

The West Midlands Rail Freight Interchange Order 201X
ES - Vol 1 - Chapter 14: Socio-Economics and Human Health
Regulation 5(2)(a)
Quod - July 2018

14 Socio-Economics and Human Health

Introduction

- 14.1 This chapter of the ES assesses the likely significant environmental effects of the Proposed Development in respect of socio-economics. In particular, this chapter describes the relevant legislation and socio-economic and health policy context; the methods used for assessment and details of the criteria used to determine significance; the baseline socio-economic and health conditions at and surrounding the Site; the potential impacts and effects as a result of the Proposed Development; any mitigation or control measures required to reduce or eliminate adverse effects; and the subsequent residual effects and likely significant effects associated with the Proposed Development.
- 14.2 There is one appendix associated with this Chapter: Technical Appendix 14.1 RWDI West Midlands Interchange Sailing Desk Study.
- 14.3 This chapter is written by Quod.

Legislation and Policy Context

National Legislation and Policy

National Policy Statement for National Networks (NPS), 2014

- 14.4 The Government has committed to deliver national networks that meet the country's long-term needs; supporting a prosperous and competitive economy and improving overall quality of life, as part of a wider transport system. This means:
- Networks with the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs.
 - Networks which support and improve journey quality, reliability and safety.
 - Networks which support the delivery of environmental goals and the move to a low carbon economy.
 - Networks which join up our communities and link effectively to each other¹.
- 14.5 The NPS sets out the Government's vision for the transport system as a driver of economic growth and social development, and it attaches particular importance to the use of rail for the transport of freight across the country from ports, in order to help meet environmental goals and improve quality of life².

Need for SRFIs

- 14.6 The NPS makes it clear that Strategic Rail Freight Interchanges (SRFI) have an important role to play in meeting these objectives. The aim of SRFIs is to allow rail to be used to best effect to undertake the long-haul journey, minimising secondary distribution by road: "SRFIs are a key element in reducing the cost to users of moving freight ...from road to rail,

thereby reducing trip mileage of freight movements on both the national and local road networks"³.

- 14.7 Government has concluded there is a compelling need for an expanded network of large SRFIs across the regions⁴. SRFI capacity needs to be provided at a wide range of locations, to provide the flexibility needed to match the changing demands of the market, possibly with traffic moving from existing RFI to new larger facilities⁵.
- 14.8 The maintenance of a competitive and sustainable economy against a background of continued economic globalisation will mean that there is a need to support measures that deliver step change improvements in capacity and connectivity between key centres, by speeding up journey times and encouraging further modal shift to rail⁶.

Benefits of SRFIs

- 14.9 The NPS states that SRFIs are beneficial to the local and regional economy, supporting other industries and creating jobs. The logistics industry provides warehousing and distribution networks for UK manufacturers, importers and retailers - currently this is predominantly a road based industry. However, the users and buyers of warehousing and distribution services are increasingly looking to integrate rail freight into their transport operations⁷.
- 14.10 Because many of the on-site functions of major distribution operations are relatively labour intensive, this can create many new job opportunities. The existence of an available and economic local workforce will therefore be an important consideration for the Applicant.
- 14.11 The NPS states that Applicants should provide evidence that they have considered reasonable opportunities to deliver environmental and social benefits as part of schemes⁸.

Constraints

- 14.12 SRFIs tend to be large scale commercial operations, which are most likely to need continuous working arrangements (up to 24 hours). By necessity they involve large structures, buildings and the operation of heavy machinery⁹.
- 14.13 In relation to Green Belt locations, the NPS advises that Green Belts are situated around certain cities and major urban areas (the preferred locations for SRFIs)¹⁰ and: "Promoters of SRFIs Interchanges may find that the only viable sites for meeting the need for regional SRFIs are on Green Belt land¹¹."
- 14.14 Sensitive locations (either environmentally sensitive or residential) may be suitable given appropriate mitigation measures¹².

National Planning Policy Framework, 2012

- 14.15 The National Planning Policy Framework (NPPF¹³) sets out a framework for delivering sustainable development and prioritising strong, vibrant and healthy communities and building a strong, responsive and competitive economy.

¹ Department for Transport, 2014. National Policy Statement for National Networks. London: TSO. Page 9

² Ibid., Paragraph 2.29

³ Ibid., Paragraph 2.44

⁴ Ibid., Paragraph 2.56

⁵ Ibid., Paragraph 2.58

⁶ Ibid., Paragraph 2.38

⁷ Ibid., Paragraph 2.45

⁸ Ibid., Paragraph 3.3

⁹ Ibid., Paragraph 4.86

¹⁰ Ibid., Paragraph 5.164

¹¹ Ibid., Paragraph 5.17

¹² Ibid., Paragraph 4.86

¹³ Department for Communities and Local Government, 2012. National Planning Policy Framework. London: TSO

- 14.16 As part of a commitment to securing local economic growth, the NPPF sets out how Government should plan proactively to meet the development needs of the business and support an economy fit for the 21st Century.
- 14.17 At the heart of the NPPF is a presumption in favour of sustainable development. The purpose of the planning system is to contribute to the achievement of sustainable development which includes social, economic and environmental roles¹⁴. Paragraph 14 states that local authorities should positively seek opportunities to meet the development needs of their area.
- 14.18 The NPPF outlines objectives for delivering sustainable development. Objective 1 'Building a strong, competitive economy'¹⁵ is of direct relevance to the Socio-Economic effects of the Proposed Development. This states that significant weight should be placed on the need to support economic growth through the planning system. Planning policies should recognise and seek to address potential barriers to investment, including a poor environment or lack of infrastructure, services or housing.

National Planning Practice Guidance, 2014

- 14.19 The Planning Practice Guidance (PPG)¹⁶ states that Local Planning Authorities should "ensure that health and wellbeing, and health infrastructure are considered in local and neighbourhood plans and in planning decision making"¹⁷.
- 14.20 The PPG sets out how Local Planning Authorities must objectively assess development needs for housing and economic development and plan for those needs¹⁸.
- 14.21 The PPG sets out how public rights of way form an important component of sustainable transport links and should be protected or enhanced¹⁹.

Local Growth White Paper, 2010

- 14.22 The Government's 2010 *Local Growth White Paper*²⁰ sets out the objective that growth should be broad-based, industrially and geographically (Paragraph 1.23); should create a business environment that competes with the best internationally (Paragraph 1.23); and should establish a sustainable and growing private sector, in particular in areas that are currently dependent on the public sector (Paragraph 4.5).

Regional Policy

Stoke-on-Trent and Staffordshire Local Enterprise Partnership Strategic Economic Plan, 2014

- 14.23 The Strategic Economic Plan²¹ (SEP) sets out a Vision and Priorities through to 2030. This sets out its '50:50:10' aim to:
- grow the economy by 50%
 - generate 50,000 new jobs
 - over the next ten years.
- 14.24 The SEP sets out three cross-cutting themes, one of which is *Connected County* that deals with strategic investment in transport and IT infrastructure (the other two are *Core City* with reference to Stoke - and *Urban Growth* with reference to the other urban areas).
- 14.25 Para 2.30 of the SEP sets out the context for the transport and logistics priorities:

"The freight and logistics industry is an important activity for the area in terms of economic prosperity, the impact on the transport network and the local environment."

"Given the volume of freight movement in the area, attempting to improve the efficiency of operations will have benefits for business in terms of efficiency savings and for residents in terms of quality of life. In terms of rail freight, the Stoke-on-Trent and Staffordshire area is located at the centre of some important regional and national routes with the most important route for the area being the West Coast Mainline. This is one of the country's principal routes and has over 50 freight trains operating along it per day in each direction."

- 14.26 The SEP then goes on to set out the vision for the *Connected County*:
"Stoke-on-Trent & Staffordshire is strategically located at the centre of many of the UK's supply chains."

"We will build on our central location and existing linkages to deliver the transport networks, employment sites and supporting infrastructure required to make our area an attractive place to do business, work, live and visit."

- 14.27 The SEP acknowledges that many of these issues cross boundaries and so Stoke-on-Trent and South Staffordshire Local Enterprise Partnership (SSLEP) is working with the Marches, Black Country, Greater Birmingham, Worcestershire and Coventry and Warwickshire LEPs to develop a shared set of strategic transport objectives, set out in Paragraph 3.20 of the SEP:
- Enabling the movement between key employment sites, ports and airports;
 - Opening-up and enhancing the locational advantage of key employment sites;
 - Providing good access to the area's innovation ecosystem; and
 - Ensuring that the motorway, trunk road and rail networks support the area's main freight and logistics locations and movements.

Black Country Strategic Economic Plan, 2014

- 14.28 The Proposed Development is not within the Black Country (it is approximately 8km to the north of the Black Country LEP boundary). However, the proposed SRFI would support the economy of the Black Country at a strategic level and the likely travel to work area (TTWA) of employees during operation includes the entirety of the Black Country LEP. Therefore, it is relevant to consider the economic policies of the LEP for this socio-economic and health assessment.
- 14.29 The sub-title of the Black Country Strategic Economic Plan (SEP)²² is, *"Made in the Black Country: sold around the world."* As such, the SEP sets out a Growth Strategy that has the central aim of "growing the global supply chain" of the LEP. Under this central aim, the LEP has 12 strategic programmes²³. Of these, the most relevant to assessment are PI2, P1, P2, P3 and P4:
- 14.30 Programme PI2 is Infrastructure:
- Connecting our Goods, Services and Employees to work and to International Markets.
- 14.31 Programme P1, P2, P3 and P4: skills for the supply chain, skills capital and upskilling and skills for the unemployed:

¹⁴ Department for Communities and Local Government, 2012. National Planning Policy Framework. London: TSO. Paragraph 6-7

¹⁵ Ibid., Paragraph 18-22

¹⁶ Department for Communities and Local Government, 2016. Planning Practice Guidance [online] Available at: <http://planningguidance.communities.gov.uk/> [Accessed 08.05.2016]

¹⁷ Ibid., Paragraph: 001 Reference ID: 53-001-20140306

¹⁸ Ibid., Reference ID: 2a-004-20140306

¹⁹ Ibid., Paragraph: 004 Reference ID: 37-004-20140306

²⁰ BIS, 2010. Local Growth: Realising every place's potential. London:TSO. Paragraph 1.23, Paragraph 4.5

²¹ Stoke-on-Trent and Staffordshire Enterprise Partnership, 2016. Strategic Economic Plan. Staffordshire: SSLEP.

²² The Black Country LEP, 2014. Black Country Strategic Economic Plan. [online] Available at: https://www.lepnetwork.net/modules/downloads/download.php?file_name=5 [Accessed 08.05.16]

²³ Ibid., Section 2.1

- Ensuring the Black Country has a labour market with the right levels of skills and qualifications to meet the needs of businesses from the area's priority growth sectors²⁴.
- Increasing the number residents qualified to degree level by 32,000 and increase Black Country employer investment in training from 62% to 66% by 2021²⁵.
- Providing bespoke interventions and meaningful support for local companies that will increase their growth and business competitiveness²⁶.
- To improve the life chances of residents through employability and skills development of groups and communities furthest from the labour market²⁷.

14.32 Transport is one of the LEP's five enabling sectors which are "crucial in terms of the wider economy and quality of life in the Black Country²⁸." The effectiveness of the LEPs programmes to secure growth are reliant on performance of these enabling sectors.

Black Country Core Strategy, 2011

14.33 The Black Country²⁹ Core Strategy³⁰ has set out a vision for growth and development in the four-district area up to 2026. The vision includes three themes: sustainable communities, environmental transformation and economic prosperity.

14.34 The economic vision states that:

"We will make the most of the Black Country's accessibility and location to attract new employment opportunities and investment in innovation and new technology, deliver a network of successful strategic, town, district and local centres and the infrastructure and raw materials needed to support the local economy, improve the wealth and image of the Black Country and support initiatives to lift educational and skills performance³¹."

14.35 The Black Country aims to deliver: "A first-class transport network [including] improvements to the national M5 and M6 motorways network and freight railway network will help deliver better connectivity to Regional and National networks³²."

14.36 As part of the Core Strategy the Black Country aspires to deliver new retail and office floorspace, strategic employment land and 35,000 new homes in Regeneration Corridors and Strategic Centres³³.

14.37 The Black Country is well placed to attract knowledge based, high technology manufacturing and warehousing employment. The Core Strategy evidence base, forecasts that employment in the logistics/ warehousing sector will grow. It forecasts that manufacturing employment will fall, but envisages that the Black Country will continue to play a large role in manufacturing/industry and attract inward investment in that sector. The Black Country will provide land for at least 75,000 industrial and warehouse jobs in 2026 requiring 2,900 ha of employment land³⁴.

14.38 The Core Strategy also sets out how it wants to ensure that growth benefits as many existing residents as possible. There are existing support structures and facilities available to help ensure that local people receive the appropriate training and develop the necessary skills to compete successfully for jobs. To assist with this where major new job creating development is proposed the Councils will negotiate with the company to devise suitable bespoke training and recruitment programmes that can benefit local people³⁵.

14.39 Recruiting and retaining graduates is also a key priority.

²⁴ Ibid., p.16

²⁵ Ibid., p.16

²⁶ Ibid., p.16

²⁷ Ibid., p.16

²⁸ Ibid., p. 22

²⁹ Dudley Metropolitan Borough Council; Sandwell Metropolitan Borough Council; Walsall Council; Wolverhampton City Council

³⁰ The Black Country, 2011. Core Strategy [online] Available at:

<http://blackcountrycorestrategy.dudley.gov.uk/EasysiteWeb/getresource.axd?AssetID=198681&type=full&servicetype=Attachment> [Accessed 09.02.17]

³¹ Ibid., p. 17

³² Ibid., p.22

Local Policy

South Staffordshire Core Strategy DPD, 2012

14.40 The Core Strategy³⁶ Core Policy 7 and supporting policy EV1 are of relevance to the potential socio-economic and health effects of the Proposed Development.

14.41 Core Policy 7 'Employment and Economic Development' sets out the council's objective to sustain and develop the local economic of South Staffordshire and encourage inward investment into the area. The Site is listed under this policy as a location that the council would support extension of existing strategic employment sites where development needs are justified.

14.42 Policy EV1 'Retention of Existing Employment Site' supports Core Policy 7. This policy sets out the strategic importance of Four Ashes as an industrial location.

Method of Assessment

14.43 The proposed methodologies used to identify the range of potential socio-economic and health effects of the Proposed Development will be in accordance with general guidelines where these exist (and as referenced) and wider professional experience. There is no Government guidance specifically setting out a preferred methodology for assessing the socio-economic and health effects of a major development, although the NPS identifies issues that should be addressed by applicants for SRFIs. These are:

- The existence of an available and economic local workforce³⁷;
- Reasonable opportunities to deliver environmental and social benefits³⁸;
- Economic effects on the best and most versatile agricultural land³⁹; and
- The ability of the proposals to support national and local economic growth and regeneration, particularly in the most disadvantaged areas⁴⁰.

14.44 This Socio-economic and Human Health ES chapter will focus on the first two of these themes as these are within the scope of EIA as defined by the *Scope and Objectives of Assessment* section set out below. Agricultural Land effects are assessed in the Planning Statement and within Chapter 6: Agriculture and Soils, of this ES. The latter two issues relate to wider macro-economic issues which are dealt with in *The West Midlands Interchange Statement of Economic Benefits* which will be submitted alongside the DCO Application (Document 7.1B).

Scope and Objectives of Assessment

14.45 The scope of the assessment has been established by drawing on:

- The West Midlands Interchange Formal EIA Scoping Opinion Request September 2016 (see Technical Appendix 2.1).
- The EIA Scoping Opinion (see Technical Appendix 2.2).

14.46 The Scoping Opinion included specific comments that related to socio-economics and health. These comments and Quod's response to them is set out in Table 14.1 below.

³³ Ibid., p.26

³⁴ Ibid., p.81

³⁵ Ibid., para 4.24

³⁶ South Staffordshire, 2012. Core Strategy Development Plan Document [online] Available at:

<https://www.sstaffs.gov.uk/doc/171694/name/ADOPTED%20Core%20Strategy%20December%202012.pdf> [Accessed 08.05.16]

³⁷ Department for Transport, 2014. National Policy Statement for National Networks. London: TSO. Paragraph 4.87

³⁸ Ibid., Paragraph 3.3

³⁹ Ibid., Paragraph 5.176

⁴⁰ Ibid., Paragraph 2.6

Table 14.1: Response to Scoping Opinion			
Originator of comment	Reference	Issue which needs consideration	Action
South Staffordshire Council	Letter to Planning Inspectorate dated 13/10/16 No ref p.12	Recommends "consideration is given to a broader Health Impact Assessment of the proposal."	In line with the recommendations of Public Health England, this Socio-Economic and Human Health ES Chapter will provide an assessment of the potential effects on human health which is proportionate to the potential effects of the proposal. This is provided in the <i>Potential Effects</i> section of this ES Chapter.
South Staffordshire Council	As above	"identify the range of jobs/roles that may be provided by the proposal." "It is suggested that the assessment of impact would benefit from provision of a breakdown of the type and skill levels of the range of roles that typically could be expected on a SRFI."	See Employment Effects During Operation section of this ES Chapter.
South Staffordshire Council	As above	"The scoping note makes no reference to such a employment, skills and training programme, which we believe is necessary to reduce vehicle mileage and maximise local employment opportunities. It is suggested therefore that the ES should include a skills and training programme within the scope for assessment. This should also be linked into the Framework Travel Plan and public transport strategy."	Quod has provided quantitative assessment of labour market capacity (including skills and occupation) with a Travel to Work Area. Quod has then provided a qualitative assessment of the effect of potential employment initiatives based on available evidence at the time of assessment and in light of the labour market context. The Applicant intends to publish a Skills and Training programme at the time of the DCO Application. (see Paragraph 0 - 14.282 of this Chapter)
Secretary of State for Communities and Local Government	p. 31	"The assessment should include a breakdown of likely jobs and roles created by the proposed development and any mitigation measures such as skills and training	As above

Table 14.1: Response to Scoping Opinion			
Originator of comment	Reference	Issue which needs consideration	Action
		programmes that would promote local employment."	
Secretary of State for Communities and Local Government	p. 31	"Where professional judgement is applied to the assessment of receptor sensitivity, magnitude of impact or the significance of an effect, the Applicant should clearly justify this within their ES chapter and refer to supporting evidence as appropriate."	See <i>Assessment Methodology</i> section of this ES Chapter.
Secretary of State for Communities and Local Government	p. 31	"The Applicant's attention is drawn to the consultation response from the CRT, which states that residential moorings should be afforded equal consideration as sensitive receptors to residential properties."	See Residential and Leisure Moorings in Baseline Conditions section of this ES Chapter. See Recreation and Amenity Effects in Potential Effects section of this ES Chapter.
Secretary of State for Communities and Local Government	p. 31	"The CRT has emphasised that users of the Staffordshire and Worcestershire Canal and Calf Heath Reservoir, such as boaters (both leisure users and residential) and towpath users, should be clearly set out in the ES as part of the baseline conditions. The CRT notes that the existing and future businesses at Gailey and Hatherton Marina should be included in the socio-economic assessment."	See Residential and Leisure Moorings in Baseline Conditions section of this ES Chapter. See Recreation and Amenity Effects in Potential Effects section of this ES Chapter.
Secretary of State for Communities and Local Government	p. 31	"The potential effects on businesses would need to be considered in the event that works are required on the rail bridge on Gravelly Way."	See Potential effects on Local Businesses section of this ES Chapter.
Public Health England	Letter to Planning Inspectorate dated 10/10/16 No ref p.3	"PHE will only consider information contained or referenced in a separate section of the ES summarising the impact of the proposed development on public health."	See Human Health Effects During Construction and Human Health Effects During Demolition section of this ES Chapter.

