and further informs the assessment of any residual or cumulative impact to be addressed through an appropriate healthcare planning contribution, also to be secured through the Section 106 agreement.
- 1.1.5 It is important to note that while it is the intention of the technical note to inform a definitive planning commitment in the Section 106 agreement, it is essential to retain a level of flexibility within the provision itself, partly to account for any unforeseen occupational healthcare requirements, but also to better align and compliment any change to local public healthcare structure, capacity, initiatives and priorities over the construction period.
- 1.1.6 To ensure this is the case, the Section 106 agreement will also set the Terms of Reference for the Sizewell C Health Working Group (SHWG) during the construction phase, such that it is maintained to observe the effectiveness of mitigation; inform any refinement where needed; and to help the Sizewell C Project align with local healthcare campaigns..
- 1.1.7 Wider health and wellbeing impacts (associated with environmental or socio-economic change) are investigated and addressed within **Volume 2, Chapter 28 Health and Wellbeing**.

1.2 Occupational health service

a) Occupational healthcare provision approach

1.2.1 As detailed below, the occupational health service will be structured around managing the health of the construction workforce by addressing three main aspects: the workplace; the worker; and wellbeing.

b) The workplace

i. Preventing ill health

1.2.2 The construction sector presents a number of occupational hazards that vary by activity, setting, and can further vary by weather condition, season and even time of day. Risk prevention will therefore be central to the occupational health provision in order to design out and reduce exposure to workplace health risks, while further providing interventions and/or advice on control measures, and providing education/training initiatives to improve awareness and consequently prevent incidence of accidents or ill health (removing and reducing the need for occupational or public healthcare).

1.2.3 Potential occupational health risks are key features inherently addressed and designed out via the planning process, and will be further managed via the procurement team and the requirement for detailed occupational health risk assessment to be conducted prior to the onset of all key stages of construction. Such information then forms part of the induction and individual task and safety briefing. Occupational health risk assessments will run throughout the construction process, and will be iteratively amended to account for occupational health monitoring, incident and near miss reporting from Hinkley Point C and Sizewell C.

1.2.4 As a minimum, the following tasks will be completed to improve workplace safety and ensure that there is a collective understanding of how each employee can protect and enhance their own health and wellbeing.

- health and safety plan;
- project risk registers; and
- task risk assessments and matrices.

c) The worker

i. Fitness to work

1.2.5 Prior to starting work on-site, each employee will go through a pre-employment health screening process to determine whether they are fit to

work. The health screening process is dependent on the type of work to be undertaken by the employee. Safety critical workers (such as crane operatives) will always require a medical examination, whereas non-safety critical workers will need to complete a health questionnaire, followed by medical examination should any health risks be identified.

- 1.2.6 The outcome from the health screening process falls under one of three classifications: fit to work; not fit to work; or fit, subject to a modification. This process enables potential existing health problems to be identified early and ensures that each employee is able to safely carry out their job, reducing potential for accidents and injury (to themselves and others).
- 1.2.7 In addition, certain groups of employees will be periodically assessed to ensure that they meet legal standards to undertake their job. This will include tasks such as operating Large Goods Vehicles (LGV), working in confined spaces, and working with Display Screen Equipment (DSE).
- 1.2.8 The occupation health service will undertake periodic ongoing assessments regarding fitness for work, in keeping with legislative guidelines and policies. In addition, the service will undertake assessment and provide advice in specific instances such as when an employee returns to work after illness or an operation. For this service, the individual must be referred to occupational health by their manager.
- 1.2.9 Serious health conditions identified during screening that cannot be addressed or treated by the occupational health service will be referred onward to an appropriate specialist. For home-based workers, this equates to complementary health screening over and above what could be expected from any other local employer and will support more rapid diagnosis and effective treatment. Non-home-based workers will be referred to place of origin and will not impact upon local health care capacity or resources.

ii. Health surveillance

- 1.2.10 The health surveillance programme will meet the obligations of EDF Energy under the Control of Substances Hazardous to Health (COSHH) Regulations 2002 and the Management of Health and Safety at Work Regulations 1999. The health surveillance programme will cover three core areas:
- hand-arm-vibration syndrome;
 - noise; and
 - COSHH – routinely this includes respiratory health and skin health surveillance.

1.2.11 The occupational health service will maintain health records in accordance with legislative requirements, enabling them to supply statistical information from the health surveillance process.

1.2.12 Appropriate treatment and referral data will be applied and discussed with the SHWG during the lifetime of the project. The application of Key Performance Indicators (KPIs) will also be applied to measure the effectiveness of the provision, and ensure residual or unforeseen impacts are appropriately addressed.

iii. **Drugs and alcohol**

1.2.13 The occupational health service will assist EDF Energy with the implementation of a drug and alcohol policy, which will include pre-placement, for reasonable suspicion and random testing. EDF Energy will manage the policy, the selection of employees to be tested and any subsequent actions should a positive result be found.

1.2.14 The occupational health service will ensure that testing of urine and breath samples is undertaken following strict guidelines, and meets the relevant legal and ethical requirements. However, the occupational health service will have no direct involvement in the selection or subsequent management of employees.

iv. **Treatment services**

1.2.15 The occupational health service will be located on the main development site in a location that is easily accessible to workers (at Hinkley Point C it is close to the main canteen). It will operate 24 hours a day and 7 days a week, with the level of resourcing proportionate to the size of the workforce on site.

1.2.16 The occupational health service will include a clinic covering all shift hours and provide a 24/7 telephone service for workers on the project campus / caravan site and in local accommodation. The onsite provision enables all workers to conveniently access the service while at work, and in so doing, will reduce the likelihood of workers taking time off to attend local public health care facilities.

1.2.17 The service will treat and advise any employee who have accidents or are taken ill at work. The provision of on-site treatment will enable earlier intervention which, in addition to reducing potential for health deterioration, will also reduce demand on local NHS healthcare services, as the provision also covers home-based workers.

- 1.2.18 Types of treatment and services to be offered on-site will include:
- referrals from first aid;
 - first aid and Trauma Medical Immediate Care (TMIC) training (courses run by site);
 - a drop in, nurse-led treatment service for minor injuries and illnesses, that will expand with the construction workforce;
 - proportionate GP provision commencing on site from the onset of the main construction activities, and increased in line with the construction workforce and associated demand (as measured by KPI);
 - provision of commonly prescribed medication;
 - confidential health advice relating to work or non-work-related health issues (including sexual health and substance misuse);
 - advice on rehabilitation and future ability to undertake normal or restricted duties, for employees who are on long-term sick leave; and
 - collation of data on accidents and cases of ill health.
- 1.2.19 As has been the case at Hinkley Point C, as the workforce grows, the service provision will expand and include additional services (such as physiotherapy and specific clinics). This will be determined by the relative need on the site as the Sizewell C Project progresses, and discussed with the SHWG to inform the provision and align with wider public health programmes.
- 1.2.20 Building on experience from the health services provided at Hinkley Point C, there will be an on-site pharmacy that will stock over 150 types of medication (including antibiotics, analgesia and nonsteroidal anti-inflammatory drugs) that can be dispensed by nurses under Written Instructions (WI). Common medications (such as antihypertensives, oral hypoglycaemics and steroids) will also be stocked and able to be dispensed by an on-site GP. If a medication is required but is not in stock, the on-site GP can write up private prescriptions for employees for collection locally, of which the prescription cost is issued to where the patient is registered.
- 1.2.21 The service will include an emergency response vehicle to facilitate rapid response, stabilising and conveying workers to safe road and air ambulance pick up areas. This will initially comprise a 4X4 to enable access to construction areas during initial ground works, and will be supplemented by an appropriate road vehicle as the infrastructure progresses.

1.2.22 First response capabilities of workers on-site will also be developed through first aid and TMIC training to enhance service capability. This will reduce the number of unnecessary emergency ambulance call outs and support the rapid transfer and conveyance of workers to hospitals.

1.2.23 The occupational health service will work closely with local emergency services (East of England Ambulance Service Trust) on the iterative development of emergency response capability as the Sizewell C Project progresses. This will include linking in and stocking emergency drugs with the ambulance service's pharmaceutical Written Instructions, to ensure a seamless handover of patients.

d) Wellbeing

i. Health promotion

1.2.24 Health promotion campaigns will be run which aim to maintain and improve the health and wellbeing of the workforce by: raising awareness of both work and non-work-related health issues; and encouraging healthy behaviours within and outside of the workplace.

