

Halsnead Garden Village - Land use and economic development report

May 2017

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Executive summary

Mott MacDonald was commissioned by Knowsley Metropolitan Borough Council (KMBC) to support the development of the Outline Business Case (OBC) for the Halsnead Garden Village housing scheme. The scheme incorporates access and junction improvements to Halsnead, a major Sustainable Urban Extension (SUE) which has been removed from the Green Belt to support Knowsley's development needs up to and beyond 2028 (the end of the Local Plan period). This report examines the wider economic benefits (jobs and Gross Value Added (GVA)) associated with the scheme, as part of the OBC. The full OBC will then be used to submit a request for funding to the Liverpool City Region's (LCR) Single Investment Fund (SIF).

Halsnead

Halsnead is a strategic housing and employment development which will deliver approximately 1,600 homes and at least 22.5ha of employment land together with a new Country Park. The housing development will provide the opportunity to diversify and enhance the housing mix in both the borough and LCR by providing a broader range of high quality housing types, including aspirational larger family accommodation. The new employment development will be at a strategic location to meet market demand for distribution and logistics space and support the growth of a key LCR sector. The new Country Park will regenerate the former Cronton Colliery site and provide a significant new leisure facility for the LCR.

Supporting key economic needs

Despite the economic strengths of the LCR, the area has the highest level of deprivation of all LEPs across England. Knowsley is the second most deprived local authority in the UK for both income and employment deprivation. Addressing worklessness, given the high levels of unemployment, sickness and dependency on income support payments, remains the key challenge for the borough.

Furthermore, as confirmed by travel to work and earnings data, Knowsley provides higher paid jobs, given its cluster of high profile manufacturing firms, but currently these jobs are filled by people living within the city region and beyond but not in the borough. Constructing a broader mix of high quality housing and developing the borough's employment land offer can help to address the issues caused by the dominant low skilled and low wage economy by attracting highly skilled workers, providing employment opportunities, and meeting the housing need.

Halsnead - substantial economic benefits

Halsnead will help to address these key economic challenges for Knowsley and the wider LCR by providing a broader mix of high quality housing and a strategic employment location for supporting the logistics sector. In summary, Halsnead has the potential to generate for the LCR:

- Approximately 900 net FTE jobs, generating £40.5m of GVA per annum. Furthermore, over a 21-year time horizon from the development being completed the present value of such benefits could be as high as £442.3m. This compares to the total construction of the infrastructure costs of £19.8m and therefore very good value for money for the public sector.
- Approximately 1,600 new homes (with 1,150 delivered by 2028) contributing significantly to the overall Core Strategy target of 8,100 homes (over 2011-2028).

- Tax related benefits of £9.1m from employment related taxes (PAYE and NI), £2.1m of council tax benefits and £1.2m of business rates. Each of these tax impacts shown are per year, meaning these benefits to public revenue will persist each year the jobs and homes are occupied.
- Significant construction benefits amounting to 2,049 temporary construction employees (equivalent to supporting 200 FTE jobs within the LCR).

In addition, the land value uplift from Halsnead once fully developed is anticipated to be in the region of £105.5m.

1 Introduction

1.1 Introduction

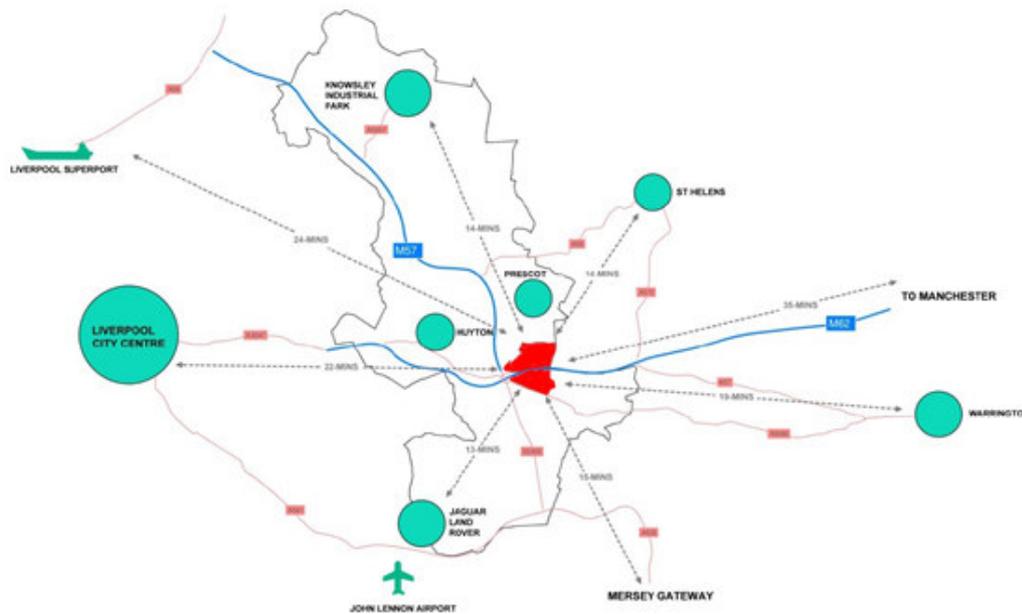
Mott MacDonald was commissioned by Knowsley Metropolitan Borough Council (KMBC) to support the development of the Outline Business Case (OBC) for the Halsnead Garden Village housing scheme. The scheme consists of creating new gateway access points and measures to ensure adequate capacity and resilience of the highway network to enable the housing, economic and leisure development at Halsnead to proceed. Halsnead is a major Sustainable Urban Extension (SUE) which has been removed from the Green Belt to support Knowsley's development needs up to and beyond 2028 (the end of the Local Plan period).

This report examines the wider economic benefits associated with the scheme (jobs and Gross Value Added (GVA)), as part of the OBC and builds on the work undertaken at Strategic Outline Business Case (SOBC) stage. This analysis alongside the full OBC will be used to submit a request for funding to the Liverpool City Region's (LCR) Single Investment Fund (SIF).

1.2 Halsnead and the scheme

Halsnead is a strategic housing and employment site for both Knowsley and the LCR. Located on the eastern side of the Tarbock Island Interchange, where the M62 meets the M57 and the Knowsley Expressway, Halsnead has the potential to provide a major new gateway entrance to the LCR (see Figure 1). The site's draft Masterplan Supplementary Planning Document (SPD)¹ provides a spatial framework for the development of the site and is scheduled for adoption in June 2017. The development is anticipated to accommodate approximately 1,600 dwellings and at least 22.5ha of employment land, together with a new Country Park.

¹ Halsnead Masterplan, SPD, 2016.

Figure 1: Halsnead – strategic location

Source: Halsnead Masterplan, SPD, 2016, p.10

The scheme will create:

- High quality and all-purpose gateway access points to ensure high quality access is in place to the site and constituent plots, ensuring comprehensive development.
- Highway capacity improvements to mitigate the impacts of development traffic on the surrounding highway network to ensure that sufficient capacity exists on the strategic road network to accommodate the level of growth planned at the site and across the LCR.

Figure 2 below, taken from the SPD, displays the outline of the masterplan area in further detail against the gateway access points and highway capacity improvements.

1.3 Methodology

The wider economic benefits have been assessed, at the LCR level, by reviewing the land use changes from the development and the associated economic impacts (jobs, GVA and housing related impacts) using Mott MacDonald's Transparent Economic Assessment Model (TEAM).

More specifically the method has entailed:

- Review of the strategic economic context for Halsnead, in terms of economic and housing policy and how the development will help deliver the growth planned.
- A detailed review of Halsnead in terms of planned development type, quantum and timescales, based on the draft SPD². This includes examining the viability work that has been undertaken.
- Discussions with key officers at KMBC and other stakeholders working on the scheme, to discuss Halsnead and the potential impacts of the scheme.

² Halsnead Masterplan, SPD, 2016.

- Quantitative assessment of the gross and net economic benefits (focusing on jobs and GVA) associated with Halsnead using TEAM.

1.4 Report structure

The remaining sections of this report are structured as follows:

- **Section 2: Strategic economic context** – summary of how the scheme supports LCR and local economic and housing policy and growth ambitions.
- **Section 3: Halsnead** – summary of the development in terms of guiding principles, quantum and type of development and timescales.
- **Section 4: Economic impact assessment** – provides the assessment of the wider economic benefits associated with Halsnead, both during construction and once the site is fully developed.
- **Section 5: Summary** – key findings of the wider economic benefits assessment.

Figure 2: Halsnead Garden Village access and movement plan



Source: Halsnead Masterplan, SPD, 2017

2 Strategic economic context

2.1 Introduction

This section provides an overview of the strategic economic context and the socio-economic characteristics of the local economy to further understand how Halsnead contributes to growth objectives. Remove watermark

2.2 Economic and housing policy

2.2.1 Northern Powerhouse

In recent years, there has been a strong Government emphasis on the need to rebalance the national economy thereby closing the gap between north and south. The Northern Powerhouse encapsulates this vision by encouraging growth in the North by building on the existing strengths of the region alongside fostering new opportunities for economic expansion³.

As part of the portfolio of projects and strategies supporting this ambition there are plans to stimulate all forms of transport including road, rail, and aviation as well as expand the freight and logistics sectors. Transforming the North into a global centre of economic success will rely on the major urban centres achieving their maximum economic potential⁴. These strategically important urban centres include Liverpool and Manchester, both of which are within easy access of Knowsley and within 20 and 40 minutes drive time proximity to Halsnead respectively.

2.2.2 Liverpool City Region

The LCR Local Enterprise Partnership (LEP)'s overall vision is to create over 100,000 additional jobs in LCR by 2040, 20,000 businesses over the next 25 years and an additional £22 billion in GVA by 2040⁵.

The LCR Growth Deal⁶, which secured funding from Government to support economic growth in the area up to 2021, focuses on transport and skills projects that will support the city region's ambitions to create a freight and logistics hub serving an expanding Port of Liverpool. The city region aims to become the best location to respond to changes in the UK and international logistics markets.

In order to accelerate this growth, the LCR Combined Authority has established the Single Investment Fund (SIF)⁷, pooling national funding through the Devolution Agreement with other local and national sources, to provide over £250m worth of funding for major schemes in its first phase up to 2019. SIF funding is prioritised on projects that are shown to deliver job creation, increased productivity and support to LCR's key growth sectors, including advanced manufacturing and logistics.

The advanced manufacturing sector in particular is key to the Knowsley economy, with several prominent employers such as Jaguar Land Rover, whilst the large scale investment in

³ The Northern Powerhouse: One Agenda, One Economy, One North, 2015, page 2.

⁴ Ibid., page 10.

⁵ Building Our Future: Liverpool City Region Growth Strategy, Liverpool City Region Local Enterprise Partnership and Liverpool City Region Combined Authority, 2016, page 9.

