Economic Impact of HS2 Infrastructure Maintenance Depot at Staveley

Derbyshire County Council

FINAL REPORT

Prepared by Volterra Partners
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1. Executive Summary

1.1 This study considers the potential economic impacts of HS2's proposed Infrastructure Maintenance Depot (IMD), situated in the Staveley and Rother Valley Corridor (SRVC). More specifically the site of the IMD will be just south of the Chesterfield-Rotherham railway line, at the former Staveley Works chemical plant.

1.2 As part of HS2, there will be three IMDs. One will be situated on the London to Birmingham route for Phase One and there will be two on Phase Two, on the western and eastern legs. Staveley is the proposed site for the IMD on the eastern leg of Phase Two. The site is located in the borough of Chesterfield and the county of Derbyshire.

1.3 The IMDs will be used as bases from which to carry out engineering activities to inspect, maintain and renew the railway's infrastructure. The most relevant comparator for the proposed HS2 IMDs in the UK is the depot at Singlewell in Gravesham, Kent, which supports the same functions for High Speed One.

1.4 In this report we estimate the economic impacts of the proposed IMD at Staveley. This includes the likely job creation, considering both direct and indirect jobs, along with estimates of how these jobs might be disaggregated across occupations. In addition, the extents to which the depot would fit with skill levels in the local area, as well as with existing regeneration plans, are also discussed.

1.5 We conclude that construction of the depot could support around 70-75 full time equivalent jobs; once operational the depot could employ 200-250 full time equivalent workers; and if the depot is used as a construction site for HS2 it might support a further 260 jobs. Furthermore, it is estimated that around 20-25 indirect jobs could be supported locally by the depot, or 100-125 jobs regionally. This means that overall we estimate that the total impact of locating the IMD at Staveley could be in the region of 540-580 direct jobs, or up to 710 including indirect impacts and at a wider spatial level.

1.6 Considering just the full time jobs that would be supported at the IMD itself, an estimate of the occupational disaggregation was based on the situation at the comparator IMD at Singlewell. This analysis led to the conclusion that there could be between 25 and 30 managers based at Staveley IMD; between 65 and 80 elementary positions; and 115 to 140 employees in process, plant and machine occupations. Hence the majority, over 50 per cent of employees, would be operatives.

1.7 An appropriate commuter catchment for the site has been identified and we have then considered the skill levels of that local community. The methodology in deciding whether the local area around Staveley IMD would be suitable was to compare its characteristics with those of the catchment area of Singlewell IMD. We conclude that the skill levels of the local community around Staveley are well suited to the proposed IMD. The area has a relative abundance of lower qualified residents, who strongly resemble the description of a 'skilled blue-collar workforce'. We therefore conclude that it could be a beneficial employment generator for the local community.

1.8 Having reviewed the current regeneration plans for the area, we conclude that using the site for an IMD would disrupt the existing plans to some extent. At a high level, and based upon the land size and location of the IMD, we estimate that the land assigned to the IMD might displace around 255 dwellings and 10,000 sq m of proposed commercial

floorspace which, using high level assumptions about densities, could accommodate around 209 jobs. In addition it would also displace a negligible amount of proposed green space. Our analysis of the displacement of activity is based on a very high level consideration of the proportion of land planned for regeneration that would be lost to the depot. In reality the current location of the depot falls in the middle of the regeneration area and therefore it is likely that the disruption would be higher than this, as it could be difficult to rework regeneration plans to fit around the IMD. The Arup study considers in more detail how different potential layouts of the IMD could minimise the disruption to the regeneration plans.

1.9 There is a consensus that the depot site at Staveley would be used as a construction site for HS2. Based on conservative estimates about construction job creation in the area and associated expenditure patterns we estimate that the influx of construction workers would generate revenues for the local area, over the entire construction period, of between £1 million and £1.2 million.

1.10 There is potential for the Staveley commuter catchment to enhance the importance of transport and storage as an employment generator. In Singlewell's catchment 12 per cent of employees are based in the sector, compared with 4 per cent in Staveley's catchment. This suggests that there is scope for growth and specialisation in this sector in and around Staveley.

1.11 Our estimates suggest that the net benefit of the IMD, when comparing the direct employment once the IMD is operational against the employment planned as part of the regeneration of the area, would be -9 to 41 direct jobs set against a loss of land for dwellings. Arup's study suggests that the displacement of potential regeneration activity could be larger than this, due to the exact location of the IMD. However the IMD provides a definitive employment prospect, of appropriate skill levels for the local community, and brings with it associated benefits through the construction period of both the IMD itself and HS2 more widely.

1.12 In addition to the quantifiable job impacts of the proposed IMD, there are some further impacts that it could have, both positive and negative. Over recent years there has been significant investment in the canal, and future plans envisage 75 miles of continuous navigable canal waterways. These plans are aimed at enhancing it and making it an area that locals can be proud of. The current route for HS2 would cross the canal several times, disrupting these plans for the canal restoration. HS2 Ltd is currently in discussions with the Chesterfield Canal Trust in order to try to find potential solutions.

1.13 The location of the IMD would be on land which requires comprehensive remediation work. For this reason it would be likely to form a later phase of development and, as such, the IMD may be a very appropriate use for this site. Furthermore, planned improvements to the road infrastructure could potentially be made more viable, and thus possibly be brought forward, if the IMD is built at Staveley.

1.14 There is potentially scope that, with some realignment of the IMD site accompanied by re-planning of the regeneration masterplan, the loss of dwellings could be minimised and other proposed uses could still be accommodated. Arup have investigated a scenario in which the IMD is moved northwards slightly and the central spine road is realigned so as to pass to the south of it. They conclude that this option is the most optimal in terms of being in line with current regenerative objectives as set out in the SRVCAAP Preferred

Option. The loss of activity resulting from the IMD would be minimised under this scenario.

1.15 We therefore conclude that the IMD will have a positive impact on the area and should be supported but it is important to undertake further work and continue discussions with HS2 Ltd in order to ensure that it is made as compatible as possible with the existing regeneration plans.

2. Introduction

2.1 This study considers the potential economic impacts of HS2's proposed Infrastructure Maintenance Depot (IMD) at Staveley. Job creation is considered, as well as the extent to which the depot would fit with existing regeneration plans for the Staveley Works and Rother Valley Corridor (SRVC). We also consider the extent to which the opportunities provided by the IMD would match the skill sets of the local community.

2.2 Chesterfield Borough Council (CBC) and Derbyshire County Council are working closely together along with the principal landowner, Chatsworth Estate, in order to find an optimal solution. Put simply this involves finding a solution that maximises the benefits of the depot whilst minimising any adverse impacts. Volterra has produced this report for Derbyshire County Council, and complementary reports have been prepared by Arup1 (on planning) and URS (on highways), who are also reporting on the potential impacts of the depot.

2.3 The primary purpose of this study is to consider the job creation and economic impact of the proposed IMD at Staveley and how compatible this is with the local population and their skill levels. We have also considered at a high level the extent to which this could fit with existing regeneration plans for the area but this report does not consider alternative layouts for the depot which could minimise the disruption to the regeneration plans. The Arup study considers this aspect in much more detail. We refer to the Arup study in this report when it is relevant to consider the findings of that study alongside this one.

The Site and Surrounding Area

2.4 This report makes reference to both 'Staveley Works' and the 'Staveley and Rother Valley Corridor' (SRVC). For clarity, 'Staveley Works' is the term generally applied to the agglomeration of foundries, chemical plants and collieries that once operated in the study area. The SRVC is the term applied to the area subject to an emerging Area Action Plan, currently being prepared by CBC, i.e. a defined policy area. In broad terms, the most significant recent land uses were a pipe works on land to the west of Works Road and a chemical works on land to the east of Works Road and west of Hall Lane, north of the River Rother. Historic land uses are more fully described in the SRVCAAP Preferred Option (CBC, November 2012).

2.5 The SRVC is a former industrial hub situated in the north east of Derbyshire. From early ironworks the corridor grew to become an extensive network of collieries, foundries and chemical works. The settlements of Barrow Hill and Hollingwood were created to serve these heavy industries and the canal and rail lines were created to provide transport. The SRVC provided both a social and economic focus for the surrounding communities. The decline in traditional industries has resulted in the cessation of the majority of activities on the site, depriving the area of jobs and income. This economic decline has been accompanied by increasing levels of deprivation – the LSOA in which most of the SRVC is located features in the top decile (top 10%) nationally in terms of overall deprivation. As a result, regeneration of the area is one of the key priorities for CBC.

[1] Chatsworth Settlement Trustees: HS2 Infrastructure Maintenance Depot (Staveley) High Level Option Appraisal, January 2014

2.6 CBC published the SRVCAAP Preferred Option in November 2012. This followed publication of a 'Regeneration Masterplan' (Capita Symonds, March 2012) by Chatsworth Settlement Trustees. Both documents recognise that regeneration of the SRVC offers significant opportunities to the local area and the Borough as a whole but must be undertaken comprehensively if these benefits are to be maximised. This regeneration will be a long-term project, perhaps taking up to 20 years to complete. This is due to extensive work that needs to be carried out regarding remediation to deal with ground contamination, as a result of the site being used for heavy industry. So far, no major restoration work has been accomplished, and this is likely to be heavily influenced by funding issues. The site has however been largely cleared in readiness for preparatory works. For instance, above-ground structures have been cleared, including the removal of the 2,000m radius hazard notification zone previously associated with a chemical works on the site.

2.7 The SRVCAAP Preferred Option was published before proposals for the IMD were made public. CBC intends to publish a revised SRVCAAP Preferred Option, which seeks to accommodate an IMD, later in 2014.

HS2's proposed Infrastructure Maintenance Depots

2.8 As part of HS2, there will be three IMDs. One will be situated on the London to Birmingham route, at Thame Road in Buckinghamshire, for Phase One. There will be another on the western leg of Phase Two, at Crewe, with a further one at Staveley, which is located in the borough of Chesterfield and the county of Derbyshire, for the eastern leg. More specifically the proposed depot at Staveley would be built at Staveley Works, which is a brownfield site.

2.9 The IMDs will be used as bases from which to carry out engineering activities to inspect, maintain and renew the railway's infrastructure. Currently the construction period for the depot remains uncertain.

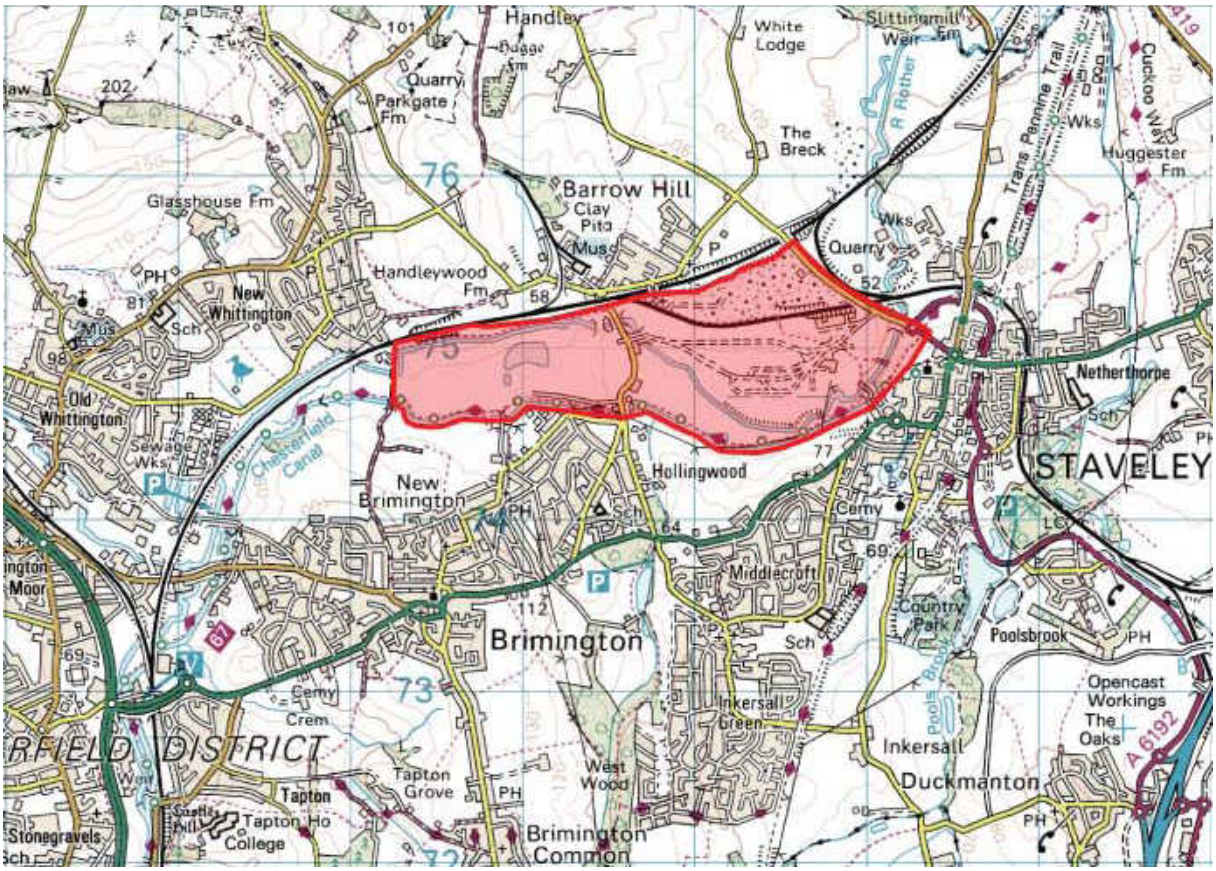
2.10 The most relevant comparator for the proposed HS2 IMDs in the UK is a depot at Singlewell in Gravesham, Kent. Morgan Sindall was awarded the contract to design and construct the depot and it was completed in 2007. It comprises office, workshop and maintenance buildings together with a rail spur off the main line, access road, car parking and hardstandings. The purpose of the depot is to support the onerous maintenance regime of Britain's first high speed railway and provides a maintenance facility with an administrative and records base, workshops and stores to maintain track vehicles, which is independent of existing railway facilities. The maintenance of the railway is undertaken from vehicles running along the tracks, which they access from Singlewell. The rail vehicles have a range of modules that can be attached to undertake the activities required and their day to day maintenance is managed on site. The depot is to the north of the Channel Tunnel Rail Link (CTRL). Other works within the depot include sidings, fuelling facility, training area, laydown area, and car parking.

Location of the Staveley IMD

2.11 Figures 1 and 2 below present the boundaries of the SRVC and the proposed site for the IMD. Although the IMD would directly occupy a relatively small proportion of the total

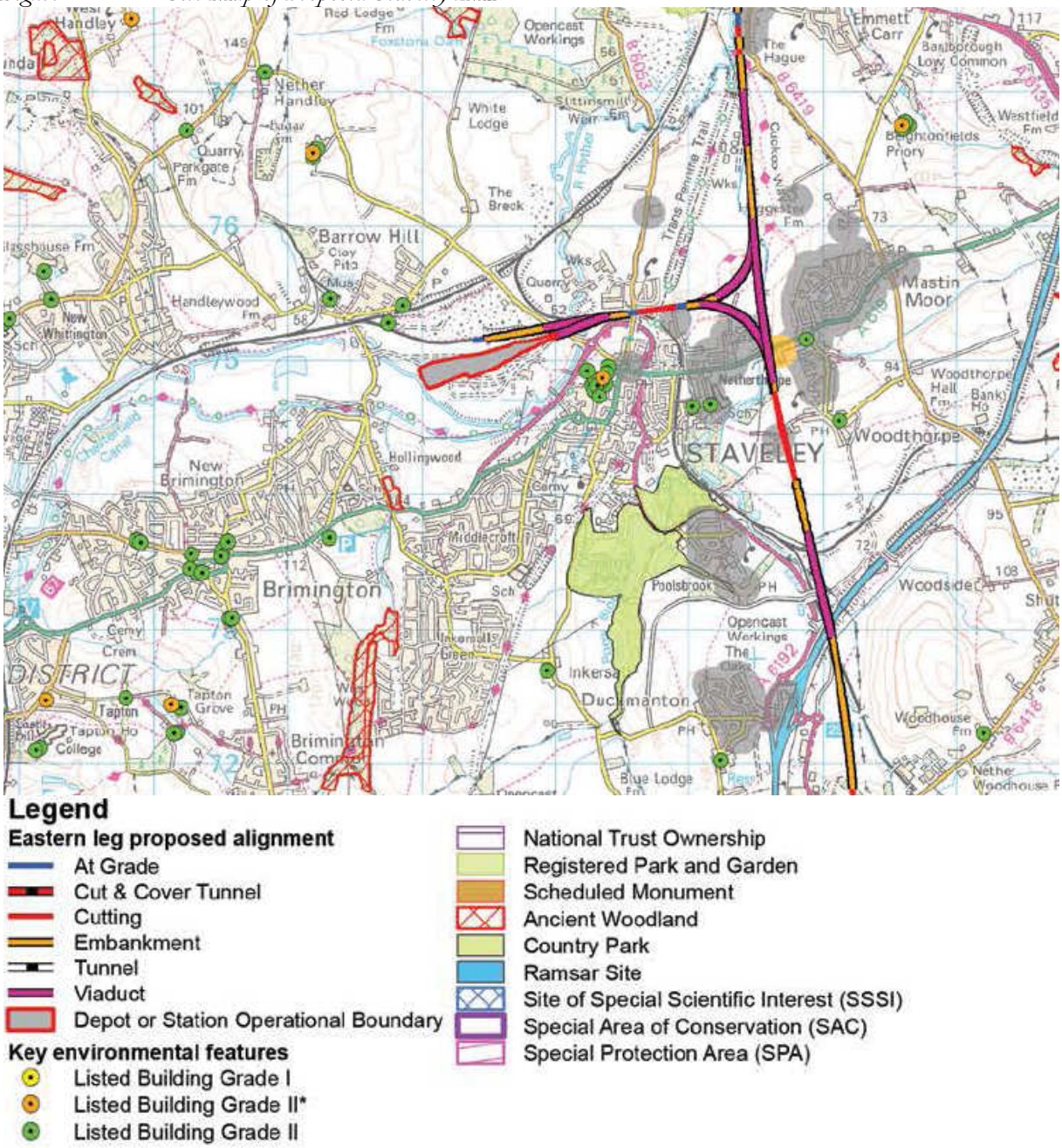
land area within the SRVC (15.5 hectares, 11.6%), its impact on the opportunity for comprehensive regeneration of the area would be of a far greater magnitude. This is because of the IMD's shape and location, cutting across different proposed land use areas and restricting the ability to provide much needed new infrastructure.