1.2.25 The provision is for the entire workforce, intended to prevent, delay and reduce the need for clinical intervention. As a consequence, this proactively reduces external healthcare demand for the non-home-based workforce, while supporting health improvements and reducing public health demand from existing home-based workers.

1.2.26 A range of promotional activities (including the use of tool box talks and presentations at health and safety and/or other meetings) will ensure full coverage of the workforce. This inclusive approach will be essential to ensure the workforce fully engage with campaigns and make positive changes.

1.2.27 The SHWG will be engaged to inform and refine the provision over the course of the construction phase, but as a minimum, health promotion campaigns will fall under the following categories, and are discussed in more detail below:

- occupational health promotion;
- mental health;
- sexual health;
- general health campaigns;
- lifestyle screening; and

- targeted health education.

ii. Occupational health promotion

1.2.28 Occupational health promotion will be designed to reduce the risk of workers contracting occupation-related diseases such as dermatitis, asthma, noise induced hearing loss, and injuries associated with manual handling.

1.2.29 This will be iteratively reviewed and refined during the course of the construction phase with support from the SHWG, to ensure it remains appropriate, effective and well aligned with wider public health initiatives and programmes.

iii. Mental Health

1.2.30 The construction industry in general, coupled with a significant proportion of workers working away from the support network of family and friends can present a range of stressors that may impact upon mental health and wellbeing or compound existing issues.

1.2.31 The occupational health service will build upon the award-winning service provision at Hinkley Point C to proactively support all workers, including through the provision of resilience training and awareness campaigns, a chaplain/counsellors and Mental Health First Aiders.

iv. Sexual Health

1.2.32 The occupational health service will include a sexual health information, testing and links to a tracing service to protect, prevent, and where appropriate treat sexually transmitted infections (STIs). Informing partners of their risk of an STI is a sensitive issue. The tracing service will provide guidance and aid with this task.

v. General health campaigns

1.2.33 General health campaigns will be aimed at improving workers' general health through advice on vaccinations, smoking, diet, alcohol, and stress, with the potential for life-long health and wellbeing benefits.

1.2.34 Engagement with the SHWG will greatly aid in coordinating and aligning local priority and seasonal campaigns to maximum effect, with both a direct benefit to not only non-home-based and home-based workers, but also indirectly filtering down to family and dependants (be they local or otherwise).

vi. Lifestyle screening

1.2.35 Lifestyle screening will be available to the entire workforce to enable early detection of high blood pressure, high cholesterol and other cardiac risks, facilitating lifestyle and behavioural intervention and care before manifest health outcomes.

1.2.36 Unlike the pre-employment check, lifestyle screening will be available to each employee annually on a voluntary basis, and provides an additional proactive means to facilitating healthy independent living for longer. Provision further manages the potential residual impact to public health from non-home-based workers, and affords additional public health benefits to home-based workers.

vii. Targeted health education

1.2.37 Targeted health education will be launched should an adverse health trend be identified in the data collected by the occupational health service relating to accident frequency and lifestyle screening.

1.2.38 The monitoring and resultant training will be shared with the SHWG partly to disseminate any transferable knowledge that can be applied on other projects, but to also test, align and be consistent with their own campaigns. Given the concern raised by the SHWG, sexual health and substance misuse will be specifically included within targeted health education, and will align with their own campaigns.

viii. Link with local services

1.2.39 To maximise effectiveness, it is intended that the occupational health service will link their internal health promotion initiatives to those publicised by the NHS, including:

- safety campaigns and messages;
- national campaigns;
- response to trends and emerging issues; and
- vaccination programmes.

1.2.40 This approach will complement and reinforce the key health messages that are being publicised locally and nationally. The mechanism for this will be strategically through the SHWG, and where appropriate through direct liaison with NHS providers.

1.3 Hinkley Point C monitoring results

- 1.3.1 Establishing trend data that can be applied to accurately forecast occupational and residual public healthcare demand on other projects is always subject to limitations due to varying activities, process, duration or embedded mitigation.
- 1.3.2 However, the construction of Hinkley Point C is uniquely transferable in this instance, being a timely example of the same technology, with comparable construction activities and workforce make up to that forecast for the Sizewell C Project.
- 1.3.3 The majority of statistics relating to the Hinkley Point C occupational health provision are available from 2017 onwards when workforce numbers began to be sufficient to warrant recording of key occupational healthcare performance indicators. As a result, the data presented in the tables below relates to the beginning of 2017 onwards.
- 1.3.4 As shown in **Table 1.1** and **Table 1.2**, and as would be expected, as the number of workers has increased, so too has the number of on-site GP appointments, tests and treatments (including physio, private X-ray, blood tests). The only exceptions to this are private prescriptions and ambulance call outs; these have both shown a reduced demand from the previous year, despite the increase in workers.
- 1.3.5 When exploring the residual referral from home and non-home-based workers, annual totals are applied, as monthly referrals are typically too small to offer any insight. **Table 1.3** demonstrates that the number of annual GP referrals for non-home-based workers are negligible, with a peak of 7 in 2018, and zero well into Q4 of 2019 despite the increased workforce. **Table 1.4** shows referral rates. When considered in tandem with the increased number of on-site GP appointments and wider preventative measures and treatments provided in 2019, this would indicate that the occupational health provision is effective in reducing and preventing residual impacts on local healthcare capacity.
- 1.3.6 Minor Injury Unit (MIU) referrals for non-home-based workers during 2017 and 2018 were equally low (4 and 7 per year respectively, averaging out at less than 0.5 per month). 2019 has however shown a pronounced increase due to an unusually high rate in July and August 2019 (11 and 8 respectively). The referrals to MIU have been largely for X-ray, and despite the absence of a local MIU in proximity to Sizewell, have been kept separate from hospital referrals in this note, as this offers additional clarity as to the nature of the demand.

- 1.3.7 Non-emergency hospital referrals (walk in, not ambulance call outs) are the most significant referral upon local healthcare services, and indicate a similar trend, having peaked at 135 in 2018 (averaging 11 a month), and totalling at 88 well into Q4 of 2019, despite the increase in workers.

Table 1.1: Hinkley Point C occupational health monitoring annual total.

Year	Total Workforce.	Ambulance Call-outs.	Onsite GP Appointments.	Treatment Interventions.	Private Prescriptions.	Private X-Ray.	Private Physio.	Private Blood Tests.
2017	2839	20	965	3357	152	38	131	105
2018	3370	59	1031	4183	189	42	395	395
2019 (Q1–Q3)	4686	39	1168	7137	143	46	768	768

Table 1.2: Hinkley Point C occupational health monitoring rates.

Year	Ambulance Call-outs (per worker).	Onsite GP Appointments (per worker).	Treatment interventions (per worker).	Private Prescriptions (per worker).	Private X Ray (per worker).	Private Physio (per worker).	Private Blood Tests (per worker).
2017	0.0070	0.3399	1.1825	0.0535	0.0134	0.0067	0.0370
2018	0.0175	0.3059	1.2412	0.0561	0.0125	0.0086	0.0409
2019 (Q1–Q3)	0.0083	0.2493	0.8828	0.0305	0.0098	0.0070	0.0237
Average	0.0110	0.2984	1.1022	0.0467	0.0119	0.0074	0.0339
Rounded to 4 decimal points.							

Table 1.3: Hinkley Point C occupational health monitoring home and non-home-based referral annual totals.

Year	Total Workforce.	Non-home-based.			Home-based.	
		GP Referrals.	Hospital Referrals.	Minor Injury Unit (MIU) Referrals.	GP Referrals.	Hospital Referrals.
2017	2839	5	94	4	5	36
2018	3370	7	135	7	13	41
2019 (Q1–Q3)	4686	0	88	32	14	36

Table 1.4: Hinkley Point C occupational health monitoring home and non-home-based referral rates.

Year	Non-home-based.			Home-based.	
	GP Referrals (per worker).	Hospital Referrals (per worker).	Minor Injury Unit (MIU) Referrals (per worker).	GP Referrals (per worker).	Hospital Referrals (per worker).
2017	0.0018	0.0331	0.0014	0.0018	0.0127
2018	0.0021	0.0401	0.0021	0.0039	0.0122
2019 (Q1-Q3)	0.0000	0.0188	0.0068	0.0030	0.0077
Average	0.0013	0.0306	0.0034	0.0029	0.0108
Rounded to 4 decimal points.					