Table 14.1: Response to Scoping Opinion			
Originator of comment	Reference	Issue which needs consideration	Action
Canals and Rivers Trust	Letter to Planning Inspectorate Dated 17/10/16 Ref: Four Ashes NSIP p.4	"The assessment should ensure the existing businesses at Gailey and Hatherton Marina are included within this section."	See Potential effects on Local Businesses section of this ES Chapter.
Canals and Rivers Trust	Letter to Planning Inspectorate Dated 17/10/16 Ref: Four Ashes NSIP p.5	"The Trust would wish to be assured that the development would not have a detrimental impact on the canal and reservoir and would still allow for these to be enjoyed by leisure and business users, especially with the high number of holiday hire boats operating on the wider network."	See Recreation and Amenity Effects in Potential Effects section of this ES Chapter.

- 14.47 As a result of this process, the objectives underlying the Socio-Economic and Human Health Assessment are to provide an assessment of:
- Temporary, direct, effects on the labour market due to creation of construction jobs;
 - Temporary, indirect effects on local business, recreation, amenity and human health as a result of demolition and construction;
 - Permanent, direct, effects on the labour market due to creation of operational jobs;
 - Permanent, indirect effects on the recreation and amenity receptors and the people who use them;
 - Permanent, indirect effects on local businesses; and
 - Permanent, indirect effects on human health.

Baseline Characterisation

- 14.48 In order to assess the potential effects of the Proposed Development, it is essential that the characteristics of the baseline environment are identified and described. Understanding the baseline conditions also assists in the identification of appropriate mitigation which could be put in place to minimise any significant adverse effects.
- 14.49 The Baseline Characteristics set out in this ES Chapter include:
- Population;
 - Age profile;
 - Labour market;
 - Claimant count;
 - Youth unemployment;

- Qualifications;
- Occupational and industrial sector of working residents;
- Deprivation;
- The local economy;
- Wider economic context; and
- Recreation and amenity receptors.

- 14.50 Baseline socio-economic conditions have been established through the analysis of nationally recognised research and survey information, including:
- 2001 Census (Office for National Statistics (ONS));
 - 2011 Census (ONS);
 - Business Register and Employment Survey (BRES) (ONS);
 - Indices of Multiple Deprivation (IMD) (2015) (DCLG);
 - Claimant Count Data (ONS);
 - Department for Work and Pensions Labour and Benefits Data (ONS);
 - Annual Survey of Hours and Earnings (ONS); and
 - Population Projections (ONS and local sources where available).

Identification of the Relevant Spatial Scale

- 14.51 The current baseline has been assessed at a local, district, regional and national level which are outlined below.
- 14.52 The Site is located in Penkridge South-East Ward in South Staffordshire. The Site is located close to the ward boundary with four neighbouring wards – Brewood Coven, Huntington and Hatherton, Cheslyn Hay North and Saredon and Featherstone and Shareshill. Data on all five wards have been collected to represent the current baseline of the area and will be referenced as the 'Local Area'.
- 14.53 The West Midlands Interchange Travel to Work Area (WMI TTWA) has been defined by WSP and agreed by Highways England. This TTWA was established with a Gravity Model using journey time to the power of two, as the deterrence factor for employee vehicles. This TTWA is the likely catchment within which the majority of Site employees are expected live. It includes 14 local authorities: Cannock Chase, Dudley, East Staffordshire, Lichfield, Newcastle-under-Lyme, Sandwell, Shropshire, South Staffordshire, Stafford, Staffordshire Moorlands, Stoke-on-Trent, Telford and Wrekin, Walsall, Wolverhampton; and 14 Birmingham wards: Aston, Erdington, Handsworth Wood, Hodge Hill, Kingstanding, Lozells and East Handsworth, Oscott, Perry Barr, Stockland Green, Sutton Four Oaks, Sutton New Hall, Sutton Trinity, Sutton Vesey and Tyburn. For more detail on the Gravity Model methodology, see Transport Technical Note 14 which is appended to the Transport Assessment (Technical Appendix 15.1).
- 14.54 The Site is located within the Stoke-on-Trent and Staffordshire Local Enterprise Partnership (SSLEP). This spatial scale has been used as a regional comparator.
- 14.55 In summary, the spatial scales that will be considered in this *Baseline Conditions* Section are as follow:
- Local – 'Local Area' (five wards - Brewood and Coven; Penkridge South East; Huntington and Hatherton; Cheslyn Hay North and Saredon; and Featherstone and Shareshill);
 - District – South Staffordshire;
 - LEP - SSLEP;
 - TTWA – Site TTWA; and
 - National – England and Wales.
- 14.56 Figure 14.1 depicts the local, district and regional context of the Site.

Figure 14.1: Site Location and Context

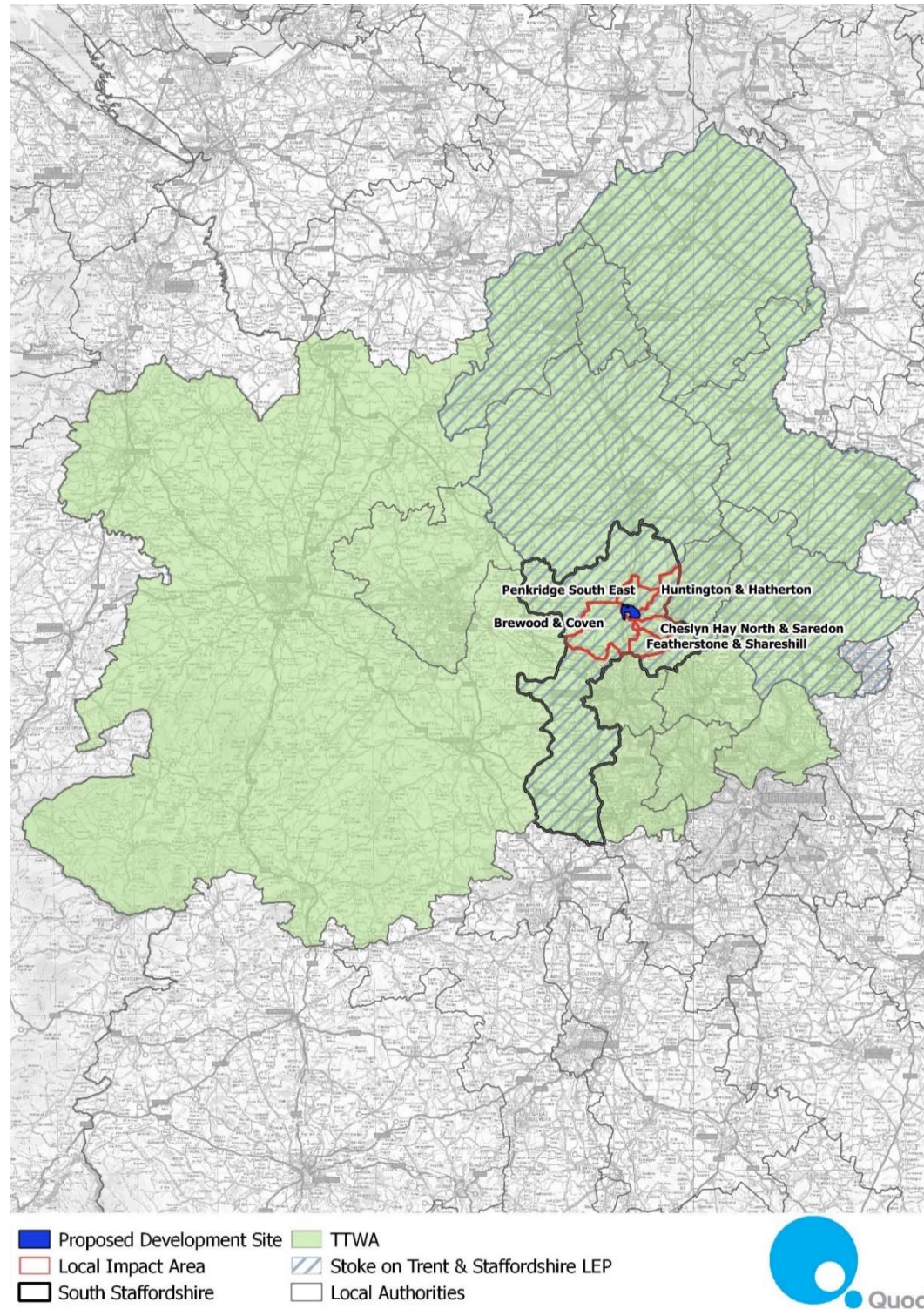
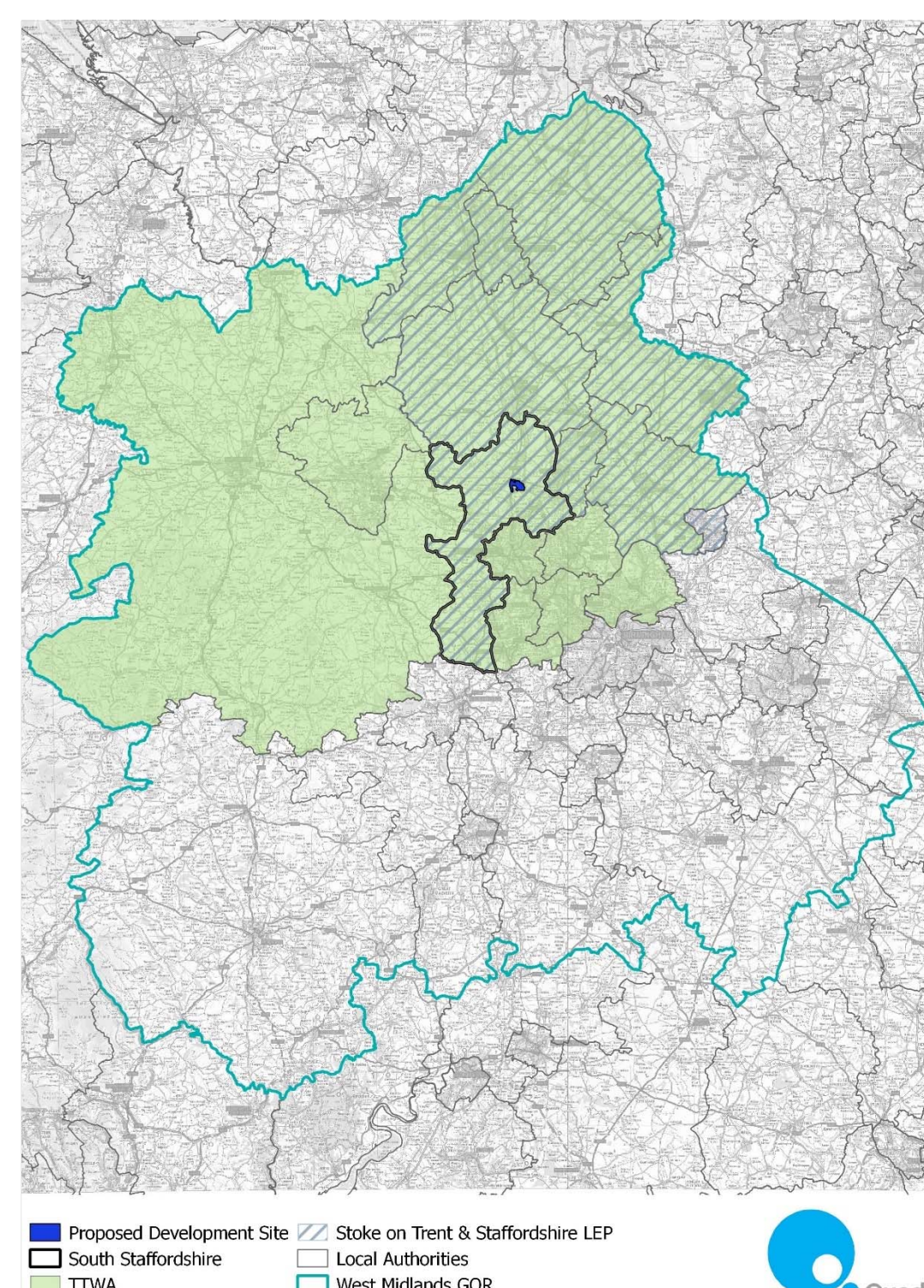


Figure 14.2: Site Location and Context with West Midlands Region



14.57 In addition to these areas, for the purposes of the potential effects on the construction workforce, West Midlands (defined as a Government Office Region by the Office for National Statistics) is considered. This is because the Construction Industry Training Board, which provides the most up to date information on trends in construction workforce and mobility provides information down to the West Midlands level. This area and is mapped on Figure 14.2.

Recreation and Amenity Receptors

14.58 Recreation and Amenity Receptors need to be assessed at different spatial scales to other Socio-economic receptors. The Recreation and Amenity Receptors are those receptors identified within the following technical topic areas which may have a recreation or amenity value for residents or visitors:

- Noise and vibration;

- Traffic and transport;
- Landscape and Visual;
- Heritage;
- Water; and
- Ground conditions.

- 14.59 These effects will be considered where they may have effects of the following nature:
- Obstruction to public rights of way (PRoW) and/or severance of a route to a facility, service or space with local amenity value;
 - Disturbance to users of PRoW from traffic, noise, dust, and landscape and visual changes;
 - Obstruction to sports and recreation facilities, places with heritage value, open access land and public open space including Areas of Outstanding Natural Beauty; and
 - Disturbance to sports and recreation facilities, open access land and public open space from traffic, noise, dust, and landscape and visual change during the various development stages.

Health Receptors

- 14.60 As set out by Public Health England, as part of the scoping process, the scope of health effects to be considered in EIA should be proportionate to the nature of a project and proportionate to the potential impacts of the proposal⁴¹. In the case of the Proposed Development, the scope of health receptors considered covers those people living and working within an impact area which is likely to experience significant direct effects, which could result in indirect effects on health. Relevant direct effects to be considered are:
- Noise and vibration;
 - Recreation and amenity;
 - Traffic and transport;
 - Water; and
 - Ground conditions.

- 14.61 Control of Major Accident Hazards (COMAH) is also considered.

Quantifying Significant Effects

Construction Effects

- 14.62 Construction effects are assessed using the information about the Proposed Development as described in the Demolition and Construction chapter (ES Chapter 5) and in the ODCEMP (Technical Appendix 2.3) and the indicative construction timetable input into the Construction Industry Training Board (CITB) Labour Forecasting Tool. This tool is an online application that can forecast labour needs for a range of construction projects. This is a standard tool, developed by the CITB in consultation with representatives across the construction industry and with a detailed evidence base with data from across the UK. It is a recognised best practice approach to preliminary forecasting of construction employment. This provides a headcount employment number.
- 14.63 The Proposed Development would be delivered in phases with some warehousing and the principal elements of the rail, road and servicing infrastructure delivered in the first phase. The remaining warehousing and required infrastructure would be delivered in response to market demand. Full construction is expected to take 15 years.

- 14.64 The CITB tool estimates that the construction workforce required for the Proposed Development has been based on an "infrastructure" model it therefore may over-estimate the employment required at the stage of delivering the warehousing. Warehousing has specific construction methods which include a relatively high proportion of off-site assembly and pre-fabrication and therefore construction employment is expected to be lower than a standard infrastructure or commercial scheme.
- 14.65 Construction employment has been presented in total construction years supported, peak headcount and average headcount.
- 14.66 Locally generated Gross Value Added (GVA) is used as an indicator of the magnitude of wider economic effects generated by a development scheme. For construction, this is calculated using Office for National Statistics⁴² *Input-output supply and use tables* which Estimates of industry inputs and outputs, product supply and demand and GVA by sector for the United Kingdom⁴³.
- 14.67 Indirect secondary socio-economic effects on health, local business, recreation and amenity receptors arising as a result of construction have been identified through analysis of the other relevant technical assessments within this ES. If these technical assessments have identified significant effects which could generate secondary indirect socio-economic effects, these have been presented here.
- 14.68 As agreed with Public Health England, the presentation of conclusions with respect to health effects can be qualitative (rather than quantitative) where appropriate⁴⁴.