Figure 1 SRVC Boundary



Source: Staveley Works Area, Regeneration Masterplan, March 2012; Capita Symonds

Figure 2 Site Map of Proposed Staveley IMD



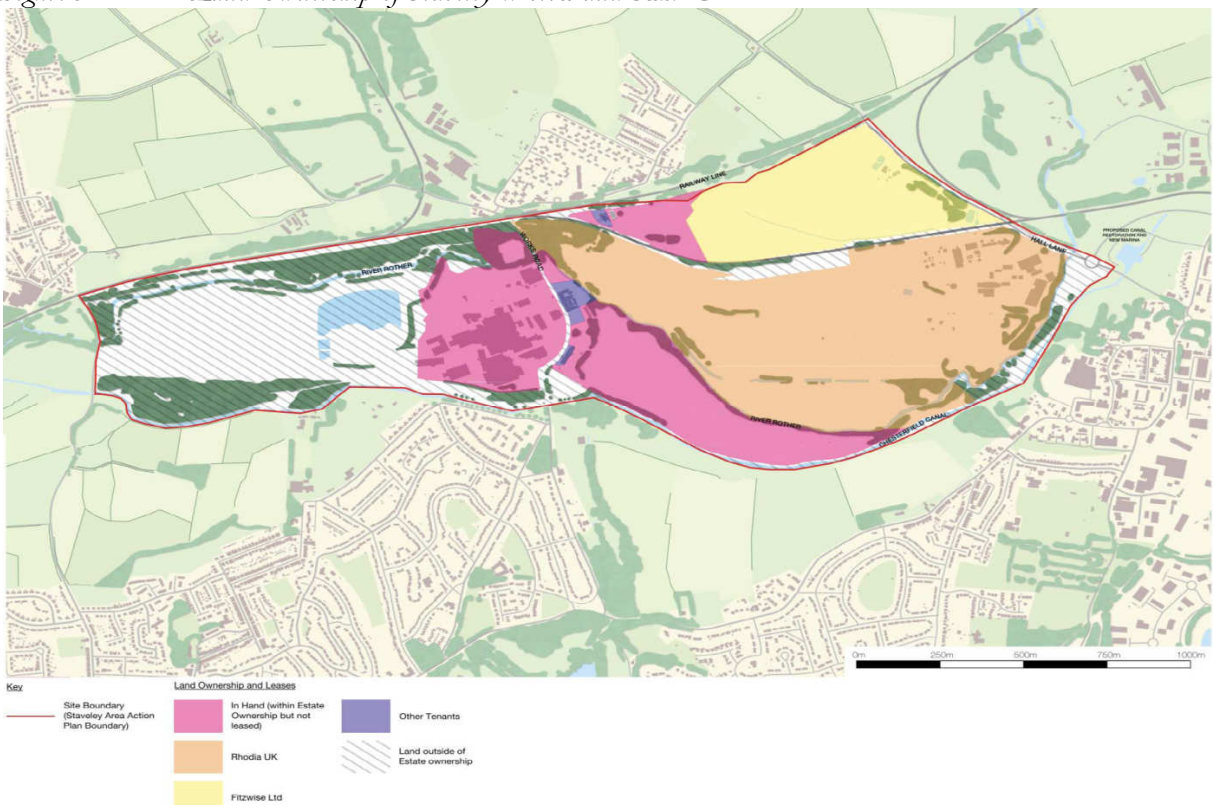
Source: Tibshelf to Killamarsh, HS2 Ltd

Land Considerations for the Area

2.12 Figure 3 shows land ownership across the SRVC. The Chatsworth Settlement Trustees have significant holdings, parts of which are leased to Rhodia UK Ltd. Rhodia's operations have largely ceased but they retain a long lease. Part of the Rhodia site is sub-leased to Mallinckrodt Chemical Works. However, that has also recently closed and the site cleared. The Clock Tower and Devonshire Buildings on Works Road have been retained and are used for a broad range of uses, including small workshops, business units and offices.

2.13 There is still a sizeable portion of the area that lies outside of Estate ownership; Saint-Gobain owns a substantial plot at the western end, along with a small pocket of land east of Works Road. Also Derbyshire County Council owns the Chesterfield Canal, which runs along the southern boundary of the Corridor, and specifically, to the south of the planned IMD site.

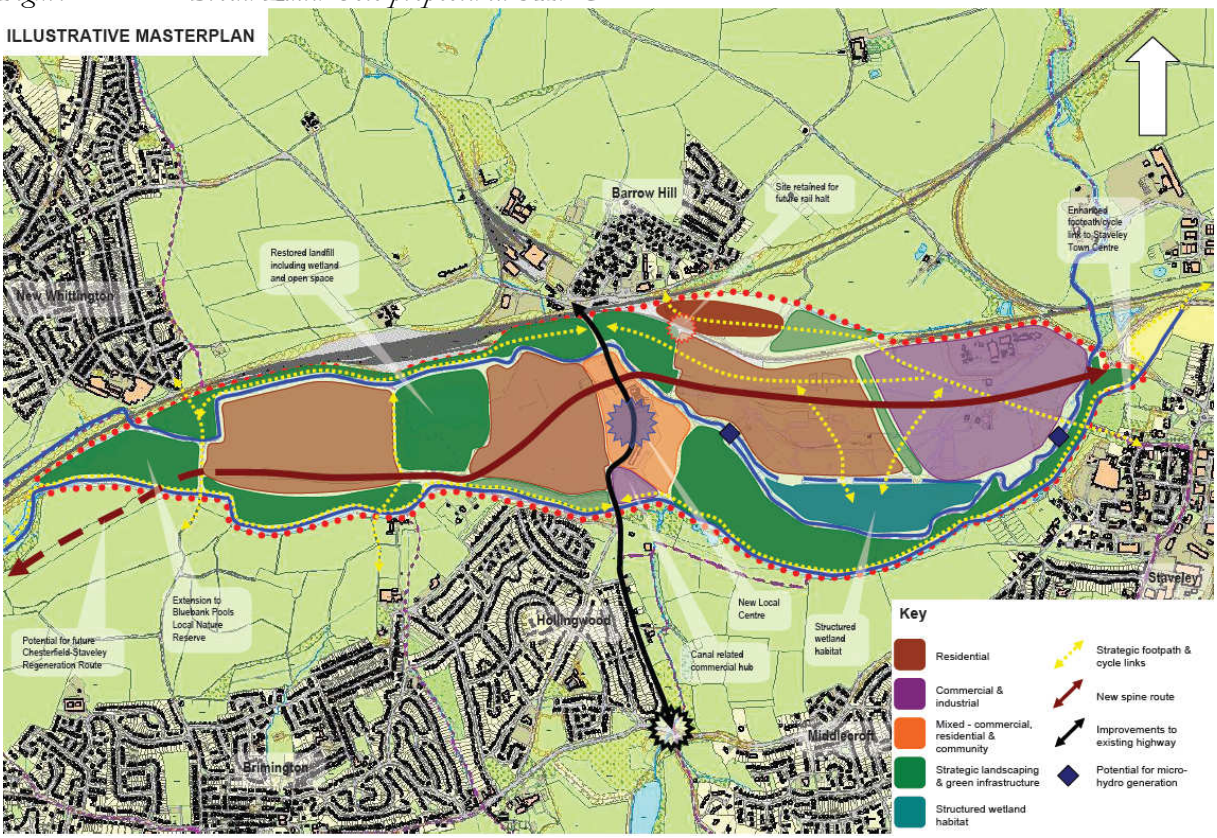
Figure 3 Land Ownership of Staveley Works and SRVC



Source: Capita Symonds; Regeneration Masterplan; 2012

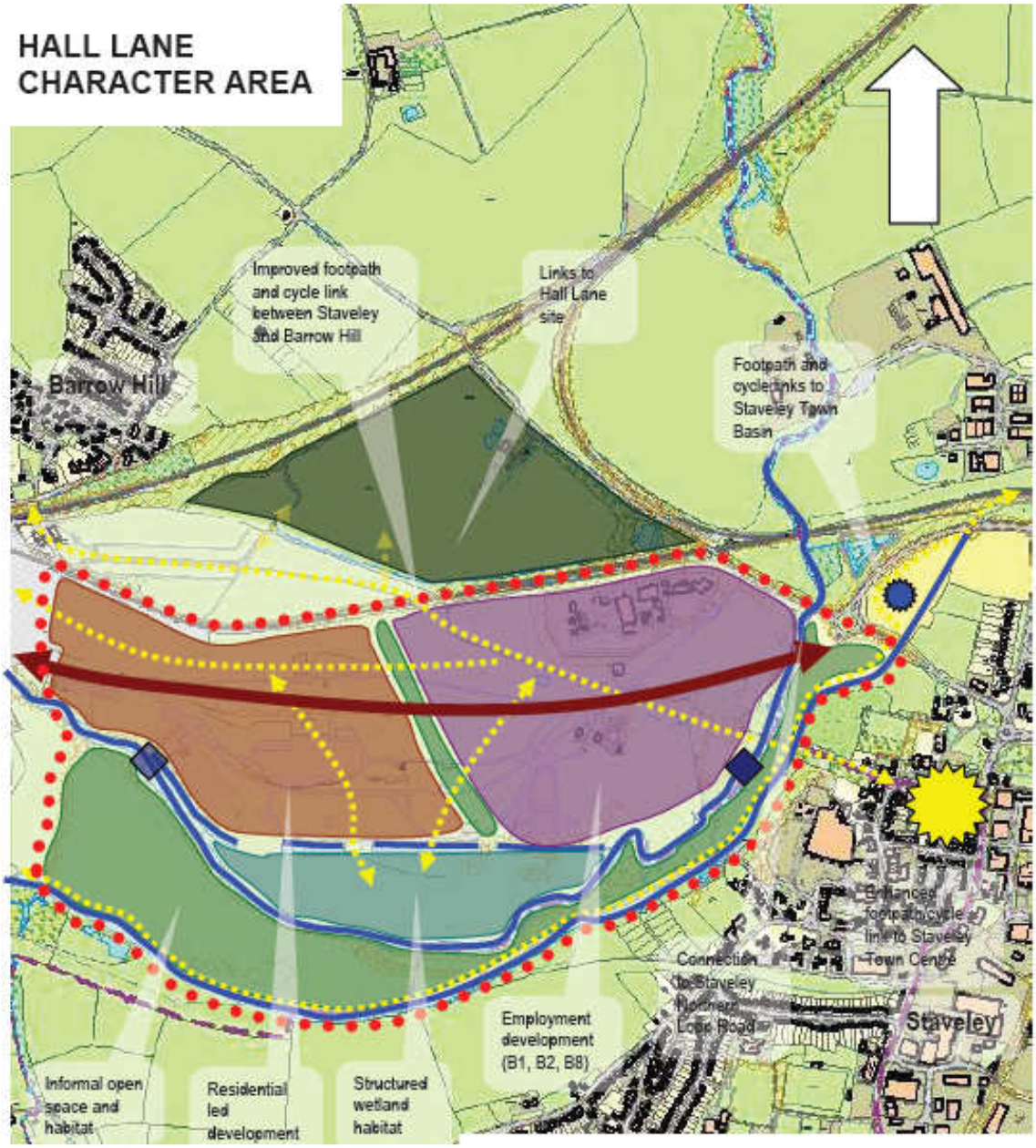
2.14 Figure 4 shows the broad land use types proposed for the site within the SRVCAAP. Figure 5 shows the Hall Lane Character Area, which is situated towards the eastern end of the SRVC and is the area within which the IMD is proposed.

Figure 4 Broad Land Uses proposed in SRVC



Source: Chesterfield Borough Council Preferred Option; November 2012

Figure 5 Broad Land Uses proposed in Hall Lane



Source: Chesterfield Borough Council Preferred Option; November 2012

2.15 The Hall Lane character area is situated in the eastern part of the SRVC with Hall Lane to the east and the canal and railway to the south and north respectively. This area was most recently occupied by chemical works by Rhodia UK Ltd and Covidien.

2.16 Hall Lane is physically very close to Staveley Town Centre, with a footpath connection via Mill Green and, once canal restoration work in this area is complete, Constitution Hill. Road connections to Staveley Town Centre are short, via Hall Lane. The area has excellent links to the highway transport network; due to the recently constructed Staveley Northern Loop Road, which provides links to Junction 29A of the M1 and Markham Vale Commerce Park.

2.17 Proposals for the IMD were made public after the publication of the SRVCAAP Preferred Option. The IMD has not therefore been incorporated into the latest proposals for the area. The proposed location of the IMD would however impose upon and cut across a number of different proposed land use types including residential, employment, green infrastructure and major highways infrastructure. Based on the emerging AAP, about 40 per cent of the IMD would be located on land identified for employment uses, a limited area on green infrastructure and a larger area on residential development. The construction of the IMD would therefore have an adverse impact on the delivery of comprehensive regeneration of the SRVC.

2.18 In this report, data is considered at various spatial levels, determined by availability but also suitability. Most of the SRVC is situated in the Lower Super Output Area (LSOA) of Chesterfield 003A. Hence data is considered in this LSOA, along with data at a ward, borough, district, LEP, regional and national level.

2.19 The next section, Section 3 of this report, estimates job creation associated with the IMD. Section 4 goes on to consider the compatibility of the proposed depot with the local community and Section 5 then considers how well the depot fits with existing regeneration plans for the area. Finally the Appendix also contains a detailed baseline assessment of the characteristics of the local area.

3. Job Creation as a result of the IMD

3.1 In this section we consider and estimate the quantifiable economic impact of the proposed IMD at Staveley in terms of job creation and spending. The most relevant comparator to consider is the existing IMD at Singlewell, which serves HS1, and we use this as a benchmark for much of our analysis. For this reason we begin this section with a brief description of the jobs supported at Singlewell.

Singlewell IMD on HS1

3.2 Singlewell IMD operates 24 hours a day and supports 145 full-time jobs.[2] We have estimated the split of these jobs across occupation types by reviewing Census statistics at a suitably small geographical area. The resulting estimate of occupational split is shown in Table 1 below.

Table 1 Occupation Disaggregation Estimates at Singlewell IMD; as a Percentage of Total

Occupation	%
Managers, directors and senior officials	12.3
Process, plant and machine operatives	55.8
Elementary	31.9

Source: 2011 National Census; Occupation by Industry

3.3 The total track length of the HS1 route is 108km, or 67.5 miles. This means that there are 21 jobs for every 10 miles of track on HS1.