1.4 Conclusion

- 1.4.1 In summary, the occupational health service provided by the Sizewell C Project will provide a bespoke package of health prevention, promotion, and treatment initiatives that will be tailored to the specific needs of the construction workforce (both home-based and non-home-based), and will be aligned to local health campaigns.
- 1.4.2 The occupational health service will build on experience from other large-scale construction projects, including at Hinkley Point C, to ensure that the service is not only effective, but also reduces residual demand and complements local public healthcare services and initiatives.
- 1.4.3 The commitment to provision of an occupational health service and the terms of reference and governance arrangements for the SHWG during the construction phase of the Sizewell C Project will be secured through the Section 106 agreement.
- 1.4.4 Appendix 28B sets out the forecasted residual demand on local healthcare services from the non-home-based construction workforce and their dependants. This will be addressed through an appropriate healthcare planning contribution, also secured in the Section 106 agreement.



Volume 2 Appendix 28B Health Baseline Sizewell Health Residual
Healthcare Forecast – Health Technical Note 2

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Plates

None Provided.

Figures

None Provided.

1. Health Technical Note 2

1.1 Health baseline

a) Overview

1.1.1 This document has been developed and refined in partnership with key health stakeholders which make up the Sizewell C Health Working Group and explores the residual impact upon local healthcare demand following the implementation of the occupational health provision detailed in **Appendix 28A** of this volume (Doc Ref. 6.3).

b) Aim and objectives

1.1.2 The purpose of this technical note is to provide the rationale for a healthcare planning contribution and to present the approach, methodology and assumptions underpinning the assessment of residual impact upon local healthcare capacity.

1.1.3 This note forecasts potential demand following the provision of mitigation, in the form of an on-site occupational health service. Following this, a proportionate healthcare planning contribution will be explored with the Sizewell C Health Working Group, alongside the phasing and allocation of such provision, with commitments secured through the Section 106 agreement.

c) Healthcare support rationale and scope

1.1.4 Planning contributions can be sought to support public services and amenities where there is a direct impact from a proposed development that may increase demand or reduce the availability or quality of such services to the host community. In this instance, support is being sought to address the potential residual impact of the temporary non-home-based workforce and their dependants upon primary and secondary healthcare.

1.1.5 Support for public health services has been requested by stakeholders as the non-home-based workforce represents a new population moving to the area, with different health needs from the host community, potentially resulting in additional healthcare demand and the need to plan for a potential change in health care services which cater to the specific needs of a relatively homogenous workforce.

1.1.6 The NHS currently allocates funds to Clinical Commissioning Groups based on the relative needs of their populations. A weighted capitation formula determines each Clinical Commissioning Groups target share of available resources, to enable them to commission similar levels of health services

for populations in similar need, and to reduce avoidable health inequalities. This is reactively apportioned relative to the population on a three year rolling basis.

1.1.7 Although all Sizewell C workers based in the UK contribute towards the revenue allocation, there would be a delay and some discrepancy at the local level due to the rapid and temporary change in population from non-home-based workers. As an example, a worker's permanent residence may be in one region, but they may temporarily reside and work in another, meaning healthcare demand and healthcare revenue allocation may fall between two different Clinical Commissioning Groups.

1.1.8 There is therefore the need to support local healthcare providers by firstly reducing and managing such need internally through appropriate occupational healthcare provision, provided in **Appendix 28A** of this volume, and then in preparing for and addressing any residual change in local healthcare demand until such allocation can effectively catch up.

1.1.9 There is also potential for additional healthcare demand from the dependants of non-home-based workers that may also move to the area (i.e. partners and children). It is important to note however, that dependants who move into the area could only do so by moving into existing local accommodation, as seen in **Chapter 9** of this volume of the **ES**, as they would not be permitted to stay on the Sizewell C Project campus or caravan site, and the long-term use of tourist accommodation would likely be prohibitively expensive. Such individuals would replace existing residents, resulting in little net additional population change or associated healthcare demand.

1.1.10 The Primary and Secondary healthcare services addressed within this note include:

- GP services; and
- hospital services (acute and chronic care).

d) **Assumptions**

1.1.11 The modelling of potential residual healthcare demand from non-home-based workers and their dependants requires a number of assumptions, including:

- the workforce and dependants assumptions set out in Chapter 9 of this volume of the ES, including Appendices 9A – 9D to this volume;

- that non-home-based workers without dependants are registered with a GP outside of Suffolk, and consider this area to be their permanent place of residence;
- all long-term health conditions are managed by their registered GP in collaboration with the appointed occupational health provider;
- all prescriptions for long-term conditions and all hospital costs fall to the commissioner in the area of permanent residence;
- residual prescriptions are to be private prescriptions managed through the appointed occupational health provider and on-site pharmacy;
- the appointed occupational health service would include a clinic covering all shift hours and provide an out of hours' health service, with a 24/7 telephone service for workers on the Sizewell C Project campus / caravan site and in local accommodation; and
- that dependants would not be able to use the occupational health service and that contributions will be secured in the Section 106 agreement for families of non-home-based workers where they are net additional to the population for which the Clinical Commissioning Groups is already funded and only for the time that such funding takes to adjust.

1.1.12 Such assumptions provide a basis to forecasting the likely residual healthcare need of workers and dependants. However, a level of conservatism is required to address uncertainties. This has been managed through a consistently conservative approach throughout this note.

1.1.13 It should be noted that the occupational health service would be available for the total workforce; home-based workers would benefit from the occupational health protection, promotion and care services supplied by the appointed occupational health provider, representing complementary care and support to local healthcare providers.

1.1.14 Further conservatism is added by not considering the significant health benefits home-based workers would receive in preventing, identifying and treating local health issues through access to the on-site occupational health service.

e) **Approach**

1.1.15 As simplified below, and discussed in more detail below, the overarching approach has been to firstly establish the likely occupational healthcare use and the subsequent referral rate to local NHS services.

- 1.1.16 While information from the Health and Safety Executive demonstrates that the construction industry in general, presents one of the most hazardous working environments within the UK, this does not relate to major infrastructure projects which implement significant risk prevention measures and occupational health promotion initiatives to facilitate a safe and healthy working environment.
- 1.1.17 The calculation of residual impact on local healthcare capacity associated with Sizewell C draws from experience on other major infrastructure projects, most notably, the construction of Hinkley Point C in Somerset.
- 1.1.18 Hinkley Point C is particularly comparable being a timely example with comparable scale, design features, construction activities, and workforce profile. The Sizewell C Health Working Group has visited the site, explored the occupational health provision and engaged with their counterparts to discuss the effectiveness of the health mitigation and any lessons learned.
- 1.1.19 Quantification of the residual impact on local healthcare capacity will inform details of on-site occupational healthcare provision, form the basis to a proportionate Section 106 Agreement and will be considered alongside existing circumstance to inform the assessment of significance within **Volume 2, Chapter 28** of the **ES**.

1.2 Healthcare use

a) Rate of use

- 1.2.1 The additional healthcare demand has been forecast based on the rate of use and referral experienced at Hinkley Point C.
- 1.2.2 As shown in **Table 1.1**, Hinkley Health has proven an effective means of managing the healthcare requirements of the construction workforce, where on-site screening, GP provision, pharmacy, treatment and active health campaigns have contributed to identification and intervention of health hazards associated with the workforce demographic and construction activities associated with this type of development.
- 1.2.3 As a result, ambulance call outs have remained low, ranging from 20-59 a year with an average rate of 0.01 per worker. The latest overarching monitoring report for Hinkley Point C¹ states that: *“to date the cumulative number of callouts made to the SW Ambulance service NHS Trust is quite low for such a major project and in line with mitigated predictions”*.

¹ Working Paper 2—Sector studies – Economic Development, Transport and Social and Community Impacts.

1.2.4 The number of residual referrals for non-home-based workers is exceptionally low, with between five to seven GP referrals a year, equating to an average referral rate of 0.0013 per non-home-based worker. A higher rate was observed for referral to minor injury units, equating to an average referral rate of 0.0034 per non-home-based worker.

Table 1.1: HPC Hinkley health monitoring and referral data.

Year	Total Workforce	On-site GP Appointments	Ambulance Call out	Private prescriptions	Private X-ray	Private Ophthalmology	Private Physio	Non-home-based Referrals		
								GP	Hospital	Minor Injuries Unit
2017	2839	965	20	152	38	10	131	5	94	4
2018	3370	1031	59	189	42	12	395	7	135	7
2019 (up to Q3)	4686	1168	39	143	46	12	768	0	88	32
Total (2017–Q3 2019)		3164	118	484	126	34	1294	12	317	43

1.2.5 The most significant non-home-based referral observed was to hospital (walk in, not ambulance call out), peaking at 135 in 2018, before declining to 88 by the end of Q3 of 2019. This equates to a referral rate of 0.03 per non-home-based worker. It is important to note that the higher rate is in part a function of the increased screening and worker monitoring and the precautionary approach for any suspected condition. It is also important to note that such screening and subsequent referral was not solely via ambulance call outs, which remain significantly lower (between 20 to 59 per year for the entire workforce, equating to a total workforce call out rate of 0.01 per member for the combined home and non-homebased workforce).