⁶ Liverpool City Region Growth Deal, UK Government, accessible:

⁷ Liverpool City Region Combined Authority: Single Investment Fund Prospectus, Liverpool City Region Combined Authority, 2016

SuperPort (see Box 2.1 below) will open up new economic opportunities for LCR, the Atlantic Gateway, the North of England and the UK as a whole. Halsnead given its prominent position on the strategic network has significant scope to contribute to these overall economic ambitions. Growth ambitions relating to SuperPort and the M62 corridor are further explored in Boxes 2.1 and 2.2 below.

Box 2.1: SuperPort

Superport is an integrated cluster of logistics assets and expertise that will deliver faster, greener global market access for business to and from the northern UK and Ireland via an enlarged post-Panamax container port. The SuperPort initiative – the transformation of the LCR's ports, airport, road, rail and logistics assets into a low carbon SuperPort of international stature - has been a consistent part of LCR's growth ambitions for a number of years. Following over four years of construction work, the Liverpool2 deep water facility was officially opened on the 4th November 2016.

Superport stretches from the historic Port of Liverpool along the Manchester Ship Canal and the heart of the northern UK road and rail network, via two airports, and across two national Enterprise Zones plus the highest density of warehousing in the UK. The opening of Liverpool2 and the advent of post-Panamax container shipping in Liverpool will mean the city is more connected with the global market than ever before, and the port is the natural first stop for vessels crossing the Atlantic.

The increased logistics capacity from this planned investment in port and logistics assets has the opportunity to deliver a transformation of the sector and significantly enhance the whole region's attractiveness for retail and manufacturing logistics operations.

Studies supporting the Liverpool SuperPort strategy have identified a need for warehousing and available land for development that is suitable for logistics operations. Knowsley is well located to meet some of this demand by virtue of its excellent transport links with the port and the wider transport network.

Source: Liverpool City Region SuperPort, Market Analysis, Land and Property 2014, LCR Growth Plan, 2014 and <https://www.peelports.com/news/2016/official-opening-of-peel-ports-400-million-liverpool-container-terminal>

Box 2.2: M62 corridor

Transport for the North (TfN) has identified the M62 corridor, which Halsnead is located on, as the most important inter-city route in the North for commercial and commuter traffic. The route is key to supporting the increasing transport demands and economic ambitions of the region. It is a very heavily trafficked route, with annual average weekday flows of over 60,000 vehicles per day in each direction, causing poor reliability and considerable congestion. Due to a number of bulk goods generating sites along the route, including logistics warehousing, the Port of Liverpool, the Humber Ports, and Peak District quarries, the M62 carries high levels of freight.

In order to ensure that the road networks in the North are capable of meeting future demand two separate roads investments have been proposed that will help transform the M62. Firstly, in the east, from Manchester to Leeds, and in the west, from Liverpool to Manchester. Improvements to junctions 10-12 of the M62 – which connect Greater Manchester to Merseyside – will significantly reduce congestion and improve journey time reliability on this route of strategic importance for local, regional and international traffic. Interventions identified for the M62 are anticipated to increase the capacity of the motorway by 33% and reduce journey times by 19%. These enhancements will accommodate current and future traffic demand on the motorway, particularly freight, thereby supporting the continued growth of these sectors within the LCR.

Source: High Speed North, National Infrastructure Commission

Other key employment sites

Several other key employment sites and growth opportunities, in close proximity to Halsnead, will also be important to ensuring a freight and logistics hub can be created in the LCR and wider North of England, including:

- **Knowsley Industrial Park (KIP)** - the largest industrial park (an area of approximately 400 hectares) in the LCR and second only to Trafford Park in the North West. KIP is strategically located between Liverpool City Centre and Manchester and in close proximity to major transport infrastructure and supports activity across the manufacturing, distribution & retail and transport & communications sectors. As part of the devolution deal significant investment has already been made in access improvements to support the site's ongoing development.
- **Atlantic Gateway** - a spatial corridor incorporating world trade, logistics, business and innovation stretching from Deeside and Merseyside through the northern part of Cheshire and Warrington to Manchester. It represents a major opportunity to drive development and growth in the core of the Liverpool-Manchester Corridor for commerce, jobs, new homes, retailing and culture⁸. The Atlantic Gateway project seeks to maximise the economic potential of the M62-M56-M53 corridor. It has been identified as one of the most significant opportunities in the UK to attract investment, accelerate growth and rebalance the national economy.
- **Omega** - a major mixed-use development located in Warrington. Although outside of the LCR the site will contribute to the wider multimodal freight corridor running throughout the north west of England. The site is located on the M62 and is to be a sustainable, highly accessible mixed-use development providing quality, bespoke commercial premises.

A recent market assessment study⁹ for the LCR concluded that SIF should focus on supporting schemes that address particular gaps in the market offer in LCR. This included the likely demand for 'mega' sheds over 100,000 sqft that can be delivered adjacent to motorways. There is a need to ensure that the region has the sites ready to accommodate the ongoing demand for logistics in sites with excellent motorway access that are ready to be developed out. This is especially the case with the latest speculative build on Omega, Warrington South now taken. Halsnead clearly fits this criteria and would be a strategic site for the LCR logistics sector.

2.2.3 Strategic housing policy

The most recent Housing Strategy for LCR was published in 2007, and aimed to provide different types of housing in a range of neighbourhoods to ensure the realisation of its vision. This vision was to secure an internationally competitive economy and cultural offer, an outstanding quality of life, and vibrant communities contributing to and sharing in sustainable wealth creation. Within Knowsley, the provision of sufficient new residential developments to support economic growth and regeneration was highlighted. An updated Housing Strategy is currently being prepared.

Since 2007, LCR's aim for housing (as set out in the Growth Strategy) is to upgrade the existing housing offer and regenerate the most deprived areas to provide an appropriate mix of housing to attract and support a skilled labour market. Indeed, the aim of the SIF housing fund¹⁰ is to accelerate the delivery of a high-quality housing market to attract and retain the skilled and

⁸ 'Atlantic Gateway Business Plan' (2012), page 5.

<http://www.atlanticgateway.co.uk/assets/downloads/ag-businessplan.pdf>

⁹ Liverpool City Region Investment Fund Market Needs Assessment – Draft Final, Cushman & Wakefield, 2016

¹⁰ Liverpool City Region Combined Authority Single Investment Fund Prospectus 2016-2019, LCR, September 2016

diverse workforce that the LCR requires to achieve the growth ambitions. There is an emphasis on:

- increasing the number of homes built in the region and accelerating the delivery rate;
- supporting the development of a high quality private rented sector with the graduate workforce as a target market;
- maximising the social value of housing delivery to support local SMEs; and,
- regenerating neighbourhoods.

The SIF will support projects that unlock unviable housing sites to accelerate housing delivery, upgrade and rebalance the housing offer to stimulate the housing market and remove constraints on economic growth and that can deliver at least 250 units within 36 months. Clearly, the housing development at Halsnead contributes directly towards these objectives and priorities.

2.2.4 Knowsley

The vision for 2028 in Knowsley's Local Plan: Core Strategy (2016) ¹¹ is that Knowsley's economy will be stronger and more diverse, providing employment choices for local people and helping to drive economic growth in the wider LCR and that a wide choice of housing is available to meet needs. The key strategic objectives relevant to Halsnead include:

1. **Sustainable economic and employment growth** - to encourage and maintain sustainable economic and employment growth in Knowsley, complementary to that within the wider LCR, by accommodating employment related development, improving skills within the workforce, and promoting enterprise, entrepreneurship and innovation.
2. **Well-balanced housing market** - to promote a well-balanced housing market throughout Knowsley by providing a sufficient quantity and mix of high quality sustainable housing in appropriate locations to meet needs and demand (including for market, affordable and supported housing).

The key growth targets for the Local Plan between 2010 and 2028 include:

- 8,100 new dwellings, at an annual average of 450 dwellings per annum.
- Provision to be made for at least 164 hectares of land to be developed for employment uses.
- To assist with meeting shortfalls in housing and employment land supply the removal of SUEs from the greenbelt, the largest of which is Halsnead. SUEs will also assist with meeting the affordable housing targets with minimum provision being set at 25% (compared to 10% on sites within the current urban area).

Knowsley's economic growth plan¹² sets out a bold ambition to establish the borough as a prime economic location in the Northern Powerhouse by focusing on the advanced manufacturing and freight & logistics sectors across three key spatial corridors:

- The **Northern Corridor** with strong links to the Port of Liverpool, the City Region's wider Superport and the regional motorway network.
- The **Central Corridor**, with Halsnead identified as a prime development opportunity, with strong links through its connectivity with Liverpool, St Helens, Wigan and Manchester.

¹¹ Knowsley local plan: core strategy, KMBC, 2016

¹² Knowsley: Our plan for accelerating economic growth 2016-2021, Knowsley Place Board, KMBC, 2016

- The **Southern Corridor** which is of regional and national significance for the Advanced Manufacturing sector with Halewood being the location for a cluster of internationally recognised automotive companies including Getrag Ford and Jaguar Land Rover.

2.3 Socio-economic characteristics

This section provides a brief overview of the key socio-economic characteristics of Knowsley and the LCR to further understand how Halsnead will support the development of LCR's key sectors (particularly freight & logistics and advanced manufacturing) and the local and regional housing offer.

2.3.1 Travel to work

Within the LCR, based on the 2011 Census, 86.1% of residents live and work in the city region meaning there is a net outflow of workers, largely to neighbouring city regions. This is reflective of the wider jobs deficit at a LCR level where there are less jobs and businesses per resident than the national average and employment rates remain very low.

In Knowsley, there is also a net outflow of workers (4,300 daily commuters) but only 34.6% of travel to work (ttw) trips are made by those that both live and work in the borough. Indeed, more Knowsley commuters work in Liverpool than stay in the borough itself (19,700 ttw trips compared to 18,500 ttw trips respectively). There are also established flows to other parts of the LCR (Sefton, St Helens, Halton), Warrington and some limited commuting to Manchester, accounting for just under 1% of all journeys from the borough.

Table 1: Travel to work - summary

	Knowsley	LCR
Total journeys to work to	49,158	539,512
Total journeys to work from	53,432	562,713
Net commuting	-4,274	-23,201
Journeys to Knowsley and LCR as % from:		
Knowsley	34.6%	7.6%
Rest of LCR	52.4%	74.9%
Warrington	2.7%	3.5%
West Lancashire	1.9%	1.8%
Manchester	0.9%	1.1%
Cheshire West and Chester	0.9%	2.9%
Wigan	0.7%	1.2%
Other	5.9%	7.1%
Total	100.0%	100.0%

Source: 2011 Census, ONS

The earnings data for Knowsley¹³ reflects the ttw patterns with average workplace earnings exceeding those of resident based demonstrating that the borough provides higher paid jobs for people living within the city region and beyond but not living in the borough. This implies Knowsley currently does not have the housing stock or sense of place of sufficient quality to attract higher paid and skilled workers.