3.4 In addition to direct jobs, there is some evidence that the IMD in Singlewell has attracted associated knock-on employment. The employment sector of Transport and Storage is important in the area surrounding Singlewell, accounting for about 12 per cent of employees. In comparison, at the national level, this sector accounts for just 4.5 per cent of total employment. At Singlewell IMD there is a security firm, LandSheriffs, which provides a service in ensuring the security of HS1. This company and the associated jobs would not have been located here without the presence of the Singlewell depot. The company employs over 50 SIA licensed guards on permanent contracts.

Job Creation at Staveley

3.5 In evidence that we have seen to date, there are not any concrete estimates of the job numbers that are expected to be generated by the IMD at Staveley. According to Derbyshire County Council, estimates have ranged at between 200 and 500 full time positions and HS2 Ltd has stated that they will be mostly local.

3.6 HS2 Ltd has estimated the number of direct jobs that will be generated by the IMD at Calvert, in Buckinghamshire. This will serve the London to Birmingham section of HS2 (Phase One). HS2 Ltd forecast that over 500 jobs could be generated, with 300 involved in its construction and a further 250 involved in its day-to-day running[3]. It is important to

[2] Source: http://www.kentrail.org.uk/singlewell_imd.htm

[3] Source: HS2's Infrastructure Maintenance Depot, HS2 Ltd

note that HS2's assertion of the number of construction jobs is relatively unspecific at this stage and so it is likely that it could include not just direct construction jobs, but also indirect jobs from construction, along with other occupations involved in the construction process. This could include the logistics and management of the project. Furthermore there is a consensus that the IMD site would be used as a construction site for the HS2 line[4], which would create additional jobs.

Construction

3.7 There are no figures on how much the IMD at Staveley will cost to construct. However, Arup was commissioned to undertake an assessment of the site options for the IMD on the London to Birmingham section. They found an IMD at Thame Road in Buckinghamshire to be the most preferred option and the cost of this was estimated at £45.6 million[5]. Without further information on the likely cost of the IMD at Staveley, we estimate that its construction would cost a similar capital sum. Based on figures for output per construction worker in Derbyshire, this suggests around 700-750 construction 'job years', or 70-75 full time equivalent jobs would be supported by the construction of the IMD.

3.8 It is standard to present construction jobs in terms of full time equivalents, so that they can be compared against permanent jobs that are created once a development is operational. However the nature of construction jobs is that they are usually temporary and can vary significantly in terms of skill levels and contract lengths. This means that jobs created by construction projects are lumpy in nature, with very large numbers employed for relatively short periods of time. We do not know the likely construction length of the depot but if we assume that it would be two years, then we can assume that there would be around 350-375 construction workers on site on average throughout this period. This is a significant employment impact for the Staveley local area.

3.9 When estimating the impact of construction workers, it is standard to consider the expenditure that they might be expected to make in the local area. It is standard to assume that they work 220 days a year, spend £5 a day, with 40% leakage. In other words, on average, they spend £3 out of every £5 in the local area each day they work. The construction of the IMD would therefore create £460k-£500k of additional spend in the local economy over the construction period. This would help to boost the incomes of local shop owners, who most likely will live in the area.

Operation

3.10 A high level method of estimating the jobs once Staveley IMD is operational would be to use track length as a proxy. Since the purpose of the IMD is to maintain the infrastructure, which includes the train track, then this seems like an appropriate proxy for likely activity. As mentioned previously, there are 145 people employed at the depot in Singlewell serving HS1. The total length of the HS1 route is 108km, or 67.5 miles, translating into 21 jobs for every 10 miles of track.

3.11 The same calculation can be carried out based on the estimated jobs at the proposed IMD at Calvert, serving Phase One of HS2. Here 250 jobs are expected to be generated

[4] Source: HS2's Infrastructure Maintenance Depot, HS2 Ltd

[5] Source: High Speed 2 Infrastructure Maintenance Depot, Arup; March 2011

at the depot and the route length is about 140 miles and so this translates into 18 jobs for every 10 miles of track on HS2 Phase 1.

3.12 There will be 116 miles of track on the Eastern leg of HS2 Phase Two; the section that will be served by the depot at Staveley. Using the Calvert and Singlewell benchmarks would result in an estimate of 207-249 jobs for the depot at Staveley.[6]

3.13 Therefore based on this simplistic assumption, we estimate that between 200 and 250 jobs would be generated. We have also estimated that the construction of Staveley would support around 70-75 FTE jobs, so this would bring the estimate up to 270-325. Thus the previous estimates for direct jobs of 200-500 seem plausible, although our estimates are at the lower end of this range. The upper 500 estimate may have included indirect jobs which we go on to consider later in this section.

Job Types

3.14 It is important to be able to have an idea of what can be expected, in terms of the breakdown of jobs created at the depot in Staveley. There is currently no disaggregation available of the jobs at the proposed IMD at Staveley, or those proposed at Calvert for the Phase One IMD, in terms of the type of job and the level of education and training necessary to be able to undertake it effectively.

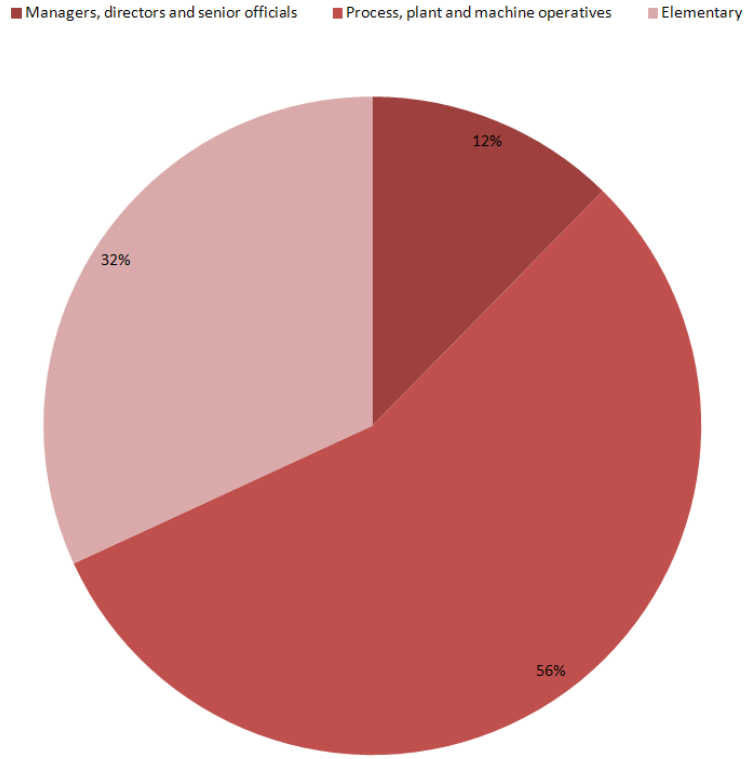
3.15 However in order to gauge the types of jobs that might be involved, we look into more detail at those employed at the IMD at Singlewell. Its employees are engaged in skilled manual and managerial occupations[7]. It can be assumed that the types of occupations at Staveley IMD will be very similar, as the depots provide equivalent functions to their respective high speed rail networks.

3.16 In order to find out the likely distribution of jobs across these different categories for Singlewell, a suitable geographical area was selected; namely, the Middle Super Output Area of Gravesham 010 in which the Singlewell depot is located. The majority of the workforce can be expected to live locally and so this selection appears credible. Next we disaggregate the jobs into the three most relevant categories – elementary; process, plant and machine; and managerial. The pie chart below shows the resulting estimated distribution of jobs across occupation.

[6] Sources: Wikipedia and HS2 Ltd

[7] Source: http://web.gravesham.gov.uk/democracy/Data/Rail%20Link%20SubCommittee/20050913/Agenda/Agenda.pdf

Figure 6 Estimated Occupation Types at Singlewell Depot



Source: 2011 National Census; Occupation by Industry and Volterra calculations

3.17 Applying this distribution of jobs to the estimated job numbers at Staveley, would result in that there would be between 25- 30 managerial positions, 66-80 elementary positions and 116-139 process, plant and machine operatives.

Supply-Side Effects

3.18 In addition to direct jobs there will be a supply chain effect initiated by the depot at Staveley. Companies that are in a relevant industry will stand to benefit. More generally, any company that can become part of the supply chain or increase its output in the supply chain will boost their own fortunes. Some of these supply chain impacts could be located anywhere across the country and others may choose to co-locate which would have larger knock on benefits for the local area. For example at Singlewell IMD there is a security firm, LandSheriffs, which provides a service in ensuring the security of HS1. This company and the associated jobs would not have been located here without the presence of the Singlewell depot. The company employs over 50 SIA licensed guards on permanent contracts.

3.19 In addition there will be firms that supply the parts required for maintaining the track. In particular, there is a small rail engineering firm located in the Barrow Hill area. It could stand to benefit from a depot in the vicinity. Furthermore, as jobs are created, residents will have greater disposable income and so their consumption will rise. This will lead to a multiplier effect as this extra income circulates throughout the economy.

3.20 With these impacts in mind, in this section we calculate indirect jobs. The standard method to do this is to apply a multiplier figure to the estimate of direct jobs. In order to

be conservative we use the lower of our estimates for the direct jobs figure, namely 207 (our earlier estimates ranged from 207-249 depending on the method used).

3.21 There are a variety of different factors which need to be considered to thoroughly undertake this assessment. These are deadweight, displacement, leakage and multipliers. Deadweight, displacement and leakage are factors that are taken away from direct jobs to estimate net jobs. Deadweight refers to any activity that would occur anyway without the proposed investment; displacement refers to the number of jobs that are displaced from elsewhere in the economy; and leakage refers to the number of jobs that will be taken up by people outside of the area of interest. Multipliers are in addition to direct jobs and are a method for estimating the knock-on indirect impacts resulting from the net direct jobs created. The IMD jobs would not be created without the delivery of HS2 and so we assume displacement is zero. Given the nature of the project and the types of jobs created, we believe most jobs will be local. This can be inferred from commuter areas which are discussed in the next section of this report. It points to the fact that most employees living within the catchment would be working in the ward. The occupations used in calculating the catchments resemble the types of jobs that can be expected at the depot. We therefore assume zero displacement and leakage.

3.22 There is currently no activity on the site that would be lost as a result of development here, and so it is appropriate to assume zero deadweight. However later in this report we specifically consider what the regeneration plans are for this area and therefore what alternative uses may not occur in the future as a result of locating the IMD here.

3.23 Multipliers are a standard method for estimating the number of indirect jobs created in addition to direct jobs through supply chain and income impacts. It is standard to estimate these at both the local and regional levels. We use the average local multiplier proposed by guidance[8] which is 1.1, and the average regional multiplier which is 1.5. This means that for every 100 direct jobs created, 10 further indirect jobs are created locally, and 50 regionally (including the 10 created locally).

3.24 Using this method, a total of 228-274 local jobs is therefore estimated, as shown in Table 2. There would be 21-25 indirect jobs created in the local area as a result of the IMD. At the regional level, the total jobs would be 310-373, with 103-124 indirect jobs created at the regional level. Note these jobs are those precipitating from the operational phase of the depot – they exclude any employment created by construction activities.

[8] Source: Additonality Guide, English Partnerships

Table 2 Indirect Jobs

Assumptions	Base scenario	Higher scenario
Deadweight, displacement and leakage	0	
Local Multiplier	0.1	
Regional Multiplier	0.5	
Gross Direct Jobs	207	249
Estimates	**Base scenario**	**Higher scenario**
Local Direct Jobs	207	249
Local Indirect Jobs (multiplier at local level = 1.1)	21	25
Total Net Local Jobs (direct and indirect)	**228**	**274**
Regional Indirect Jobs (multiplier at regional level = 1.5)	103	124
Total Net Regional Jobs (direct and indirect, including local impacts)	**310**	**373**

Source: Volterra Calculations

Use of the Depot Site as a Construction Site for HS2

3.25 There is a consensus that sites, which are allocated to depots proposed as part of HS2, will also be used as sites for the construction of the line itself. In particular, these sites will be used as bases from which construction will take place. This clearly will have an impact on the local area in and around the SRVC – both positive in terms of construction workers spending money in the local economy and negative; there could be negative externalities such as noise pollution.

3.26 Additional expenditure by construction workers has been estimated. There will be 10,000 construction workers, according to HS2 Ltd[9], in the cities of the Midlands and North. Based on the current distribution of construction workers, around 60 per cent will be based in the East Midlands, which therefore equates to 6,000 workers. This figure includes the construction of both the line and hub station at Toton. If it is assumed that there is a 60/40 split[10] in favour of stations, then around 2,400 jobs will be created in the East Midlands associated with building the line. We make a further assumption that there will be a construction site for HS2 every 20km. The total length of the HS2 Phase 2 line is 116 miles, or 185.6 km. Based on these assumptions, this site would have around 260 FTE construction workers in the local area, spending money. It should be noted that we believe these assumptions are appropriately conservative and it could be the case that considerably more construction workers are located in the area, depending upon how the construction is managed and planned.

3.27 We use the same local expenditure assumptions set out in paragraph 3.9 in order to estimate the expenditure of these construction workers in the local area. Over the 6-7 year construction period, we therefore estimate that the use of the site as a construction site for the HS2 development would create around £1.7 million of additional spend in the local economy. This would help to boost the incomes of local shop owners, who most likely will live in the area. As businesses benefit, so too would employees. Note that

[9] Source: http://www.hs2.org.uk/what-hs2/economic-benefits-jobs

[10] For the purposes of this assessment, we view this as a conservative assumption as it assumes that the construction of stations involves considerably more workers than the construction of the line.

another way in which this assessment is conservative is that the jobs assumed are just for the East Midlands, but the track length is for the whole of the Phase 2 section.

Total Jobs

3.28 We have estimated direct job creation at the proposed IMD at Staveley (207-249), indirect job creation locally (a further 21-25 jobs), indirect job creation regionally (103-124 including the local indirect jobs), direct construction employment associated with building the depot itself (70-75 jobs), and finally job creation that we might expect in this area resulting from the overall construction of Phase 2 of HS2 (260 jobs). This means that overall we estimate that the total impact of locating the IMD at Staveley could be in the region of 540-580 direct jobs, or up to 710 including indirect impacts at a wider spatial level. Whilst we have tried to be conservative wherever possible, it should be noted that some of the wider construction jobs could bring benefits to the local area even if the IMD is not located at Staveley.

3.29 All jobs are reported in terms of FTEs as this is the standard method for evaluating the impact of development proposals, and it enables jobs from different aspects to be summed together. However it is important to note that construction jobs tend to be of a temporary nature compared to most other jobs. In particular, construction workers tend to have contracts which mean that work is concentrated over a relatively short time with high volumes working on a particular construction site. Construction years arising from building the depot amount to 700-750 and for use of the site as a construction site, around 2,600 construction years of employment can be expected. Over the 6-7 year construction period the average number of construction workers on site would be 370-430, although this would be expected to peak at levels much higher than this during the busiest part of the construction phase.

3.30 The table below summarises all of the job impacts discussed in this section. For the purposes of direct comparison, all job estimates are presented as full time equivalents. There could also be indirect jobs as a result of the construction impacts, which could be estimated using the same multipliers but we do not estimate those here, because construction jobs are typically less local in nature and the primary focus of this report is the estimate of impacts at the more local level.