1.2.6 While home-based workers have also seen some residual GP and hospital referrals, it is important to recognise that these figures are also a result of the increased screening and monitoring over and above what home-based workers would typically receive, and should not be considered as an impact. Instead, this extra surveillance, coupled with the on-site GP service provision and private prescriptions (which home-based workers may utilise for convenience if they wish) represents a benefit to and complements local healthcare, enabling earlier intervention and treatment with potentially

greater recovery and survival rates and reduced expense to local Clinical Commissioning Groups where conditions are caught early.

b) Residual healthcare forecast

- 1.2.7 **Chapter 9** of this volume of the **ES** uses a workforce profile peaking at 7,900 workers and forecasts the level of home-based and non-home-based recruitment, provided also in **Appendix 9A** to this volume.
- 1.2.8 At peak construction it is anticipated that there would be 2,016 home-based workers and 5,884 non-home-based workers. The monthly peak construction workforce of each year is then further applied as a precautionary approach.
- 1.2.9 When applying the ambulance call rate to the total workforce, (home and non-home-based), assuming a similar rate to that experienced during the construction of Hinkley point C, there is the potential for approximately 79 ambulance call outs during the peak construction year (7900 x 0.01).
- 1.2.10 After factoring in the occupational healthcare service provision, the residual referral to local services is anticipated to be minimal. The annual average number of GP referrals is predicted to be four, peaking at eight GP referrals (during construction Year 7), and totalling 47 GP referrals over the entire 12 year construction phase.
- 1.2.11 The annual average number of referrals to the Minor Injury Unit (largely for X-rays) is predicted to be 10, again peaking in Year 7 at 20 referrals and totalling 124 referrals over the entire construction phase, as shown on **Table 1.2**. However, in the absence of a local Minor Injury Unit, and should a private solution not be found, this would contribute to the number of non-emergency hospital referrals.
- 1.2.12 Non-ambulance hospital referrals (for significant yet non-emergency medical issues) represent the largest change in local healthcare demand, with an annual average referral of 91 (approx. 8 per month) peaking in Year 7 at 177 (approx. 15 per month), and totalling at 1,093 over the entire construction phase.

Table 1.2: Non-home-based worker residual healthcare forecast

Year	Month	Non-home-Based Workers.	Forecasted Referral.			
			GP (0.0013 worker).	Referral per	Minor Injury Unit Referral (0.003 worker).	Hospital Referral (0.03 worker).
1	12	816	1		3	24
2	24	1,504	2		5	45

Year	Month	Non-home-Based Workers.	Forecasted Referral.			
			GP (0.0013 worker).	Referral per	Minor Injury Unit Referral (0.003 worker).	Hospital Referral per (0.03 worker).
3	36	2,538	3		9	76
4	48	3,519	5		12	106
5	60	4,551	6		15	137
6	72	5,598	7		19	168
7	81	5,884	8		20	177
8	85	5,470	7		19	164
9	97	3,920	5		13	118
10	109	1,582	2		5	47
11	121	491	1		2	15
12	133	560	1		2	17
Total			47		124	1,093
Annual Peak			8		20	177
Annual Average			4		10	91

1.2.13 Disregarding the complementary care home-based workers will benefit from, and even when applying the consistently conservative approach, the residual impact is considered negligible.

c) Non-home-based dependants

1.2.14 As detailed in **Appendix 9B** of this volume (Demographic benchmarks and Workforce Characteristics), survey evidence from Hinkley Point C indicates that 13% of workers surveyed had brought dependants to live with them during the construction period.

1.2.15 When applied to Sizewell C Project (not discounting for those occupying accommodation where families are not allowed i.e. campus and caravan site), this would equate to around 765 ‘families’ (13% of 5,884 workers). This assumes one non-dependant adult per family (in reality some will have more than one e.g. partners, friends and parents, and some will have none). Not all families will include children, often families are comprised of couples or adult dependants.

1.2.16 Survey data from Hinkley Point C would further indicate approximately 403 children within these family households during the peak construction phase, including:

- 180 pre-school-aged children;
- 190 primary school-aged children; and
- 33 secondary school-aged children.

1.2.17 It is predicted that of the non-home-based workers that bring dependants, this would equate to approximately 1,168 individuals (765 partners and 403 children) directly attributed to the Sizewell C Project during the peak construction year, which would constitute an additional demand for approximately one GP spread over the entire study area.

1.2.18 Importantly, of the non-home-based workers that choose to bring families, they can only relocate to existing housing, offsetting the previous tenants or owners, and with them, their associated health care demand. On this basis, and for the purpose of the assessment, the potential effect of dependants occupying existing properties is not considered significant.

1.2.19 However, it is recognised that local public health services are stressed, and a planning contribution for dependants is to be provided to assist local health care providers in meeting current and unforeseen demand.

1.3 Conclusion

a) Assessment conclusion

1.3.1 Applying the Hinkley Point C statistics and anticipated NHS referral rate for the non-home-based workforce has shown that over the course of construction, the residual referral rate to local public healthcare will be minimal, with the largest impact being non-emergency hospital referrals, totalling at 1,217 over the entire 12 year construction phase, equating to approximately 101 a year, peaking to 197 in Year 7.

1.3.2 Ambulance call outs are minimal, with the potential for approximately 79 ambulance call outs during the peak construction year for the entire workforce (7900 x 0.01), representing less than 1% of the East of England Ambulance Service Hazardous Area Response Teams call out from April 2018 to April 2019². However, it is noted that this may increase pressure on local ambulance response centres in the region disproportionately, as a result of the relative remoteness of the site and its access requirements for a nuclear construction site. As such, under certain conditions a minor adverse effect may arise before mitigation, and therefore SZC Co. will seek

² NHS East of England Ambulance Service (2019) Annual Report 2018-19: <https://www.eastamb.nhs.uk/Governance/reports/EEAST%20-%20Annual%20Report%202018-19.pdf>

to develop a responsive mitigation strategy in this regard, secured in the Section 106 agreement.

- 1.3.3 GP referrals are inconsequential, totalling at 47 over the entire construction phase, on account of the on-site occupational healthcare service provision.
- 1.3.4 The non-home-based workers that choose to bring dependants will likely only do so where workers are commissioned for extended periods and could only take up existing residential accommodation, replacing the previous residents, and their associated healthcare demand (the use of tourist accommodation would be prohibitively expensive in these situations).
- 1.3.5 While this does not represent a net additional increase in healthcare demand, it is recognised that the NHS and local healthcare services are highly valued and sensitive to change. As such, applying the indirect net population growth attributed to the non-home-based workforce would equate to approximately 1,168 individuals (765 partners and 403 children) directly attributed to the peak construction year of Sizewell C Project, which would constitute one GP spread over the entire study area.



Volume 2 Appendix 28C East Suffolk Health Baseline

APPENDIX 28C: EAST SUFFOLK HEALTH BASELINE

Introduction

Different communities have varying susceptibilities to health impacts and benefits as a result of social and demographic structure, behaviour and relative economic circumstance. The aim of the following information, which makes up this health baseline, is to put into context local health and socio-economic circumstance of the communities living in the study area (East Suffolk), drawing from available statistics. County (Suffolk), regional (East) and national (England) averages have been used as relevant comparators.

It should be noted that the study area comprises the local government district of East Suffolk, recently formed by merging Suffolk Coastal and Waveney districts. In some circumstances, statistics are only available for the two previously known districts; in these instances, an average of the data collected for Suffolk Coastal and Waveney has been used to represent the study area.

Demography



Population Change			
Area	2013	2018	Change (%)
East Suffolk	241,426	248,249	2.8
Suffolk	735,844	758,556	3.1
East	5,951,934	6,201,214	4.2
England	53,865,817	55,977,178	3.9

Source: Office for National Statistics

Overall, population growth within the study area is lower than that of the county, regional and national averages.

The population structure is top heavy, with a larger proportion of the population aged 50 and over compared to the national average, and a lower proportion of the population of working age compared to the national average.