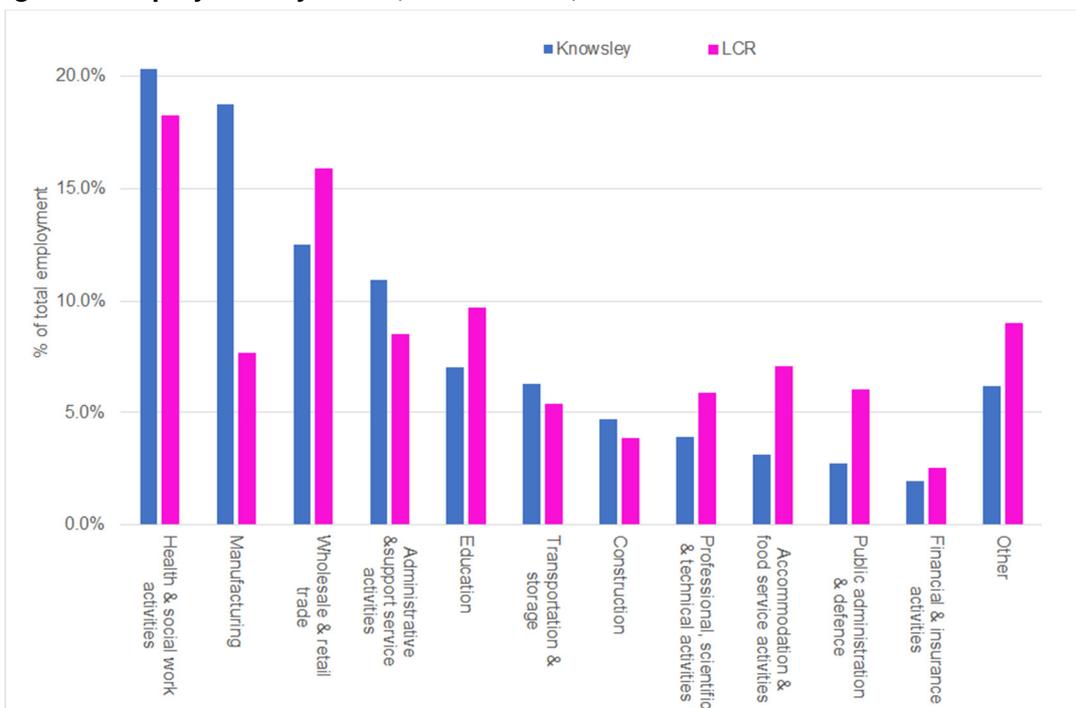
¹³ Annual Source of Hours and Earnings, ONS, 2016. Data shows consisting pattern of lower resident wages compared to workplace wages.

Halsnead, given its strategic location and housing offer, has the potential to influence these patterns by providing a sustainable location that will provide access to employment opportunities across the LCR, Greater Manchester and elsewhere in the North West but also attract higher skilled workers who in time are likely to fill more of the borough’s higher paid jobs.

2.3.2 Employment

At a workplace level, approximately 64,000 employees work in Knowsley, representing 10.7% of total LCR employment¹⁴. The key employment sectors for the borough are manufacturing (18.8%), health (20.3%), wholesale & retail trade (12.5%) and administrative & support services (10.9%). Clearly, Knowsley makes a strong contribution towards the LCR’s advanced manufacturing and freight & logistics sector which Halsnead can further build upon.

Figure 3: Employment by sector, as % of total, 2015



Source: BRES, ONS, 2015

2.3.3 Deprivation¹⁵

Despite the economic strengths of the LCR the area has the highest level of deprivation of all LEAs across England with over 31% of neighbourhoods within 10% of the most deprived areas nationally. Deprivation is clustered in inner city areas around Liverpool and the main town centres.

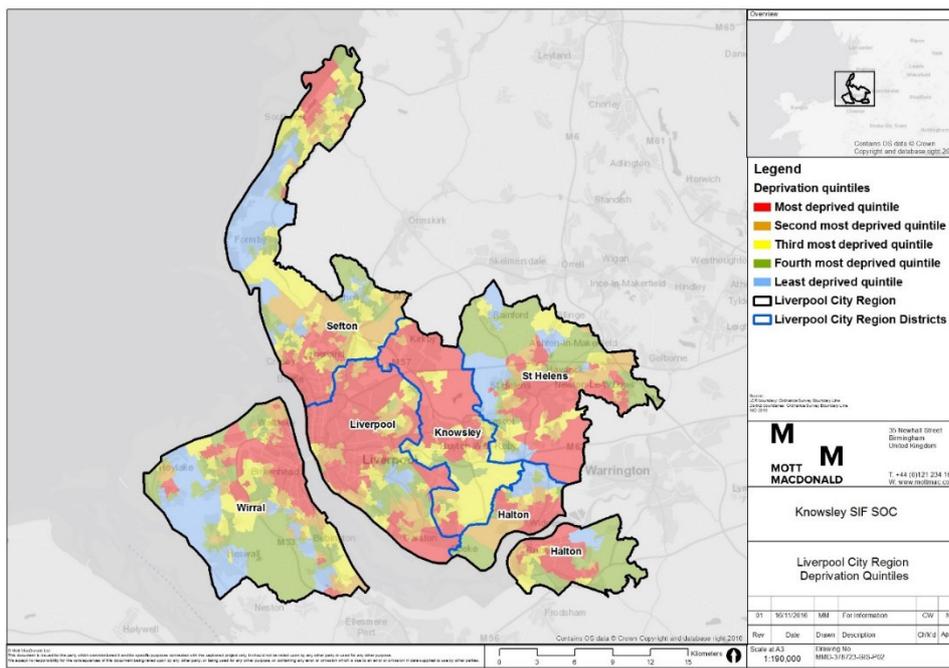
Mirroring this trend deprivation is acute in Knowsley, which is the second most deprived local authority in England with 45.5% of the borough’s neighbourhoods in 10% of the most deprived

¹⁴ Business Register Employment Survey, ONS, 2015

¹⁵ The Index of Multiple Deprivation (IMD) measures relative deprivation across England. The IMD combines domains of deprivation, such as economic, health and housing to rank every lower super output area (LSOA) in England, these LSOAs can then be grouped into quintiles ranging from the most to the least deprived

areas nationally. The borough is ranked the most deprived local authority in the UK for both income and employment deprivation¹⁶, highlighting that the area suffers from high levels of unemployment, sickness, or disability and comparatively has lower earnings and higher dependency on income support payments. With higher unemployment levels than the LCR level this demonstrates the labour market and skills issues that the area faces and the need for regeneration and economic development that can provide sustainable job opportunities across a range of skill levels and high quality housing for both existing residents and to attract new residents and raise aspirations.

Figure 4: Index of Multiple Deprivation, LCR, 2015



Source: Index of Multiple Deprivation, Department for Communities and Local Government, DCLG

2.4 Housing

The 2011 Census highlights that there are currently 62,967 dwellings in Knowsley with an overall household size, the number of residents per household, of 2.4. There is a high proportion of households (over 26.6%) being within affordable tenures, including social rented, with the highest concentrations occurring in Kirkby and North Huyton¹⁷.

Table 2: Housing stock by tenure, 2011

	Owned		Rented		Total
	Owned outright	Owned with a mortgage or loan or shared ownership	Social rented	Private rented or living rent free	
Knowsley	26.1%	36.2%	26.6%	11.1%	100.0%

¹⁶ The English Indices of Deprivation, DCLG, ONS, 2015

¹⁷ Knowsley Strategic Housing Market Assessment, DCA, 2010

	Owned		Rented		
LCR	28.8%	32.4%	21.6%	17.2%	100.0%
England and Wales	30.8%	33.5%	17.6%	18.0%	100.0%

Source: Census, 2011

Correspondingly, as at the LCR level, there is a much lower level of ownership (counting both outright and mortgaged) in Knowsley at 62.3% compared to 64.3% nationally. The LCR has a higher proportion of households in rented tenures driven by Liverpool's large private rental market.

The most common type of housing in Knowsley, as in the LCR, is semi-detached houses accounting for 41.1% of all household spaces. Again, as in the LCR, there is a low proportion (12.9%) of detached homes compared to 22.6% at a national level.

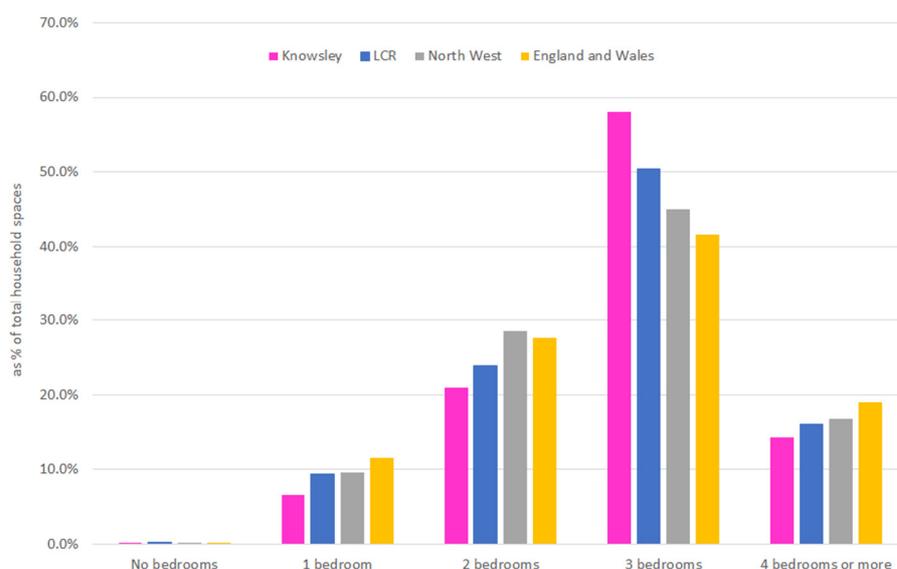
Table 3: Housing stock by type

	Knowsley	LCR	North West	England and Wales
Detached house or bungalow	12.9%	12.9%	17.7%	22.6%
Semi-detached house or bungalow	41.1%	37.5%	35.7%	30.7%
Terraced house or bungalow (including end-terrace)	35.2%	31.3%	30.0%	24.7%
Flat, maisonette or apartment	10.6%	18.2%	16.3%	21.6%
Caravan or other mobile or temporary structure	0.3%	0.1%	0.3%	0.4%
TOTAL	100.0%	100.0%	100.0%	100.0%

Source: Census, 2011

The housing market in Knowsley is dominated by households with three bedrooms, accounting for 58.0% of all household spaces and, as highlighted in the Core Strategy, there are clear shortages of larger, executive market homes (4 bedrooms or above) and smaller one-and two-bedroom units in the affordable housing sector.