Operational Effects

- 14.69 The creation of employment during the operational phase of the Proposed Development has been assessed using a range of sources including:
- Research by Prologis⁴⁵, a leading provider and manager of warehousing in the UK;
 - The Homes and Communities Agency's Employment Density Guide 3rd edition, November 2015; and
 - Quod's own research into patterns and types of employment in modern warehouse and SRFI facilities.
- 14.70 For the operation phase, the GVA is calculated using standard GVA per worker in the logistics sector published by the Office for National Statistics⁴⁶ applied to projected operational employment numbers. Displacement has been considered, applying the Homes and Communities Agency Additionality Guide⁴⁷.
- 14.71 The creation of operational jobs has not been considered on a phased basis. No adverse socio-economic effects would result from a shorter or longer phasing of delivery in this context, so a phased assessment of job creation has not been undertaken.
- 14.72 Indirect secondary socio-economic effects on health, local business and recreation and amenity receptors arising as a result of on-site operations have been identified through analysis of the other relevant technical assessments within this ES. If these technical assessments have identified significant effects which could generate secondary indirect socio-economic effects, these have been presented here.
- 14.73 As agreed with Public Health England, the presentation of conclusions with respect to health effects can be qualitative (rather than quantitative) where appropriate⁴⁸.
- 14.74 Where indirect and secondary socio-economic effects have been identified in phases in the relevant technical chapters (i.e. effects whose magnitude or significance changes over time

⁴¹ Letter from Vince Jenner, Public Health England to the Planning Inspectorate, 10/06/16 (Ref TR050005)

⁴² ONS, 2017. Gross Value Added. [online] Available at: <https://www.ons.gov.uk/economy/grossvalueaddedgva> [Accessed 09.02.17]

⁴³ ONS, 2017. Input-output supply and use tables. [online] Available at: <https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables> [Accessed 09.02.17]

⁴⁴ Letter from Vince Jenner, Public Health England to the Planning Inspectorate, 10/06/16 (Ref TR050005)

⁴⁵ Prologis, 2011, Technical Notes from Prologis UK, Do Distribution Warehouses Deliver Jobs?; Prologis, 2015, Technical Insights from Prologis, Distribution Warehouses Deliver More Jobs

⁴⁶ ONS, 2017. Gross Value Added. [online] Available at: <https://www.ons.gov.uk/economy/grossvalueaddedgva> [Accessed 09.02.17]

⁴⁷ Homes and Communities Agency. 2014. Additionality Guide, 4th ed.

⁴⁸ Letter from Vince Jenner, Public Health England to the Planning Inspectorate, 10/06/16 (Ref TR050005)

over the course of construction or during operation), these have been referenced as such. Receptor Sensitivity.

- 14.75 The main sensitive receptors for the socio-economic assessment are the accommodation and labour markets, businesses and communities at a number of spatial levels. It is not possible to ascribe specific 'values' to socio-economic sensitive receptors due to their diversity in nature and scale. There has therefore been a focus on the qualitative (rather than quantitative) 'sensitivity' of each receptor, and, in particular on their ability to respond to change based on recent rates of change and turnover.
- 14.76 The socio-economic environment is a dynamic and adaptive one with constant background change and turnover, for example people moving into and out of the area and changing jobs. This is a particular feature of the construction sector. This qualitative sensitivity is based on professional judgement but broadly ascribes low sensitivity to those receptors that are easily adaptive to change and high sensitivity to those receptors that are not easily adaptive to change.
- 14.77 Broadly speaking, in the context of the size, change and turnover of the district and regional population and economy, these factors are of lower sensitivity whilst provision of local services for which there is greater lead time and less dynamism, are of higher sensitivities.

Magnitude and Significance

- 14.78 Predicted significance levels therefore combine an assessment of the overall magnitude or scale of the effect, and compare this to the ability of each receptor to respond to change. Potential effects have been considered in terms of long term or temporary, adverse (negative) or beneficial (positive) and cumulative.
- 14.79 Some effects cannot be quantitatively assessed; in such cases a qualitative assessment has been used. In addition, the magnitude of the effect does not necessarily correlate with the effect significance. The key influences on the determination of effect significance include:
- The capacity of the relevant area to absorb the effect (sensitivity);
 - The magnitude of the potential effect;
 - The geographical extent of the effect;
 - The duration and reversibility of the effect; and
 - Recent rates of change in the locality.
- 14.80 The temporal scope of the effect has been assessed to be either temporary or permanent.
- 14.81 The duration of the effect can be:
- Short Term (e.g. <5 years).
 - Medium term (5-10 years).
 - Long Term (>10 years).
- 14.82 For example, whilst the construction effects are temporary, they could be spread over a 15 year period and would therefore be Long Term.
- 14.83 The assessment process aims to be objective and quantifies effects as far as possible. However, some effects can only be evaluated on a qualitative basis. Effects are defined as follows:
- **Beneficial** classifications of significance indicate advantageous effects which may be minor, moderate, or major in magnitude.
 - **Neutral** classifications of significance indicate no significant beneficial or adverse effect.
 - **Adverse** classifications of significance indicate disadvantageous effects, which may be minor, moderate or major in magnitude.
- 14.84 Where adverse or beneficial effects have been identified, these have been assessed against the following scale:
- Negligible

- Minor
- Moderate
- Major.

- 14.85 The level of significance is derived by a combination of the magnitude of the effect and the sensitivity of the receptor. Thus, for example, a key (major or moderate) significant effect (in either construction or operation) would be likely to be of major or at least moderate magnitude, affect a wide area, be long term or irreversible and difficult to absorb in the relevant area.
- 14.86 The assessment of construction employment creation focuses on the "peak" of the construction period i.e. that largest projected number of construction employees on-site at any one time during the construction period. This enables it to demonstrate the maximum scale of effects and ensure mitigation measures meet the worst case for any adverse effects.
- 14.87 The magnitude and significance of these effects are assessed within the geographical contexts as set out above.

Dealing with Uncertainty

- 14.88 It is necessary to acknowledge that there is a degree of uncertainty in the accuracy of the baseline characterisation, the prediction of the magnitude and significance of effects and the vulnerability of receptors.
- 14.89 Wherever possible, baseline characterisation and projections in this Chapter are supported by appropriate, robust and up-to-date data and high level technical expertise of the author.
- 14.90 Where a range of potential outcome is considered likely, this assessment presents a likely "worst case scenario".

Assumptions and Limitations

- 14.91 There are no further assumptions regarding the assessment methodology or available data, over and above those set out in the above Methodology section.

Baseline Conditions

Current Baseline

Population

- 14.92 Population statistics are provided to set out the context of the number and characteristics of people at each spatial scale.
- 14.93 The total population of the Local Area is approximately 26,240. The population profile of the Local Area is broadly in line with all comparator areas. As set out in Table 14.2 and Table 14.3 the proportion of the total population aged 65 and over is higher in the Local Area (18%) than England and Wales (16%).
- 14.94 The population density of the Local Area is 2.9 people per hectare.
- 14.95 The Local Area experienced a slight increase in the population between 2001 and 2011 (4%). This is in the context of 8% growth across England and Wales. The population of over 65s in the Local Area significantly increased (38%) in the ten years from 2001. Growth in this age group has been experienced at all spatial scales although at a lower rate than the Local Area – 34% across South Staffordshire, 19% across the SSLEP and 11% across England and Wales.

- 14.96 The proportion of under 16s has decreased between 2001 and 2011. The greatest decline has been felt in South Staffordshire at the district level (-13%) closely followed by the Local Area (-12%). This is in the context of 1% growth across England and Wales.
- 14.97 ONS Population Projections can be obtained at the regional and national level but are unavailable at ward level. At the national level only figures for England are available. The population in South Staffordshire and the SSLEP are projected to grow slightly (2% and 4% respectively) in the 10 years from the 2011 Census. This growth is lower than the national projection of 7%.
- 14.98 Across all spatial scales the population of people aged 65 and older is projected to grow significantly.
- 14.99 The TTWA – the area from within which the majority of operational employees is expected to live – is nearly 3 million and is relatively young, with 20% of the population under the age of 16.

Table 14.2: Population and age profile of local, regional and national areas

	All	% Under 16	% 16-64	% 65+
Local Area	26,240	17%	65%	18%
TTWA	2,993,520	20%	63%	17%
South Staffordshire	108,130	16%	63%	21%
SSLEP	1,097,500	18%	64%	18%
England & Wales	56,075,910	19%	65%	16%

Table 14.3: Population dynamics within local, regional and national areas

	Population 2001	Population 2011	Projected Population 2021	% growth 2001-2011	% growth 2011-2021
Local Area	25,200	26,241	n/a	4%	n/a
TTWA	2,874,940	2,993,552	n/a	4%	n/a
South Staffordshire	105,900	108,131	110,000	2%	2%
SSLEP	1,047,370	1,097,497	1,137,000	5%	4%
England	49,138,830	53,012,456	56,962,000	8%	7%

The Size of the Labour Market

- 14.100 The size of the labour market sets the context for assessing the potential effects of the new jobs that would be created at the Proposed Development.

- 14.101 As set out in Table 14.4, there are 19,870 people aged between 16 and 74 within the Local Area. Of these, 63% are economically active. The labour market profile of the Local Area is broadly in line with all spatial scales.
- 14.102 The TTWA has a labour force of 1.3 million economically active residents. Unemployment within the TTWA is relatively high, at 5% of the population aged 16 to 74. The unemployment statistics in Table 14.4 meet the definition of ILO unemployment⁴⁹ – so may include residents who are not claiming unemployment benefits but are still seeking work.
- 14.103 In addition, there may be residents who are considered to be inactive, in that they are not currently seeking work, but who may return to the labour market if presented with suitable available opportunities. These are known as discouraged workers.
- 14.104 Approximately 10% of UK workers in employment are underemployed i.e. employees working less than 40 hours a week who are looking for a new job with longer hours to replace their current (main) job or who want to work longer hours in their current job (at their basic rate of pay)⁵⁰. Approximations of underemployment are not available at a local level.

Table 14.4: Labour market within local, district, regional and national areas

	All Persons 16-74	Active : Part Time	Active : Full Time	Active: Self Employed	Active: Unemployed	All economically active (not inc. full time students)
Local Area	19,870	15%	38%	10%	3%	12,540
TTWA	2,172,800	14%	37%	8%	5%	1,297,370
South Staffordshire	80,720	15%	38%	10%	3%	51,670
LEP	812,170	14%	39%	9%	4%	501,510
England & Wales	41,126,540	14%	38%	10%	4%	25,449,860

- 14.105 The overall employment rate measures the proportion of people aged 16 to 74 who are in employment (full-time, part-time or self-employed). as per the European Commission official statistics⁵¹. As set out in Table 14.5, the employment rate within the Local Area is 63% and 60% within the TTWA. South Staffordshire has a relatively high employment rate of 64%.

Table 14.5: Employment rate within local, regional and national areas

Area	Employment Rate 16 to 74
Local Area	63%

⁴⁹ To be considered unemployed under the International Labour Organisation Definition, a person must have been out of work for 4 weeks and must be able to start work in the next 2 weeks. It does not relate to receipt or not of unemployment benefits.

⁵⁰ Office for National Statistics. 2017. EMP Underemployment and overemployment. [Online] available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/underemploymentandoveremploymentemp16> accessed 28.09.17

⁵¹ Eurostat Statistics Explained. [online] Available at: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Unemployment> accessed 28.09.17

Table 14.5: Employment rate within local, regional and national areas	
Area	Employment Rate 16 to 74
TTWA	60%
South Staffordshire	64%
SSLEP	62%
England & Wales	62%

Claimant Count

- 14.106 Jobs Seekers Allowance (JSA) is an unemployment benefit paid to individuals of working age (defined in this dataset as all individuals aged 16 to 64) who are registered as unemployed and actively seeking work. Due to changes in the way unemployment benefits are paid via the introduction of Universal Credit, the JSA is being phased out. The ONS produces “experimental” statistics of Claimant Count including both Universal Credit and JSA claimants who are claiming unemployment benefits. These are modelled estimates to be used as a guide.
- 14.107 Claimant Count sets the context for assessing the potential effects of the new jobs that would be created at the Proposed Development in terms of the potential to reduce unemployment.
- 14.108 As shown in Table 14.6, the Claimant Count rate is broadly in line with the figures from the JSA. The Local Area reports the lowest rate at 0.8%, well below the national average of 1.8% and the TTWA with a rate of 2.5%.

Table 14.6: Claimant Count (population aged 16 to 64)	
Area	Claimant Count Rate
Local Area	0.8%
TTWA	2.5%
South Staffordshire	1.0%
SSLEP	1.2%
England & Wales	1.8%

- 14.109 The majority of job seekers are looking for sales, customer service and other elementary (entry level/lower skilled) occupations, as is the pattern generally in the economy. These types of jobs can be broadly referred to as “Elementary to mid-level” jobs. Within the Local Area, there are approximately 90 job seekers looking for work in these types of occupations. The figures for job seekers claimants by sought occupation are set out in Table 14.7.

Table 14.7: Job seekers sought occupation (population aged 16 to 64)					
Area	Managers & Senior Officials	Skilled Trades Occupations	Sales & Customer Service occupations	Elementary Occupations	Total
Local Area	0	10	65	25	100
TTWA	2,975	1,255	19,655	7,775	31,660
South Staffordshire	25	25	315	120	485
SSLEP	440	165	4,135	1,395	6,135
England & Wales	46,735	16,665	286,820	88,535	438,755

Youth Unemployment

- 14.110 Youth unemployment statistics set the context for assessing the potential effects of the new jobs that would be created at the Proposed Development in terms of the potential to reduce youth unemployment.
- 14.111 Between 16% and 20% of Job Seekers Allowance claimants in each of the study areas are aged under 24. Based on these rates, within the Local Area this would equate to an estimated 25 young people; 7,775 within the TTWA; 120 in South Staffordshire; 1,205 in the SSLEP; and 88,745 across England and Wales as a whole.

Qualifications

- 14.112 Qualifications statistics set the context for assessing the potential effects of the new jobs that would be created at the Proposed Development in terms of providing new jobs that match the skill-set of the people within impact areas.
- 14.113 As set out in Table 14.8 1 in 4 residents of the Local Area have no formal qualifications. However, this figure is lower than the TTWA (29%) and the SSLEP (27%).
- 14.114 The proportion of residents within the TTWA gaining Level 4+ qualifications is relatively low at 21% compared to the national average of 27%.
- 14.115 The proportion of residents achieving Level 1, 2, 3 and apprenticeship qualifications is broadly in line across all comparator areas.

Table 14.8: Qualifications (population aged 16 and over) within local, district, regional and national areas							
Area	None	Level 1	Level 2	Apprenticeship	Level 3	Level 4+	Other
Local Area	25%	15%	17%	4%	12%	22%	4%
TTWA	29%	14%	16%	3%	12%	21%	5%
South Staffordshire	24%	14%	17%	4%	13%	25%	4%
SSLEP	27%	14%	16%	4%	13%	22%	5%
England & Wales	23%	13%	15%	4%	12%	27%	6%

Occupational and Industrial Sector of Working Residents

- 14.116 The occupational and industrial profile, taken from the Census 2011, sets the context for assessing the potential effects of the new jobs that would be created at the Proposed Development in terms of providing new jobs that match the experience and skill-levels of existing residents within the impact areas, or in terms of addressing structural weaknesses in the economy within these areas. Occupation reflects level of skill and/or seniority and industry reflects the sector of employment.
- 14.117 The occupation profile of the population of the Local Area and comparator areas is set out in Table 14.9.
- 14.118 Across the local, regional and national areas the largest proportion of residents are engaged in professional and associate professional occupations. In the Local Area this group comprises 27% of the working resident population. This figure is higher than the SSLEP (25%) but lower than South Staffordshire (29%) and England and Wales as a whole (30%).
- 14.119 The industry of working age residents within local, regional and national areas is set out in Table 14.10 and Table 14.11. As is the case generally in the economy of England and Wales, wholesale and retail trades and health and social work are amongst the most significant employers. Additionally, in the Local and Regional areas those employed in manufacturing is higher than the national average 12% to 13% compared to 9% in England and Wales. In the Local Area the highest proportion of residents (17%) are employed in the wholesale and retail trades.
- 14.120 The transport and storage sector broadly represents 4%-5% of working aged residents across all spatial scales. This equates to 590 residents in the Local Area and 2,050 across South Staffordshire as a whole.
- 14.121 The construction sector broadly represents 10% of working aged residents across all spatial scales. This equates to 1,350 residents engaged in the construction sector in the Local Area and 5,270 in South Staffordshire. The construction industry is addressed in more detail in the next section of this ES chapter, *The Regional Construction Industry*.

Table 14.9: Occupation profile (resident population aged 16 to 74)

Area	Managers	Professionals and associate professionals	Administrative and secretarial occupations	Skilled trades	Caring, leisure, service occupation, sales and customer services	Process, plant and machine operatives and elementary occupations
Local Area	12%	27%	12%	14%	16%	18%
TTWA	10%	25%	11%	13%	19%	22%
South Staffordshire	13%	29%	13%	13%	16%	16%
SSLEP	10%	25%	11%	13%	18%	22%
England & Wales	11%	30%	11%	11%	18%	18%

Table 14.10: Industrial profile of the Local Area (resident population aged 16 to 74)

This table refers to people who live within the study areas (figures have been rounded)

Area	% of residents in Local Area	Total employed residents in the Local Area	% of residents in South Staffordshire	Total employed residents in South Staffordshire
Wholesale and retail trade	17%	2,250	17%	1,140
Human health and social work activities	11%	1,440	12%	6,200
Manufacturing	12%	1,610	12%	6,470
Construction	10%	1,350	10%	5,270
Education	10%	1,260	10%	5,600
Public administration and defence; compulsory social security	7%	930	7%	3,540
Transport and storage	5%	590	4%	2,050
Administrative and support service activities	4%	570	4%	2,150
Accommodation and food service activities	4%	570	4%	2,050

Table 14.11: The manufacturing, construction and transport and storage sectors (resident population aged 16 to 74)

	Local Area	TTWA	South Staffordshire	SSLEP	England & Wales
% of residents in Manufacturing	12%	13%	12%	13%	9%
Total employed residents in Manufacturing (figures have been rounded)	10	176,500	6,500	68,400	2,370,000
% of residents in Construction	10%	8%	10%	9%	8%
Total employed residents in	1,350	108,600	5,270	44,460	2,043,230

Table 14.11: The manufacturing, construction and transport and storage sectors (resident population aged 16 to 74)

Construction (figures have been rounded)					
% of residents in Transport and Storage	5%	5%	4%	6%	5%
Total employed residents in Transport and Storage (figures have been rounded)	600	70,900	2,050	28,750	1,313,300

Table 14.12: Business Register and Employment Survey (Employees)
This table refers to people who work within the study areas

Transport & storage (inc. postal)	7%	700	5%	1,600	7%	77,900
Retail	7%	700	8%	2,400	10%	116,800
Professional, scientific & technical	7%	700	8%	2,600	5%	62,800
Construction	7%	700	9%	3,000	6%	66,500
Accommodation & food services	6%	600	8%	2,700	6%	67,300
Business administration & support services	5%	500	7%	2,200	8%	90,200
Health	4%	400	10%	3,200	13%	154,100
Motor trades	3%	300	2%	600	2%	28,500
Arts, entertainment, recreation & other services	3%	300	4%	1,300	5%	55,800
Mining, quarrying & utilities	2%	200	1%	400	1%	15,700
Financial & insurance	1%	100	2%	500	2%	22,600
Total		9,900		32,400		1,185,200

The Local Economy

Employment

- 14.122 There are approximately 9,900 employees working within the Local Area and 1.185 million within the TTWA. This refers to people who work within the specified spatial scales, rather than those who live locally as set out in Table 14.9 and Table 14.10.
- 14.123 The largest local sector of employment is the manufacturing sector making up 15% of all employees working in the Local Area. Other major employment sectors within the Local Area are education, wholesale, retail trade and public administration and defence.
- 14.124 Table 14.12 provides additional detail regarding employment within the Local Area, South Staffordshire and the TTWA.