Table 3 Summary of Jobs impact estimates

Type of job	Range of estimate (FTE)
Direct jobs at the IMD	207-249
Direct jobs through construction of IMD	70-75
Direct jobs through use of site during construction phase	260
Total Direct Jobs	**537-584**
Indirect jobs at the local level	21-25
Indirect jobs at the regional level (including local level)	103-124
Total Jobs (direct and indirect, at the regional level)	**640-708**

Source: Volterra calculations

3.31 In the next section we consider the compatibility of these jobs with the skill levels of the local workforce.

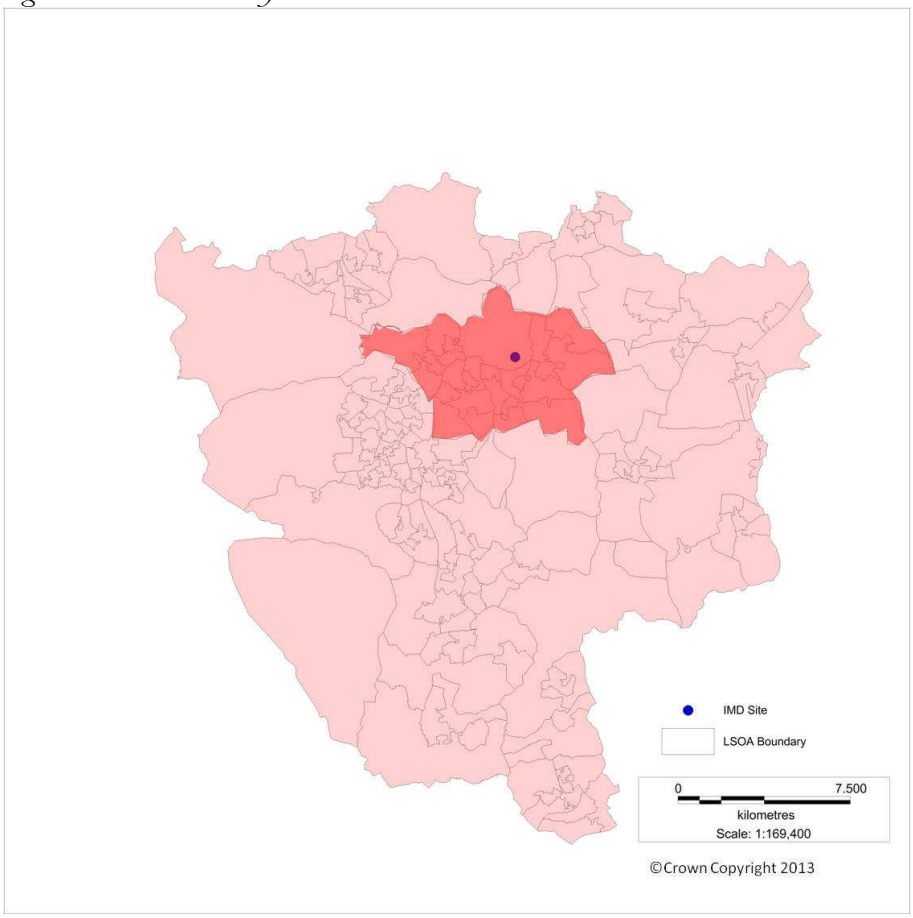
4. Compatibility of IMD with Local Population

4.1 In this section we consider the extent to which the skill levels in the local community are well matched to the types of jobs that will be created at the IMD at Staveley. In order to do this, we consider the likely area from which the majority of commuters will travel to work at the depot. This is defined in the next section. We then define a similar commuter catchment for the Singlewell depot, and finally we compare the skill levels of the working population around Singlewell with the potential commuter catchment around Staveley. We find that the two population types are of similar skill levels, suggesting that the depot could be well matched with the local community.

Commuter Catchment Areas

4.2 A commuter catchment area is typically defined to be an area that captures a large proportion of the people who commute to work in a given location. Figure 7 shows the commuter catchment that we have defined for Staveley IMD. It was defined such that the weighted average of the percentage of workers in Barrow Hill and New Whittington (the ward where the Staveley depot will be) also living within the commuter area equalled between 60 and 70 per cent. In other words, the area was defined such that the majority of people working in relevant industries in the ward also resided within the catchment zone.

Figure 7 Staveley IMD Commuter Catchment



Source: UK Travel Flows, 2001 National Census, ONS, Volterra calculations

4.3 There were three occupation types involved, shown below in Table 4, in determining the commuter catchment of Staveley IMD. To calculate the weighted average, proportions in each occupation were based on the estimate of the occupational distribution at Singlewell IMD which was detailed earlier in this report and shown in Figure 6.

4.4 Workers in Barrow Hill and New Whittington that also live there comprise more than half of the workers living within the commuter catchment. Furthermore, 51.5 per cent of managers in Barrow Hill and New Whittington live within the commuter area, with 61.4 per cent of operatives and 74.8 per cent of elementary occupations also living within the commutable catchment. This is intuitive since, in general, managers and senior officials will be willing and able to travel further distances to work than their less skilled/qualified counterparts as the financial reward, i.e. their salary, is more lucrative.

4.5 One figure does stand out and that is the percentage of managers and senior officials working in Barrow Hill and New Whittington, that also reside there (38.9 per cent). This is very high. However, it could be a positive sign since it suggests any managerial posts created could be taken by local residents.

Table 4 Percentage of workers living within Commuter Catchment, by Occupation

CAS 2003 Ward of Residence	All Jobs	Managers and Senior Officials	Process, plant and machine operatives	Elementary occupations
Barrow Hill and New Whittington	35.5	38.9	20.1	36.9
Hollingwood and Inkersall	8.7	2.9	19.1	8.6
Brimington South	4.3	2.9	4.7	6.6
Brimington North	3.3	1.7	5.4	6.1
Old Whittington	2.9	1.7	1.7	10.1
Middlecroft and Poolsbrook	2.7	1.7	5.4	4.0
Lowgates and Woodthorpe	2.6	1.7	5.0	2.5
Commuter Catchment Area	60.0	51.5	61.4	74.8
Weighted Average for Commuter Area	**64.4**			

Source: UK Travel Flows, 2001 National Census, ONS

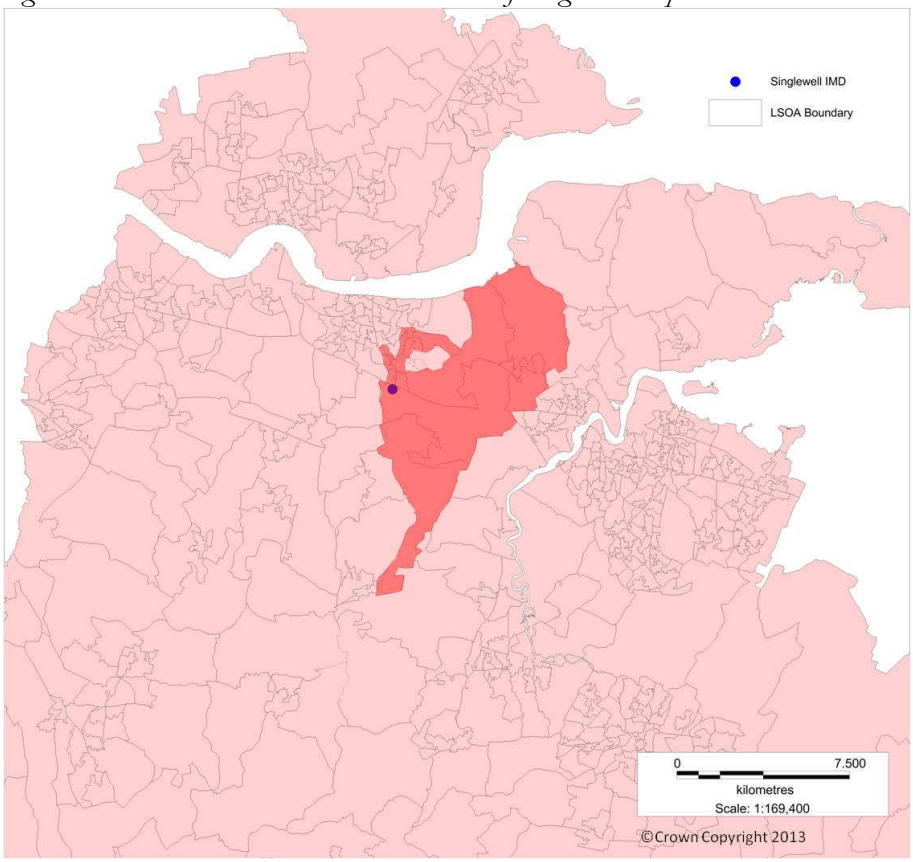
4.6 We undertake a similar assessment for Singlewell to determine the appropriate commuter catchment of the IMD located there. The calculations are shown in Table 5 and the resulting area is represented in Figure 8. Like Staveley, the weighted average is based on the estimated occupation composition at Singlewell IMD.

Table 5 Percentage of workers living within Commuter Catchment, by Occupation

Ward	All Jobs	Managers	Process, Plant and Machine Operatives	Elementary
Shorne, Cobham and Luddesdown	45.4	62.5	62.5	28.3
Singlewell	2.6	0.0	9.4	5.9
Westcourt	2.7	0.0	0.0	6.6
Higham	2.4	2.3	0.0	3.3
Commuter Area	53.0	64.8	71.9	44.1
Weighted Average for Commuter Area	**62.2**			

Source: UK Travel Flows, 2001 National Census, ONS

Figure 8 Commuter Catchment Area of Singlewell Depot



Source: UK Travel Flows, National Census 2001, ONS, Volterra calculations

Skill levels of the Commuter Catchments

4.7 Next the skill levels of the populations that live in these two commuter catchments are considered, relative to the wider regions in which they are located. This allows for direct comparison of the type of population living in the vicinity of Staveley and Singlewell. If they exhibit similarities in terms of how educated they are, then this should boost the chances of a depot at Staveley being successful. In other words, this is to primarily see if the jobs created by the IMD at Staveley will match the local workforce, by means of using the case study of Singlewell.

4.8 Table 6 shows that there is a relative abundance of less qualified people in the commuter catchment zone of Singlewell. Indeed, 28 per cent of residents have no qualifications, compared to 19 per cent in the South East more generally. Furthermore, in Singlewell's catchment, 34 per cent of residents either had level 1 or level 2 as their highest form of qualification.

4.9 Around Staveley the figure for those with level 1 or 2 as their highest level of qualification was very similar, 33 per cent. For both catchments people with these qualifications were more prevalent than their respective regional levels; with this group representing around 30 per cent for both regions more widely.

4.10 The same general message is resonated by the percentage with degree level qualifications. Less than one-in-five had a degree in the catchment of Singlewell IMD, whereas nearly 30 per cent do in the South East. Similarly, just 16 per cent had a degree in Staveley's catchment, compared to 24 per cent in the East Midlands. Therefore from these statistics it is clear that the two populations have a fairly similar skills structure, especially relative to the wider region in which they are located.

Table 6 Skill Levels of the Commuter Catchments and the relevant Regions

Qualifications	Singlewell Commuter Catchment	South East	Staveley Commuter Catchment	East Midlands
None	28	19	32	25
Level 1	17	14	15	14
Level 2	17	16	18	16
Apprenticeship	5	4	4	4
Level 3	11	13	12	13
Level 4 and above	18	30	16	24
Other	5	5	4	5

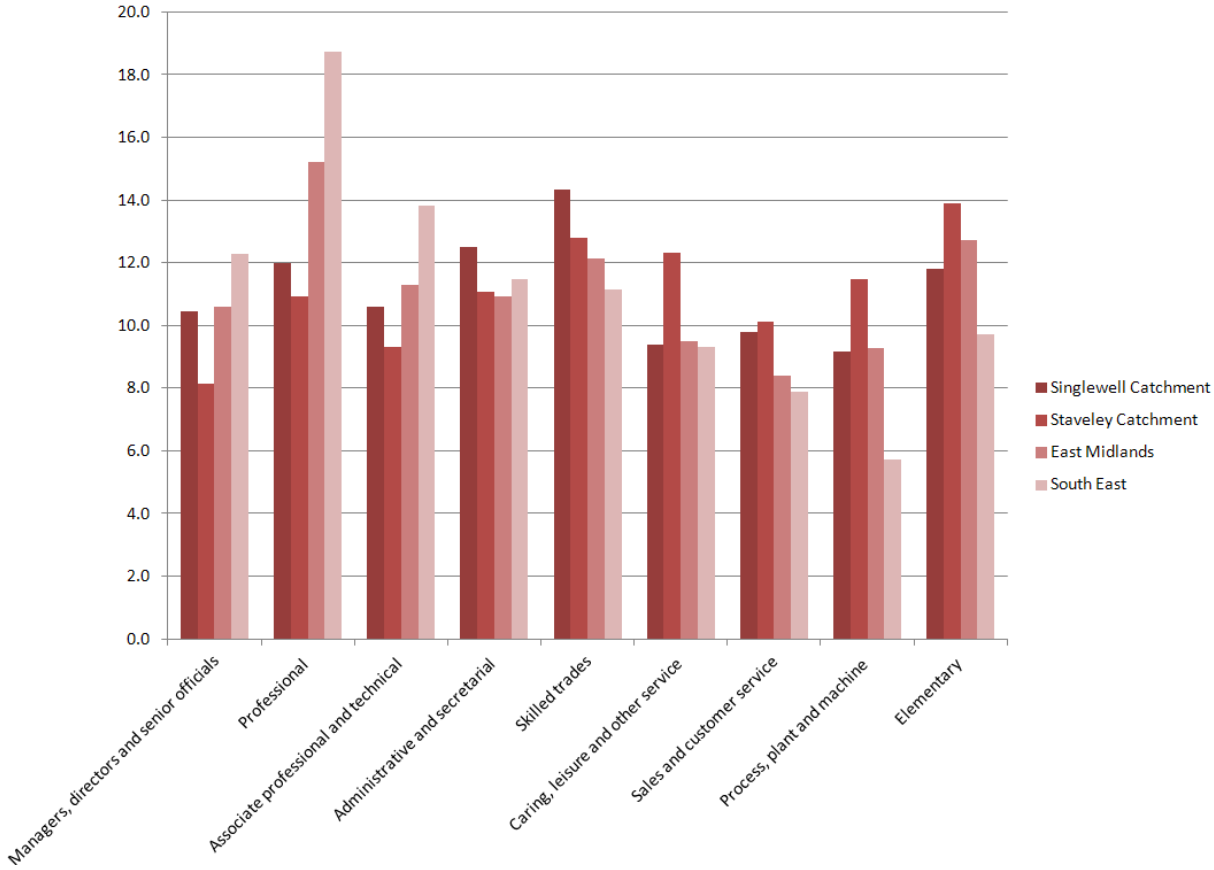
Source: National Census 2011, totals may not sum due to rounding

Occupations in the Commuter Catchments

4.11 It is also interesting to consider the type of jobs that are taken up in the same geographies as above. Clearly this is linked to the highest level of qualification attained, as generally, the more skilled the workforce, the more prevalent are jobs in managerial and professional occupations. And at the same time, proportions in elementary roles diminish with a more highly skilled labour force.

4.12 Figure 9 shows that the two commuter catchment areas have fairly high proportions of employees based in elementary and operative positions compared to their respective regions. They also both have lower than regional-average proportions of managerial and professional occupations. For instance, in Singlewell's catchment, 12 per cent have a job classified as elementary. This compares with under 10 per cent in the South East. In the same catchment, 9 per cent work in process, plant and machine. This compares with under 6 per cent in the South East. In Staveley's catchment zone, 11 per cent of employees are based in professional occupations. This is significantly lower than the 15 per cent found in the East Midlands more widely.

Figure 9 *Comparison of Occupation Types*



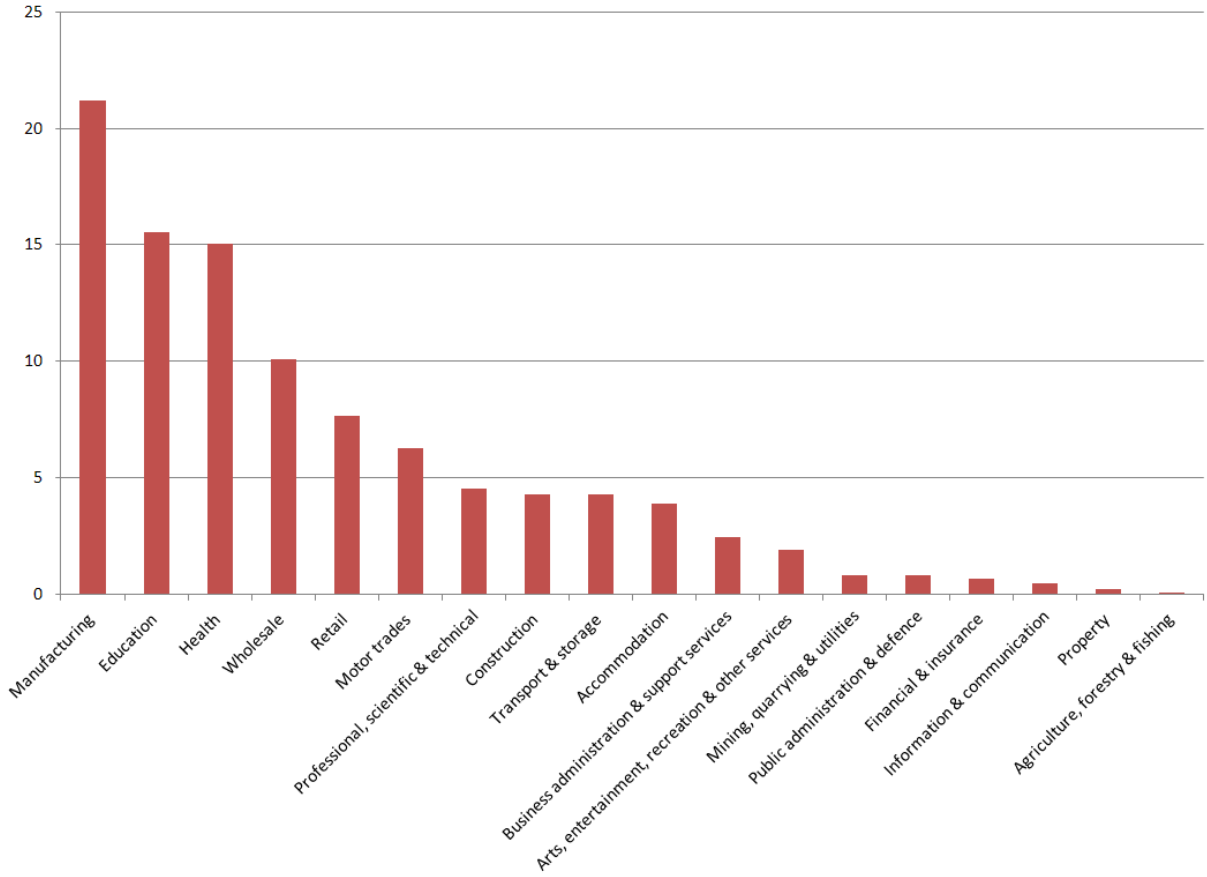
Source: 2011 National Census, Occupation by industry; ONS

Industries in the Commuter Catchments

4.13 Another interesting comparison is the industries that are most prominent in the commuter catchments. This creates a snapshot of the structure of the local economies around the depots. The most important industries in each area are those which employ the highest percentage of workers. Figure 10 shows this information for the commuter catchment area of Staveley, whilst Figure 11 does the same for Singlewell.