Source: Office for National Statistics

Local Authority	Average Household Size				
	2016	2021	2026	2031	2036
Babergh	2.28	2.26	2.25	2.23	2.21
Great Yarmouth	2.31	2.29	2.28	2.26	2.24
Ipswich	2.26	2.22	2.19	2.17	2.15
Mid Suffolk	2.30	2.29	2.27	2.25	2.23
South Norfolk	2.32	2.27	2.23	2.20	2.18
East Suffolk	2.24	2.22	2.20	2.19	2.17
Average	2.28	2.26	2.24	2.22	2.2

Source: Office for National Statistics

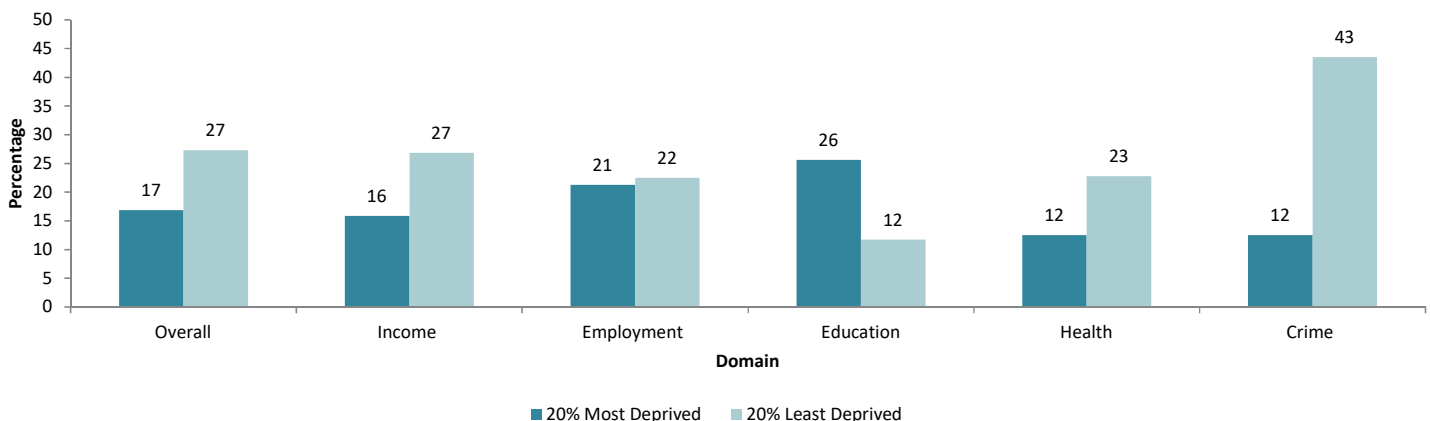
Average household size is projected to decrease between 2016 and 2036 in all local authority districts in proximity to the main development site. On the basis that construction is anticipated to commence in 2022 and be completed nine to twelve years later (2031-34), projections for average household size have been provided up to 2036.

Deprivation

The overall deprivation category is defined by a combination of all domains (including health, employment, income, crime and education - as below), some of which are not included individually in this analysis. For overall deprivation, 17% of LSOAs are in quintile 1 (20% most deprived), while 27% are in quintile 5 (20% least deprived). Education is the most deprived domain with 26% of LSOAs in quintile 1 and 12% of LSOAs in quintile 5. Crime is the least deprived domain with 12% of LSOAs in quintile 1 and 43% of LSOAs in quintile 5.

Overall, there are more LSOAs in quintile 5 (20% least deprived) than quintile 1 (20% most deprived) for each deprivation domain except education. This indicates that generally, the study area has low levels of deprivation.

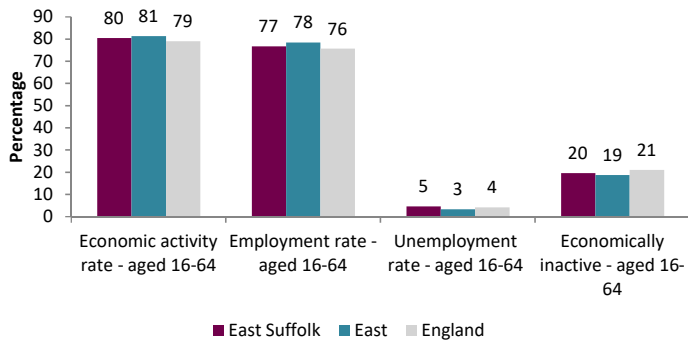
Deprivation Summary Statistics



Source: Ministry of Housing, Communities and Local Government

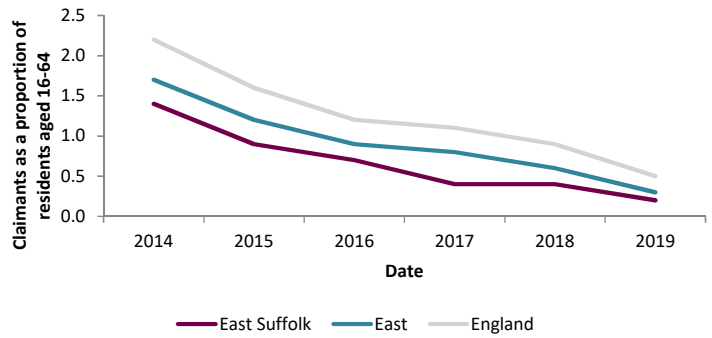
Socio-economic Factors

Economic Activity



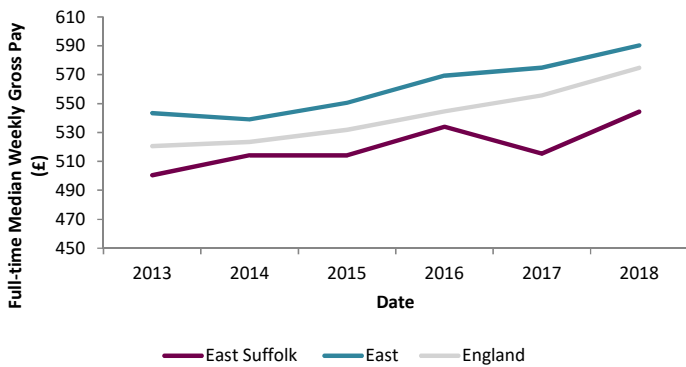
Source: NOMIS

Job Seekers Allowance



Source: NOMIS

Income



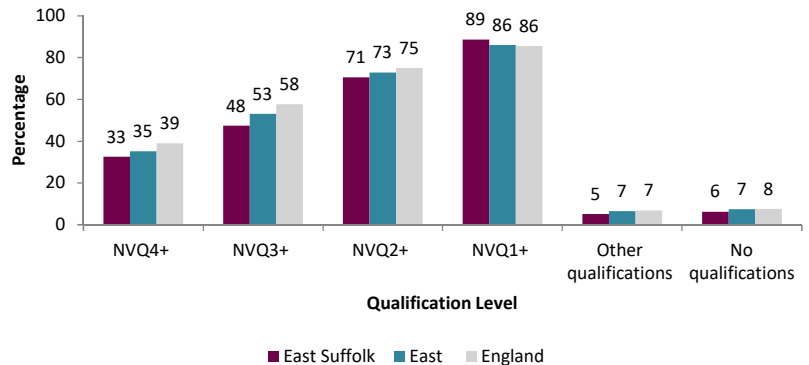
Source: NOMIS

Unemployment rate in the study area is higher than the regional and national averages, while employment rate within the study area is higher than the national average but lower than the regional average. Economic activity is lower than the regional average and higher than the national average, while economic inactivity is higher than the regional average and lower than national average. Those who are economically inactive are those who are unemployed (in the conventional form), and are not seeking employment. Common reasons for economic inactivity include long-term sickness or disability, looking after a family/home, being a student, or being retired.

The number of unemployed people claiming Jobseekers' Allowance in the study area has been decreasing over the years, and is consistently below the regional and national averages.

The proportion of residents claiming Jobseekers' Allowance for over 1 year in the study area (used as a proxy for long-term unemployment), is lower than both the regional and national average.

Qualification Attainment



Source: NOMIS

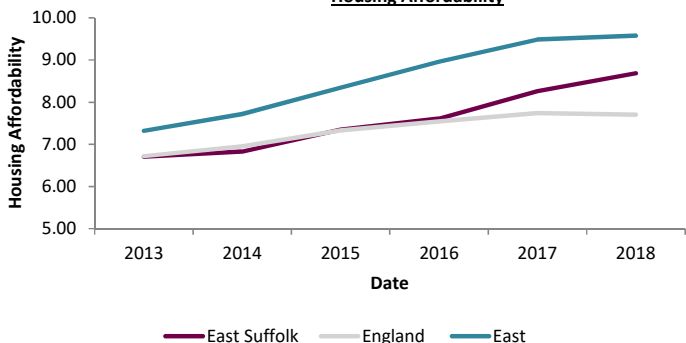
Generally, income for full-time workers within the study area has increased between 2013 and 2018. Income in the study area is consistently below the regional and national averages.