Table 14.12: Business Register and Employment Survey (Employees)
This table refers to people who work within the study areas

Area	% Local Area Residents	Total Local Area	% South Staffordshire	Total South Staffordshire	% TTWA	Total TTWA
Manufacturing	15%	1,500	14%	4,500	14%	159,800
Education	12%	1,200	9%	2,800	9%	109,200
Wholesale	10%	1,000	6%	2,000	6%	70,900
Public administration & defence	8%	800	4%	1,200	4%	45,400

The Regional Construction Industry

- 14.125 The construction sector broadly employs 10% of working aged residents at a local and Staffordshire level. This equates to 1,350 residents in the Local Area and 5,270 in South Staffordshire as shown on Table 14.10.
- 14.126 The construction industry supports 700 workplace jobs in the Local Area and 3,000 within South Staffordshire, as shown on Table 14.11, i.e. there is currently net out-commuting.
- 14.127 The Construction Industry Training Board publishes Construction Skills Forecasts by region⁵². Total employment in the construction industry in the West Midlands was 181,510. This does not include office based professional and technical support (e.g. architects and surveyors) or other non-operative support services such as cleaners or security. By 2020 this is forecast to grow to 190,130⁵³. The forecast total employment levels are derived from expectations about construction output and productivity. Essentially, this is based upon the

⁵² CITB, 2015. Workforce Mobility and Skills in the UK Construction Sector: West Midlands. [online] Available at: <http://www.citb.co.uk/documents/research/workforce%20mobility%202015/west%20midlands%20mobility%20report%202015.pdf> [accessed 09.02.17]

⁵³ CITB, 2016. Construction Skills Network Forecasts 2016-2020: West Midlands. [online] Available at: <http://www.citb.co.uk/Documents/research/CSN%202017-2021/CSN-WestMidlands-2017.pdf> [accessed 09.02.17]

question 'How many people will be needed to produce forecast output, given the assumptions made about productivity?'. Therefore, the construction industry in the West Midlands is expected to require an additional 8,620 construction employees in 2020 over and over the current workforce. The actual number of net additional workers required is higher – as some workers will leave in the industry to other jobs, migrate to other regions or retire. The total requirement for new construction workers in the region to 2020 is estimated to be approximately 12,120⁵⁴.

14.128 The workforce is highly mobile within the West Midlands, with approximately 40% of employees having travelled more than 50 miles to a job in a given year. However, the workforce remains relatively self-contained within the region, with 82% of construction workers on-site in the West Midlands also living within the region.

Employment in Logistics

14.129 Recent trends indicate that the number of people engaged in logistics (transport and storage sector) has declined in the Local Area between 2009 and 2015. There was a sharp decline in employment between 2009 and 2013 with a recovery in 2015 which was experienced across all spatial scales considered.

14.130 In all comparator areas, the employment figures for 2015 surpassed those prior to the decline in 2013. These figures are set out in Table 14.13 below.

14.131 The Business Register and Employment Survey, from which this data is drawn, is survey based and therefore subject to sampling errors which means that it should be used as a guide, especially when used at a very local level.

Area	2009	2010	2011	2012	2013	2014	2015
Local Area	600	600	600	700	300	400	700
TTWA	58,000	56,100	54,900	63,300	57,400	65,100	77,900
South Staffordshire	1,500	1,400	1,300	1,400	900	1,200	1,600
SSLEP	26,400	24,200	23,200	25,400	23,800	25,600	31,200
England & Wales	1,120,300	1,111,500	1,115,900	1,118,200	1,109,200	1,151,300	1,220,900

The Public Sector

14.132 The Government's 2010 *Local Growth White Paper* sets out the objective that growth should be broad-based, industrially and geographically (Paragraph 1.23); should create a business environment that competes with the best internationally (Paragraph 1.23); and should establish a sustainable and growing private sector, in particular in areas that are currently dependent on the public sector (Paragraph 4.5)⁵⁵. This remains a government priority under the current Parliament. Public sector employment statistics therefore provide a context for assessing the benefits of supporting new private sector jobs.

14.133 Exact numbers of people working in the public sector at a ward level was not available from national datasets. However, estimates of public sector prevalence can be made using the

health, education and public administration and defence sectors as a proxy. This could represent an overestimate as some of these jobs could be in the private sector.

14.134 For wider spatial scales, the Business Register and Employment Survey (BRES) provides an estimate of public sector reliance. Comparative levels of estimated public sector employment are set out in Table 14.14 below. Public sector employment is highest at the TTWA scale, at 19% which is in line with England and Wales (18%) but higher than all remaining comparator areas. South Staffordshire has relatively low Public Sector reliance.

Area	Public Sector Number (figures rounded)	BRES have been	Public Sector Proportion BRES
Local Area	1,500		15%
TTWA	219,400		19%
South Staffordshire	3,900		12%
SSLEP	74,500		16%
England & Wales	4,631,700		18%

Wages

14.135 Wage statistics provide context for the potential economic benefits of new jobs – and therefore an increase in wages – in an impact area.

14.136 Wages in the area vary according to location and between resident based measures and workplace based measure. Figures for both the gross annual pay of full time residents and those working in the same geographies were obtained from the Annual Survey of Hours and Earnings from the ONS.

14.137 Resident based average annual pay in South Staffordshire is in line with the national average at £27,550 although it is £2,120 higher than the average of the SSLEP. The highest wages within the SSLEP are within Stafford and South Staffordshire with both reporting wages over £27,500. The lowest wages are within Stoke-on-Trent at £22,250, approximately £5,500 less than the national average. Resident Wages have steadily increased across all spatial scales since 2002 although growth at both regional levels has been slower than the national rate.

14.138 Data on workplace based wages in 2015 (the most recent published) is unavailable in South Staffordshire (due to sampling issues in that year) therefore data from 2014 has been used for this geography only. Wage statistics are not available at a ward level, so an accurate estimate of the TTWA wage cannot be made. South Staffordshire and the SSLEP have large discrepancies between resident based and workplace based incomes. Workers earn approximately £3,500 less than workplace incomes in South Staffordshire, and approximately £2,000 less in the SSLEP area. This suggests that higher value jobs tend to go to residents within the borough.

14.139 Table 14.15 below outlines the figures for gross annual pay based on residents and workplaces.

14.140 This data is not available for the TTWA.

⁵⁴ CITB, 2016. Construction Skills Network Forecasts 2016-2020: West Midlands. [online] Available at: <http://www.citb.co.uk/Documents/research/CSN%202017-2021/CSN-WestMidlands-2017.pdf> [accessed 09.02.17]

⁵⁵ BIS, 2010. Local Growth: Realising every place's potential. London:TSO. Paragraph 1.23, Paragraph 4.5

Table 14.15: Median gross annual pay 2015 (resident based and workplace based)

	Resident based median gross annual pay (full time) £	Workplace based median gross annual pay (full time) £
South Staffordshire	27,551	24,071*
SSLEP	25,612	23,833
England & Wales	27,732	27,715

*figure taken from 2014

Wider Economic Context

14.141 At the regional level (statistical Government Office Region), the West Midlands contributed £49.6 billion of total GVA to the national economy in 2012. Data is unavailable at the district level with data only reported at a county level. Staffordshire and Shropshire are combined for GVA reporting purposes. Shropshire and Staffordshire contributed approximately £27 billion of total GVA to the national economy in 2012. In 2014, the SSLEP contributed £20.2 billion of GVA to the national economy. This is set out in Table 14.16.

Table 14.16: Total GVA (£ million) 2008 to 2014

	2008	2009	2010	2011	2012	2013	2014
Shropshire and Staffordshire	25,868	24,276	25,984	27,900	27,052	n/a	n/a
SSLEP	17,873	16,959	17,913	18,504	18,655	19,538	20,197
West Midlands	46,158	44,909	48,829	48,474	49,611	n/a	n/a
UK	1,414,107	1,382,229	1,414,635	1,452,075	1,495,576	1,551,553	1,624,276

Deprivation

14.142 Deprivation is defined as "The damaging lack of material benefits considered to be basic necessities in a society⁵⁶."

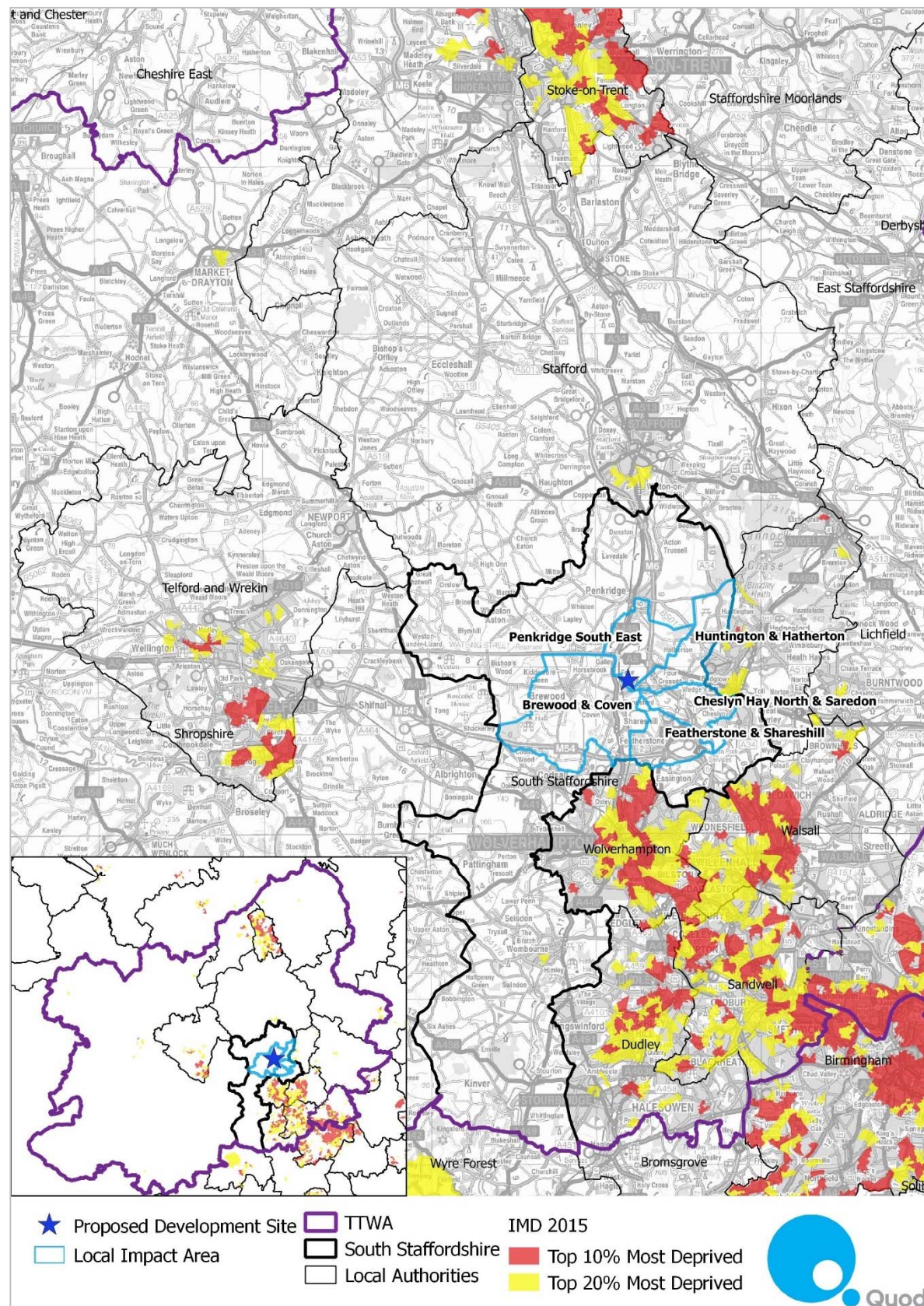
14.143 The Department for Communities and Local Government Index of Multiple Deprivation measures relative deprivation of neighbourhoods in England, taking into account a range of indicators including (but not limited to) employment, crime, health and access to services. In this socio-economic and human health assessment, the index sets the context for assessing the potential effects of the new jobs and economic activity that would be

generated by the Proposed Development in terms of potential to reduce deprivation amongst local residents. Residents of a deprived area are assessed to be more sensitive to the effects of economic benefits such as new jobs.

14.144 Figure 14.3 shows the relative levels of deprivation across South Staffordshire and surrounding districts. Areas shown in red are within the 10% most deprived in the country and areas shown in yellow are within the 20% most deprived. This illustrates that the Site and South Staffordshire do not have concentrations of deprivation compared to the neighbouring districts. The TTWA experiences high levels of deprivation to the south within Wolverhampton, Dudley, Sandwell, Walsall, and to the north within Stoke-on-Trent districts. Small pockets of deprivation are present in Telford and Wrekin, Lichfield, Cannock and Stafford within the TTWA.

⁵⁶ Oxford University Press, 2017. The Oxford English Living Dictionary. [online] Available at: <https://en.oxforddictionaries.com/definition/deprivation> [Accessed 09.02.17]

Figure 14.3: Deprivation



Human Health

General Health Profile

- 14.145 Public Health England produced a health profile for the district of South Staffordshire in June 2015⁵⁷. This reviews a variety of health indicators across South Staffordshire in comparison to the region (West Midlands) and nation as a whole.
- 14.146 Overall, health indicators of South Staffordshire residents are better than the England average. The male life expectancy at birth is significantly better than England average at 80.3 years compared to 79.5 years across England. For women, the average life expectancy is 84 in South Staffordshire, compared to 83.1 in England.
- 14.147 Approximately 62% of adults record achieving at least 150 mins of physical activity per week compared to only 56% across England. Deprivation and statutory homelessness is also much lower across South Staffordshire than the regional and national averages.
- 14.148 Two indicators were ranked 'significantly worse than England average' in 2015 – excess weight in adults and recorded diabetes. South Staffordshire recorded that approximately 70% of their adult population was classified as having excess weight⁵⁸. This compares to 64% as the national average. The percentage of people on GP registers with a recorded diagnosis of diabetes was recorded at 6.6% in South Staffordshire compared to 6.2% across England. While this rate is significantly worse than the England average it is better than the regional average across the West Midlands.

Health impacts: overview of sources

- 14.149 Quod has undertaken an extensive literature review regarding the impact of socio economic conditions on health including economic activity and the wider determinants of health in the environment. The most significant document is the Marmot Review into Health Inequalities Post 2010 which has informed this baseline assessment⁵⁹.

Unemployment related health problems

- 14.150 Access to employment can be a significant contributing factor to increased health and well-being. Being in work can make it easier to pursue a healthy lifestyle, with income being one of the strongest indicators of health and disease in public health research. Unemployment is often related to an increased risk of poor physical and mental health and premature death.
- 14.151 Unemployed people experience a multiplicity of elevated health risks. They experience higher rates of limiting long-term illness, mental illness, and cardiovascular disease. The experience of unemployment has also been consistently associated with an increase in overall mortality, and in particular with suicide. Unemployed people experience a much higher use of medication and worsened prognosis and recovery rates.
- 14.152 There are three core ways in which unemployment affects levels of morbidity and mortality:
- Financial problems as a consequence of unemployment result in lower living standards, which may in turn reduce social integration and lower self-esteem;
 - Unemployment can trigger distress, anxiety and depression. Many psychological stressors contribute to poor health not only among the unemployed themselves, but also their partners and children. Loss of work can result in a sense of loss of a core role which is linked with one's sense of identity, as well as a loss of rewards, social participation and support;
 - Unemployment effects on health behaviours, being associated with increased smoking and alcohol consumption and decreased physical exercise. Unemployment is associated with a wide range of adverse health effects including anxiety, depression and an increase in self-reported illness, together with an increased rate of heart disease. Long

⁵⁷ Public Health England, 2016. South Staffordshire District Health Profile.

⁵⁸ Public Health England, 2017, South Staffordshire Health Profile

⁵⁹ Marmot, M. et al, (2010). Fair Society, Healthy Lives: The Marmot Review into Health Inequalities Post 2010.

term unemployment can increase the likelihood of these problems affecting people as well as an increase in psychological problems and an increase in domestic violence. It can also be the case that those who develop poor health are more likely to remain unemployed in the long term.

- 14.153 The relationship between low income and poor health follows a social gradient, with people living on a low income being more likely to experience worse health and be less physically active. Having insufficient money to lead a healthy life is a highly significant cause of health inequality. The calculation of Minimum Income for Healthy Living (MIHL) includes the level of income needed for adequate nutrition, physical activity, housing, social interactions, transport, medical care and hygiene. In England, there are gaps between a minimum income for healthy living and the level of state benefit payments that many groups receive.
- 14.154 Getting people into work is, therefore, of critical importance to reducing health inequalities. Patterns of employment both reflect and reinforce social difference and there are serious inequalities of access to labour market opportunities. Rates of unemployment are highest among those with no or few qualifications and skills, people with disabilities and mental ill-health, those with caring responsibilities, lone parents, those from some ethnic minority groups, older workers and, in particular, young people.
- 14.155 According to the BRES data (2015) as outlined above, there are 9,000 jobs within the Local Area. The economic activity rate in the Local Area is lower than all comparator areas at 63% compared to South Staffordshire which has an employment rate of 64%.