4.14 Education, manufacturing and health account for more than half of all employees in Staveley's commuter zone. Conversely, information and communication and financial services contribute a combined negligible 1 per cent to total employees. The area's most significant employment sector is manufacturing, with more than 1 in 5 employed in the sector. This compares with less than 9 per cent for England and Wales, as shown by Figure 12.

Figure 10 Percentage of Employees by Sector, Staveley Commuter Zone



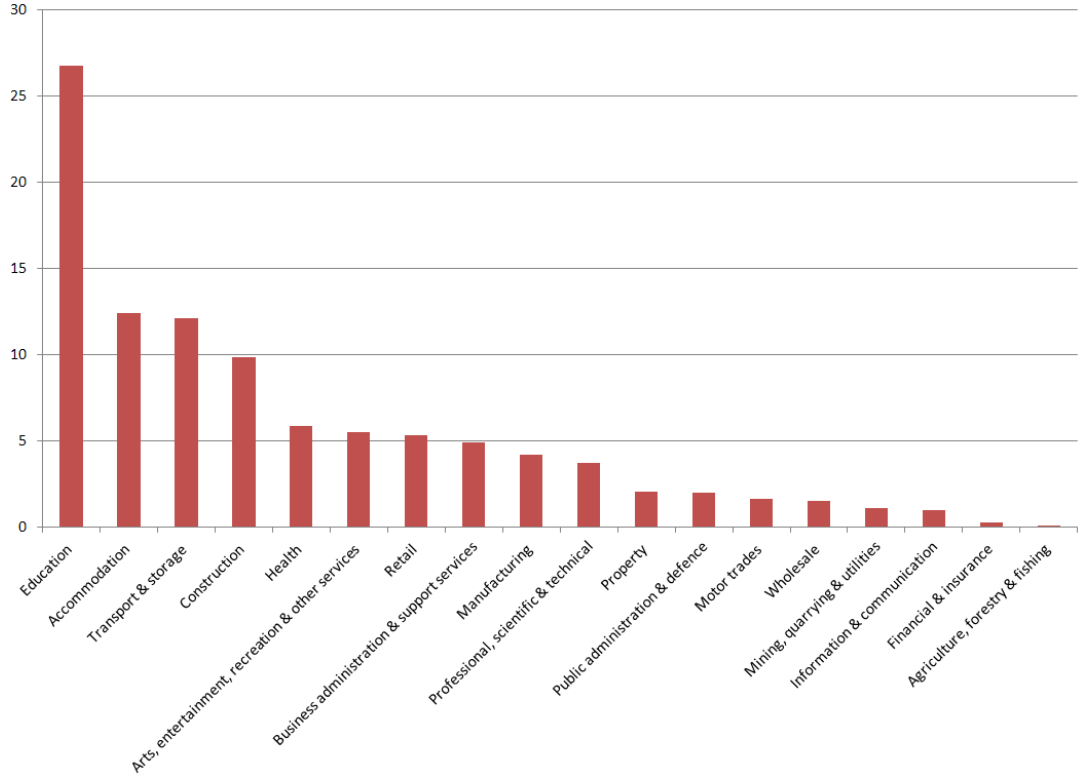
Source: BRES, ONS, 2012

4.15 Figure 11 shows that in Singlewell's commuter zone, education is by far the most prominent sector in terms of employees – with over a quarter of workers based in the sector. Transport and storage is important too, accounting for about 12 per cent of employees.

4.16 For England and Wales the proportion employed in transport and storage is much lower, at around 4.5 per cent, and Staveley's catchment is currently in line with the national average in this sector. Construction is also fairly important to the Singlewell area, accounting for almost 1-in-10 employees. This contrasts with just over 4 per cent in England and Wales on average, and a similar proportion in the Staveley catchment.

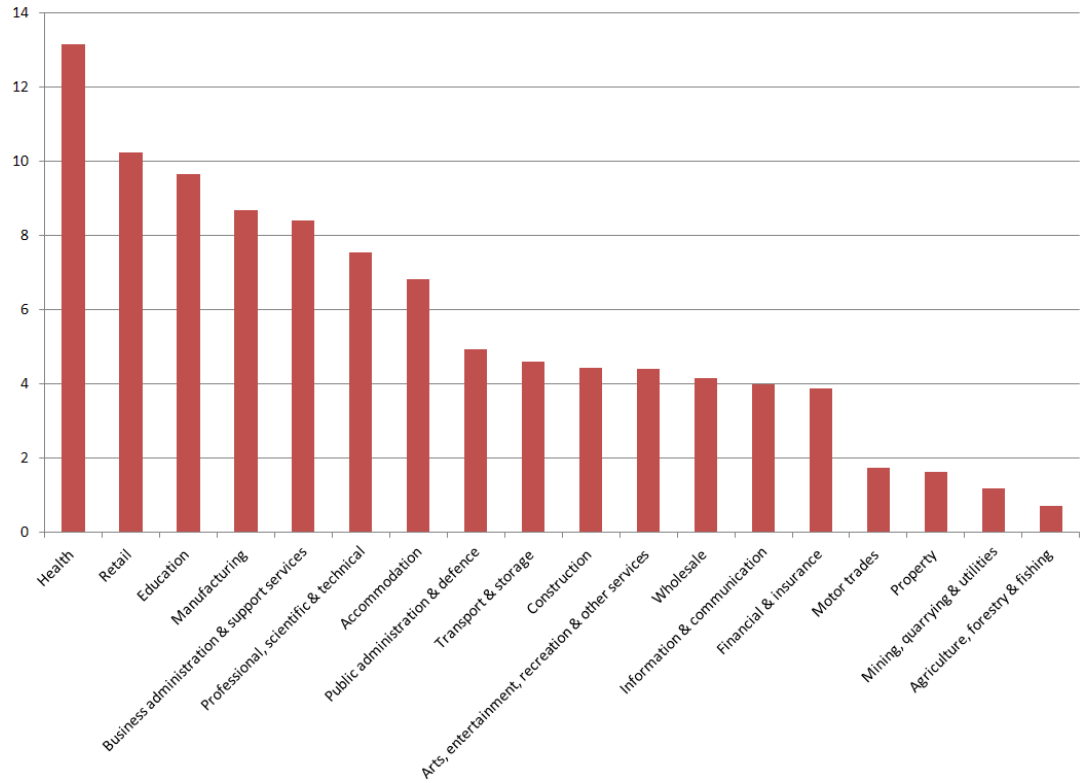
4.17 In other words, as employment sectors, transport and storage is two and a half times as important, and construction is twice as important in Singlewell's catchment than in England and Wales as a whole. This reflects the relative specialisation in the Singlewell area and the importance of these sectors to the local economy.

Figure 11 Percentage of Employees by Sector, Singlewell Commuter Zone



Source: BRES, ONS, 2012

Figure 12 Percentage of Employees by Sector, England and Wales Average



Source: BRES, ONS, 2012

Forecasting Future Population Characteristics

4.18 The earlier sections have concluded that the characteristics of the local area appear to be a good match for the job creation likely to stem from the proposed IMD. However due to the long-term nature of the project, it is also an important consideration to consider whether the population, which is suitable currently for the depot, will also be suitable in 20 years' time. In other words, it is necessary to consider whether the structure and characteristics of the population are likely to change significantly.

4.19 This is very difficult to predict as there are a lot of factors which will influence this. These include government policies such as education as well as building houses. The type of housing will affect the type of population living in the vicinity. Currently there is a high degree of social housing in the local area and this is associated with generally larger families, on either relatively low incomes, or unemployed. Furthermore the current structure of the economy reflects a "skilled blue-collar workforce". Indeed there are above average percentages of employees in the skilled trades sector, as well as in process, plant and machinery.

4.20 There has been some research into the effects of education on labour mobility, but this area is still being researched extensively. Put more simply, it involves whether an individual with more years of schooling/education is more likely to travel further to find work. With this in mind, data reveals that highly qualified people, in particular with degrees and above, are generally more willing and able to travel further afield for employment. This in itself is a very open topic. Maybe this is because graduates tend to earn higher salaries and so are willing to travel further. There could also be unobserved effects such as university education making people less tied to a particular area. This could be because university is commonly associated with people leaving home and so they become used to living away from where they grew up. Hence they can become less tied to an area.

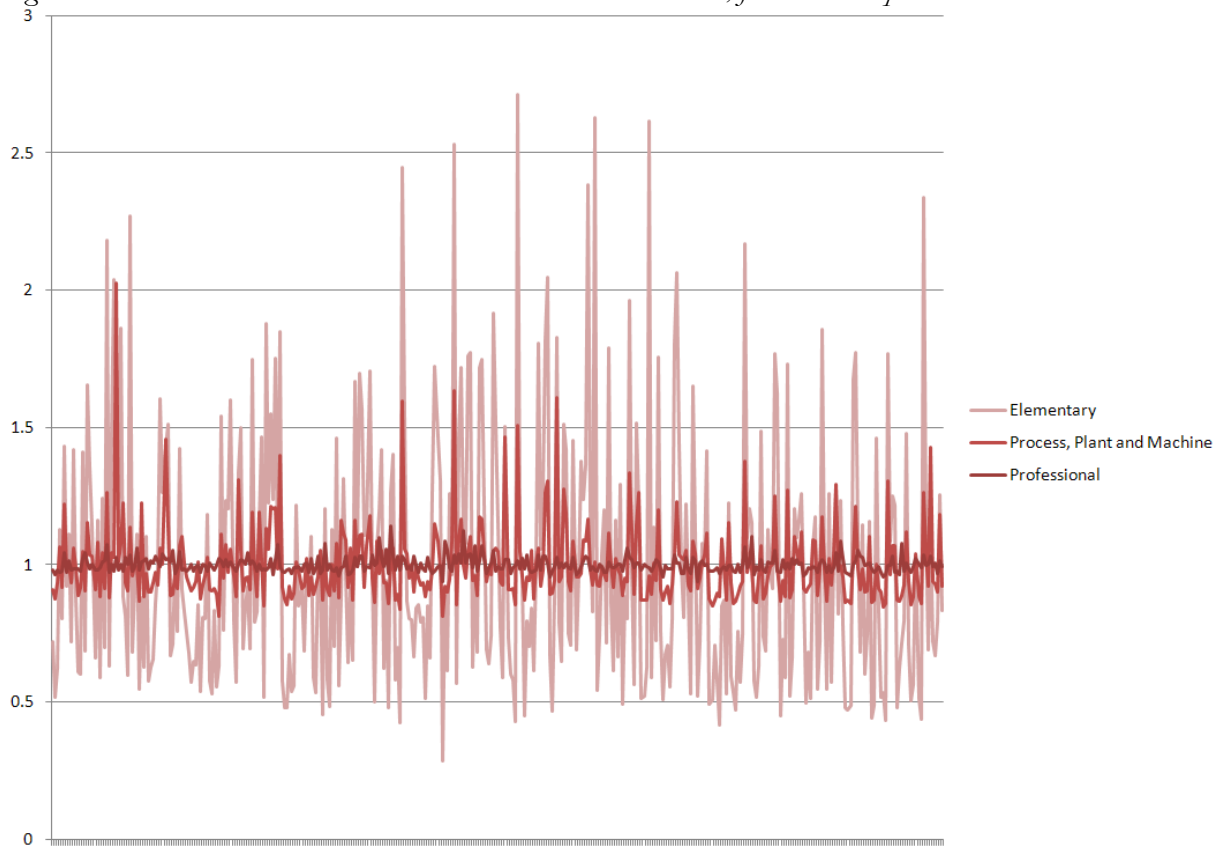
4.21 As a way of demonstrating the effect of education on labour mobility, Figure 13 shows a cross-section of the October 2013 Claimant Count rates for all locatl authorities in England, Scotland and Wales; by three occupations. These reflect a spectrum of skill levels – elementary requiring the lowest and professional the highest. The rates have been normalised so that the series revert around a mean of 1. This enables just the deviation from the mean to be observed and thus eliminates the distortion caused by the absolute values.

4.22 There is a clear pattern. The Claimant Count rate fluctuates far more as the skill level required for the occupation decreases. Specifically, the range in the claimant count is 0.2 per cent for professional occupations. The values are significantly higher at 1.2 and 2.4 per cent for process, plant and machinery; and elementary jobs respectively. These figures confirm a negative relationship between skill level and the range in unemployment rates between areas. So for higher skilled occupations, the difference in unemployment rates between areas is far less than for elementary jobs.

4.23 This is explained by the following mechanism: firstly, areas with low unemployment tend to have more job vacancies. Subsequently, unemployed people will move from an area of high-unemployment to one with low-unemployment in search of a job. They are far more likely to do this if they are in an occupation requiring a high skill level. This culminates in the unemployment rate falling in the area that they originated from and so the rates are

equalised between areas to a higher extent than for less skilled occupations where people are more adverse to moving.

Figure 13 Cross-sectional Normalised Claimant Count Rate, for three Occupations



Source: Claimant Count, ONS; October 2013

4.24 In summary, this suggests that as the population in the area of consideration is a relatively less skilled one in general, then people are more likely to stay in the local area. Hence this suggests that the population is likely to still be well-matched with the depot in the future, when it will be operational, in terms of the type of population residing in the local area or more specifically, the commuter catchment.

4.25 It is important that local education and training providers offer suitable qualifications to residents in the area, so as to enable them to fill the vacancies that will be created by the depot.

5. Compatibility with Regeneration Plans

5.1 Section 5 considers the compatibility of the proposed IMD at Staveley with wider regeneration plans for the area. We consider each proposed land use in the regeneration area in turn; first by considering how much of each there is and secondly, how the presence of a depot will impact upon each land use.

Housing

5.2 The Chesterfield Core Strategy sets out a housing requirement of 7,600 dwellings for the period 2011 to 2031 (362 dwellings/year). The SRVC is identified as a major focus for new homes (around 2,000 dwellings). Regeneration Priority Areas (RPAs), which include Barrow Hill to the north of the SRVC, will also be a focus for new homes.

5.3 The 2,000 new dwellings identified for the SRVC represents over one quarter of the Borough's total housing requirement. Around 850 of these new dwellings[11] could be accommodated within the Hall Lane character area. The SRVC will play a significant and vital role in meeting the need for new homes. This area has experienced substantial growth in its young population, as shown in the Appendix of this report. This will inevitably increase demand for housing significantly in the future. This highlights the fact that Staveley Works and the SRVC more generally are vital locations for achieving the housing requirements that the Borough will face.

5.4 For illustrative purposes, to see how the IMD will affect housing plans that would otherwise come to fruition, areas can be used as rough guides. Relative to Hall Lane as a whole, the depot would occupy around 30 per cent of proposed residential land. Subsequently we estimate that around 255 dwellings could be forfeited as a result of the depot being located here, which is equivalent to a 13 per cent cut of the total proposed housing on the SRVC.