Figure 5: Households by size, 2011



Source: 2011 Census, ONS

Average house prices in Knowsley, at approximately £111,600, are consistently around 10% lower than LCR and 50% lower than the national average. Despite this housing affordability is an issue given average resident salaries are low.

Table 4: Average house prices 2010-2016 (£)

	2010	2011	2012	2013	2014	2015	2016
Knowsley	111,600	107,500	106,600	106,100	109,300	111,100	111,600
Liverpool City Region	123,600	118,900	117,100	116,800	121,200	123,900	129,300
North West	133,200	129,200	128,300	128,900	134,900	139,900	146,800
UK	170,400	167,900	168,600	172,900	186,800	197,900	211,900

Source: Average house prices by local authority, region and nation, ONS, 2017

In summary, the housing market in Knowsley is characterised by lower value housing and many residents in the social rented sector. Furthermore, given that a large proportion of people who work in Knowsley do not live there suggests there is a shortage of job opportunities and housing to meet Knowsley's overall requirements. There is a strategic need to provide affordable homes and a wider range of homes to attract a broader demographic of people to the area. Constructing a broader mix of housing types and developing the borough's employment land offer can help to address the issues caused by the dominant low skilled and low wage economy by attracting more highly skilled workers, providing employment opportunities and meeting the housing need.

2.5 Summary

Key points:

- The advanced manufacturing and logistics sector is critical to LCR's growth ambition to create a freight and logistics hub serving an expanding Port of Liverpool. Halsnead offers a strategic development opportunity, tying closely with other initiatives and employment sites, to provide high quality employment space to support these objectives.
- There is an established need to upgrade the existing LCR housing offer and regenerate the most deprived areas to provide an appropriate mix of housing to attract and support a skilled labour market.
- In Knowsley a high proportion of residents commute out of the borough demonstrating that there is a shortage of job opportunities for current residents. Halsnead is likely to provide employment opportunities across all skill levels and can contribute towards addressing this shortage.
- Furthermore, there is clearly a low skilled and low wage economy within the borough with many of the higher paid jobs being filled by residents from elsewhere. Addressing this will rely on attracting a broader demographic of people into the area.
- Diversifying the housing offer to provide a greater range of larger family housing will assist in attracting higher skilled workers which over time will raise aspirations and address the issues caused by the low wage low skilled economy.
- Deprivation is acute in Knowsley which reinforces the need to provide job opportunities and address housing shortages in the affordable sector.

- Clearly, Halsnead provides a significant opportunity to support the plans set out in the Core Strategy to address these issues and make a significant contribution to the borough's growth plans.

3 Halsnead

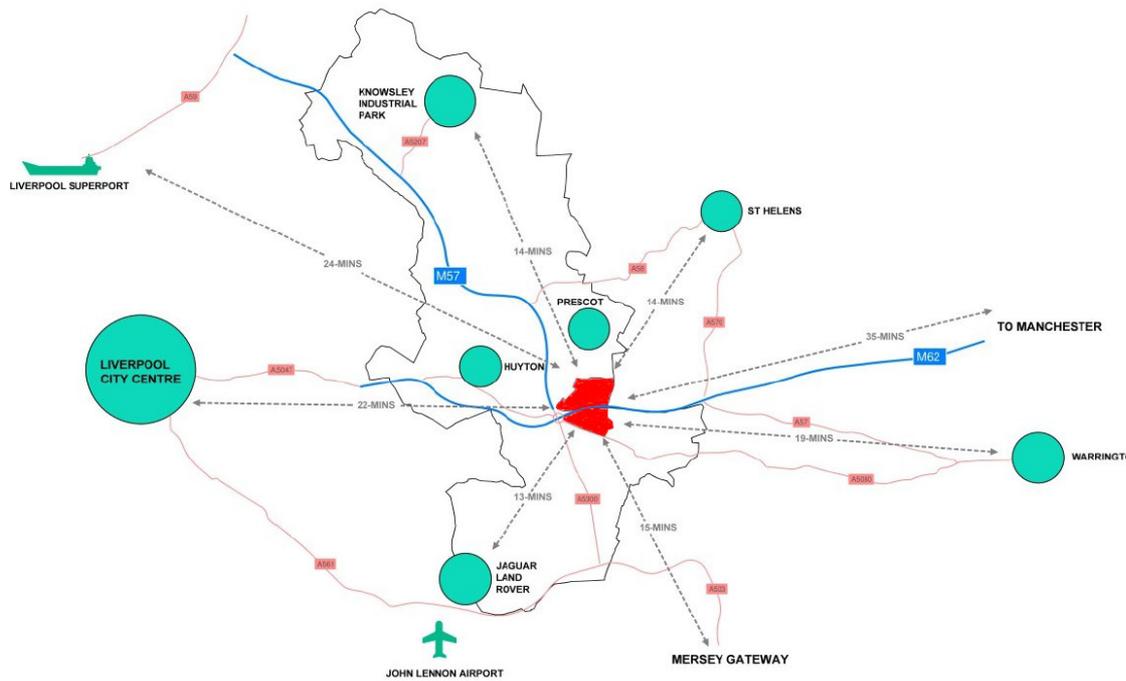
3.1 Introduction

This section provides an overview of Halsnead, using the SPD and the background viability work¹⁸, in terms of the type of housing and employment development and the phasing, which directly informs the economic impact analysis.

3.2 Overview

Halsnead, the largest of the SUEs, is a 174 ha site strategically located on the eastern side of the Tarbock Island Interchange where the M62 meets the M57 and the Knowsley Expressway (A5300). It is highly accessible to the strategic highway network (with good connections to other key strategic employment sites such as the Liverpool SuperPort, Knowsley Industrial Park and Warrington).

Figure 6: Strategic location of Halsnead development site



Source: Halsnead masterplan, SPD, 2016 (Halsnead site shown in red)

The site comprises the former Halsnead Park Estate and has an attractive topography with areas of substantial woodland. The development will help support existing services and facilities, particularly within Whiston, and provide housing, employment, local services and leisure opportunities for the surrounding area.

¹⁸ Shared with Mott MacDonald on a Strictly Private & Confidential Basis

The site’s draft SPD sets out the key requirements for land use and quantum and a clear framework for development.

Figure 7: Halsnead Garden Village Illustrative masterplan



Source: Halsnead Masterplan SPD, 2017

3.3 Strategic objectives

The six strategic objectives for Halsnead are listed below. From an economic development perspective the most significant objectives are 2 and 6 relating to diversifying and enhancing the quality of the housing stock within Knowsley and strategic employment land development to support the LCR logistics sector.

Table 5: Strategic objectives for the development of Halsnead

<p>1: A Shared Place-making Vision</p> <p>Ensuring that Halsnead is a well-designed place of high environmental quality that:</p> <ul style="list-style-type: none"> • Embeds Garden Village principles of design, and functionality adapted to the 21st Century and specific to Halsnead; • Rediscovered the historic Halsnead Park Estate by retaining and enhancing the existing landscape and built heritage and reconnecting north and south of the motorway; and • Integrates with Whiston physically, visually and functionally
<p>2: Diversifying the housing stock</p> <p>Diversify and improve the range and quality of housing stock within the borough and at a local level; including the provision of a range and mix of homes in walkable neighbourhoods with diverse and distinct character</p>
<p>3: Enhancing Connectivity</p> <p>Creating a clear and legible movement framework that links the existing and new community and improves connections across the M62. This should capitalise on existing infrastructure and public transport to improve access for all and connections by non-car modes including pedestrian, cycle and equestrian.</p>

4: Creating a Strong Greenspace Framework

Creating a well-connected green and blue space infrastructure network of multi-functional spaces. With ecological, drainage, recreational, health, connectivity and sustainability benefits that offers a high quality and distinctive setting for the development. Support the delivery of a new Country Park focussed on the former Cronton Colliery.

5: Ensuring Comprehensive Development

Adopting a collaborative approach to ensure that the development is designed and implemented to support the comprehensive delivery of Halsnead as a whole; including the timely provision of physical and community infrastructure.

6: Attracting Employment

Creating the right conditions to attract significant new employment development at this strategic location to meet the demand for distribution, logistics, advanced manufacturing and other appropriate uses identified in the Liverpool City Region economic sectors.

Source: Halsnead Masterplan SPD, 2016

3.4 Key requirements

In addition to the wider objectives set out above, the SPD also stipulates ten requirements that all development of the site must adhere to, listed below.

Table 6: Halsnead Supplementary Planning Document (HSPD) key requirements

HSPD key requirements

- **KEY REQUIREMENT HSPD1 - Framework Masterplan** - Development will be delivered in accordance with the strategic outline parameters identified on the Framework Masterplan. Planning applications for all development at Halsnead should be accompanied by written and illustrative material that demonstrates how proposals align with these parameters.
 - **KEY REQUIREMENT HSPD2 - Land use and amount** - Development will contribute to delivering the balance and quantum of uses identified in Table 6.1 across the site as a whole, incorporating land north of the M62 and south of the M62. This will be achieved within the parameters of key requirement HSPD1.
 - **KEY REQUIREMENT HSPD3 - Residential development** - Approximately 1,600 new homes will be delivered within the residential development areas identified on the Framework Masterplan. In order to ensure comprehensive and holistic delivery and provision of infrastructure to meet the needs of the community, planning applications for individual plots and parcels will contribute to strategic infrastructure, local (site-specific) infrastructure and affordable housing requirements in accordance with the approach set out in Section 8. The majority of residential development will be on land north of the M62. Residential development south of the M62 will be limited to no more than 30 dwellings, subject to further testing at planning application stage.
 - **KEY REQUIREMENT HSPD4 - Employment development** - Land south of the M62 will accommodate a minimum of 22.5ha employment development, with vehicular access provided from Cronton Road. Planning applications for employment development should:
 - Demonstrate how the development will minimise or avoid impact on retained natural habitats including ancient woodland, protected trees and designated Local Wildlife Sites, including the ecological network connections between these;
 - Create a semi-natural landscaped boundary to the proposed Country Park;
 - Integrate the former mineral railway line link into layout design to provide an unimpeded and multi-user equestrian, footpath and cycle link over the M62;
 - Ensure continued, safe access to the Coal Authority monitoring station;
 - Not impede access to and/or the enjoyment of the proposed Country Park and ensure that safe crossings are provided for non-car modes to that facility; and
 - Ensure there is no harmful impact on the Listed Building at Old Halsnead Hall or its setting.
 - **KEY REQUIREMENT HSPD5 - Primary education** - Land identified on the Framework Masterplan will be reserved for development of a new 2.5 form entry primary school with the capacity to expand to 3-form entry. The school should include associated playing fields with the potential for these to be managed for dual school / community use. The primary school will be delivered as an integral part of the development and will be operational prior to occupation of the 300th dwelling at Halsnead. Early years / nursery provision will be provided either integrated within the Primary School and/or through new or extended private facilities.
 - **KEY REQUIREMENT HSPD6 - Access and movement** - Development at Halsnead will be accessed from new junctions onto the existing road network as shown on the Framework Masterplan and Access and Movement Plan. Development will maximise connectivity and permeability for all travel modes. The internal route hierarchy will be designed to connect and encourage pedestrian and cyclist movement between the site and the existing settlement. Development will:
 - Include a road system capable of accommodating buses, with provision of bus stops and related infrastructure at optimum locations;
-