Health and Air Quality

- 14.156 Air quality is a key influence in the quality of the environment in which a population lives, with implications for long-term health. Dust and emissions from transport and construction processes are the main potential source of pollutants. Poor air quality is associated with negative health outcomes such as chronic lung disease, heart conditions and asthma, particularly among children.
- 14.157 Planning and development influence land use and therefore may influence the quantity and types of emissions produced – either reducing or increasing. Mitigation measures including designing open spaces to act as green lungs for a community and use of technology to reduce and capture emissions may be used where appropriate.
- 14.158 Further details on the air quality baseline are set out in Chapter 7: Air Quality, of this ES.

Health and Noise and Vibration

- 14.159 Noise and vibration have tangible links to the health of a population, particularly in places where people live or work in close proximity to sources of noise and vibrations. Excessive noise and vibrations may lead to mental health issues, stress-related illness, annoyance, disturbance of sleep, hypertension and cardiovascular effects.
- 14.160 These effects may adversely impact health and wellbeing but also may lead to more serious health conditions.
- 14.161 Planning and development may reduce noise effects through appropriate mitigation on and off-site.
- 14.162 Further details on the noise and vibration baseline are set out in Chapter 13: Noise and Vibration, of this ES.

Health and Water Quality

- 14.163 Water pollution may have adverse effects on human health immediately or after long term exposure. Different forms of pollutants (e.g. heavy metals, industrial waste, microbial pollutants and suspended particles) affect human health in different ways including

developmental problems, cancers, immune suppression, acute poisoning and the spread of water borne diseases which can all cause increased rates of morbidity and mortality.

- 14.164 Planning and development may influence water quality by reducing or increasing pollutants that are released into the water system.
- 14.165 Further details on the water quality baseline are set out in Chapter 16: Water Environment and Flood Risk, of this ES.

Health and Traffic and Transport

- 14.166 Traffic or transport impacts may have beneficial or adverse effects on health. Planning and Development may result in effects that improve or reduce access to services, including health services and to employment. It may provide or remove access to public transport, walking and cycling routes that support active lifestyles.
- 14.167 A full transport baseline is set out in Chapter 15: Transport and Access.

COMAH/Hazardous Substance Control

- 14.168 COMAH regulations⁶⁰ are in place to ensure that all businesses that undertake certain types of activity must notify the Health and Safety Executive (and other appropriate Competent Authorities) of these activities, and commit to working safely within the specified guidelines to protect the health of those that live and work in the area around the business and to protect the environment.
- 14.169 The regulations apply to businesses that deal with substances that have the potential to “cause major accidents to people and the environment”. COMAH regulations apply when a business stores (or are likely to store), use or could generate sufficient quantities of dangerous substances that equal or exceed the COMAH threshold quantities.
- 14.170 There are two locations in close proximity to the Site which are currently covered by COMAH regulations:
- Carver (Wolverhampton) Limited (Gravelly Way) (*Flammable liquids and gases*)
 - SI Group-UK Limited (Flammable liquids and gases; Hazardous to the aquatic environment; Toxic).
- 14.171 Each of these sites have Consultation Zones around them, defined by the Health and Safety Executive (HSE) as areas within which development may be constrained and where, if development is proposed, the HSE must be consulted on Planning Applications. The zones include an “Inner Zone”, “Middle Zone” and “Outer Zone”.

Health Deprivation and Disability (IMD 2015)

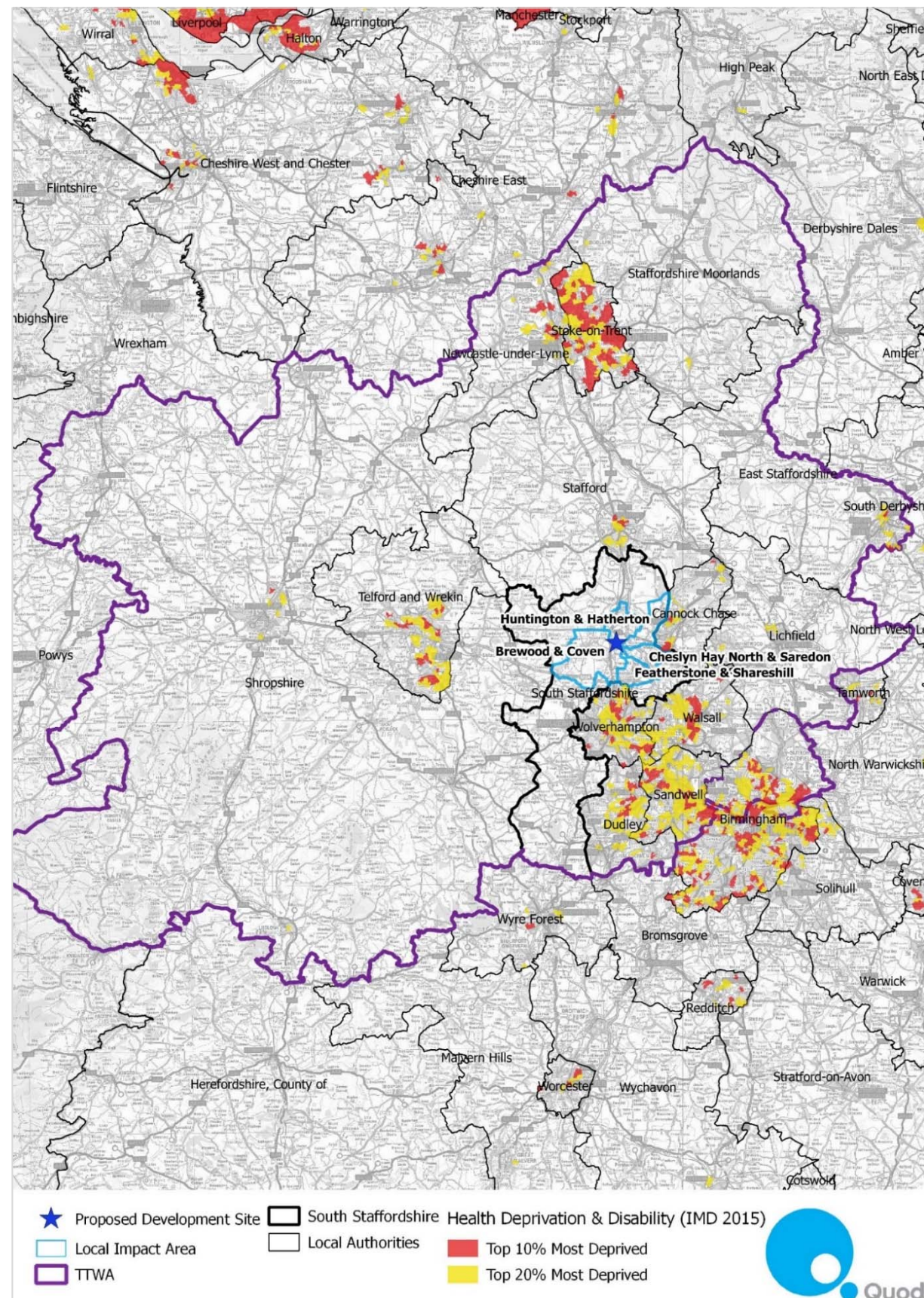
- 14.172 The Indices of Multiple Deprivation (IMD) measures relative deprivation of neighbourhoods in England, taking into account a range of indicators including employment, crime, health and access to services. These indicators can be stripped out individually to understand the drivers of deprivation in a local area. Health deprivation and disability “measures the risk of premature death and the impairment of quality of life through poor physical or mental health”⁶¹. To calculate this deprivation a range of data is used including morbidity, disability, premature mortality and mood and anxiety disorders.
- 14.173 Figure 14.4 maps the health deprivation and disability domain of the IMD 2015. Areas shown in red are within the 10% most deprived in the country and areas shown in yellow are within the 20% most deprived. This shows high deprivation across Stoke-on-Trent and to the districts south of Local Area including Telford and Wrekin, Wolverhampton, Walsall, Dudley, Sandwell and Birmingham.
- 14.174 Planning and development may influence health related deprivation indirectly by creating jobs, improving access to services and improving living and working environments, which could all have beneficial effects in reducing health related deprivation. There is also

⁶⁰ The Control of Major Accident Hazards Regulations 2015

⁶¹ Department for Communities and Local Government, 2015. The English Indices of Deprivation 2015: Technical Report. London:TSO

potential for poor planning and development to have effects that could be associated with an increase health related deprivation.

Figure 14.4: Health Deprivation and Disability (IMD 2015)



Recreation and Amenity Receptors

14.175 The Recreation and Amenity Receptors are those receptors identified in the Baseline sections within the following technical topic areas and which may have a recreation or amenity value for residents or visitors. Relevant topic areas are:

- Noise and vibration;
- Transport and Access (including potential severance effects);
- Landscape and Visual;
- Cultural Heritage;
- Flood Risk and Water Environment; and
- Ground Conditions.

14.176 Based on the baselines set out in the relevant ES Chapters, Recreation and Amenity receptors have been identified as users of and visitors to:

- Cannock Chase AONB landscape; including its special qualities and setting;
- Somerford Park to the south west of the Site;
- Calf Heath;
- Existing local businesses and services;
- Staffordshire and Worcestershire Canal and towpath;
- Calf Heath Reservoir (including sailors and anglers);
- Public Rights of Way (PROW) around, through and with views of the Proposed Development;
- Local parkland, woodlands, trees and hedgerows;
- Ponds and water features, including the canal; and
- Heritage receptors (including Conservation Areas, Scheduled Monuments and listed buildings) as identified in Table 9.2 of Chapter 9: Cultural Heritage – Built Heritage.

Receptors along the Staffordshire and Worcestershire Canal and towpath

14.177 There are canals located in close proximity to the Proposed Development that are used for residential and/or leisure moorings. The Staffordshire and Worcestershire Canal runs through the Site. This Canal meets the Shropshire Union Canal and Old Main Line to the south in Wolverhampton and meets the Trent and Mersey Canal in the north in Shugborough.

14.178 Moorings along these canals are used for leisure and/or residents. Waterside Moorings (as part of the Canal and River Trust) provides a comprehensive map of all residential and leisure moorings within the immediate vicinity of the Site.

14.179 The closest moorings to the Proposed Development are the Gailey Wharf moorings, located approximately 1.12 km to the north of the Site on the Staffordshire and Worcestershire Canal. These moorings have a 1 year contract for residential use. Currently there are nine occupied leisure moorings and one vacant mooring in this location. From this information, this assessment assumes that there are ten households which could be occupied at any one time in these moorings.

14.180 To the immediate north of the Gailey Wharf moorings, at the junction of the canal and the A5, there is Top Gailey Lock which has services for canal users including a water point, rubbish disposal facilities and chemical toilet disposal facilities. Other facilities include boat hire, boat services, toilets and a shop.

14.181 There are businesses, organisations and clubs that are operational in the Local Area and who may be sensitive to recreation and amenity effects.

14.182 In their response to the EIA Scoping Request, the Canal and River Trust has requested that users of the Staffordshire and Worcestershire Canal and Calf Heath Reservoir, (such as boaters, both leisure users and residential, and towpath users) and existing and future

businesses at Gailey and Hatherton Marina should be included in the socio-economic assessment and this section includes those receptors.

14.183 There are businesses located along the A5 to the North of the Site and around the Gailey Marina, and to the east of the Site at the Hatherton Marina. These businesses are listed below alongside their potential sensitivity to amenity effects of activities at the Proposed Development Site. Businesses, clubs and organisations are listed in Table 14.17 and Table 14.18.

14.184 In addition to these businesses, there are tenant farmers operating on the Site currently. Known activities on these farms are equestrian businesses and seasonal game shooting. These activities do not provide any services to the general public.

Business name	Activity	Potential sensitivity to amenity effects of activities at the Proposed Development Site
Hatherton Boats	Repair, maintenance, transportation and storage of canal and narrow boats	Some sensitivity: could have indirect effects from any recreation and amenity effects on the Canal
Hatherton Marina	Mooring, Dry dock, boatbuilding and maintenance	Some sensitivity: could have indirect effects from any recreation and amenity effects on the Canal
Calf Health Marina Complex	Marina, Bar, Restaurant, convenience store	Some sensitivity: could have indirect effects from any recreation and amenity effects on the Canal
Gailey Wharf and boatyard ABC Boat Hire and chandlery Gailey Marine Ltd Canalside shop	Boat sales, tour operator, mooring and boat maintenance, canalside shop, chandlery	Some sensitivity: could have indirect effects from any recreation and amenity effects on the Canal
JD Boat Services	Boat construction and sales, boat hire	Some sensitivity: could have indirect effects from any recreation and amenity effects on the Canal
Concrete Batching Plant	Concrete Batching Plant	Limited sensitivity: potential amenity effect on employees
Sewage Treatment Works	Sewage Treatment Works	Limited sensitivity: potential amenity effect on employees
Dobbies Garden World and restaurant	Garden Centre	Limited sensitivity: potential amenity effect on visitors
GMC Goeuropean Motorhomes and Caravans	Caravan sales depot	Limited sensitivity: potential amenity effect on visitors
The Spread Eagle Pub	Public House	Some sensitivity: potential amenity effect on visitors associated with local tourism

Business name	Activity	Potential sensitivity to amenity effects of activities at the Proposed Development Site
The Four Ashes Pub	Public House	Some sensitivity: potential amenity effect on visitors associated with local tourism
Gailey Pottery	Pottery workshop and sales	Some sensitivity: potential amenity effect on visitors associated with local tourism
C Piper and Sons / Piper Nurseries and Plant Centre	Commercial plant Nurseries	Limited sensitivity: potential amenity effect on employees
Cyril's tea room	Tea room	Some sensitivity: potential amenity effect on visitors associated with local tourism

Organisation name	Activity, Location	Potential sensitivity to amenity effects of activities at the Proposed Development
The Gailey Club House/ Gailey Canoe club	Boat club house and rental, Gailey Marina	Some sensitivity: could have indirect effects from any recreation and amenity effects on the Canal
Greensforge Sailing Club	Sailing club operational from Calfheath Reservoir	Some sensitivity: could have indirect effects from any recreation and amenity effects on Calf Health Reservoir
Blackfords Progressive Angling Society	Angling society operational from Calfheath Reservoir	Some sensitivity: could have indirect effects from any recreation and amenity effects on Calf Health Reservoir
Wolverhampton Racing Cycling Club	Cycling club which has runs that go through the Local Area	Some sensitivity: could have indirect effects from any recreation and amenity effects on the roads and PRowS
South Staffordshire Sailing Club	Sailing Club operational from Gailey Lower Pool (Gailey Lower Reservoir)	Some sensitivity: could have indirect effects from any recreation and amenity effects on Gailey Lower Reservoir

Existing businesses reliant on access from Gravelly Way

14.185 There are four commercial operations accessible from Gravelly Way that could be affected if access to Gravelly Way was to be affected: Carver (Wolverhampton) Limited (Gravelly Way)/Carver Gases, Hoppe UK Ltd, Gestamp West Midlands and SI Group-UK Limited. Bericote Four Ashes is currently under construction and, at the time of writing is at or near completion. When operational, this site and its occupants will also require access via Gravelly Way.

Human Health Receptors

- 14.186 Human health receptors are existing residents and employees who live or work within an impact area within which there are likely to be significant environmental effects, as identified in the following chapters of this ES:
- Air Quality;
 - Noise and vibration;
 - Transport and access effects (including potential severance effects);
 - Water effects; and
 - Ground Conditions.
- 14.187 Control of Hazardous Substances (COMAH) has also been considered.
- 14.188 The widest impact area considered in these chapters is for Transport and Access. A map illustrating the impact area under consideration is shown at Figure 15.1 of Chapter 15: Transport and Access, entitled "*Links for Transport Assessment*". The furthest links from the Site are:
- To the north: Link 1 - M6 between junctions 13 and 14
 - To the south: Link 6 - M6 Between junctions 9 and 10
 - To the west: Link 10 - A5 Watling Street between A41 and A4640 Redhill Way
 - To the east: Link 34 - A5 Between A34 and B4154.

Sensitive Receptors

Existing Sensitive Receptors

- 14.189 The baseline section identifies the following sensitive receptors that have the potential to experience socio-economic or health effects generated as a result of the Proposed Development:
- Existing local residents within the Local Area who may be affected by job creation, amenity and health effects;
 - Existing employees who may be affected by human health and amenity effects;
 - The Construction Labour Force within the West Midlands who may be affected by job creation at the Proposed Development;
 - The Operational Labour Force within the Site TTWA, who may be affected by job creation at the Proposed Development;
 - The Local Economy within the SSLEP which may be affected by economic activity generated by the Proposed Development;
 - The National Economy which may be affected by economic activity generated by the Proposed Development;
 - The Recreation and Amenity Receptors including existing local residents (including residential moorings), visitor such as ramblers and dog walkers and existing local businesses which may be affected indirectly by the activities of the Proposed Development, which could have knock-on socio-economic effects on residents and businesses; and
 - The people or employees within impact areas that have been identified in this ES as likely to experience significant direct effects that could have indirect health effects.

New Sensitive Receptors

- 14.190 Future sensitive receptors introduced to the Site by the Proposed Development, would include the new employees working at the Site.
- 14.191 These receptors would be new to the Site, but not new to the study area as a whole so would already be captured within the baseline assessment.

Potential Effects

The Proposed Development

- 14.192 This section presents the likely significant effects of the demolition, construction and operation associated with the Proposed Development, which includes:
- An intermodal freight terminal with direct connections to the West Coast Main Line, capable of accommodating up to 10 trains per day and trains of up to 775m long, including container storage, Heavy Goods Vehicle ('HGV') parking, rail control building and staff facilities;
 - Up to 743,200 square metres (gross internal area) of rail served warehousing and ancillary service buildings;
 - New road infrastructure and works to the existing road infrastructure;
 - Demolition and alterations to existing structures and earthworks to create development plots and landscape zones;
 - Reconfiguring and burying of electricity pylons and cables; and
 - Strategic landscaping and open space, including alterations to public rights of way and the creation of new ecological enhancement areas and publicly accessible open areas.
- 14.193 A full Description of Development is included in Chapter 4 of this ES.

Embedded Mitigation

- 14.194 The Proposed Development would include strategic landscaping and open space, including alterations to public rights of way and the creation of new publicly accessible open areas. This would be embedded mitigation and enhancement which would be designed to reduce potential adverse effects on recreation and amenity and provide public benefit.