5.5 The proposed IMD has the potential to disrupt the published proposals for comprehensive redevelopment of the area, as expressed within the emerging SRVCAAP and the Regeneration Masterplan, through physical land take and operational effects including noise and light pollution (the IMD would operate 24 hours a day). Development of the IMD would therefore reduce the number of dwellings that could be delivered on the site. Our methodology in determining how disruptive the depot would be to housing plans assumes a linear approach. Specifically, this means that an x percentage reduction in land designated for housing leads to an x percentage reduction in dwellings. However, there are likely to be logistical constraints that will mean this assumption is too simplistic and optimistic. Arup have considered more comprehensively the possible plots of housing that could be achieved given various scenarios regarding the location of the IMD and central spine road.

5.6 There is potentially scope that, with some realignment of the IMD site accompanied by re-planning of the regeneration masterplan, the loss of dwellings could be minimised and

[11] SRVCAAP Preferred Option; November 2012, Chesterfield Borough Council

other proposed uses could still be accommodated. In order to minimise any adverse impacts on the regeneration plans for the area, this should be considered carefully.

Employment

5.7 The council is aiming to provide 79 hectares of new employment land over the same time stretch, for B1, B2 and B8 uses in Chesterfield. These include business, general industry and storage/distribution purposes. This employment space will come from already committed sites, mainly Markham Vale, but also from RPAs.

5.8 CBC wishes to create a business park towards the eastern side of the SRVC. This will form a significant majority of the 28 hectares, or 280,000 sq m, of employment land proposed on the Corridor. According to CBC this translates into around 100,000 sq m of floor space.

5.9 For the purposes of carrying out a high level estimate of likely job creation associated with the planned commercial land, we use the Masterplan[12], which gives an indication of the breakdown into various uses. It infers a ratio of floorspace of 1 : 3 : 2.5 for B1(c), B2 and B8 uses respectively. This is seen as a suitable approximation as CBC does not expect any significant new B1 office floorspace. Using standard employment densities[13], we estimate that a total of 2,092 Full Time Equivalent jobs would be created.

5.10 In terms of commercial and industrial land, around 10 per cent would be directly lost to the depot. Accordingly this would result in around 209 jobs being lost. However, employment will of course be generated as a consequence of the depot – our estimates described earlier in this report suggest that the direct employment at the IMD will be between 200 and 250 jobs. Therefore there would be a net value of -9 to 41 FTE jobs, as a result of the depot in terms of direct employment generated during the operational phase.

5.11 Our jobs estimates are lower than those made by Arup (who estimate 2,779 jobs) for two reasons. Firstly they have assumed that the 100,000 sqm is net or gross internal area, as relevant for different land uses, whereas we have assumed it is gross external area. Neither of these is definitively correct as at this stage the floorspace creation is suitably high level such that it is difficult to predict exactly what level of net internal space could be accommodated in the regeneration area. Secondly, we have excluded the commercial land in the middle of the SRVC, as it will not be directly affected by the depot. Conversely, Arup have included this within their jobs figures. Both of these differences contribute to our lower total jobs number for the scenario in which the depot is excluded, although at a high level, the two approaches taken are broadly comparable.

5.12 Arup have estimated job creation of 2,779 and we have estimated a lower figure of 2,092. Both fall within the 2,000-2,900 range given by CBC in their employment topic paper for the site and at a high level should therefore be viewed as broadly consistent with one another.

[12] Source: Regeneration Masterplan; March 2012; Capita Symonds

[13] Source: Employment Densities Guide 2nd Edition, 2010, Homes and Communities Agency

5.13 It should be noted that the high level assumptions we have made about the split of commercial land between B1, B2 and B8 uses make a considerable difference to the job creation estimates and therefore the resulting job creation could be very different if a significantly different mix of uses is planned.

5.14 The result of our analysis is that, at a high level, the lost regeneration space would have supported around the same number of jobs as the IMD could. Some dwellings would however also be displaced as a result of the IMD (as detailed earlier in this report).

5.15 However, on balance, the IMD represents a definitive employment prospect, of appropriate skill levels for the local community, and brings with it associated benefits through the construction period of both the IMD itself and HS2 more widely and we therefore believe the net benefits will be positive.

Regeneration

5.16 There are other factors that are important too, in determining how well the IMD will fit with current plans for the area. Since the closure of much of the industries and firms that used to occupy the SRVC, there has been significant investment by Chesterfield Canal Partnership, aimed at restoring the canal to its former glory. It is envisaged that, eventually, there will be 75 miles of continuous navigable canal waterways, accessible at the Corridor. The Trans-Pennine Trail runs alongside the Chesterfield Canal on the southern boundary of the Staveley Works Site; linking Chesterfield Town Centre, Staveley and Sheffield. This not only enhances connections between these places, but also provides a means in which people can exercise in an aesthetically pleasing environment. With this in mind, the current route envisaged for HS2 crosses a nine-mile stretch between Staveley and Kiveton, which is currently in the process of being restored, approximately four times. Current plans see the canal crossed both by the proposed HS2 mainline, but also by spurs, which connect the HS2 mainline with Staveley IMD. HS2 Ltd is in discussion with the Chesterfield Canal Trust in order to find potential solutions associated with these crossings.

5.17 Another point is that where the IMD would be located, is a former chemical works site. Because of this, the ground has been contaminated and will require comprehensive remediation work. CBC claim that because of this and the need for accessibility improvements at the eastern end of Hall Lane, this area is likely to form a later phase of development and as such, requires some flexibility so as to allow for changes in market demand and monitoring the impact of earlier phases of development. The plans subsequently allow for a mixture of housing/employment uses. Thus, due to this longer-term view for development in Hall Lane, an IMD would be suitable as it would not be operating until 2032/33 if it were to go ahead. In particular, the forfeit in economic activity accruing from opting for a depot over planned commercial development, would be minimised.

Connectivity

5.18 It is evident that transport links in the local area are not of a particularly high standard. Chesterfield Council's Community Infrastructure Study (2009) found that although Barrow Hill was served by a GP, Post Office and Primary School, its accessibility to other

facilities including secondary schools, local shops and importantly employment opportunities was sub-standard and compounded by limited bus services. Table 7 highlights this succinctly; in Barrow Hill and New Wittington only 16 per cent of workers use the bus as a means of travelling to work. For the D2N2 this average stands at 21 per cent, which is in line with the wider region and national averages. This is clearly an area that requires enhancement. Car ownership is not cheap and so it is important that there are good transport links, so as to increase the pool of available workers.

Table 7 Percentage in Employment, by Mode of Transport to Work[14]

	Bus	Car
Chesterfield 003A	20	74
Barrow Hill and New Whittington	16	78
Brimington North	21	73
Brimington South	16	78
Hollingwood and Inkersall	15	80
Lowgates and Woodthorpe	19	75
Middlecroft and Poolsbrook	22	72
Old Whittington	21	72
Commuter Catchment Area	18	76
D2N2	21	70
East Midlands	20	72
England and Wales	21	63

Source: Method of Travel to Work; 2011 National Census

5.19 However it is important to note that the council's budget is being squeezed and there are also feasibility concerns regarding an enhanced bus service. This relates to the potential demand there would be – Barrow Hill and New Whittington is sparsely populated, with a population density of 5.7 people per hectare. This compares with 15.7 per hectare in Chesterfield more widely.

5.20 Vehicle access into and through the SRVC is currently limited to just two roads; Hall Lane to the east and Works Road through the centre. Phase 1 of the Staveley Northern Loop Road provides a link between Hall Lane and Junction 29A of the M1. A second phase is programmed to run south of the site, connecting Hall Lane with the A619.

5.21 CBC have included in their SRVCAAP Preferred Option a central spine road, which they feel is a vital catalyst for development in the SRVC, as it will create far superior accessibility within the site. The spine road should be designed so as to facilitate further connection to a possible Chesterfield to Staveley Regeneration Route (CSRR) at its western end; and to the east, it should join onto the existing phase 1 Staveley Northern Loop road.

5.22 The Replacement Chesterfield Borough Local Plan (2006) protects the alignment of the proposed CSRR. This protection has been 'carried over' to the Local Plan: Core Strategy (adopted 2013). It would provide a connection from Chesterfield Town Centre through to Hall Lane, and the M1 beyond at Junction 29a. The scheme is identified in the Derbyshire Joint Local Transport Plan (LTP) though no funding is currently in place.

[14] Note, Bus includes walking and cycling

5.23 Planned improvements to the road network would be made more viable and thus probably would be brought forward, if the IMD was built at Staveley Works, as it is likely that sources of funding could be acquired from HS2 for this purpose. Moreover, there is a consensus that the sites hosting the HS2 depots will act as construction sites for HS2 in general. This could further secure investment for associated infrastructure i.e. roads.

5.24 The adopted Local Plan: Core Strategy recognises that the protected alignment would not maximise regeneration benefits. Indeed, it pre-dates the restoration of the Chesterfield Canal and so is not now deliverable. The SRVCAAP Preferred Option identifies that an alternative alignment located more centrally through the SRVC would maximise opportunities for regeneration within the area. The SRVCAAP incorporates flexibility in the detailed location and design of the CSRR. The IMD, as currently proposed, however would prevent delivery of the CSRR and as a result significantly frustrate the ability for comprehensive regenerative development. Options for relocation of the IMD to allow retention of the CSRR are assessed in the report prepared by Arup. Indeed one scenario they consider is that the IMD is moved northwards, whilst the central spine road is realigned so as to pass to the south of the IMD. They conclude that this is the best option to aim for and have consulted with HS2 Ltd subsequently, who have suggested that the scenario is viable.

5.25 A key objective involving connectivity is the improvement in local workers' geographical mobility, i.e. how accessible they are to jobs. As alluded to previously, greater provision of bus services to serve the SRVC and adjacent settlements, e.g. Barrow Hill, would be optimal given sufficient funding. Failing this however, providing safe and attractive walking and cycling routes could be a realistic and effective option.

5.26 There was an operating railway station at Barrow Hill and a number of associated buildings still exist. Also, the rail line to the north of the site is not used regularly for passenger services at present. However, options to re-use the line for this purpose are being explored in conjunction with the redevelopment at Markham Vale. Furthermore, there is potential for a rail halt at the north east section of the SRVC. These activities would be in the same industry as the depot and so there would be potential supply-chain effects.

A. Appendix: Baseline Socio-Economic Conditions

A.1 In this Appendix, an economic and social profile of the study area is identified and analysed. The boundaries of the study area were not subject to any strict conditions. Instead the objective was to select a region such that the site of the IMD was roughly in the centre. The majority of the impacts can be expected to occur within the study area. The study area is comprised of Chesterfield, Bolsover and North East Derbyshire and, more specifically, was designed so as to encapsulate the commuter catchment zone.

Demographics

A.2 All areas, not unexpectedly, exhibited increases in their total populations. The first column in Table 8 shows that Chesterfield, along with the two districts contained in the study area, recorded reasonable growth; the commuter catchment population grew by 4.8 per cent. However this was relatively low compared to an increase of 7 per cent in the D2N2 and 8.7 per cent in the East Midlands. But within the zone there were vast differences – Middlecroft and Poolsbrook's population grew by 16.3 per cent, compared to a contraction of 0.4 per cent in Brimington North.

A.3 Closer inspections of the figures reveal significant disparities between population growths of particular segments of the various populations. Most notably, in the LSOA of Chesterfield 003A, the population of 0-15 year olds grew over the ten year period by a remarkable 8.3 per cent. This compares with a 1.5 per cent contraction in the D2N2 overall.

A.4 On the other hand, the working-age population of the commuter catchment area experienced a relatively flat increase of 6.5 per cent. This contrasts with figures of 8.4 per cent and 9.1 per cent for the D2N2 and England/Wales averages respectively.

Table 8 Population Growth, 2001-2011; Percentage Change of Persons, by age bracket

	All Ages	Age 0-15	Age 16-64	Age 65+
Bolsover	5.7	-3.9	7.4	10.6
Chesterfield	5.0	-4.3	6.4	10.4
North East Derbyshire	2.1	-8.6	0.0	20.8
Barrow Hill and New Whittington	2.1	-4.9	1.9	12.4
Brimington North	-0.4	-12.0	4.2	-5.7
Brimington South	1.7	-14.1	3.2	10.8
Hollingwood and Inkersall	6.6	3.2	5.1	17.0
Lowgates and Woodthorpe	7.1	-0.3	9.2	9.1
Middlecroft and Poolsbrook	16.3	12.6	23.7	-3.3
Old Whittington	0.8	-8.5	3.9	-0.2
Commuter Catchment	**4.8**	**-2.9**	**6.5**	**7.4**
Chesterfield 003A	6.9	8.3	6.1	8.6
D2N2 LEP	7.0	-1.5	8.4	11.9
East Midlands	8.7	0.2	9.6	15.3
England and Wales	7.8	0.9	9.1	11.0

Source: National Census; 2001 and 2011, ONS

A.5 Table 9 shows the 2011 population structure; while Table 10, the change in the composition of the population between 2001 and 2011. In all geographies covered, the proportion of working age is roughly three-fifths. What varies more is the split between the two subsets of the dependent population – the young and the old. Indeed in Chesterfield 003A, there is a relatively large proportion of 0-15 year olds (22.3 per cent), which significantly eclipses the D2N2 average of 18.3 per cent. Following on from this, the LSOA has a very small share of 65+ year olds – at just 13.9 per cent, which compares to 18.6 per cent in Chesterfield as a whole. Therefore in the immediate vicinity of the proposed depot site, the population is of a young structure.

A.6 Table 10 shows the evolution of the population structures; namely the change in the percentage of the population within each age bracket, over the decade. Chesterfield 003A experienced a slight increase (0.3 per cent) in its young population; with over 65s seeing their share rise by a similar extent (0.2 per cent). Accordingly, the share of working age fell by 0.5 per cent. Importantly, the trend found in the wider geographic area was a declining share occupied by the young population. In particular, in the D2N2 the proportion of the population made up from 0-15 year olds fell by 1.6 per cent. A similar result was found for the England/Wales average. In nearly all places the fall in the percentage of 0-15 year olds was partially, but not completely, negated by the rise in the proportion of over-65s. Hence, the overarching dependent population decreased in all areas other than North East Derbyshire, where the age bracket 65+ experienced an increase of 3.3 per cent; and Chesterfield 003A. Moreover 003A, over the decade, has seen a contraction of its working-age population. This will have inevitably led to heightened pressures and difficulties in regenerating the area.