A lower proportion of the population in the study area have attained NVQ2+ to NVQ4+ level qualifications compared to the regional and national averages. The proportion of the population who have attained NVQ1+ qualifications in the study area is higher than the regional and national averages. Those attaining "other" qualifications, and those with no qualifications, are both lower than the regional and national averages.

Housing

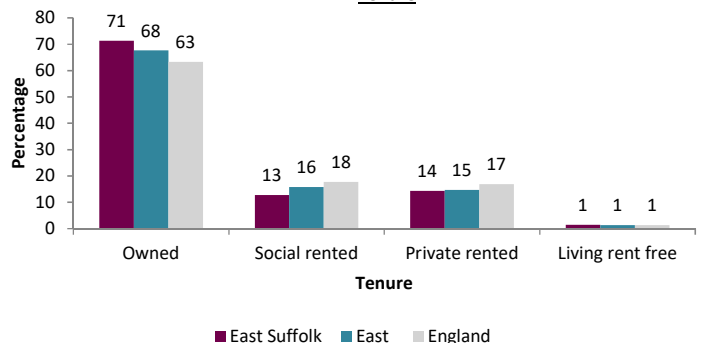
Housing tenure in the study area shows that a higher proportion of residents own their house compared to regionally and nationally. The proportion of social and private rented housing in the study area is lower than the regional and national averages. The proportion of those living rent free is very low and is equal to the regional and national averages. Trend analysis shows that housing is becoming increasingly unaffordable in the study area, and generally follows the regional trend. In recent years housing has become less affordable in East Suffolk than nationally.

Housing Affordability



Source: Department for Communities and Local Government

Tenure

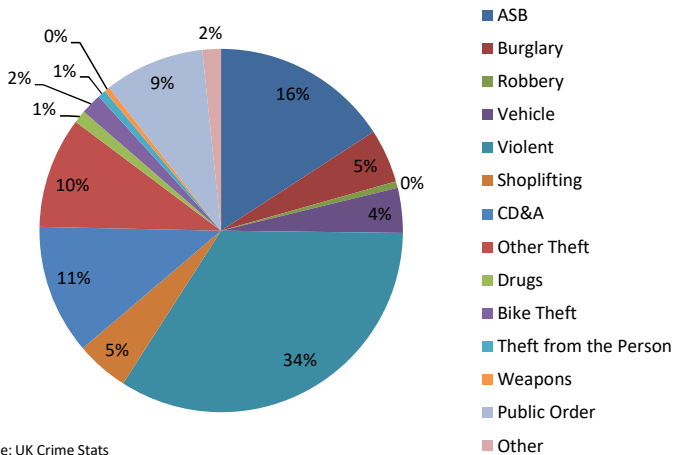


Source: NOMIS

Crime

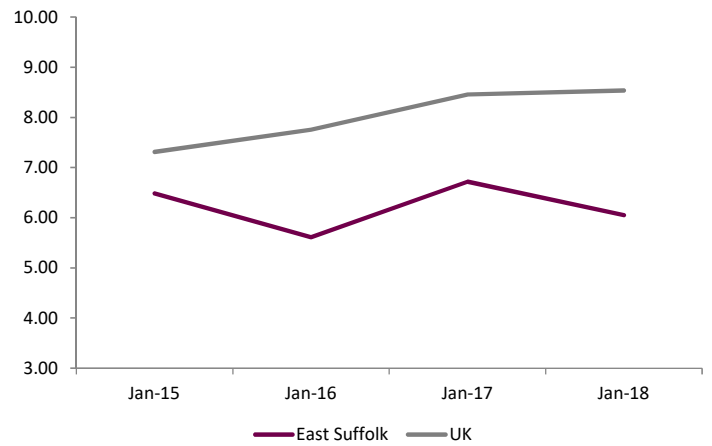
Crime rate within the study area is consistently lower than the UK average, and has fluctuated over the years. Following an increase from 5.61 to 6.72 per 1,000 population in the study area between 2016 and 2017, crime rates decreased again to 6.05 per 1,000 population in 2018. When analysing the types of crimes being committed in East Suffolk, most recent figures show that the largest contribution (34%) is from "violent crimes", followed by "anti-social behaviour" (ASB) (16%) and "criminal damage and arson" (CD&A) (11%).

Crime Breakdown



Source: UK Crime Stats

Crime Rate

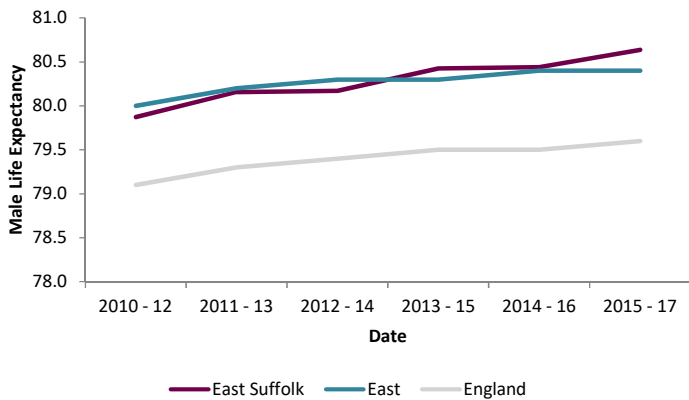


Source: UK Crime Stats

Life Expectancy

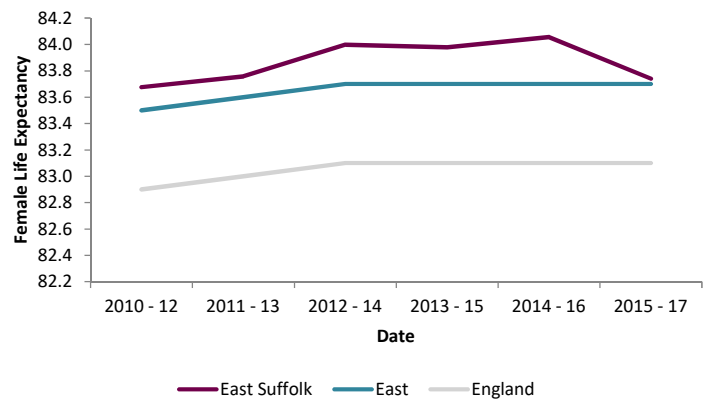
Male life expectancy in the study area has generally been increasing, fluctuating slightly above and below the regional average, but is consistently above the national average. Female life expectancy has been consistently higher than the regional and national averages, however most recent figures (2015-17) show a decrease from the previous year, to a level more similar to the regional average.

Male Life Expectancy



Source: PHE Health Profiles

Female Life Expectancy



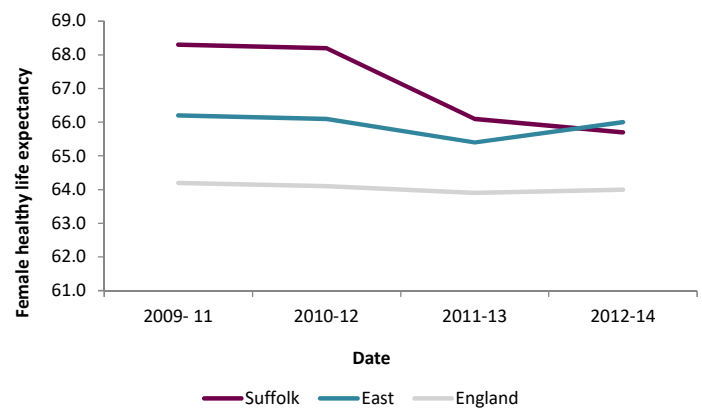
Source: PHE Health Profiles

Male Healthy Life Expectancy



Source: Office for National Statistics

Female Healthy Life Expectancy



Source: Office for National Statistics

When considering healthy life expectancy (HLE), i.e. the proportion of life spent in "good" health, the patterns change slightly. Male HLE has been fluctuating since 2009 but remains consistently above the regional and national averages. Female HLE has been decreasing since 2009, although the rate of decrease has slowed down in recent years (2012-14). Between the years of 2009-11 and 2011-13, female HLE was consistently higher than the regional and national averages; however, a consistently decreasing trend shows that in 2012-14 female HLE is lower than the regional average but remains higher than the national average.