Demolition and Construction Effects

Employment effects during demolition and construction

- 14.195 The CITB tool estimates that the construction workforce required for the Proposed Development would be the equivalent of 4,500 person years of employment. As stated in the methodology, this is based on an "infrastructure" model it therefore may over-estimate the employment required at the stage of delivering the warehousing.
- 14.196 The construction timetable is projected to be over 15. Over this timeframe, the construction employment will fluctuate as phases are started and completed. The peak construction employment is not expected to exceed 1,000 headcount. In reality, it is likely to be closer to the long-term average of 230 per month due to the nature of warehouse construction methods, with a relatively high proportion of off-site assembly and prefabrication.
- 14.197 There is a significant pool of potential local construction labour as set out the *Baseline Conditions* section. There are approximately 1,350 construction workers living in the Local Area and 5,270 living within South Staffordshire.
- 14.198 In addition, the UK construction workforce is highly mobile and workers may travel from beyond the district. The Construction Industry Training Board indicates that the West Midlands as a whole has 211,620 employees in construction and related trades in 2016 - and this is forecast to grow to 215,280 by 2020. Based on current construction employment patterns in the West Midlands, approximately 80% of employees would come from within the West Midlands.
- 14.199 Specialist contractors would be required to undertake the construction of certain elements of the Proposed Development; for some tasks, these contractors would bring with them specialist skilled and experienced labour which may come from elsewhere in the UK. Local labour would be used where this is practical and exists within the local skills base.

- 14.200 Due to the mobility of the construction workforce, it is not particularly relevant to assess the potential employment effects of construction at the Local Area level, although some local residents will likely benefit from the job creation. However, the Applicant will establish an Employment, Skills and Training Plan to maximise opportunities for local residents to access employment opportunities during construction.
- 14.201 The Proposed Development would have a **temporary** (not permanent), **long term** (more than 5 years), **minor beneficial effect** at the **District Level, West Midlands** and **SSLEP levels** with respect to creation of construction employment. The effects would be **negligible at a National level**.

Wider economic effects of construction

- 14.202 Based on ONS Statistics on Supply and Use in the UK economy, the expected direct GVA generated as a result of construction activity on the Proposed Development would be £198m. This should be considered in the context of annual GVA of the SSLEP of £20,197m (1%).
- 14.203 This investment would result in indirect and induced GVA effects via the supply chain and labour market i.e. it would boost jobs and businesses in the construction supply chain and in the wider economy. GVA effects are calculated using the GVA multiplier for construction, which is 1.889, and further calculations which link this indirect GVA to induced employment. These multiplier effects would result in a total of £415m of additional GVA in the wider economy generated as a result of the Proposed Development as set out in Table 14.19.

Direct GVA Over construction period	£169m
Indirect and Induced GVA Over construction period	£155m
Total GVA Over construction period	£324m
GVA per year over 20 years	£16.2m

Figures have been rounded

- 14.204 The geographical distribution of this indirect and induced increase in GVA may be widespread throughout the UK. However, the Applicant commits to engaging with local suppliers where possible to maximise local benefits.
- 14.205 This investment would also be in accordance with local, regional and national policy as set out in the *Legislation and Policy Context* section of this Chapter. The NPPF states that significant weight should be placed on the need to support economic growth through the planning system. The SSLEP has a strategic objective to create 50,000 jobs over the next 10 years (to 2024). Core Policy 7 'Employment and Economic Development' of the South Staffordshire Core Strategy DPD sets out the council's objective to sustain and develop the local economy of South Staffordshire and encourage inward investment into the area.
- 14.206 Whilst the total effect is relatively small in the context of the SSLEP economy as a whole, this magnitude of effect is still considerable for a single development project. The Proposed Development would also result in economic effects that are in line with local, regional and national policies on economic and employment growth.
- 14.207 It would therefore result in a temporary, long term, minor beneficial effect at a District and SSLEP level; although in the context of the national economy, it would have a temporary, long term, negligible effect.

Recreation and amenity effects during demolition and construction

- 14.208 Each sub-section below summarises the potential indirect effects on recreation and amenity arising from direct effects, identified elsewhere in this ES, specifically on:
- Water;
 - Landscape and Visual;
 - Transport (including potential severance effects);
 - Heritage;
 - Noise and vibration; and
 - Air quality.
- 14.209 At the end of this series of summaries a concluding paragraph presents the overall recreation and amenity assessment.

Water

- 14.210 With respect to indirect effects arising from use of watercourses for recreation or amenity, through the adoption of biological treatment methods (in accordance with Environment Agency guidance) the Proposed Development would not result in any significant effects on the water quality of watercourses (including the canal). Full details are set out in Chapter 16 of this ES.

Landscape and visual impacts

- 14.211 With respect to effects associated with Landscape and Visual impacts, a range of mitigation measures has been proposed. Full details of these measures are set out in Chapter 12 of this ES. In summary, these measures include:
- Well managed and controlled site activities.
 - The protection of all trees and vegetation to be conserved in accordance with BS5837:2012 (Trees in Relation to Design, Demolition and Construction-Recommendations).
 - The early implementation of the landscape proposals wherever practicable within respective phases.
- 14.212 The only significant (Moderate/Major and Major adverse) residual effects relevant for this chapter have been identified as:
- Direct effect and loss of existing woodland, trees and hedgerows, including approximately two thirds of Calf Heath Wood (Moderate/Major Adverse).
 - Varying views though generally limited stretches of the canal. Most notable effects between Gailey Marina and Gravelly Way bridge with proposed bridge and nearest buildings under construction (Moderate/ Major Adverse).
- 14.213 In general, views of the Proposed Development from recreation and amenity routes and spaces will be intermittent, shielded by new and existing planting, mounding and screening. Visual and landscape effects will lessen over time, as planting matures.
- 14.214 The Proposed Development will have no direct effect upon the AONB landscape (yet it will have an influence over its very south-westerly extent and over the views to and from the AONB landscape.) The influence of the Proposed Development will be limited to the south-west corner of the AONB and the proposals will be one of a number of active and large scale infrastructure and development within view (including the settlement of Cannock, M6 Motorway, Veolia ERF, Rodbaston Wind Turbines, Four Ashes Industrial Estate etc.) so effects will not be significant in the wider context.
- 14.215 The Proposed Development will result in the removal of approximately two thirds of Calf Heath Wood and other hedgerow and trees across the Site. It will also however include extensive new native woodland, tree, shrub and hedgerow planting and will be underpinned by a comprehensive management regime for all existing and new planting and habitats across the Site.

- 14.216 Public Rights of Way (PRoW) are used in the area for recreational walking. Although there are no PRoW that run through all parts of the Site, some residents use parts of the Site for dog walking and rambling. Whilst not strictly legal, this access has not been prohibited by the landowners. The most significant effect on a walking route through the Site will be on the Canal Towpath which is not a PRoW but it is publicly accessible and used for leisure. Overall, the nature and significance of the visual effects for towpath users will vary but the most notable visual change would arise between Gailey Marina and Gravelly Way Bridge. Views from other PRoW surrounding and in the wider Site context are quite limited due in part to the limited existence of PRoW over this particular landscape and to the natural screening provided by landform variations and woodlands.
- 14.217 In the majority of footpath views, where the Proposed Development is visible it will be the higher parts of the building(s) that will be visible above intervening woodland/ trees and lower level activity associated with the proposals is unlikely to be visible.
- 14.218 Users of Calf Health reservoir will experience a change in their view. New mounding and woodland/ tree planting will be sited around this part of the Site's perimeter and will offer some filtering/ screening of the lower active parts of the Proposed Development, although the higher parts of the building(s) will remain clearly visible. However, it should be noted that the views from the reservoir already include the A5, Junction 12 approach and the Veolia ERF.
- 14.219 In general, the Proposed Development in construction will be seen in middle and longer distance views, set within a wooded and varied context that includes other large scale and active man-made features.
- 14.220 The Proposed Development will include two new Community Parks that will improve public access as part of the landscape proposals. Despite the direct loss of the existing woodland, trees, hedgerows and farmland, the conserved and new planting, alongside the proposed management regime and improved public access will offer some benefits. The Community Parks will be of significant recreation and amenity value for local residents and visitors alike.
- 14.221 The Proposed Development will include the formation of water features and wetland areas largely as part of a Surface Water Drainage Scheme. These features will be designed to maximise their contribution in landscape and biodiversity terms alongside the drainage requirements. Many of these features will be sited in the Community Parks and alongside the canal and in these contexts will contribute towards landscape areas with a mix of habitats and uses. Some water features and biodiversity landscaping will be included as part of the initial development works to ensure that it will have recreation and amenity value during the construction period.
- 14.222 Overall, given the intermittent nature of the effects on views, the existing industrial and road context, of which many receptors have an existing view, the adverse recreation and amenity affects are likely to be limited. No recreation activity is expected to be prevented. It is acknowledged that the residents of, and visitors to, the Gailey Marina and Gravelly Way bridge will experience visual effects that may affect their amenity. The proposed early phasing of the proposed planting, wetlands, and Croft Lane Community Park during construction would have beneficial effects. Residents of and visitors to the Gailey Marina will be able to benefit from these additions.

Transport

- 14.223 There are no transport links that require detailed assessment as a result of construction traffic.
- 14.224 Driver, pedestrian and cyclist delay have the potential to have indirect effects on recreation and amenity (via access to and enjoyment of facilities and PRoW including severance). Whilst no significant adverse effects of this nature are anticipated that could affect recreation and amenity receptors, the demolition and construction traffic will be managed

through the measures in the Demolition and Construction Traffic Management Plan (DCTMP) (an appendix to the Transport Assessment, Technical Appendix 15.1).

- 14.225 Therefore there are not expected to be any significant recreation and amenity affects arising from traffic and transport effects.

Heritage

- 14.226 There will be no likely significant effects arising from demolition or construction of the Proposed Development on heritage receptors (including Conservation Areas, Scheduled Monuments, listed buildings, and non-designated heritage receptors) primarily because of the distance and limited intervisibility between the Site and the majority of heritage receptors that have been assessed.
- 14.227 The demolition of two non-designated heritage receptors, Heath Farm and Woodside Farm, will cause total loss of their heritage value. The nature of the heritage value of these non-designated receptors is low, however, which means that there will be only a minor effect on the local historic environment overall. Heath Farm and Woodside Farm are in private ownership, and there will be no effect on public recreation or amenity as a result of demolition.
- 14.228 During construction, it is possible that parts of the canal towpath would need to be closed. If necessary at all, this closure would be a temporary. This may have a minor impact on recreational use of the canal but would have no long term or significant effects on the appreciation of the heritage value of the conservation area.
- 14.229 There are not expected to be any significant recreation and amenity affects during demolition or construction arising from heritage effects.

Noise and Vibration

- 14.230 The demolition and construction stage of the Proposed Development is expected to generate some potential significant direct and indirect noise and vibration impacts, with temporary effects. It has been identified that the noisiest works are likely to give rise to major adverse effects where the works are close to the off-site receptors.
- 14.231 Chapter 13: Noise and Vibration sets out the residential properties that are likely to be affected by noise effects during construction. Predicted effects vary according to the location of receptors and their distance from the construction works and effects will vary over time due to phasing. This detail is set out in Chapter 13. The upper end of the ranges of predicted noise levels will only occur where the works are at the closest possible distance to each receptor. The exact duration of works at these minimum distances is not known in detail, however, it is expected to be relatively short.
- 14.232 Details for mitigating construction noise are set out in the ODCEMP (Technical Appendix 2.3), which will be updated as further detail on the construction works emerges (as part of the DCEMP to be secured as a DCO Requirement).
- 14.233 The Applicant will include construction noise in the bespoke noise insulation scheme that is to be a committed measure to address adverse effects of the Proposed Development. Table A13.2.2 in Technical Appendix 13.2 sets out thresholds that, when equalled or exceeded for the specified periods, will result in eligibility for noise insulation.
- 14.234 Consideration has been given as to whether there may be any properties that could be so adversely affected by construction noise that the occupants may require temporary rehousing. The Applicant is committed to avoiding this situation, however, and will commit to managing the works so that the higher thresholds are not reached, or where they are reached, the period of exposure is kept below the exposure periods as specified. On the basis of this commitment, temporary rehousing will not be required to protect residents from construction noise.

- 14.235 Construction vibration is also likely to give rise to moderate adverse effects, where vibratory works are carried out close to two particular off-site receptors. These effects are likely to be short-term in duration, and therefore temporary.
- 14.236 Noise is not expected to prevent or significantly impact on recreation activities and, where effects on residential amenity are significant enough to require mitigation (by the terms of the thresholds set out), this mitigation will be carried out as specified in Chapter 13.
- 14.237 In terms of recreation and amenity effects generated, effects are expected to be adverse but limited, short-term and isolated.

Air Quality

- 14.238 The modelling assessment of air quality during construction has predicted negligible impacts at all receptor locations as a result of construction traffic movements.
- 14.239 An assessment of construction dust impacts arising from the Proposed Development has indicated the development proposals would have a high risk of causing dust impacts at adjacent receptors in the absence of suitable mitigation. The control of dust emissions from demolition and construction sites relies upon good site management and mitigation techniques to reduce emissions of dust and limit dispersion. A summary of the mitigation measures recommended in the IAQM guidance to reduce impacts from a high-risk sites is provided in section 8 of the Outline Demolition and Construction Environmental Management Plan (ODECMP) included as Technical Appendix 2.3. It is recommended that these measures would be set out in the Phase-Specific Dust Management Plan which would form part of the Demolition and Construction Environmental Management Plan (DCEMP). With such measures in place, the residual effect would be negligible. Further details of this assessment are set out in Chapter 7: Air Quality of this ES.

Wind Effects

- 14.240 There is the potential for significant changes in the speed or direction of wind to affect the use of the Calf Heath Reservoir for sailing. A desk based assessment of the potential for changes in wind on the reservoir has been undertaken (included as Technical Appendix 14.1). This demonstrates that for the majority of the time (70%) there would be little to no effect on wind direction or speed as a result of the Proposed Development. Up to 30% of the time there may some changes in the wind speed or direction.

Conclusion

- 14.241 On balance, the recreation and amenity effects experienced by residents and visitors within the impact areas during construction are likely to be intermittent and mitigated to a large extent by extensive provision of landscaping, noise, traffic mitigation measures. As construction is phased, individual receptors are not expected to experience the effects consistently over the period of construction. Rather any adverse effects will be intermittent and short term for any one receptor. As mitigation measures are implemented and planting matures, effects would be expected to lessen over time.
- 14.242 No effects are expected to prevent current recreational practices from taking place.
- 14.243 The most extensive effects would be visual effects, but these are not expected to affect recreational use of the landscape or waterways.
- 14.244 Noise and vibration effects are expected to be significant, especially for users to the moorings and the closest homes. This may affect amenity of residents and leisure users and the effect is likely to be adverse but short term.
- 14.245 Croft Lane Community Park – which will be completed within 5 years of the commencement of the authorised development will have beneficial recreation and amenity effects during the construction period. The net effect on recreation and amenity will be **temporary, short term and minor adverse at a Local Level**. It will be **negligible** at all other spatial scales.

Effects on existing businesses, organisations and clubs during demolition and construction

- 14.246 Businesses, organisations or clubs may be affected where their revenue, employees or members may be affected by an impact on a recreation or amenity receptor identified in the Baseline.
- 14.247 The Baseline section of this Chapter identifies some local businesses, clubs and organisations that could be sensitive to the recreation and amenity effects arising from the Proposed Development.
- 14.248 Known activities on the tenant farms on-site are equestrian businesses and seasonal game shooting. These activities do not provide any services to the general public or support a significant number of jobs. These activities will be curtailed in line with the tenancy agreements and relevant break or termination clauses, including within the required notice periods.
- 14.249 As indicated above, there may some changes in the wind speed or direction on the reservoir used for sailing.
- 14.250 As the potential recreation and amenity effects identified above are not significant (temporary, long term and minor to moderate adverse) the majority of businesses, clubs or organisations are not expected to be significantly or adversely affected.
- 14.251 Noise effects are expected to be significant, especially for users to the moorings and this may affect amenity of residential and leisure users of the canal – and therefore have the potential to affect some businesses that rely on this trade, as listed in the Baseline section. These effects are expected to be short term and intermittent.
- 14.252 A new bridge structure will be provided in order to cross both the West Coast Main Line and the Staffordshire and Worcestershire Canal- but the existing canal bridge will be retained and this will allow access to the Bericote Development and SI Group uses to be maintained during construction.
- 14.253 Some businesses may experience positive effects due to increased footfall from new employees in the area. Some clubs may benefit from the Community Parks and the Site's landscaping.
- 14.254 On balance, the net effect is expected to be **Neutral to Minor Adverse at Local Level**.

Human health effects during demolition and construction

- 14.255 Each sub-section below summarises the potential indirect effects on human health arising from direct effects, identified elsewhere in this ES, specifically on:
- Water;
 - Ground Conditions;
 - Socio-economics;
 - Recreation and amenity;
 - Transport (including potential severance effects);
 - Noise and vibration; and
 - Air Quality.
- 14.256 At the end of this series of summaries a concluding paragraph presents the overall recreation and amenity assessment.

Water

- 14.257 With respect to indirect effects on health due to water quality, through the adoption of biological treatment methods (in accordance with Environment Agency guidance) the Proposed Development would not result in any significant effects on the water quality of watercourses (including the canal). Full details are set out in Chapter 16 of this ES. A full Drainage Strategy will be provided alongside the DCO Application.

14.258 As a result, there will be no residual significant adverse effects with respect to water effects, and no consequential likely significant effects on human health during demolition and construction.

Ground conditions

14.259 With respect to indirect effects on human health arising from ground conditions, Chapter 11 of this ES demonstrates that the Proposed Development would have in place mitigation measures and would adhere to the relevant guidance and regulations.

14.260 As a result, there will be no residual significant adverse effects with respect to ground conditions, and no consequential likely significant effects on human health during demolition and construction.

Socio-economics

14.261 The Proposed Development is expected to create an average 230 construction jobs at any one time over the 15 year construction period. In general, access to employment is associated with improved mental and physical health.

14.262 Creating new jobs, especially jobs which may provide opportunities for people who were previously unemployed, is associated with positive effects on human health.