Table 9 2011 Age Structure; Percentage of Population, by age bracket

	0-15	16-64	Age 65+
Bolsover	18.0	63.8	18.2
Chesterfield	17.5	63.9	18.6
North East Derbyshire	16.5	62.4	21.1
Barrow Hill and New Whittington	18.5	64.6	16.9
Brimington North	18.3	69.7	12.0
Brimington South	15.4	61.4	23.2
Hollingwood and Inkersall	19.4	62.9	17.6
Lowgates and Woodthorpe	20.0	62.4	17.7
Middlecroft and Poolsbrook	23.3	62.1	14.6
Old Whittington	16.2	63.1	20.7
Commuter Catchment	18.7	63.5	17.7
Chesterfield 003A	22.3	63.8	13.9
D2N2	18.3	64.7	17.0
East Midlands	18.5	64.5	17.1
England and Wales	18.9	64.7	16.4

Source: National Census; 2001 and 2011, ONS

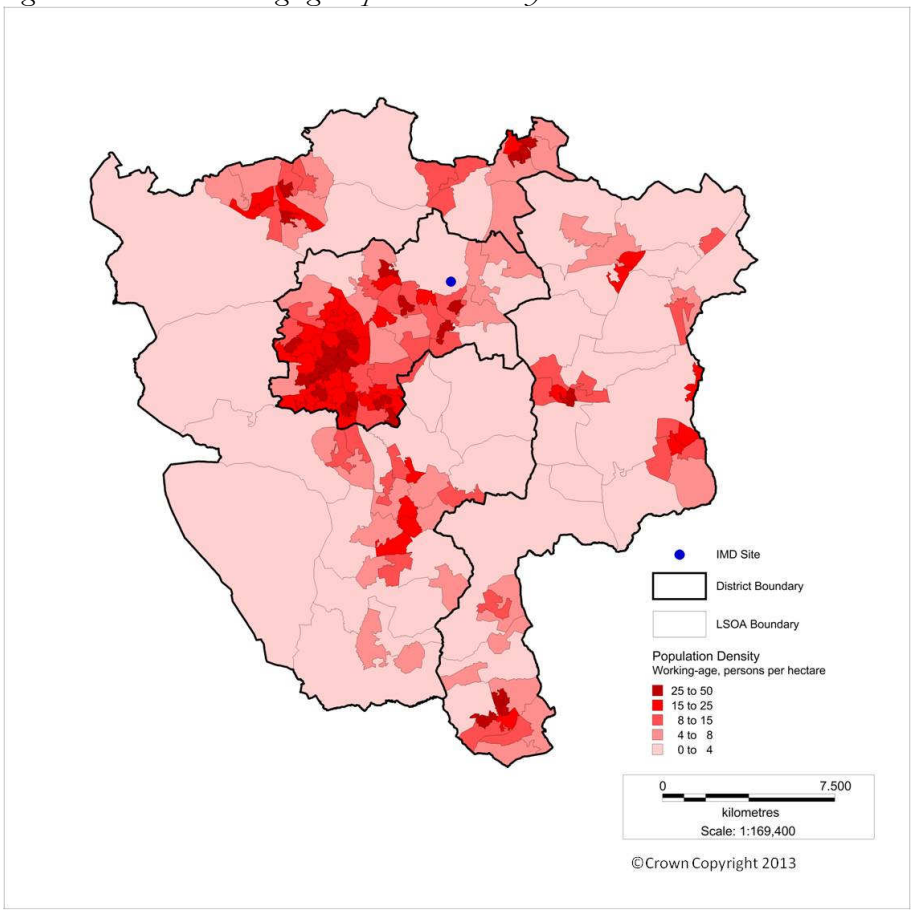
Table 10 Change in Age Structure, 2001-2011; Change in the Percentage of Persons, by age bracket

	0-15 year olds	16-64 year olds	65+ year olds
Bolsover	-1.8	1.0	0.8
Chesterfield	-1.7	0.8	0.9
North East Derbyshire	-1.9	-1.3	3.3
Barrow Hill and New Whittington	-1.4	-0.2	1.5
Brimington North	-2.4	3.1	-0.7
Brimington South	-2.8	0.9	1.9
Hollingwood and Inkersall	-0.7	-0.9	1.6
Lowgates and Woodthorpe	-1.5	1.2	0.3
Middlecroft and Poolsbrook	-0.8	3.7	-2.9
Old Whittington	-1.7	1.9	-0.2
Commuter Catchment	**-1.5**	**1.0**	**0.4**
Chesterfield 003A	0.3	-0.5	0.2
D2N2	-1.6	0.8	0.7
East Midlands	-1.6	0.6	1.0
England and Wales	-1.3	0.8	0.5

Source: National Census; 2001 and 2011, ONS

A.7 Figure 14 below exhibits the population density of 16-64 year olds in the study area, by LSOA. In most parts, population density is low, with pockets of more densely populated areas. Chesterfield generally has a higher density towards the west of the borough. Indeed the LSOA in which most of the SRVC is located, is in the least densely populated category. But it can be seen that, as a whole, Chesterfield has a more widespread high density of working age people, when compared with Bolsover and North East Derbyshire.

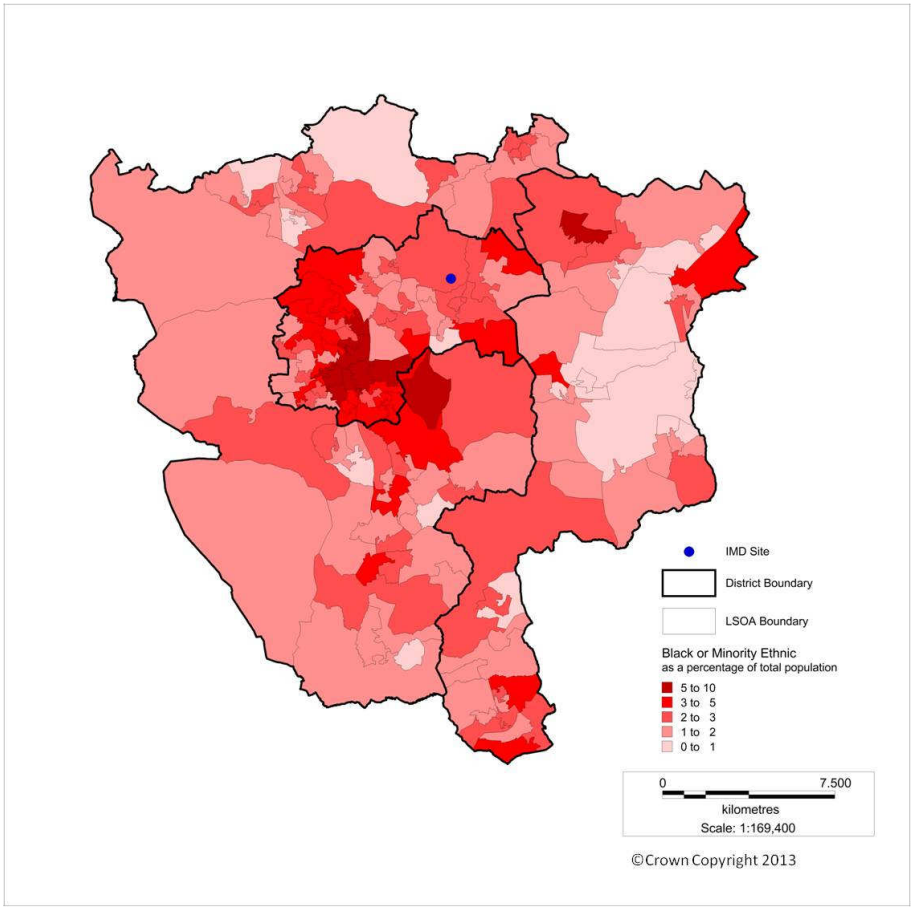
Figure 14 Working-age Population Density



Source: National Census 2011, ONS

A.8 Figure 15 below shows the percentage of the population that is made up from Black and Minority Ethnics. In Chesterfield the LSOAs to the west of the borough have higher proportions of BMEs. The highest percentage is found in Chesterfield 010A, where 9.1 per cent of residents are black or minority ethnic. However these figures are still low relative to England and Wales as a whole, where 14 per cent are BME.

Figure 15 Black and Minority Ethnics; Percentage of Total Population



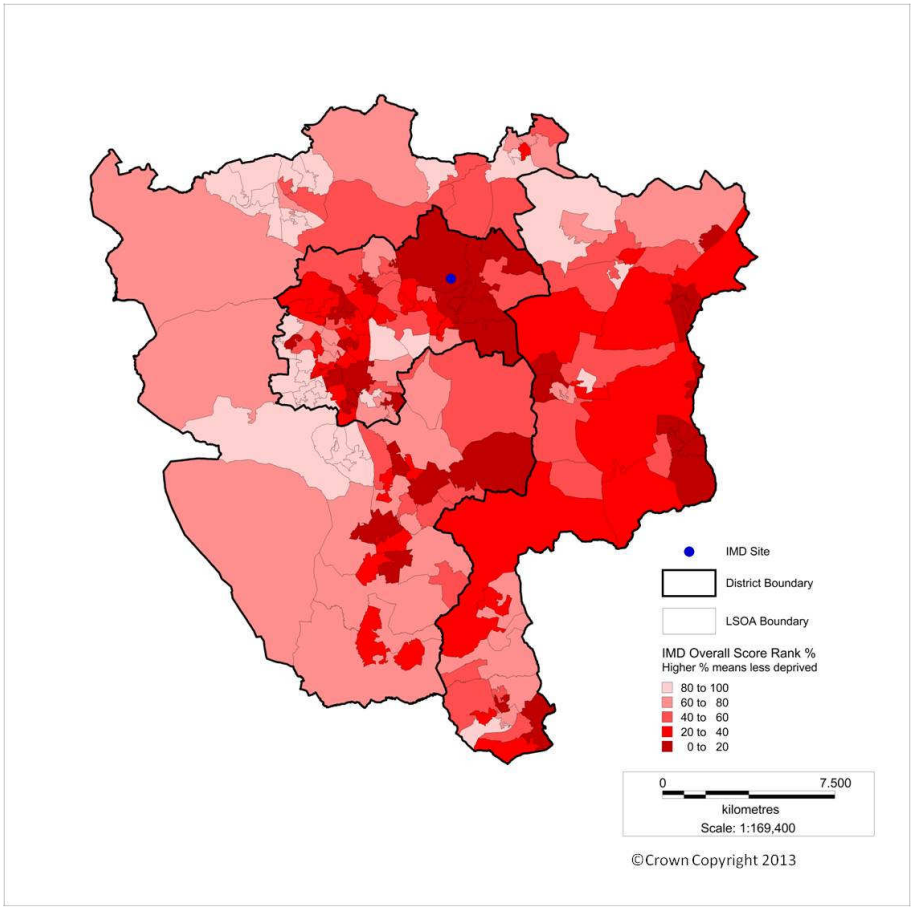
Source: National Census 2011, ONS

Deprivation

A.9 Figure 16 shows overall deprivation in the study area. Bear in mind that the ranks for each LSOA are relative to LSOAs in the study area only. Accordingly, Figure 17 reflects the same analysis, except the scores are ranked relative to all LSOAs in England. More deprived areas have a lower ranking i.e. the most deprived LSOA has a rank of 1. Subsequently the larger the rank as a percentage of total rank, the less deprived is the area.

A.10 Chesterfield 003A is in the bottom quintile relative to LSOAs in the study area. Specifically it ranks as 6.1 per cent. Large swathes of Bolsover are deprived too. Unlike population density, the levels of deprivation tend to increase further to the East of Chesterfield. Despite some parts of Chesterfield being deprived, there are other areas towards the South East of the borough, which fall into the 20 per cent least deprived. North East Derbyshire is relatively non-deprived when compared to the rest of the study area – most of its LSOAs fall into the 40 per cent least deprived.

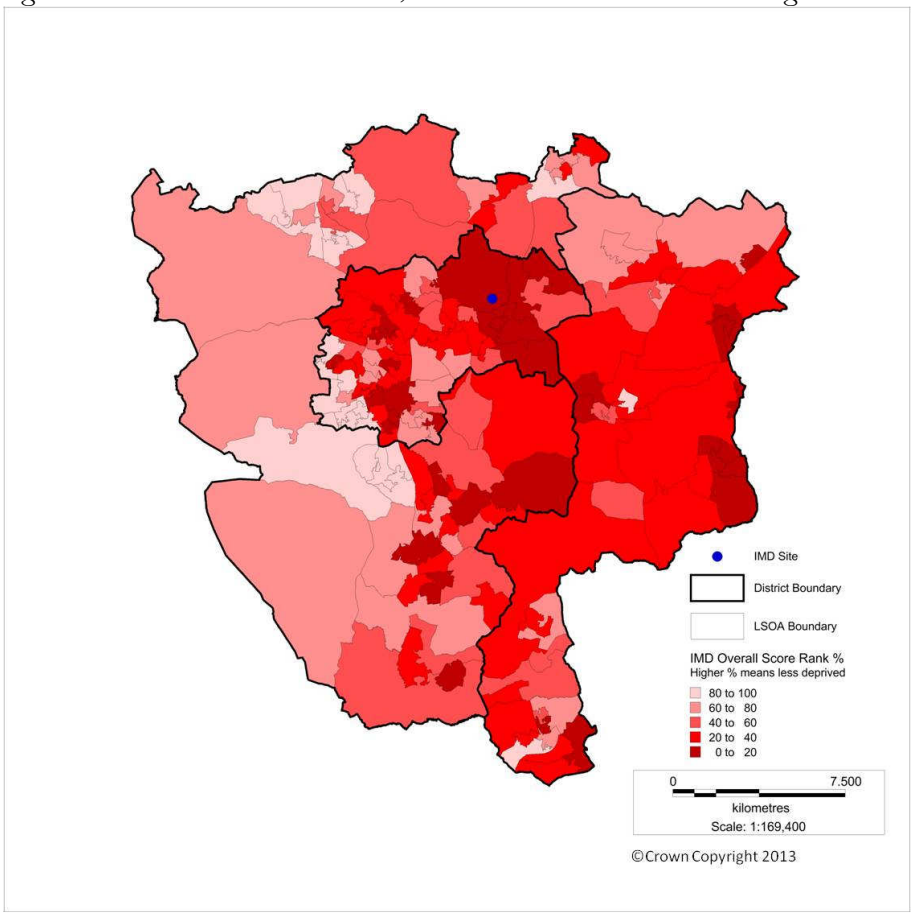
Figure 16 Overall IMD Score; rank relative to all LSOAs in Study Area



Source: Indices of Multiple Deprivation, 2010

A.11 Figure 17 shows a mixed picture, similar to Figure 16 above. Chesterfield 003A is in the bottom decile nationally, in terms of its overall IMD score. Furthermore a significant number of LSOAs in Chesterfield feature in the bottom 40th percentile. Bolsover probably has the most widespread levels of deprivation – the vast majority of LSOAs rank in the bottom 40th percentile.

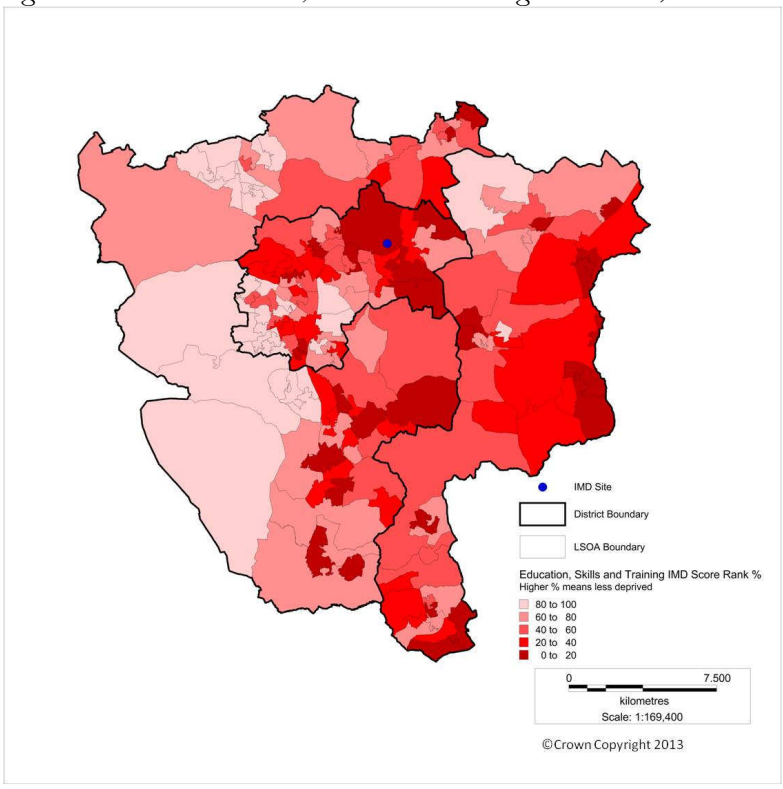
Figure 17 Overall IMD Score; rank relative to all LSOAs in England



Source: Indices of Multiple Deprivation, 2010

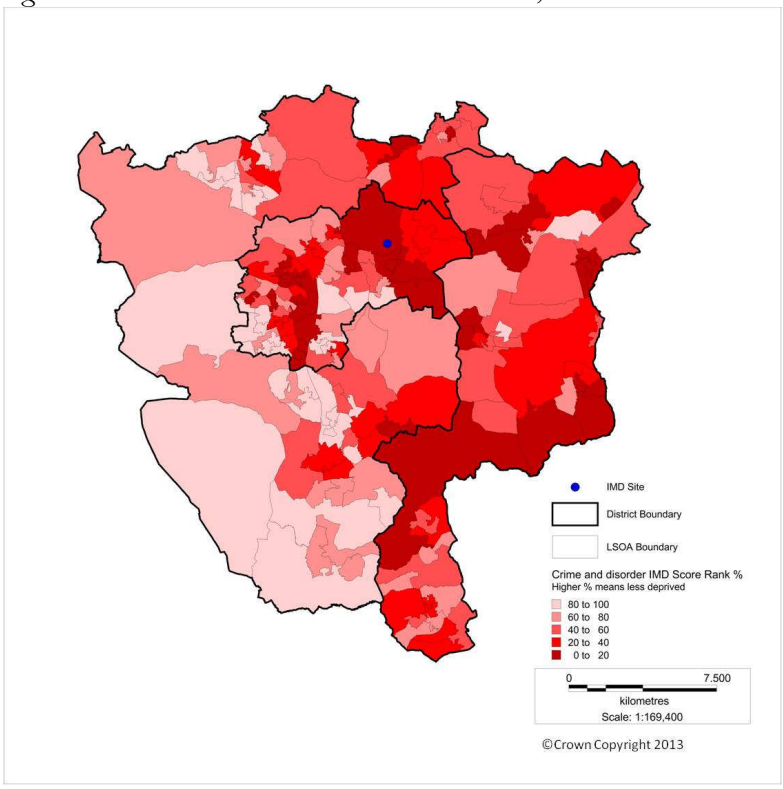
A.12 Finally Figures 18 and 19 below show deprivation for components of the IMD; namely: crime and disorder, and; education, skills and training. A very similar pattern emerges, in which Chesterfield and Bolsover have greater levels of deprivation, compared with North East Derbyshire. For both categories Chesterfield 003A ranks within the most deprived quintile.