HSPD key requirements

-
- Provide primary routes from the vehicular access points as shown on the Access and Movement Plan connecting the development with surrounding area;
 - Ensure high quality, convenient and attractive pedestrian, cyclist and equestrian routes where appropriate, into and throughout the site; and
 - Provide a high quality pedestrian, cyclist and equestrian route across the M62 using the route of the former mineral rail line and connecting Stadt Moers Country Park with the new Country Park south of the M62.
 - Developers will be expected to contribute to the off-site highway works listed in Table 6.3 and public transport infrastructure, to enable accessibility and mitigate highways impacts arising from the development..
-
- **KEY REQUIREMENT HSPD7 - Strategic utilities** - Development should accord with a comprehensive drainage utilities strategy for the site to be submitted and agreed prior to development commencing, unless otherwise agreed with utility providers. In all instances applicants will be required to demonstrate and ensure that that development of individual land parcels will not sterilise the ability to bring forward other any other land within the site.
-
- **KEY REQUIREMENT HSPD8 - Connected green infrastructure** - Development will be shaped by and integrate a strong and coherent green infrastructure framework as shown in the Green Infrastructure Plan. Development should:
 - Integrate larger scale semi-natural spaces and major landscape features at the strategic scale;
 - Help to deliver a diverse range of green space functions that provide place-making benefits at the local street scale and wider neighbourhood scale;
 - Create nodal points within a network of green links, becoming community hubs in their own right;
 - Deliver spaces and landscapes of high value; multifunctional Green Infrastructure that combine biodiversity functions, amenity value and practical benefits such as mitigation of noise and air quality constraints; and
 - Ensure active built frontage to spaces and landscapes, and to the green links and corridors that connect them.
-
- **KEY REQUIREMENT HSPD9 - Diverse Public Open Space** - The strong commitment to Green Infrastructure will result in a quantum of open space that exceeds minimum planning policy provisions for residential development. Open space should meet a wide range of amenity and recreation functions, to create a distinctive green setting and high quality of place that aligns with Garden Village principles and the place-making pillars. Detailed on-site provision in terms of quantum, extent and function will be determined through the planning application process, with reference to the Green Infrastructure Plan and the Public Open Space Plan.
-
- **KEY REQUIREMENT HSPD10 - Open space tiers** - Open space requirements can be represented as groups or 'tiers' of open space, according to their strategic importance, relative flexibility in location and design, and responsibility for delivery and maintenance.:
 - Tier 1 - Strategic open space located outside the development areas shown in the Framework Masterplan, to be subject to a bespoke delivery and management regime.
 - Tier 2 - Strategic open space located outside of the development areas shown in the Framework Masterplan, to be incorporated into and delivered as part of development proposals.
 - Tier 3 – Proposed new strategic open spaces with a location that is largely fixed, with precise extents and design to be determined as a collaboration between the Council, developer(s) and other relevant stakeholders as part of future development proposals
 - Tier 4 - Smaller scale open spaces distributed throughout the residential development area, to be located, designed and delivered as part of individual development proposals. Applicants should demonstrate that they will deliver open space tiers 2, 3 and 4 as shown on the Open Space Tiers Plan, as an integral part of their proposals, including arrangements for enhancement and long term maintenance.
-

Source: Halstead Masterplan SPD, 2017

3.5 Proposed land uses

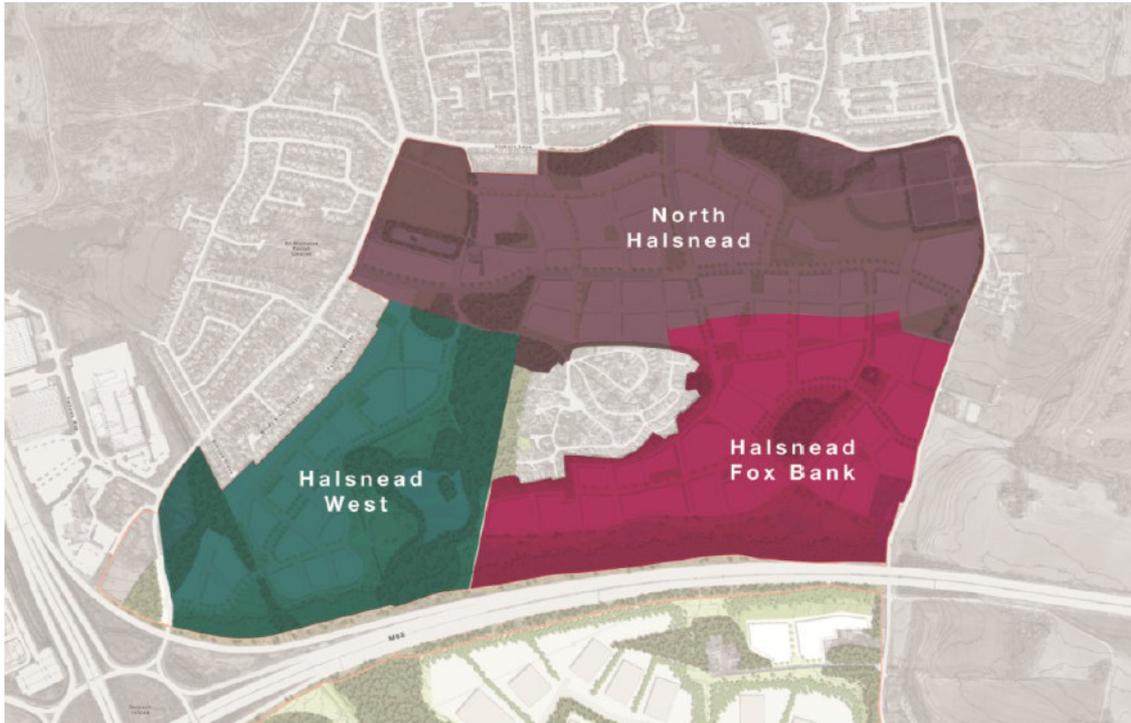
The Framework Plan sets out the outline spatial parameters that will form the foundations of all future development proposals in Halsnead, within Figure 6.1 of the SPD document¹⁹. Overall the site must deliver approximately 1,600 dwellings and a minimum of 22.5 ha of employment land, together with a Country Park.

The site is divided across the M62 motorway with approximately 60% of the site to the north of the M62 and the remaining 40% to the south. The site to the north is allocated for housing uses while the land to the south is primarily allocated for employment uses, with some housing, together with a Country Park. The plots to the north of the M62 are divided into three sections, North Halsnead, Halsnead West and Halsnead Fox Bank as shown in Figure 8 below. Halsnead

¹⁹ Halsnead Masterplan SPD, Knowsley Council, 2016, p.37

South on the opposite side of the M62 is a single plot comprising almost entirely of employment land, together with a Country Park.

Figure 8: Residential character areas: key plan



Source: Halsnead Masterplan SPD, 2016

Each of these plots have distinct characteristics which have been set out in the table below. These characteristics include the type of housing planned for the site, the housing density and additional features such as transport infrastructure identified as part of the masterplan.

Table 7: Summary of plots and development potential

Site	Halsnead West	Halsnead North	Halsnead Fox Bank	Halsnead South Bank
Housing density (dph)	30-40	35-45	30-35	n/a
Type of housing	Primarily family homes	Mix of housing types, including some apartments	Mix of housing types, typically 2-3 stories	A maximum of 30 houses
Employment space and type	None	None	None	22.5ha B8 industrial

Source: Halsnead Masterplan SPD, 2016

3.6 Market demand

The market demand study²⁰ undertaken to support the SPD provided the following evidence from housebuilders regarding the site:

²⁰ Halsnead Masterplan SPD: Market Demand Review, October 2016

- The location of the settlement in relation to key transport links, including the M62, the M57 and Whiston train station, and the accessibility of Halsnead to key employment areas, such as Liverpool and Manchester, is considered to be beneficial to the local market.
- Halsnead would also appeal to families if the appropriate choice of properties and quality of environment was provided.

Additionally, it is worth highlighting the following key conclusions in relation to the commercial development which helps to inform the assumptions for the economic impact analysis:

- There is strong occupier demand for industrial space across the country with modern, big box (i.e. 100,000 sq ft plus) facilities especially sought after and healthy demand for mid box space (i.e. 50,000-100,000 sq ft). Construction of modern distribution units has increased and most UK regions are seeing significant activity in the speculative market, including in the north west.
- Industrial land values and rental values have been increasing in the north of England despite Brexit although resulting tighter credit conditions for commercial developers and some investors may slow this down. Evidence from agents indicates that if occupier demand remains consistent there could be a shortage of supply in certain locations, which will further drive rental values up in the north west.
- Discussion with agents in relation to the local market and M62 corridor highlighted that:
 - Demand for industrial premises in the M62 corridor is strong with Omega Business Park considered a prime location with new and modern premises selling and leasing quickly. The existence of high profile businesses like Jaguar Land Rover acts as a draw for occupiers, such as suppliers, seeking to be located nearby. The nearby Warrington area and junctions along the M6 are particularly prime locations.
 - The Knowsley market is slightly weaker in comparison but the site still presents a good location with strategic connections and evident market demand.
 - Current and speculative development is focused on larger big box facilities with no smaller speculative units being developed.
 - In summary, the employment land at Halsnead would be well suited to deliver B8 warehouse, logistics and distribution units with the Knowsley market increasingly appealing to larger profile companies, such as Amazon and Matalan. Agents commented that the site is more suitable for larger units but the development of all types of units would lease and sell well in this location.

3.7 Phasing of the development

The indicative phasing of the development set out in the SPD is a 17-year construction period beginning in 2018. The total of 1,600 dwellings will be constructed at an average rate of 93 dwellings per annum (dpa) with a peak of 150 dpa in year 8, 2025. These figures are inclusive of affordable housing that must constitute 25% of all dwellings delivered, in line with the Local Plan.

The development of employment land on the site has not been given a phasing schedule in the SPD as it is anticipated to be private sector led, being delivered in response to market demand for sites in the area. Employment land on this site is not tied to the delivery of housing and is free to be developed in line with private sector demand, aside from the need for developers to demonstrate “a comprehensive approach to infrastructure delivery, including highways and utilities” in order to allow the entire site to be developed²¹. However, there is an indication within

²¹ Halsnead Masterplan SPD, 2016, page 142

the viability work that construction would begin in mid-2017 and be completed by mid-2021 across the four constituent land parcels.