Recreation and amenity

14.263 The net effect on recreation and amenity is expected to be temporary, short term and minor adverse at a Local Level. The delivery of a new Community Park in Phase 1, during construction, will have beneficial health effects as it will increase opportunities for outdoor leisure and recreation, supporting a fit and active lifestyle. Noise and vibration effects are expected to be significant for especially for residents of the moorings and this could affect their amenity and may have consequential effects on health. Noise is addressed in more detail below.

Transport

14.264 Driver, pedestrian and cyclist delay have the potential to have indirect effects on health if they reduce access to services or increase stress. Whilst no significant effects are anticipated, the construction traffic will be managed through the measures in the Demolition and Construction Traffic Management Plan (ODCTMP) and any subsequent Construction Traffic Management Plan (CTMP) to be approved by the local planning and highway authorities.

14.265 As a result, there will be no residual significant adverse effects with respect to traffic and transport and no consequential likely significant effects on human health during demolition and construction.

Noise and vibration

14.266 Disturbance through noise and vibration is linked to a range of potential adverse health effects. These include effects on mental health (stress and annoyance) and wider health and wellbeing (sleep loss, hypertension and cardiovascular health).

14.267 Notwithstanding future mitigation measures (as outlined above and in detail in Chapter 13 of this ES), it is likely that where the construction works are close to the off-site receptors, moderate to major, adverse effects may still occur, but they are likely to be short-term in duration.

14.268 The potential impacts of noise and vibration on health can widely vary between different individuals. When exposed to the same level of noise, different individuals may react differently as a result of a complex mixture of underlying levels of health, lifestyle factors and personal preferences. There is a wide range of interacting factors it is difficult to

appropriately quantify the likely impact of noise and vibration from construction on health and wellbeing although some isolated and short term adverse effects are possible.

Air Quality

14.269 As outlined in Paragraph 14.234-14.235, on the assumption that dust management techniques are employed (which it is recommended are delivered through a Phase-Specific Dust Management Plan which would form part of the Demolition and Construction Environmental Management Plan (DCEMP) potential air quality impacts during construction would be sufficiently reduced to ensure that no significant residual effects arise. Further details of this assessment are set out in Chapter 7: Air Quality of this ES.

Construction health effects: Conclusion

14.270 Environmental factors do not produce predictable or equal health effects on all individuals. The potential impacts of an environmental change on health can widely vary between different individuals. When exposed to the same level of environmental effect, different individuals may react differently as a result of a complex mixture of underlying levels of health, lifestyle factors and personal preferences.

14.271 There are no likely significant adverse effects on health expected to be generated indirectly from effects on water, ground conditions, socio-economics, landscape or transport.

14.272 Some significant adverse effects are expected to be generated as a result of noise and vibration – and this may have indirect effects on health. During construction, these effects are expected to be intermittent and isolated and there is a possibility that noise will need to be controlled Section 61 of the Control of Pollution Act 1974.

14.273 Beneficial health effects may be generated indirectly from new jobs and economic opportunities and the provision of a new Community Park.

Potential Completed Development Effects

Employment effects during operation

14.274 The Proposed Development would deliver up to 743,200 sqm GIA. Based on a range of sources as set out in the *Assessment Methodology*, this floorspace is likely to have an average employment density of 87 sqm GIA per headcount job.

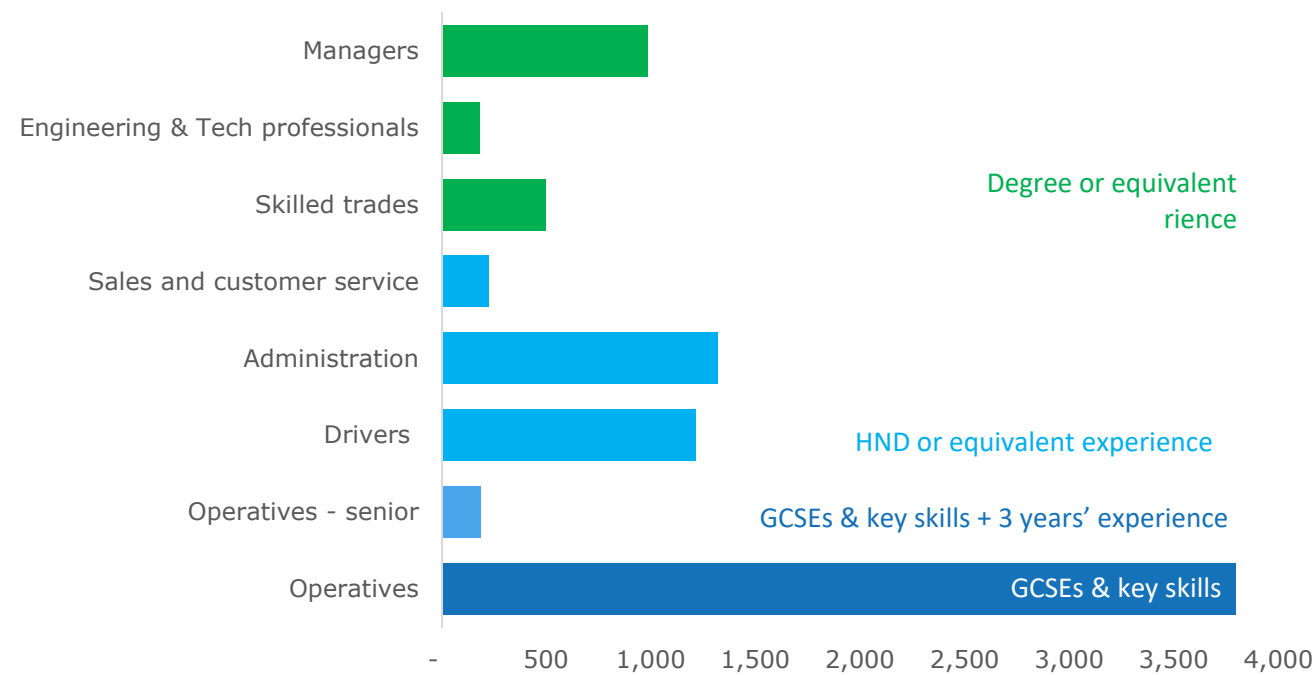
14.275 Therefore, the Proposed Development would support approximately 8,550 additional headcount jobs on-site.

14.276 Based on survey data collect by Prologis⁶², data from the Annual Population Survey and Quod's own research which is detailed in the *Statement of Economic Benefits* (Document 7.1B), it is possible to estimate the skill and occupation profile of these new jobs. An estimated skill/occupation profile is shown on the graph below.

⁶² Prologis, 2011, Technical Notes from Prologis UK, Do Distribution Warehouses Deliver Jobs?; Prologis, 2015, Technical Insights from Prologis, Distribution Warehouses Deliver More Jobs

⁶² ONS, 2017. Gross Value Added. [online] Available

Figure 14.5: Projected employment at the Proposed Development by occupation and skill level.



- 14.277 These jobs should be assessed in the context of the local labour market, where there are 700 people in the Local Area and 77,900 people within the TTWA who are already working in the logistics sector and could have appropriate skills and relevant experience.
- 14.278 In addition, there are 31,660 unemployed residents within the TTWA who are currently seeking work and receiving unemployment benefits. Of these unemployed residents, the majority are seeking elementary and sales/customer service positions. Approximately half of the jobs supported by the Proposed Development would be at this occupational level.
- 14.279 Approximately 19% of the jobs supported by the Proposed Development would be higher skilled managerial, technical and skilled jobs requiring a degree or 5-10+ years of experience. Approximately a quarter of the local population is qualified to this level.
- 14.280 Therefore, there is a large pool of available labour supply at appropriate skill and occupation levels, including residents who are currently unemployed. As set out above, there is local, regional and national policy support for economic and employment growth including a SSLEP target of 50,000 new jobs by 2024. These additional jobs at the Proposed Development would represent 17% of that target.
- 14.281 The Applicant will submit an Employment, Skills and Training Plan (ESTP), which will set out commitments to support local people into work. In combination with the Site Wide Travel Plan, these documents will demonstrate measures in place to increase local access to jobs and promote sustainable commuting patterns.
- 14.282 In this context, the Proposed Development would have a permanent major beneficial effect at the Local, District levels and SSLEP levels, a minor beneficial effect at the TTWA level and a negligible effect at all other levels.

Wider Economic Effects of Operation

- 14.283 The ONS estimates state that that each logistics worker generates £49,945 in GVA per year.

⁶³ "low" displacement is defined in the Homes and Communities Agency, 2014. Additionality Guide, 4th Ed. as up to 25%.

- 14.284 Therefore, the addition of 8,550 new logistics and related jobs in the Proposed Development would generate an estimated additional £427m in locally generated GVA every year.
- 14.285 The operation of the Proposed Development may also have displacement effects. Displacement arises where an intervention (such as a development) takes market share, labour, land or capital from other existing firms. Therefore a beneficial effect, such as an increase in GVA may not be net additional to the overall economy, as it displaces GVA generated elsewhere.
- 14.286 At a local level displacement is likely to be negligible – the Proposed Development will provide a relatively unique offer in the local context and will not result in a reduction in economic activity elsewhere within the Local Area. The same is likely to be true of South Staffordshire. "Low" levels of displacement (approximately 25%) are expected to occur at a TTWA and SS LEP level⁶³. Some existing activity may be displaced but the majority of the increase in activity will be net additional to the area.
- 14.287 Therefore, the summary of Operational GVA effects is set out in Table 14.2.
- 14.288 This investment would result in indirect GVA effects via the supply chain. This is calculated using the GVA multiplier for *warehousing and support services for transportation*, which is 2.055, and further calculations which link this indirect GVA to induced employment. The multiplier and induced effects would result in a total of £912m of additional GVA in the wider economy as set out in Table 14.20.
- 14.289 This should be considered in the context of annual GVA of the SSLEP of £20,197m i.e. a 4.5% increase in annual GVA generated within the SSLEP.

Table 14.20: Operational GVA Effects		
Direct GVA per year	£427m	
Displacement	GVA generated within Local Area & South Staffordshire Net of Displacement	GVA Generated within the TTWA & SSLEP Net of Displacement
Direct GVA per year	£427m	£320m
Indirect and Induced GVA per year	£485m	£364m
Total GVA per year	£912m	£684m

Figures have been rounded

- 14.290 The geographical distribution of the indirect and induced increase may be wide-spread throughout the UK economy. However, the Applicant commits to engaging with suppliers which maximise local benefits via an Employment, Skills and Training Plan (ESTP).
- 14.291 Whilst the directly generated GVA is relatively small in the context of the SSLEP economy as a whole, this magnitude of effect is a substantial contribution for a single development project. The Proposed Development would also result in economic effects that are in line with local, regional and national policies on economic and employment growth. In particular, the operation of the Proposed Development would help to meet the Government's vision set out in the National Policy Statement for National Networks as set out the Legislation and Policy Context section of this Chapter.

- 14.292 The NPS specifically sets out the Government's vision for the transport system as a driver of economic growth and social development, and it attaches particular importance to the use of rail for the transport of freight across the country from ports, in order to help meet environmental goals and improve quality of life⁶⁴. The Government has concluded that there is a compelling need for an expanded network of Strategic Rail Freight Interchanges⁶⁵.
- 14.293 The Proposed Development would therefore result in a major beneficial effect a Local, District and SSLEP level; and a minor beneficial effect at a National level.

Recreation and amenity effects during operation

- 14.294 This assessment reviews the potential indirect effects on recreation and amenity arising from the following direct effects, identified elsewhere in this ES:
- Water;
 - Landscape and Visual;
 - Transport (including potential severance effects);
 - Heritage;
 - Noise and vibration; and
 - Air quality.
- 14.295 At the end of this series of summaries a concluding paragraph presents the overall recreation and amenity assessment.

Water

- 14.296 With respect to indirect effects arising from use of watercourses for recreation or amenity, through the adoption of biological treatment methods (in accordance with Environment Agency guidance) the Proposed Development would not result in any significant effects on the water quality of watercourses (including the canal). Full details are set out in Chapter 16 of this ES.
- 14.297 As a result, there will be no residual significant adverse effects with respect to water effects and no consequential likely significant effects on recreation and amenity during operation.

Landscape and visual impacts

- 14.298 With respect to effects associated with Landscape and Visual impacts, a range of mitigation measures has been proposed. Full details of these measures are set out in Chapter 12 of this ES. In summary, these measures include:
- establishment and subsequent maturing of the proposed planting and habitat creation; mounding and shielding; and
 - From the Canal Towpath, particularly where this stretches south from Gailey Marina, the maturing of the new woodland, trees and other planting and positive management of that conserved, both within the adjacent Croft Lane Community Park and along the canalside to the east will increasingly reduce the visual effects of the Proposed Development over time.
- 14.299 The only significant (Moderate/Major and Major adverse) residual landscape and visual effects relevant to this chapter have been identified as:
- Landscape character of the Site and its immediate context; and
 - Visual effects Residential properties on Croft Lane, A5, A449, Station Drive and Straight Mile.
- 14.300 The Proposed Development will have no direct effect upon the AONB landscape (yet it will have an influence over its very south-westerly extent and over the views to and from the AONB landscape.) The influence of the Proposed Development will be limited to the south-west corner of the AONB and the proposals will be one of a number of active and large scale infrastructure and development within view (including the settlement of Cannock, M6

Motorway, Veolia ERF, Rodbaston Wind Turbines, Four Ashes Industrial Estate etc.) so effects will not be significant in the context.

- 14.301 Careful attention has been paid throughout the design process to minimise the potential effects upon woodland, trees and hedgerows as part of a balanced and well considered development solution. Upon completion of the Proposed Development, a significant number of new woodland areas, tree belts, other trees and tree groups, hedgerows and planting will have been implemented.
- 14.302 The Proposed Development will include the formation of water features and wetland areas largely as part of a Surface Water Drainage Scheme. These features will be designed to maximise their contribution in landscape and biodiversity terms alongside the drainage requirements. Many of these features will be sited in the Community Parks and alongside the canal and in these contexts will contribute towards landscape areas with a mix of habitats and uses.
- 14.303 Significant landscape areas will be conserved and created to both sides of the canal. The Proposed Development will also include two new Community Parks that will improve public access as part of the landscape and GI proposals. Despite the direct loss of the existing woodland, trees, hedgerows and farmland, the conserved and new planting, alongside the proposed management regime and improved public access will offer benefits. The new Community Parks would result in a substantial uplift in publicly accessible open space for recreation and amenity use, including for the existing residents and visitors who use the existing Site for dog walking and rambling.
- 14.304 In general, views of the Proposed Development from recreation and amenity routes and spaces will be intermittent, shielded by new and existing planting, mounding and screening. A small number of residential properties will continue to experience significant visual effects for the duration of operation. This effect is assessed in Chapter 12 of this ES. The majority of other landscape or visual effects are predicted to be insignificant 15 years Post Completion of the Proposed Development.
- 14.305 No recreation activity is expected to be prevented by landscape or visual effects during operation.
- 14.306 It is acknowledged that the residents of and visitors to the area immediately around the Site would experience visual effects that may affect their amenity, especially in the early years of operation. The proposed planting, wetlands, and Croft Lane Community Park would have beneficial effects. Residents of and visitors to the Gailey Marina will be able to benefit from these additions. On balance, the long term effects on recreation and amenity are not expected to be significant. Surface Water Drainage Scheme

Transport

- 14.307 Driver, pedestrian and cyclist delay have the potential to have indirect effects on recreation and amenity (via access to and enjoyment of facilities and PRoW). Some adverse effects have been identified with respect to delays at Link 4, Link 5, Link 12, and Link 13. The links considered for assessment are shown in Figure 15.1.
- 14.308 Driver Stress and Delay has been identified as having links with a moderate or major adverse impacts. These are Links 4, 5, 12 (Moderate to Major Adverse) and 13 (Moderate Adverse).
- 14.309 However, after mitigation (the introduction of the HGV Management Plan, Sustainable Transport Strategy and Travel Plan and a segregated footway and cycleway along Vicarage Road) these adverse effects are reduced to minor to moderate adverse with the introduction of mitigation. There are no significant adverse effects expected due to severance and access to services will not be limited.

⁶⁴ Department for Transport, 2014. National Policy Statement for National Networks. London:TSO. Paragraph 2.29

⁶⁵ DfT, 2014, paragraph 2.56

14.310 Access routes to all existing businesses will be well designed and adequate to meet needs for employee, delivery and emergency access.

Heritage

14.311 There will be no likely significant effects arising from the operation of the Proposed Development on heritage receptors (including Conservation Areas, Scheduled Monuments, listed buildings, and non-designated heritage receptors) primarily because of the distance and limited intervisibility between the Site and the majority of receptors that have been identified.

14.312 The Proposed Development includes embedded mitigation to preserve and enhance the heritage value of heritage receptors within and near to the Site boundary. These measures include landscaping and high quality architectural design and the removal of two SI/Bericote pipe crossings and the SI/Bericote access footbridge (secured via the DCO requirements).

14.313 The effect of the Proposed Development on the amenity of the canal will be mitigated by the distance between the canal and development zones in the north half of the Site, and the proposed landscaping to screen the appearance of the Proposed Development in this area. This will help to preserve the open landscape quality of the canal's setting, and experience for recreational users of the canal. The character and appearance of the canal Conservation Area will also be enhanced by the removal of the pipe crossings and footbridge.

14.314 There are not expected to be any significant recreation and amenity affects during operation of the Proposed Development arising from heritage effects.

Noise and vibration

14.315 The assessment of on-site operational noise suggests that moderate adverse effects are likely at a number of receptors at and around the canal and surrounds and at some residential receptors.

14.316 The provision of noise insulation, and importantly ventilation, should result in internal noise levels that meet the target noise levels set out in BS8233: 2014 and the WHO Guidelines, thereby providing a suitable internal noise climate for affected residents.

14.317 The assessment of off-site road traffic noise and vibration suggests that only minor adverse effects are likely as a result of the Proposed Development along the majority of roads, with moderate adverse effects along the A5 between M6 Junction 12 and the proposed Site access, and Vicarage Road between the proposed Site access and the A5.

14.318 Noise is not expected to prevent or significantly impact on recreation activities and where effects on residential amenity are significant enough to require mitigation (by the terms of the thresholds set out) this mitigation will be carried out as specified in Chapter 13.