Physical Health

Emergency hospital admission rates for all cardiovascular and respiratory diseases in the study area are lower than the national averages in most recent figures (2018-19). For cardiovascular diseases, "other forms of heart disease" has the highest incidence rate in the study area, followed by "ischaemic heart diseases". For respiratory diseases, "influenza & pneumonia" has the highest incidence rate, followed by "chronic lower respiratory diseases".

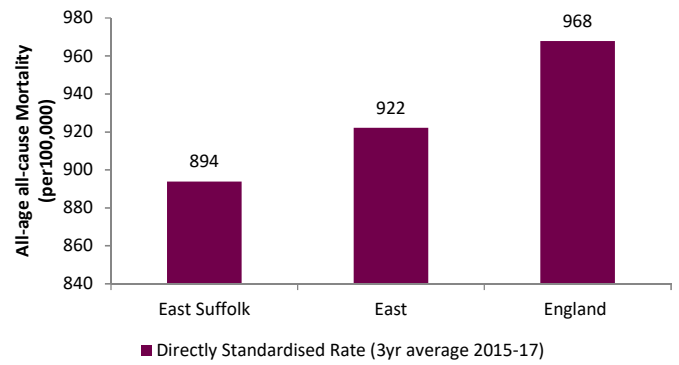
All-age all-cause mortality rate in the study area is lower than both the regional and national averages. From the statistics analysed for respiratory disease, cardiovascular disease and cancer, cancer is the main cause of death where there are 125.9 deaths per 100,000 population, compared to cardiovascular diseases where there are 64.3 deaths per 100,000 population, and respiratory diseases where there are 30.2 deaths per 100,000 population.

Emergency Hospital Admissions

ICD Code	Disease	Emergency Hospital Admissions Incidence Rate (per 100,000)	
		England	Study Area
Cardiovascular			
I00-I09	Rheumatic heart disease	3.3	2.9
I10-I15	Hypertensive diseases	36.8	32.5
I20-I25	Ischaemic heart diseases	251.6	222.2
I26-I28	Pulmonary heart disease & diseases of pulmonary	52.0	45.9
I30-I52	Other forms of heart disease	354.0	312.6
I60-I69	Cerebrovascular diseases	166.5	147.0
I70-I79	Diseases of arteries, arterioles & capillaries	39.2	34.6
I80-I89	Diseases of veins & lymphatic system nec.	73.8	65.2
I95-I99	Other & unspecified disorders of the circulatory system	47.5	42.0
Respiratory			
J00-J06	Acute upper respiratory infections	237.7	166.8
J09-J18	Influenza & pneumonia	504.7	354.0
J20-J22	Other acute lower respiratory infections	312.5	219.2
J30-J39	Other diseases of upper respiratory tract	33.7	23.6
J40-J47	Chronic lower respiratory diseases	373.3	261.9
J60-J70	Lung diseases due to external agents	46.8	32.8
J80-J99	Other diseases of the respiratory system	86.4	60.6

Source: NHS Digital and PHE Local Health (corrected using SAR for CHD and COPD)

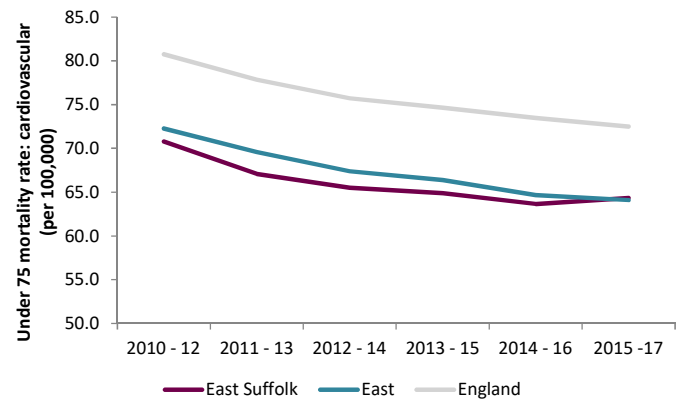
All-age All-cause Mortality



Source: NHS Digital

Mortality from cardiovascular disease has been decreasing since 2010 and has been consistently lower than the national and regional average between 2010-12 and 2014-16. However, it has increased slightly since 2014 to more closely equal the regional average.

Cardiovascular Mortality

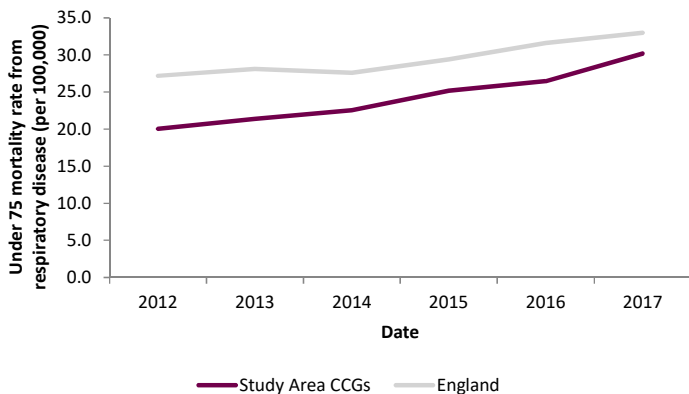


Source: PHE Health Profiles

The mortality rate for respiratory disease has been increasing since 2012, and is consistently lower than the national average.

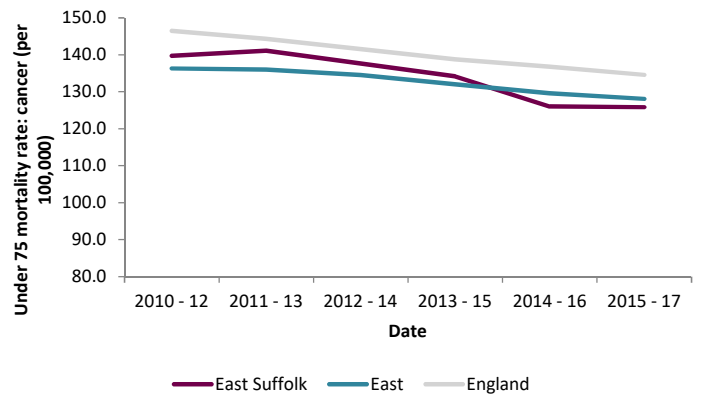
The under 75 mortality rate for cancer shows a general decrease since 2010-12. Between the years of 2010-12 and 2013-15, cancer mortality is consistently lower than the national average but higher than the regional average. However, most recent statistics show that cancer mortality within the study area is below both the regional and national averages.

Respiratory Mortality



Source: NHS Digital

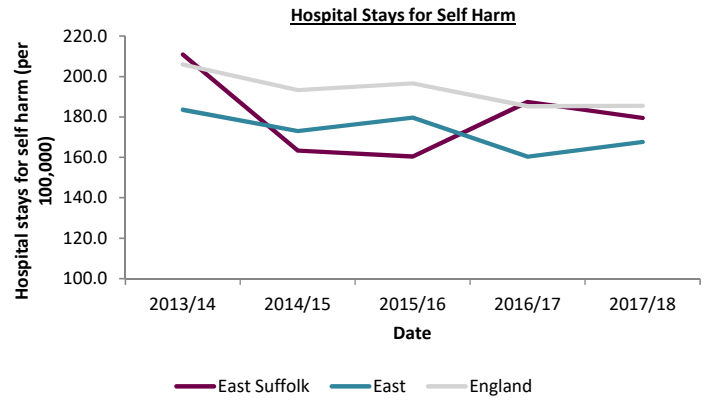
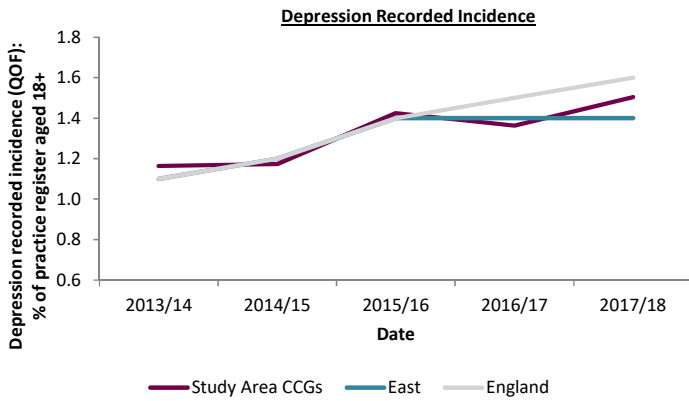
Cancer Mortality