3.8 Summary

Key points:

- Halsnead, the largest of Knowsley SUEs, is a large strategic development site which will provide housing to diversify and enhance the quality of the borough's housing stock and employment development to support the LCR key economic growth sectors (particularly the logistics sector).
- Market demand analysis, undertaken as part of the evidence base, demonstrates that the site is viewed as a sustainable, attractive, and accessible location by housebuilders and that the employment land will be well suited to deliver B8 warehouse, logistics and distribution units.
- Given this, Halsnead provides substantial scope to contribute towards the borough's identified housing and employment needs.

4 Economic impact assessment

4.1 Introduction

This section provides an assessment of the wider economic benefits of the transport scheme by unlocking development at Haslehead and is based on the draft SPD, viability work²² and indicative land uses for the site.

The wider economic benefits identified largely focus on the potential of the site once fully developed given the SPD, once adopted, provides the spatial framework for developing the site rather than specifics relating to delivery and phasing. However, indicative trajectory analysis is provided based on the viability work. The key inputs to the assessment are the draft SPD and the associated baseline documents, particularly the market demand review²³. This section is structured as follows:

- **Methodology** – sets out our approach, using Mott MacDonald’s in-house Transparent Economic Assessment Model (TEAM) and defines key terms such as additionality.
- **Temporary construction impacts** – details the temporary construction benefits from construction of the scheme itself and the housing and commercial development proposed on site.
- **Employment and GVA impacts** – related to the jobs and associated GVA created once the employment land is fully developed.
- **Housing impacts** – related to the housing trajectory for the site, contribution to Knowsley’s housing targets and the potential resident population once fully developed.
- **Value uplift analysis** – relating to associated benefits, modelled using TEAM, including tax receipts from the housing and employment created.
- **Trajectory and NPV analysis** – further detail on the potential phasing of the commercial development and the NPV of the associated benefits over time.
- **Land value uplift analysis** – assessment of the likely land value uplift from the development in accordance with the Department for Communities and Local Government’s (DCLG) Appraisal Guide²⁴ and Department for Transport (DfT) Web Transport Appraisal Guidance (WebTAG) Unit A.2.3.

Given the transport scheme, through providing access points and ensuring the highway network is resilient to the development, will ensure Haslehead goes ahead the net additional impact of the scheme is high. The treatment of additionality is further explained below (under 4.2 Methodology).

4.2 Methodology

4.2.1 TEAM methodology

The wider economic benefits have been calculated using Mott MacDonald’s TEAM, which assesses the economic benefits arising from land-use change, calculated in-line with HM Treasury Green Book principles of additionality. It is also aligned to draft WebTAG guidance on

²² Shared with Mott MacDonald on a Strictly Private & Confidential Basis

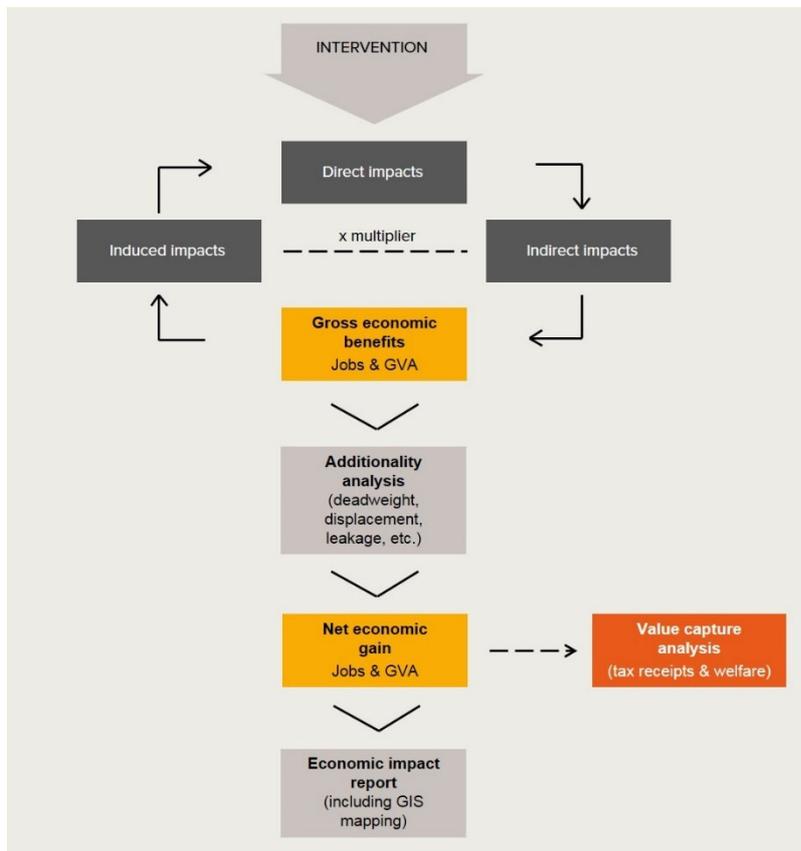
²³ Haslehead Masterplan SPD, Market Demand Review, October 2016

²⁴ The DCLG Appraisal Guide, DCLG, December 2016

supplementary economic modelling (TAG Unit M5.3) where it reflects the 'Additionality Modelling' approach.

The model assesses the core economic benefits of the associated land-use changes relating to jobs and GVA but also undertakes value capture analysis of financial benefits, including tax receipts and welfare savings from employment generation (Pay-As-You-Earn (PAYE) and National Insurance (NI)) and those from land use changes (business rates and council tax). The model uses Office of National Statistics (ONS) datasets alongside bespoke local area analysis, in this case for the North West, LCR and Knowsley, to inform specific assumptions. TEAM operates as follows:

Figure 9: TEAM methodology



Source: Mott MacDonald

The net economic gain to LCR from land use changes from Halsnead is captured by adjusting the gross impacts for additionality, that is *“the net, rather than [the gross impact of an intervention] after making allowances for what would have happened in the absence of the intervention”*²⁵. The assessment therefore adjusts the gross impacts by considering the following additionality assumptions:

- Deadweight: the level of economic activity that would have occurred without the intervention.
- Leakage: the level of benefits (i.e. jobs at Halsnead) that are likely to go to residents outside of the LCR.

²⁵ The Green Book, HM Treasury, p.52

- Displacement: the proportion of economic benefits that are displaced from elsewhere (e.g. through relocation of business activities to Halsnead).
- Multiplier impacts: knock on impacts within the economy from supply linkages due to purchases made as a result of the intervention and further purchases with linked firms along the supply chain (indirect effects) and income effects associated with local expenditure as a result of those who derive incomes from the direct and supply linkage impacts (induced effects).

The assumptions relating to additionality are fully referenced in the assessment below.

4.3 Temporary construction impacts

4.3.1 Capital costs

Halsnead scheme – infrastructure works

The total capital cost for the scheme is estimated at £19.8m covering improvements to Tarbock Island and the site access junctions and improvements to off-site junctions.

Halsnead – housing development

In addition to the scheme itself there will be a high construction cost associated with the build out of Halsnead – both the housing and commercial buildings on the employment land. Overall, using the viability work, the total construction costs for all the residential development (including Halsnead South) is anticipated to be in the region of £158.8m²⁶.

Halsnead – commercial development

Using the viability work the total construction cost of the commercial development at Halsnead South is estimated at £39.0m.

Overall cost

Considering the build out of the site (residential and commercial) and the construction of the road the total spend within the construction sector is in the range of £217.7m.

4.3.2 Results

Using TEAM and key assumptions relating to construction purchases, salaries, and national guidance the construction expenditure will support approximately 2,049 direct jobs years. This means that during the construction phase up to 2,049 construction employees in total are likely to be on site. Given, in standard HM Treasury guidance, one full-time equivalent (FTE) job is equal to 10 employment years, in total 205 FTE jobs will be created from the construction phase.

Clearly not all these jobs will be taken up by residents of the LCR and a leakage level of 25%, the medium rate from the HCA Additionality Guide²⁷, is assumed given the nature of the construction sector which tends to have a degree of specialist roles. Displacement is assumed to be zero given the project is unlikely to displace construction activity from elsewhere with spare capacity in the economy. Overall the total net direct jobs from construction is therefore 154 FTEs.

²⁶ Note this relates to the 1,589 units on Halsnead North, West and Fox Bank and 41 units on Halsnead South. These are the assumptions used in the viability work.

²⁷ HCA Additionality Guide 2014, p. 26

There are also multiplier impacts associated with these construction jobs given construction activity feeds into numerous other related business activities such as building materials, steel, architectural services, legal services, and insurance and most of these linkages tend to result in job creation in the local economy. In the absence of detailed input-output modelling, the composite multiplier (which captures both indirect and induced impacts) has conservatively been assumed to be 1.3. This multiplier is based on national guidance for estimating the likely scale of the composite multiplier at the sub-regional level.

Overall the construction phase of the transport scheme and development itself could support up to another 46 jobs and therefore the total net economic gain to the LCR associated with construction is 200 FTEs. Using an average GVA per worker figure of £44,000 for the North West this approximates to a net economic impact of £8.8m in GVA. Although these economic benefits will only last for the duration of the construction period they are significant given the scale of investment planned.

Table 8: Construction impacts

	Value	Formula	Source
Construction cost	£217.7m	(a)	Project information
% of cost spent on salaries	30.2%	(b)	Annual Business Survey, ONS, 2014 (North West Construction sector)
Salary expenditure in LCR	£65.7m	(c)=(a)*(b)	Calculation
Average mean salary	£32,089	(d)	Annual Survey of Hours and Earnings, ONS, 2016 (Full time mean wages in construction sector, North West)
Direct job years supported	2,049	(e)=(c)/(d)	Calculation
1 FTE=10 employment years	10	(f)	Best practice assumption
Direct jobs supported	205	(g)=(e)/(f)	Calculation
Leakage	25.0%	(h)	Assumed a medium proportion of the jobs will be filled within the LCR. But the level is higher than for the permanent jobs created given the nature of the construction sector. (HCA Additionality Guide 2014, p. 26)
Net direct FTEs	154	(i)=(g)- ((g*(h)))	Calculation
Composite multiplier	1.3	(j)	Composite regional multiplier value – low level used based on construction supply chains likely to be more dispersed. (HCA Additionality Guide 2014, p.39)
Indirect & induced jobs	46	(k)=((j)*(i))- (i)	Calculation
Total jobs supported in LCR	200	(l)=(k)+(i)	Calculation
Average GVA per worker pa	£44,000	(m)	Regional Accounts, ONS, 2015 and Workforce Jobs, North West, 2014 and workforce jobs, North West, ONS, 2014
Total GVA supported	£8.8m	(n)=(l)*(m)	Calculation

Source: Mott MacDonald

4.4 Employment and GVA impacts

The employment and GVA impacts have been calculated based on the employment land uses proposed for Halsnead South – 22.5ha of B8 industrial land. The detailed viability work has provided up to date Gross External Area (GEA) floorspace figures for B8 land uses which have been fed directly into TEAM.