14.319 The NPS does aspire to an aim for development to improve health and quality of life (which could be considered to include recreation and amenity factors) through the effective management and control of noise "where possible" but this is not considered to be a requirement of the policy and not something which the provision of substantial development such as a SRFI is likely to be able to achieve.

Wind Effects

14.320 There is the potential for significant changes in the speed or direction of wind to affect the use of the Calf Heath Reservoir for sailing as indicated above.

Air Quality

14.321 The Community Parks represent sensitive receptors for air quality in terms of short-term exposure however given the transient nature of members of the public using these locations the annual mean and 24-hour objectives are not considered relevant in these locations.

14.322 The impact of the Proposed Development in terms of new exposure has therefore been assessed in relation to exposure to short-term NO2 concentrations at these receptor locations.

14.323 It is considered unlikely that the "1-hour mean objective" would be exceeded within the Community Parks. The impact of the Proposed Development with regards new exposure and use of the Community Parks for recreation and amenity purposes would therefore be negligible during operation. Further details of this assessment are set out in Chapter 7: Air Quality of this ES.

Conclusion

14.324 On balance, the potential adverse recreation and amenity effects experienced by residents and visitors within the impact areas during operation are likely to be intermittent and mitigated by extensive provision of landscaping, noise, traffic mitigation measures. No recreation activity is expected to be prevented by any effects. The new Community Parks would result in a substantial uplift in publicly accessible open space for recreation and amenity use.

14.325 Noise and vibration effects are expected to be significant, especially for users to the moorings and amenity of residents immediately around the Site. This may affect amenity of residents and leisure users.

14.326 Given the intermittent nature of the effects on views, the existing industrial and road context of which many receptors have an existing view the adverse effects on recreation and amenity are limited. The proposed planting, wetlands and Community Park would have beneficial effects on recreation and amenity during operation. On balance, the net effect would be **Permanent and Minor Adverse a local level**.

Effects on existing businesses, organisations and clubs during operation

14.327 Businesses, organisations or clubs may be affected where their revenue, employees or members may be affected by an impact on a recreation or amenity receptor identified in the Baseline.

14.328 The Baseline section of this Chapter identifies some local businesses, clubs and organisations that could be sensitive to the recreation and amenity effects arising from the Proposed Development.

14.329 Access routes to all existing businesses will be well designed and adequate to meet needs for employee, delivery and emergency access.

14.330 As the recreation and amenity effects identified above are not significant the majority of businesses, clubs or organisations are not expected to be significantly or adversely affected.

14.331 Some businesses may experience positive effects due to increased footfall from new employees in the area. Some clubs may benefit from the Community Park and the Site's landscaping.

14.332 On balance, the net effect is expected to be **Neutral at a Local Level**.

Human health effects during operation

14.333 This assessment reviews the potential indirect effects on human health arising from the following direct effects, identified elsewhere in this ES:

- Water;
- Ground Conditions;
- Socio-economics;
- Recreation and amenity;
- Transport (including potential severance effects);
- Noise and vibration; and
- Air Quality.

14.334 It also includes an assessment of the Proposals in light of regulations and guidance on COMAH/Hazardous Substance Control and on Electro-Magnetic Frequency.

Water

14.335 With respect to indirect effects on human health due to water quality, through the adoption of biological treatment methods (in accordance with Environment Agency guidance) the Proposed Development would not result in any significant effects on the water quality of watercourses (including the canal). A Drainage Strategy is provided with the DCO Application.

14.336 As a result, there will be no significant adverse effects with respect to water effects, and no consequential effects on human health during operation.

Ground Conditions

14.337 With respect to indirect effects on human health arising from ground conditions, Chapter 11 of this ES demonstrates that the Proposed Development would have in place mitigation measures and would adhere to the relevant guidance and regulations. As a result, there will be no significant adverse effects with respect to ground conditions, and no consequential effects on human health during operation.

Socio-Economics

14.338 The Proposed Development is expected to create an 8,550 permanent jobs. In general, access to employment is associated with improved mental and physical health. Creating new jobs, especially jobs which may provide opportunities for people who were previously unemployed, is associated with positive effects on human health.

Recreation and amenity

14.339 The delivery of a new Community Park will have beneficial human health effects as it will increase opportunities for outdoor leisure and recreation, supporting a fit and active lifestyle.

14.340 Noise and vibration effects are expected to be adverse, especially for residents of the canal, and this may have consequential effects on health. Noise is addressed in more detail below.

Transport

14.341 Driver, pedestrian and cyclist delay have the potential to have indirect effects on human health if they reduce access to services or increase stress.

14.342 Some adverse effects have been identified with respect to delays at Link 4, Link 5, Link 12, and Link 13.

14.343 After mitigation (including the introduction of the HGV Management Plan, Sustainable Transport Strategy and Travel Plan and a segregated footway and cycleway along Vicarage Road) none of these adverse effects are likely to be significant.

14.344 There are no likely significant adverse effects due to severance. Full details of the proposed mitigation are set out in Chapter 15: Transport.

14.345 There are no significant impacts arising from fear or intimidation as a result of road traffic.

Noise and vibration

14.346 Disturbance through noise and vibration is linked to a range of potential adverse health effects as outlined above.

14.347 The assessment of on-site operational noise suggests that moderate adverse effects are likely at a number of receptors at and around the canal and surrounds and at some residential receptors.

14.348 The potential impacts of noise and vibration on health can widely vary between different individuals. When exposed to the same level of noise, different individuals may react differently as a result of a complex mixture of underlying levels of health, lifestyle factors and personal preferences. Due to this wide range of interacting factors it is difficult to appropriately quantify the likely impact of noise and vibration from operation on health. The provision of a bespoke noise insulation scheme, and the use of enhanced insulation and ventilation in response to noise impacts is considered a valid response to potential noise impacts.

14.349 The NPS does aspire to an aim for development to improve health and quality of life through the effective management and control of noise "where possible" but this is not considered to be a requirement of the policy and not something which the provision of substantial development such as a SRFI is likely to be able to achieve.

Air Quality

14.350 The EPUK/IAQM guidance has been used to assess the likely significant effects on human health from air quality as a result of the Proposed Development (refer to Chapter 7: Air Quality).

14.351 The air quality assessment has shown there would be no increase in the number of receptor locations which exceed relevant human health air quality objectives as a result of the Proposed Development and the Proposed Development does not introduce new receptors into a location of poor air quality. The impact of the scheme is not therefore considered to be significant in terms of human health.

14.352 The proposals are anticipated to reduce overall HGV movements across the wider road network resulting in significant reductions in regional NO_x, PM₁₀ and PM_{2.5} emissions. The increase in movements of goods via freight would result in a beneficial impact on regional air quality.

14.353 The Proposed Development aims to reduce the overall number of HGV using the road network by using rail freight to transport goods. This is expected to result in a positive impact on regional air quality.

Further details of this assessment are set out in Chapter 7: Air Quality of this ES. Risks associated with COMAH/Hazardous Substance Control & Explosives Safeguarding

14.354 There are two locations in close proximity to the Site which are currently covered by COMAH regulations:

- Carver (Wolverhampton) Limited (Flammable liquids and gases)
- SI Group-UK Limited (Flammable liquids and gases; Hazardous to the aquatic environment; Toxic).

14.355 Each of these sites have Consultation Zones around them, defined by the HSE as areas within which development may be constrained and where, if development is proposed, the HSE must be consulted on planning applications. The zones include an "Inner Zone", "Middle Zone" and "Outer Zone".

14.356 Based on the HSE's development classification, the Proposed Development is defined as "DT1.1 x1 Workplaces (predominantly non-retail) providing for 100 or more occupants in any building: Level 2⁶⁶".

14.357 Such workplaces are permitted by the HSE (they "Don't Advise Against Development") in all except the Inner Zone. The Inner Zones for neither Carver (Wolverhampton) Limited nor SI Group-UK Limited would overlap with any places of work within the Proposed Development.

14.358 Therefore, these existing COMAH zones do not constrain the Proposed Development.

⁶⁶ Health and Safety Executive, 2011, PADHI: HSE's land use planning methodology pp. 9-17

- 14.359 The Proposed Development is considered unlikely to require COMAH consent in its own right. Should a future tenant undertake hazardous activities over the specified thresholds, they will be legally bound to inform the HSE and put proportionate safety measures in place.
- 14.360 There is one local explosives site covered by the safeguarding regulations: Explosive Regulations 2014. HFM Pyrotechnics is currently registered to keep explosives at a facility within Site boundary, off a private road to the south of the A5. This facility will cease to operate as a result of the Proposed Development and there would cease to be any explosive risk associated with it.
- 14.361 Therefore, the Proposed Development is in accordance with HSE guidance, is not expected to increase the number of people working within an Inner Zone, will not change the existing conditions in terms of COMAH and will not give rise to any significant hazardous substance or explosive effects that may affect human health.
- 14.362 Perception of risk, and stress associated with that perception, will be limited by good communication between the Applicant and existing residents and businesses. The West Midlands Interchange Liaison Group would be responsible for providing clear information to residents on matters relating to the operations on-site, including any health and safety measures. The Liaison Group will communicate resident and business concerns to the Applicant and occupiers.

Risks associated with Electro-Magnetic Frequency

- 14.363 Electric and magnetic fields (EMFs) are associated with most electrical apparatus including power lines, underground cables and domestic appliances. EMFs diminish rapidly with distance from the source.
- 14.364 Studies investigating the effects of electric fields have suggested that small charged particles, known as corona ions, which are generated by power lines, may cause health effects. However, there is little evidence to support this possibility⁶⁷.
- 14.365 In the UK, the 1998 International Commission on Non-ionizing Radiation Protection (ICNIRP) Guidelines have been adopted for public exposure and these provide guidance on the exposure levels based on two key metrics of Magnetic Field (µT) and Electric Field (kV/m). These limits are regularly reviewed by the Government drawing on guidance from the Stakeholder Advisory Group on Extremely Low Frequency Electric and Magnetic Fields (EMFs) SAGE.
- 14.366 All UK installations, including those at the Proposed Development, are designed and operated accordingly and therefore the Proposed Development is not expected to give rise to any significant or reasonably foreseeable adverse effects from EMFs.

Operational Health effects: conclusion

- 14.367 Environmental factors do not produce predictable or equal health effects on all individuals. The potential impacts of an environmental change on health can widely vary between different individuals. When exposed to the same level of environmental effect, different individuals may react differently as a result of a complex mixture of underlying levels of health, lifestyle factors and personal preferences.
- 14.368 On balance, there are no likely significant adverse effects on health expected to be generated indirectly from effects on water, ground conditions, socio-economics, landscape, air quality or transport after mitigation.
- 14.369 Risks associated with COMAH/Hazardous Substance Control or explosives are covered by Government regulations to which the Proposed Development would be compelled by law to adhere. Risks associated by EMFs are not significant based on the available evidence.

⁶⁷ Public Health England, 2013, Electric and magnetic fields: health effects of exposure. [available online] <https://www.gov.uk/government/publications/electric-and-magnetic-fields-health-effects-of-exposure/electric-and-magnetic-fields-assessment-of-health-risks> accessed 24.11.17

- 14.370 Beneficial health effects may be generated indirectly from new jobs, increased economic prosperity and the provision of new Community Parks. A reduction in HGV movements would have beneficial effects on air quality at a regional level.
- 14.371 The noise assessment has identified moderate adverse effects from on-site operational noise and isolated moderate to major traffic noise effects during operation. These effects, though isolated, may have consequential effects on human health for those receptors that would be exposed to these effects. These effects would be mitigated via insulation for residents of local homes and other appropriate mitigation measures but may still have some isolated indirect effects on health where mitigation cannot be applied, such as on the canal moorings but these effects are not expected to be significant.

Summary of Mitigation Measures

- 14.372 As no significant adverse effects have been identified in this ES Chapter, no mitigation measures are required.

Summary of Residual Effects

- 14.373 Table 14.21 provides a tabulated summary of the outcomes of the Socio-economic Assessment of the Proposed Development.

Table 14.21 Summary of Residual Effects							
Receptor	Description of Residual Effect	Nature of Residual Effect*					St Mt Lt
		Significance **	+ -	D I	P T	R IR	
Demolition and Construction							
Construction and demolition employment	District West Midlands SSLEP	Minor	+	D	T	R	Lt
Wider economic effects of construction and demolition	District SSLEP	Minor	+	D	T	R	Lt
Effects on local businesses, organisations and clubs during demolition and construction	Local	Neutral to Minor	-	I	T	R	Lt
Recreation and amenity effects during demolition and construction	Local	Minor	-	I	T	R	St
Human health effects during demolition and construction	All spatial scales	No significant effects identified	N/A	N/A	N/A	N/A	N/A
Completed Development							

Table 14.21 Summary of Residual Effects							
Receptor	Description of Residual Effect	Nature of Residual Effect*					
		Significance**	+ -	D I	P T	R IR	St Mt Lt
Operational employment	Local District SSLEP	Major	+	D	P	R	Lt
Operational employment	TTWA	Minor	+	D	P	R	Lt
Wider economic effects of operation	Local District SSLEP	Major	+	D	P	R	Lt
Wider economic effects of operation	National	Minor	+	D	P	R	Lt
Effects on local businesses, organisations and clubs during operation	Local	Neutral		I	P	R	Lt
Recreation and amenity effects during operation	Local	Minor	-	I	P	R	Lt
Human health effects during operation	All spatial scales	No significant effects identified	N/A	N/A	N/A	N/A	N/A

Notes:

* - = Adverse/ + = Beneficial; D = Direct/ I = Indirect; P = Permanent/ T = Temporary; R=Reversible/ IR= Irreversible; St- Short term/ Mt -Medium term/ Lt -Long term.

**Negligible/Minor/Moderate/Major

Likely Significant Environmental Effects

14.374 The following socio-economic effects of the Proposed Development have been assessed to be significant. All significant effects that have been identified at the time of this ES are beneficial.

- Operational employment effects at the Local, District, TTWA and SSLEP levels; and
- Wider economic impacts of operation at the Local, District and SSLEP levels.

Decommissioning

14.375 The Proposed Development is expected to be operational indefinitely, as long as it is viable and fit for purpose.

14.376 In the long term, it may likely to be re-developed or adapted on a piecemeal basis as operator requirements change and new occupiers move to the Site. These changes are unlikely to significantly affect the role of the Site as centre of employment and contributor to the economy.

14.377 Should the Proposed Development cease to operate, the loss of direct and indirect employment at end of operation and following completion of decommissioning is inevitable and would result in adverse socio-economic effects. However, as set out in *HM Treasury Green Book: Appraisal and Evaluation in Central Government* (2011), due to Social Time Preference, which attaches a greater value to present, rather than future consumption, a discount rate should be applied to future benefits and costs. Under this methodology, after 25 years of operation, benefits of the Proposed Development including employment, should be discounted to 0.4231 of their value at the start of operation. After 50 years, costs of decommissioning should be discounted to 0.058 of their value at the start of operation i.e. the effect is negligible when considered at Net Present Value.⁶⁸

Cumulative Effects

14.378 This section of the Chapter assesses the potential effects of the Proposed Development in combination with the potential effects of other development schemes (referred to as 'other developments') within the surrounding area, as listed within Technical Appendix 2.6. These schemes have been considered as they have potentially significant socio-economic effects.

14.379 A socio-economic cumulative assessment considers how socio-economic effects of other developments in the planning pipeline may interact with each other to result in beneficial or adverse effects that are greater than the effects of the Proposed Development in isolation.

14.380 The likely significant cumulative socio-economic effects of these schemes are presented below.

Demolition and Construction

Demolition and Construction Employment

14.381 The Proposed Development, together with the other developments, would be expected to generate employment opportunities during demolition and construction.

14.382 When considered at a regional level (as is relevant to consider given the mobility of the construction workforce), this demand for construction labour would be part of the general trend of activity in the construction industry. The Construction Industry Training Board produces regional analyses of construction industry supply and demand. These take into account projected construction output by sector including commercial, infrastructure and housing. They also take into account known large scale "one-off" developments such as major infrastructure or regeneration sites.

14.383 The West Midlands construction industry output is expected to grow by an annual average of 1.7%, equating to a change in total employment in the sector of 10,200 additional employees. To account for employees leaving the sector (retiring, migrating) this would require an additional 3,030 construction employees every year in the region 2016-2020.

14.384 The CITB forecasts feed into local, regional and national policy on construction skills and labour force strategies. The Cumulative Schemes would be part of this forecast trend of construction activity. Therefore, there are not net additional construction employment effects to be considered for the specific cumulative scheme.

14.385 On an individual site basis, planning conditions, on-site provision and off-site payments would ensure that any adverse effects of these other developments are mitigated. Where appropriate and necessary, developers could commit to employing local people, which could

⁶⁸ HM Treasury, 2011. The Green Book, Long Term Discount Factors. London:TSO. Page 100

maximise the local benefit of demolition and construction which could help to capture a larger proportion of the benefit locally.

- 14.386 Given the size and mobility of the West Midlands demolition/construction labour market and the trend growth as set out by the CITB, it is not expected that demolition and construction of the other developments would generate any adverse effects with respect to socio-economics. In this context, the overall effect would be **minor and beneficial at a West Midlands** and **SSLEP levels** and **negligible at all other spatial levels**.

Effects on Local Businesses, Recreation and Amenity effects and Human Health effects

- 14.387 No adverse cumulative effects are expected over and above those business, recreation, amenity and human health effects that have already been identified in this Chapter.

Operational Development

Operational Employment

- 14.388 The cumulative schemes would, if implemented, bring forward a large amount of employment floorspace. This growth is planned for in local and regional policies, as set out in the Legislation and Policy Context of this chapter. The SSLEP has an employment target of 50,000 new jobs to 2024.
- 14.389 On an individual site basis, planning conditions, on-site provision and off-site payments would ensure that any adverse effects of increased economic activity are mitigated.
- 14.390 The increase in employment of the other developments and the Proposed Development, in line with policy aspirations, would result in a **permanent major beneficial** effect at the **Local and District levels**; a **moderate beneficial effect** at the **SSLEP level** and a **negligible effect at all other levels**.

Effects on Local Businesses, Recreation and Amenity effects and Human Health effects

- 14.391 No adverse cumulative effects are expected over and above those business, recreation, amenity and human health effects that have already been identified in this Chapter.