Source: PHE Health Profiles

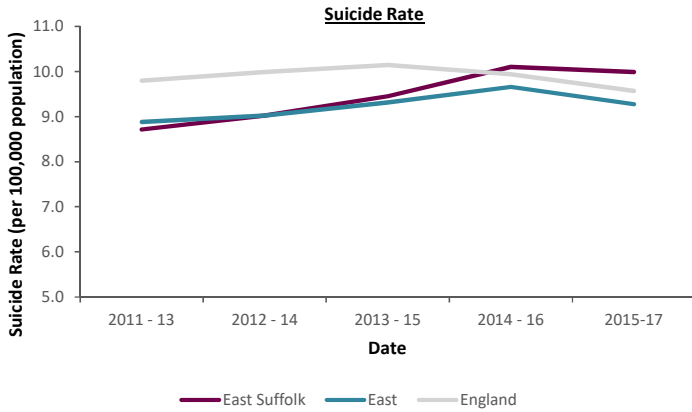
Mental Health

Depression recorded incidence within the study area has shown a general increase over the years; most recent figures (2017/18) show that incidence rate is lower than the national average but higher than the regional average. Hospital stays for self-harm in the study area have been fluctuating since 2013/14. Following an increasing trend between 2015/16 and 2016/17 where levels went from lower than regional and national averages to higher than both, they have been decreasing again to lower than the national average. Suicide rate in the study area was increasing between 2011-13 and 2014-16, but has decreased since to a higher level than the regional and national averages. The study area has a dementia recorded prevalence (age 65+) equal to the regional average but lower than national average in 2018.

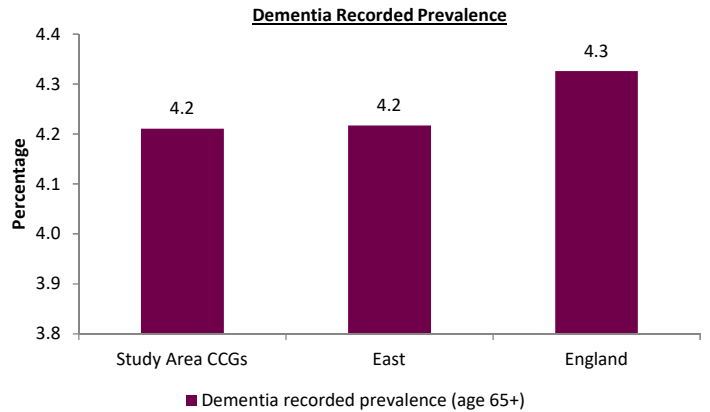


Source: PHE Mental Health and Wellbeing JSNA Health Profiles

Source: PHE Health Profiles



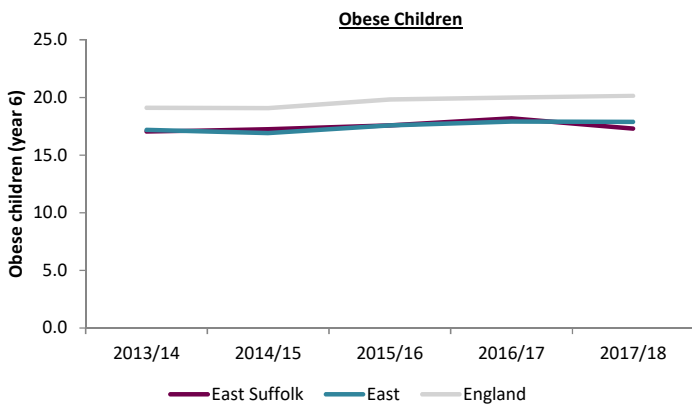
Source: PHE Health Profiles



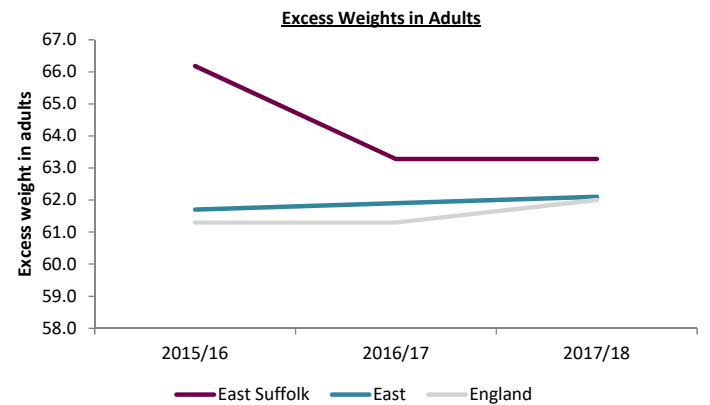
Source: PHE Dementia Health Profiles

Lifestyle

The proportion of obese children in the study area has remained relatively static over the years, consistently below the national average but similar to the regional average. The proportion of adults with excess weight on the other hand, has been consistently higher than both the regional and national averages, but has been decreasing - this is in contrast to the regional and national trends which have remained relatively static over the years.



Source: PHE Health Profiles

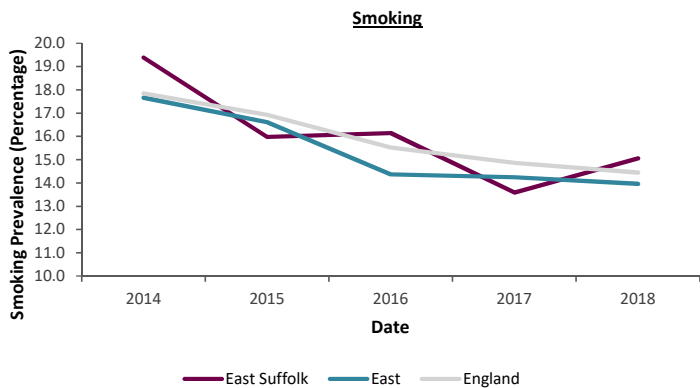


Source: PHE Health Profiles

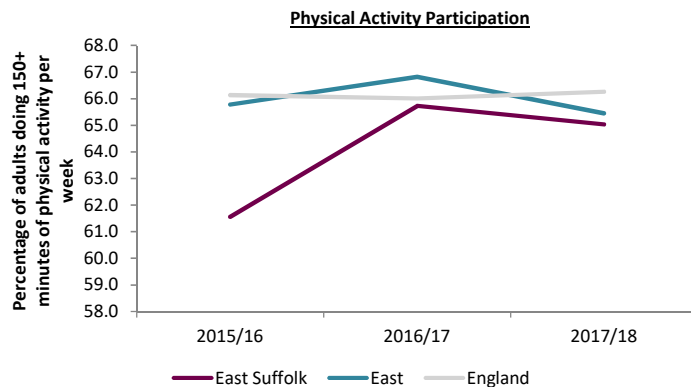
The percentage of adults in the study area who engage in 150+ minutes of physical activity per week is consistently below the regional and national averages. Most recent figures show that within the study area, following an increase in 2016, participation in physical activity is decreasing again.

Smoking prevalence within the study area has been fluctuating, but has shown an overall decrease since 2014.

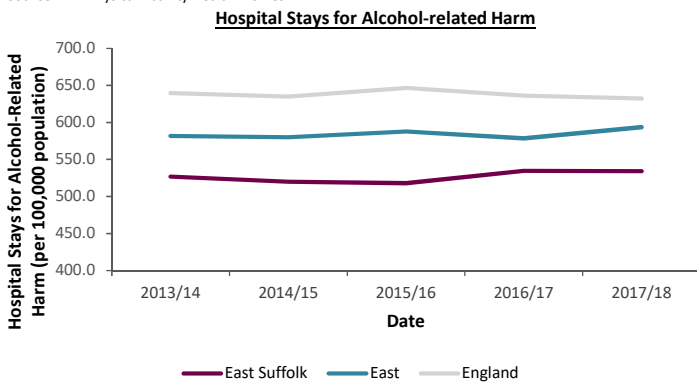
Hospital stays for alcohol related harm have remained relatively static over the years since 2013 following regional and national trends, and has remained consistently below the regional and national averages.



Source: PHE Health Profiles



Source: PHE Physical Activity Health Profiles



Source: PHE Health Profiles

Conclusion

From analysis of available statistics, physical and mental local health circumstance in the local study area can be considered good, and trends are generally positive. In most circumstances, health status is better than the national average and more comparable to the regional average. As a result, it is not considered that the community as a whole would be particularly sensitive to environmental changes associated with the construction and operation of the proposed project.

It should be noted that the description of the whole population, and the populations within the local and wider study area, does not exclude the possibility that there will be some individuals or groups of people who do not conform to the overall profile.