4.4.1 Assumptions

The key assumptions used in the economic impact assessment relate to land use and additionality. These are fully detailed below and programmed into TEAM to calculate the associated jobs and GVA.

Table 9: TEAM: Key assumptions

Assumption	Level	Justification
Land use assumptions		
Gross External Area (GEA) floorspace	87,400 ²	Figures for the parcels of employment land in Halsnead South from the viability work.
Land use	B8	Draft SPD
Occupancy rate	90%	Given high levels of occupier demand currently evident in the market
Employment land density	77m ² of GEA/FTE	HCA Employment Land Density Guide, 2015. Based on Regional Distribution Centre density.
Additionality assumptions		
Deadweight	10-30%	The strategic infrastructure is clearly required to unlock the development of Halsnead. However, it is unwise to assume no development would come forward over the planning period but it is still deemed unlikely. Therefore, deadweight is set at 10% for all of the employment land except Parcel R, which is set at 30%, given this plot of land is being actively marketed already. There is a chance that this land could be developed without the infrastructure but it is unlikely and the investment would almost certainly accelerate delivery.
Displacement	15%	Reflecting high levels of occupier demand in the area and growth initiatives to build freight and logistics sector displacement is considered to be lower than that suggested in the guidance (25% for low displacement, Additionality Guide, p.30).
Leakage	14%	Based on travel to work flows approximately 14% of LCR jobs are filled by non LCR residents. Therefore, leakage is expected to be relatively low. This is also in line with the best practice ready reckoner (Additionality Guide, p.27).
Composite multiplier	1.44	Average linkages across the economy assumed, following guidance (based on evidence collected) on B2/B8 developments and the average ready reckoner values within the best practice guidance. (Additionality Guide, p.35-36).
Data assumptions		
GVA per worker	£44,000	Regional Accounts, ONS, 2015 and Workforce Jobs, North West, 2014 and workforce jobs, North West, ONS, 2014. In reality, the average could be higher for B8 use but the regional economy average is used to ensure conservative approach given level of unknowns relating to type of development.

Source: TEAM Mott MacDonald assumptions, various sources listed

4.4.2 Results

The economic impacts from the operational phase of the employment land at Halsnead being developed are displayed below, based on the site's full development and the assumptions regarding land use and additionality (described above). In total the site has capacity to provide in the range of 1,000 gross jobs and £44.9m of GVA pa once fully developed. At a net level, once adjusting for additionality, the economic gain is 922 jobs and £40.5m of GVA pa.

Table 10: Gross and net economic impacts, Halsnead employment land

	Number of jobs	Gross Value Added (GVA), £m
Gross direct impacts	1,022	£44.9
Net direct impacts	640	£28.1

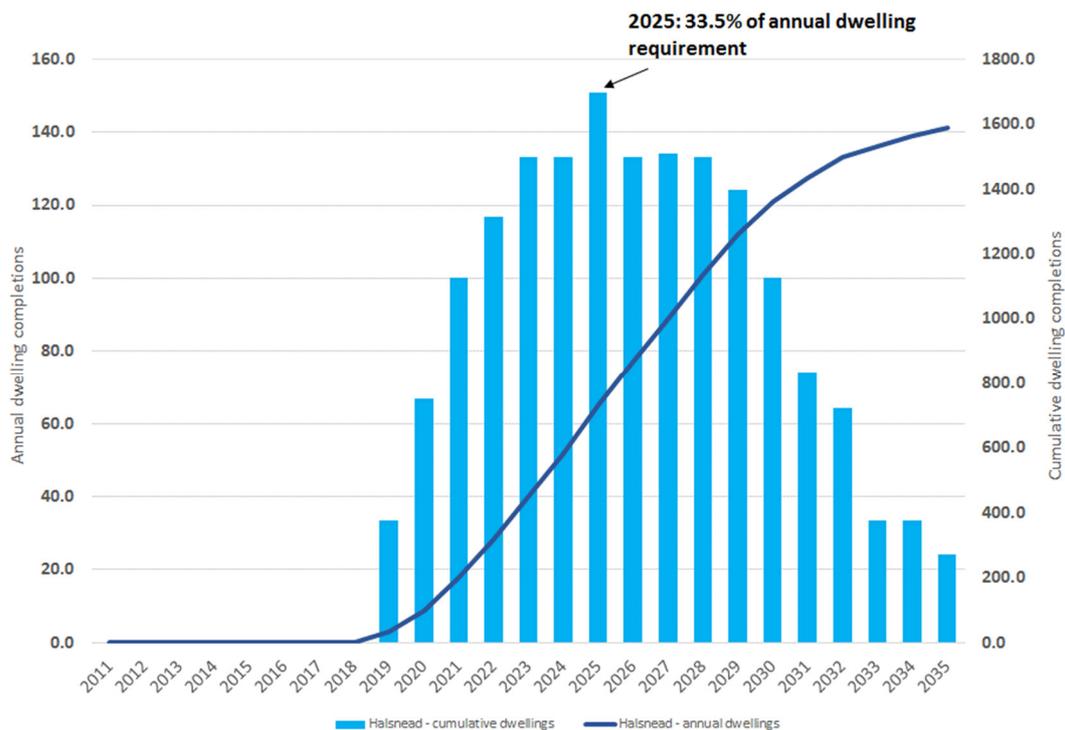
	Number of jobs	Gross Value Added (GVA), £m
Multiplier impacts	282	£12.4
Total net impact	922	£40.5

Source: Mott MacDonald

4.5 Housing impacts

Once fully developed Halsnead is anticipated to deliver approximately 1,600 houses, with a growth trajectory as shown below for the housing allocated to the land north of the M62²⁸.

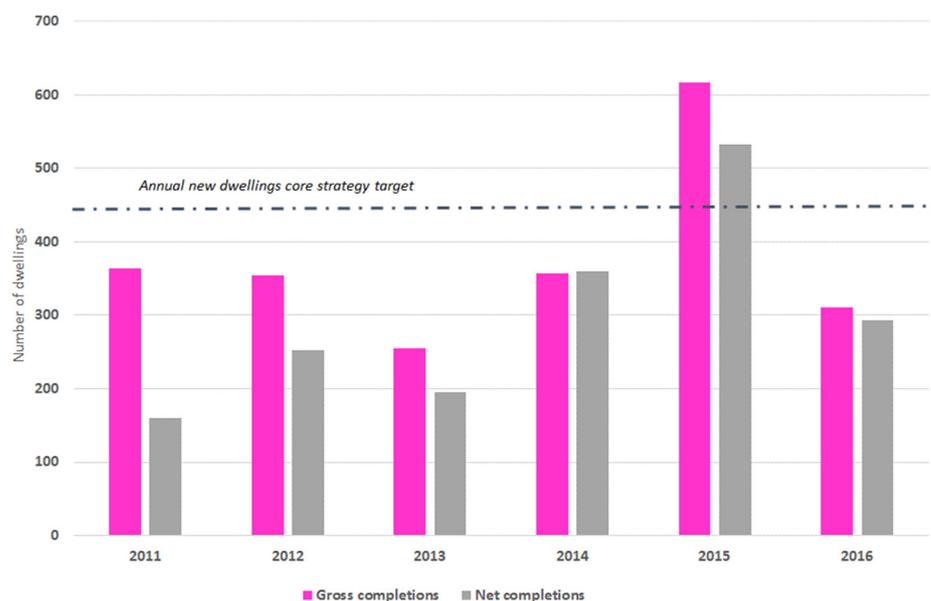
Chart 1: Halsnead indicative housing delivery trajectory 2017-2035



Source: Halsnead viability assessment, Mott MacDonald/Turleys

Clearly, the development will make a significant contribution to the overall housing requirements over the Core Strategy period and beyond of 8,100 new dwellings in total and 450 per annum by 2028. As can be seen below the overall number of gross dwelling completions in the borough has been significantly behind the 450 target since 2011 with the exception of 2015.

²⁸ The detailed viability work details the housing trajectory for 1,589 units on land to the south which this chart displays.

Chart 2: Gross and net dwelling completions – Knowsley, 2011/16

Source: Mott MacDonald using Annual Monitoring Reports evidence.

4.5.1 Residential population

Using an average household size of 2.3²⁹ for Knowsley the indicative overall resident population of Halshead, for 1,600 houses once fully developed, is in the range of 3,700 persons. The viability work also provides an indication of dwellings by size. Using the implied distribution by size, by combining the open market and affordable housing components, the following provides a more detailed assessment of the potential size of the resident population that could emerge from the development. Unfortunately, the Census does not provide data on household size by number of bedrooms but the sensitivity test below shows that the resulting population size is fairly similar even if the household size is adjusted and remains in the range of 3,600-3,700 persons.

Table 11: Dwellings by size and potential resident population

Dwelling type	Number of dwellings	% of total dwellings	Average household size assumptions		Resident population	
			Average	Adjusted	Average	Adjusted
1 Bed Flat	79	5.0%	2.32	1.0	184	79
2 Bed Flat	91	5.7%	2.32	1.0	210	91
2 Bed House	417	26.3%	2.32	1.0	967	417
3 Bed House	481	30.3%	2.32	3.0	1,115	1,443
4 Bed House	465	29.3%	2.32	3.0	1,077	1,394
5 Bed House	55	3.5%	2.32	4.0	128	221
Total	1,589	100.0%	2.32	1.0	3,681	3,646

Source: SPD and viability work, Mott MacDonald. 2011 Census used for average household size.

²⁹ 2011 Census

4.6 Value uplift analysis

The development of new housing and employment opportunities will also trigger several knock-on impacts in terms of associated tax benefits. These have been calculated here using the net job creation and housing estimates to calculate the following:

- **Employment related tax impacts** - associated with the net job creation. This covers the level of PAYE and NI generated from the development aligned to the proportion assumed as net additional to the LCR.
- **Property and land related taxes** – associated with the land use changes from house building (council tax) and the employment development (business rates).

4.6.1 Employment related taxes

Using TEAM, it is estimated that the creation of 922 net jobs could generate in the region of £9.1m pa employment related taxes, consisting of PAYE and NI (employee and employer) payments. This estimate is based on assuming:

- The income tax and NI tax rates set by Government.
- Applying an average salary of £30,444 for the LCR (Source: Annual Survey of Hours and Earnings (ASHE), ONS, relating to full time mean wages, 2016).

Although central government will capture these benefits they clearly show the development will make a significant contribution to tax generation from employment.

4.6.2 Property and land use related taxes

The development will contribute towards other taxes generated from the land use changes including council tax from the housing development and business rates from the commercial development.

Council tax revenue

The housing development on Halsnead is estimated to provide in the range of £2.1m pa of housing-related council tax revenue based on the following assumptions:

- Average house price of £208,000 for the open market sales element and £111,600³⁰ for the affordable homes element (using the latest average house price for Knowsley).
- Council tax bands by house value and band rates for Knowsley.

Business rates

The business activity generated by the Halsnead development is assumed to generate in the region of £1.2m pa of business rates. This is based on assuming the following:

- Applying the rateable value per m² for industrial use for Knowsley to the total developable floorspace – set at £28 per m² (source: Valuation Office, ONS, 2016).
- Applying the Department for Communities and Local Government (DCLG)³¹ multiplier of 0.497, which is the business rate (in £s) per pound of rateable value (set for England).

³⁰ Average house prices by local authority, region and nation, ONS, 2016

³¹ Business Rates Information Letter, DCLG, February 2016

4.7 Trajectory and NPV analysis

4.7.1 Commercial development

There are no firm guidelines as to how the employment space will build up over time with the SPD stating that although there is no requirement for specific phasing for the employment land, development will need to demonstrate a comprehensive approach to infrastructure delivery, including highways and utilities, to ensure the whole site can be delivered, and that no part of the site is sterilised by disproportionate infrastructure costs.

However, for the purposes of the viability assessment the overall construction periods for the parcels of employment land are considered with construction beginning in mid-2017 and being completed by mid-2021. Using the individual construction periods for each parcel of land and assuming that the employment benefits build up fully over 5 years of construction being completed the net present value of the benefits, over a 21 year period (2017-2038), would be in the range of £442.3m³². Considering the infrastructure costs of £19.8m the overall net present value of the costs and benefits is £423.8m. This compares to £75.3m of benefits under the counterfactual (do nothing, which assumes some commercial development comes forward despite the transport interventions not proceeding). Clearly given the level of development planned there are significant economic benefits that outweigh the public-sector funding requirement

4.8 Land value uplift analysis

Both DCLG and the DfT recommend that the benefits from unlocking development should be captured via estimating the land value uplift. Under the DCLG Appraisal Guide it is recommended that no monetary assessment is made of the employment impacts of a development given it is unlikely that one benefiting from government expenditure would do anything to increase aggregate employment. However, given that the SIF will be prioritised on projects that deliver job creation, increased productivity and support to LCR's key growth sectors (particularly Manufacturing and logistics) the focus of this report has been on the quantification of the jobs and GVA uplift associated with the commercial development at Halsnead at a LCR level. Despite this it is still important to include the land value uplift which captures the difference between the value of the land in its new use and its previous value and therefore the net private benefits of a development.

Three alternative methods have been undertaken to calculate the land value uplift including:

- a.) The DCLG approach as described in the appraisal using the data within the viability work that has been compiled for the Halsnead Supplementary Planning Document (SPD) relating to the gross development values and total development costs to derive the land value uplift.
- b.) The data within WebTAG that is provided from the Valuation Office Agency (VOA) on sub-regional per hectare residential land values (set as £1.5m per hectare for Liverpool).
- c.) Using data on land values obtained from the SPD Market Demand Review³³ which reported greenfield residential values to be in the range of £700,000-£750,000 per net acre (£1.7-£1.9m per hectare). Below the lowest value, £1.7m per hectare, is used.

³² A 21-year time horizon has been used in line with the viability trajectory work with an average duration of GVA benefits of 9 years. Although commercial buildings may last longer than 21 years the new businesses locating within them are likely to move on sooner than this and therefore this time horizon is a reasonable assumption. The average persistence of GVA benefits in general is perceived as 10-15 years (for references refer to Impact of RDA Spending, Department for Business Enterprise & Regulatory Reform, March 2009) and therefore this analysis is conservative. An average discount rate of 3.5% has been used in line with HM Treasury guidelines.

³³ Halsnead Masterplan SPD: Market Demand Review, October 2016, p.26

Using all three approaches the resulting land value uplift is calculated for the residential and non-residential components (for the latter only possible using the viability work) below.

Table 12: Land value uplift analysis

	Residential	Non-residential	Total
Method (a.): SPD Viability work	£62.1m	£25.7m	£87.8m
Method (b.): WebTAG default values	£105.5m	£0.0m N/A	£105.5m
Method (c.): Reported land values	£121.9m	£0.0m N/A	£121.9m

Source: Mott MacDonald

There are clear differences across the different approaches given the underlying land values which are difficult to conclude over given the level of unknowns. The viability work was undertaken for a different purpose and it is not necessary applicable in this case given:

- There is no evidence of recent current market activity relating to the Halsnead site to inform a valuation.
- There is no evidence of previous or current market activity in Whiston or Halsnead surrounds, due to the lack of sites, to inform a valuation.
- The current viability appraisal work that is being undertaken as part of the SPD is a high level exercise for a specific purpose (to demonstrate viability of the overall development in principle) and its authors advise that such will and should not be representative of land values.

Given this it is recommended that method b.) using the default WebTAG land values for Liverpool is used given the higher similarity with the reported land values expected by developers and that it is the lower of the two values. The figure does also exclude the commercial development given the lack of market data pertaining to anticipated commercial land values and absence of any default WebTAG value. This is a conservative approach and believed to provide a sufficient indication of the likely land value uplift.

4.9 Other wider economic benefits

There are several other wider economic benefits, qualitative in nature, that could arise from Halsnead which are summarised below.

Table 13: Other wider economic benefits of Halsnead

Qualitative benefit	Description
Provision of green space	Halsnead will also incorporate a new Country Park, linked by high-quality green corridors, and form part of an extensive network of Green Infrastructure. This will build and enhance on the Green Infrastructure and leisure and recreation facilities in the Borough and LCR, providing associated wellbeing benefits.
Construction sector – potential for training opportunities.	Given the scale of the development site there are clear opportunities for Knowsley to ensure that construction companies use local labour wherever possible and provide training opportunities such as Apprenticeships.

Source: Mott MacDonald

4.10 Summary

Key points:

- Halsnead will deliver significant economic benefits (jobs and GVA) to LCR through the creation of B8 employment space. Overall, once accounting for additionality,

these could be as high as 922 net jobs generating £40.5m of GVA per annum. Furthermore, over a 21-year time horizon from the development being completed the present value of such benefits could be as high as £442.3m.

- The associated tax benefits from the development amount to £9.1m pa of employment tax benefits (PAYE and NI), £2.1m pa of council tax benefits and the potential to generate in the region of £1.2m pa of business rates.
- The development will contribute significantly to Knowsley's overall housing requirements of 8,100 new dwellings over the Core Strategy period especially given historical housing completions have been behind the target of 450 per annum. By 2028 approximately 1,150 homes will be delivered at Halsnead, approximately 14% of the overall Core Strategy target. Furthermore, the housing, providing greater mix of family and executive homes, will diversify and enhance Knowsley's overall housing stock.
- Construction costs, including the infrastructure works and construction of the housing and commercial development, amounting to £217.7m will support in the range of 2,049 temporary construction employees. Taking into account any leakage and multiplier jobs and converting to full time equivalents the overall impact at LCR is 200 FTEs.
- There will also be several qualitative benefits associated with the development particularly the provision of green space and the opportunity to link the construction of the development with local training initiatives.
- The indicative land value uplift for the site is calculated as £105.5m once fully developed which is a conservative figure given the land value average used and that the uplift from the non-residential development is excluded.

5 Conclusions

5.1 Appointment

Mott MacDonald was commissioned by KMBC to support the development of the OBC for the Halsnead Garden Village housing scheme. The scheme consists of creating new gateway access points and measures to ensure adequate capacity and resilience of the highway network to enable comprehensive development at Halsnead to proceed. Halsnead is a major SUE which has been removed from the Green Belt to support Knowsley's development needs up to and beyond 2028 (the end of the Local Plan period).

5.2 Knowsley - key economic strengths and challenges

The advanced manufacturing and logistics sector is critical to LCR's growth ambition to create a freight and logistics hub serving an expanding Port of Liverpool. Halsnead offers a strategic development opportunity, tying closely with other initiatives and employment sites, to provide high quality employment space to support these objectives.

There is an established need to upgrade the existing LCR housing offer and regenerate the most deprived areas to provide an appropriate mix of housing to attract and support a skilled labour market. In Knowsley a high proportion of residents commute out of the borough demonstrating that there is a shortage of job opportunities for current residents. Halsnead is likely to provide not only a housing mix that can attract skilled labour and raise aspirations but employment opportunities across all skill levels and can contribute towards addressing the shortage of jobs.

5.3 Halsnead

Halsnead is a strategic employment and housing site for both Knowsley and the LCR. Located on the eastern side of the Tarbock Island Interchange, where the M62 meets the M57 and the Knowsley Expressway, Halsnead has the potential to provide a major new gateway entrance to the LCR. The site's draft Masterplan SPD³⁴ provides a spatial framework for the development of the site and is scheduled for adoption in June 2017. The development is anticipated to accommodate approximately 1,600 dwellings and at least 22.5ha of employment land, together with a new Country Park.

The scheme will create:

- High quality and all-purpose gateway access points to ensure high quality access is in place to the site and constituent plots, ensuring comprehensive development.
- Highway capacity improvements to mitigate the impacts of development traffic on the surrounding highway network to ensure that sufficient capacity exists on the strategic road network to accommodate the level of growth planned at the site and across the LCR.

Given the proposed scheme, through providing access points and ensuring the highway network is resilient to the development, will ensure Halsnead goes ahead and in a timely manner the net additional impact of the scheme is assessed to be high.

³⁴ Halsnead Masterplan, SPD, 2016.

5.4 Halsnead – wider economic benefits

Halsnead will deliver significant economic benefits (jobs and GVA) to LCR through the creation of B8 employment space. Overall, once accounting for additionality, these could be as high as **922 net jobs generating £40.5m of GVA per annum**. Furthermore, over a 21-year time horizon from the development being completed the present value of such benefits could be as high as £442.3m.

The associated tax benefits from the development amount to £9.1m pa of employment tax benefits (PAYE and NI), £2.1m pa of council tax benefits and the potential to generate in the region of £1.2m pa of business rates.

The development will contribute significantly to Halsnead's overall housing requirements of 8,100 new dwellings over the Core Strategy period especially given historical housing completions have been behind the target of 450 per annum. **By 2028 approximately 1,150 homes will be delivered at Halsnead, approximately 14% of the overall Core Strategy target.** Furthermore, the housing, providing greater mix of family and executive homes, will diversify and enhance Knowsley's overall housing stock. Overall it is anticipated that the housing development could provide housing to accommodate up to 3,700 additional residents within the Borough.

In addition, construction costs, including the infrastructure works and construction of the housing and commercial development, amounting to £217.7m will support in the range of 2,049 temporary construction employees. Considering any leakage and multiplier jobs and converting to FTEs the overall impact at LCR is **the equivalent 200 FTEs in the construction sector.**

There will also be several qualitative benefits associated with the development particularly the provision of green space and the opportunity to link the construction of the development with local training initiatives.