Figure 18 Education, Skills and Training IMD Score; ranked relative to all LSOAs in Study Area



Source: Indices of Multiple Deprivation, 2010

Figure 19 Crime and Disorder IMD Score; ranked relative to all LSOAs in Study Area



Source: Indices of Multiple Deprivation, 2010

Economic Activity

A.13 Table 11 below presents economic activity rates; the rate stands at a relatively low 61.3 per cent in Chesterfield 003A, compared to 68.3 per cent in the D2N2 and 69.7 per cent for England and Wales. For the slightly wider area i.e. Barrow Hill and New Whittington, the rate is significantly higher – 68.9 per cent. This highlights the acuteness of the poor economic conditions in the immediate vicinity of the IMD site. Furthermore, it was indicated earlier that Chesterfield 003A had a growing dependent population. Hence the LSOA has a shrinking working-age population, with a low economic activity rate. This poses real problems for the area.

Table 11 Economic Activity Rates, as a Percentage of Resident Population

	Economically Active Rate
Bolsover	66.9
Chesterfield	67.9
North East Derbyshire	68.0
Barrow Hill and New Whittington	68.9
Brimington North	71.1
Brimington South	68.7
Hollingwood and Inkersall	66.4
Lowgates and Woodthorpe	65.6
Middlecroft and Poolsbrook	62.7
Old Whittington	66.9
Commuter Catchment Area	**67.2**
Chesterfield 003A	61.3
D2N2	68.3
East Midlands	69.3
England and Wales	69.7

Source: 2011 National Census; ONS

A.14 For the period July 2012-June 2013, the unemployment rate in Chesterfield stood at 7.4 per cent, compared to an average of 8.0 per cent for England and Wales, 8.2 per cent for the D2N2 LEP and 8.1 per cent for the East Midlands.[15] Thus, on the face of it, Chesterfield as a whole is doing fairly well in terms of unemployment.

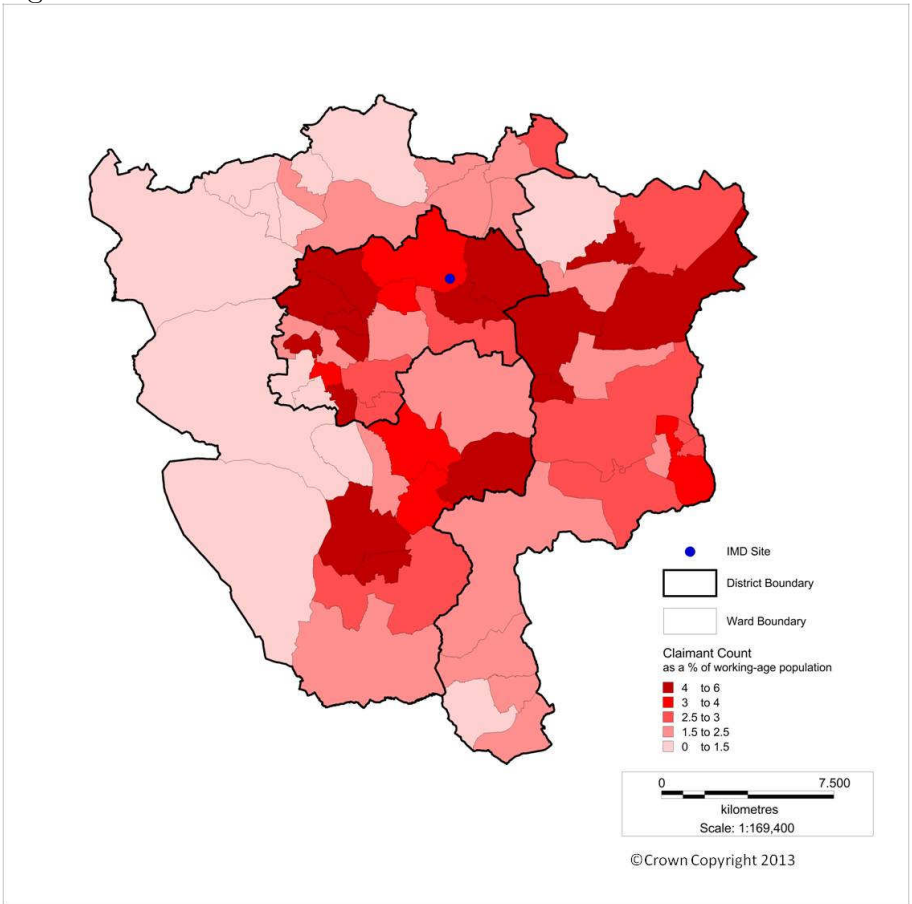
A.15 Chesterfield's relative performance in terms of the Claimant Count is not as strong. The Claimant Count has historically recorded a slightly lower incidence of unemployment than the APS. Also, the APS and Claimant Count figures are for two different time periods and the economic climate is more optimistic with the Claimant Count data. In October 2013, 3.2 per cent of Chesterfield's working age residents (16-64 year olds) were registered on the Claimant Count. This compared with 3.1 per cent in the D2N2, 2.9 per cent in the East Midlands and 3.0 per cent for England and Wales.

A.16 Figure 20 shows the Claimant Count rate by ward. Chesterfield and Bolsover have much higher incidences of people claiming unemployment-related benefits compared to North

[15] These figures are from the Annual Population Survey.

East Derbyshire. Chesterfield has a diverse range of rates. Rother is the ward with the highest unemployment, based on this measure, with 6 per cent of working-age residents claiming. Conversely, Walton has a mere 1.2 per cent of residents following suit. Barrow Hill and New Whittington, where the IMD would be situated, has a rate of 3.3 per cent.

Figure 20 Claimant Count Rate



Source: Claimant Count, ONS; October 2013

A.17 Table 12 below shows two variables; firstly, young claimants aged 24 and under as a percentage of total claimants. And secondly, the Claimant Count rate among young people. For the commuter catchment area as a whole, 38.7 per cent of all claimants were aged 24 or less. For England and Wales this figure stands at a much lower 26.4 per cent. Furthermore, the actual Claimant Count rate for this age bracket was 7.6 per cent in the commuter area, compared with 4.3 per cent for the England/Wales average. There are particularly worrying pockets of the local area in which youth unemployment has soared. Indeed Chesterfield 003A has a claimant count rate of 12 per cent. Furthermore in Lowgates and Woodthorpe nearly half of all claimants are aged 24 or under.

Table 12 Youth Claimants as a Percentage of Total Claimants; and Youth Claimant Count Rate[16]

	% of claimants that are Young	Claimant Count
Bolsover	32.2	5.3
Chesterfield	36.6	7.1
North East Derbyshire	31.0	4.6
Barrow Hill and New Whittington	40.0	8.5
Brimington North	36.8	7.3
Brimington South	46.2	5.3
Hollingwood and Inkersall	30.8	5.2
Lowgates and Woodthorpe	47.8	10.2
Middlecroft and Poolsbrook	37.0	8.2
Old Whittington	36.4	9.6
Commuter Catchment Area	**38.7**	**7.6**
Chesterfield 003A	36.4	12.0
D2N2	29.6	4.8
East Midlands	28.7	4.4
England and Wales	26.4	4.3

Source: Claimant Count, 2011; 2011 National Census

A.18 An important aspect of appraising the IMD at Staveley is how compatible the jobs, which would be generated, are with current job seeker's preferences and abilities. As there is no direct data on the skills and qualification levels of the unemployed, the sought occupations of claimants can be used as a proxy for how skilled they are. For an individual is unlikely to seek an occupation in which they do not have the required skills set. In Table 13, three sought occupations are included and should cover virtually all of the jobs created at the depot. These are construction; process, plant and machinery; and elementary.

A.19 There is wide disparity within the commuter catchment area in terms of the type of job that an unemployed person is after. The ward in which the depot would be based has the second highest rate (32 per cent) of job seekers interested in elementary positions, among the seven wards. This figure compares with 27.2 per cent for England and Wales. Old Wittington has the highest percentage with 36.4 per cent of job seekers wanting such a position. Furthermore the LSOA in which most of the IMD would be located has 55 claimants, 45.5 per cent of which are seeking an elementary position.

A.20 In terms of operatives, Barrow Hill and New Whittington has a relatively high percentage of 8 per cent seeking such roles. This compares with 6.5 per cent in the D2N2. The construction variable results from the summing of elementary and skilled construction jobs. This variable displays the largest variation among the three included. Lowgates and Woodthorpe has a particularly strong demand for such occupations, with 8.7 per cent of job seekers wanting a job in construction. Furthermore the weighted average for the commuter catchment in construction, where the weights are the respective total amounts of claimants in each ward, is 4.5 per cent, compared to 3.4 per cent in the East Midlands.

[16] **Note, the claimant count rates for under-24s used 2011 census data for denominator.*

Table 13 Percentage of Claimants, by Sought Occupation

	Process, Plant and Machine	Elementary	Construction
Barrow Hill and New Whittington	8.0	32.0	4.0
Hollingwood and Inkersall	7.7	23.1	3.8
Brimington South	7.7	23.1	7.7
Brimington North	5.3	26.3	0.0
Old Whittington	4.5	36.4	4.5
Middlecroft and Poolsbrook	7.4	29.6	3.7
Lowgates and Woodthorpe	4.3	26.1	8.7
Commuter Catchment Area	**6.5**	**28.4**	**4.5**
Chesterfield 003A	9.1	45.5	9.1
D2N2	6.5	32.3	3.8
East Midlands	6.7	31.2	3.4
England and Wales	6.7	27.2	4.2

Source: Claimant Count, ONS; October 2013

Skills

A.21 In terms of how qualified the local population is, Table 14 gives a breakdown of the percentage of residents aged 16 and over with the specified qualification as their highest level of qualification. For the commuter catchment area as a whole, 31.5 per cent of people have no qualifications at all. The situation is particularly dire in Middlecroft and Poolsbrook, where about two-fifths of people are completely unqualified; and in Chesterfield 003A the figure stands at a similarly dismal 36.9 per cent. These values compare with 25.4 per cent for the D2N2 LEP and 22.7 per cent for England and Wales.

Table 14 Percentage of Residents aged 16+; Highest Qualification Achieved

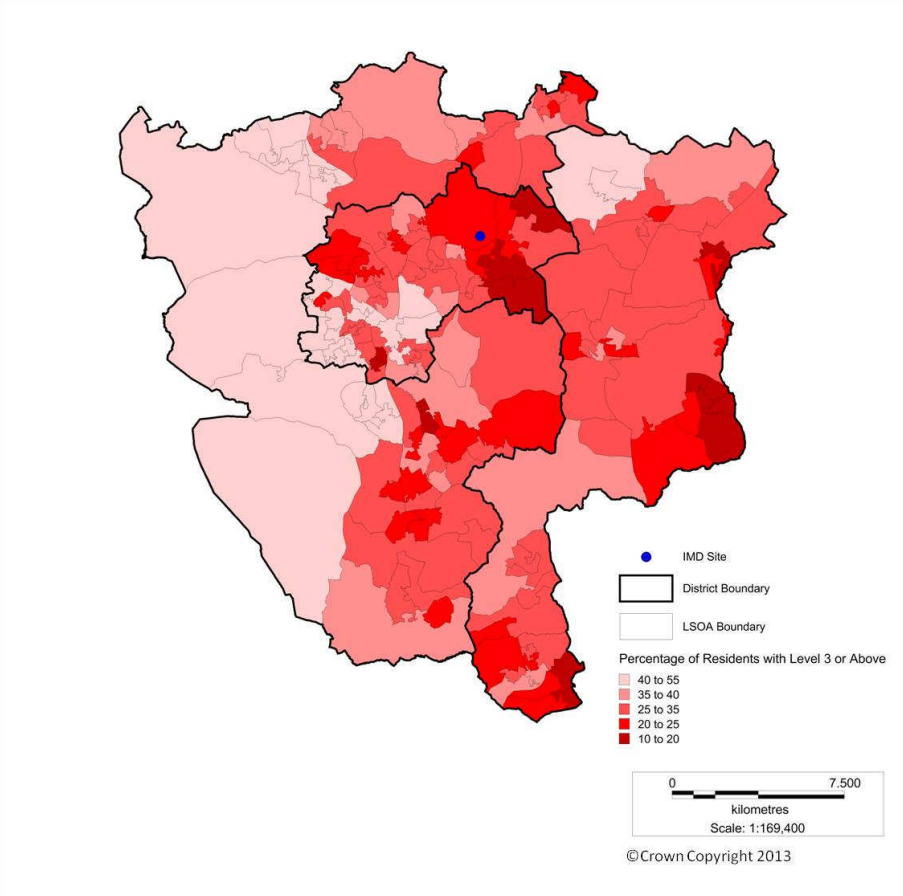
2011 Ward	None	Level 1	Level 2	Apprenticeship	Level 3	Level 4+	Other
Barrow Hill and New Whittington	29.9	14.0	18.5	4.9	11.6	17.5	3.6
Hollingwood and Inkersall	29.8	14.8	18.8	4.9	12.6	15.2	3.8
Brimington South	27.9	13.1	16.3	4.5	12.5	21.9	3.8
Brimington North	28.6	16.6	18.1	4.1	13.4	15.0	4.1
Old Whittington	32.6	14.6	17.2	4.3	11.0	16.1	4.3
Middlecroft and Poolsbrook	39.4	15.4	17.4	3.3	10.1	10.5	3.9
Lowgates and Woodthorpe	34.9	17.8	15.9	3.7	11.0	12.5	4.3
Commuter Catchment Area	**31.5**	**15.0**	**17.5**	**4.3**	**11.8**	**15.9**	**3.9**
Chesterfield 003A	36.9	15.6	17.0	4.4	9.8	12.7	3.7
D2N2	25.4	13.7	15.4	4.0	13.2	23.6	4.7
East Midlands	24.7	13.9	15.6	4.0	12.9	23.6	5.3
England and Wales	22.7	13.3	15.3	3.6	12.3	27.2	5.7

Source: National Census 2011, ONS

A.22 According to HS2 Ltd[17] apprenticeships will be created during the construction of the IMD. As Table 14 shows, for certain wards in the commuter catchment, a relatively high proportion of residents have, as their highest qualification, an apprenticeship. In Barrow Hill and New Whittington, the figure stands at 4.9 per cent, compared to 3.6 per cent in England and Wales on average. This suggests that there is a relatively large proportion of workers looking for this type of employment and training opportunity.

A.23 The assertion that there is a relatively unskilled workforce in the area surrounding the proposed depot is backed up by the percentage of people holding qualifications of level 3 and above. Indeed in the commuter catchment area, 27.7 per cent do so. However for the East Midlands it is much higher at 36.5 per cent and for England and Wales even more so at 39.5 per cent. Furthermore, within the study area there is vast disparity. Figure 21 shows that North East Derbyshire has a denser population of highly skilled individuals. Comparatively, Chesterfield has widespread poor qualification levels. In particular in Chesterfield 003A only 22.5 per cent of residents have attained a qualification of level 3 or above.

Figure 21 Percentage of Population with level 3+



Source: Qualifications and Students, National Census 2011, ONS

[17] Source: Tibshelf to Killamarsh, HS2 Ltd, July 2013

Employment

A.24 So far, the skills level of the local population has been considered, along with the type of occupation that an average claimant would seek. These give a good indication of the match between the prospective job vacancies and the people that will potentially fill these positions. It is also necessary to consider the structure of the local economy; more specifically, the areas of employment in which the area specialises in.

A.25 Table 15 reveals that for the commuter catchment as a whole, 4.3 per cent of employees worked in construction and the same figure worked in transportation and storage during 2012. These figures are actually just below the England/Wales average and are similar to the D2N2 LEP.

A.26 However, in Chesterfield 003A, 7.6 per cent of employees were engaged in construction activities in 2012. This was significantly above the England/Wales average of 4.4 per cent. There are wards within the commuter catchment that have a similar dependence on construction as a source of employment. For instance in Lowgates and Woodthorpe, and Brimington South, the figures are 7.6 and 7.2 per cent respectively.

A.27 In terms of transport and storage, Hollingwood and Inkersal stands out, as 15.3 per cent of its employees worked in this sector. This figure far exceeds the D2N2 average of 3.9 per cent.

Table 15 Percentage of Employees, by Sector

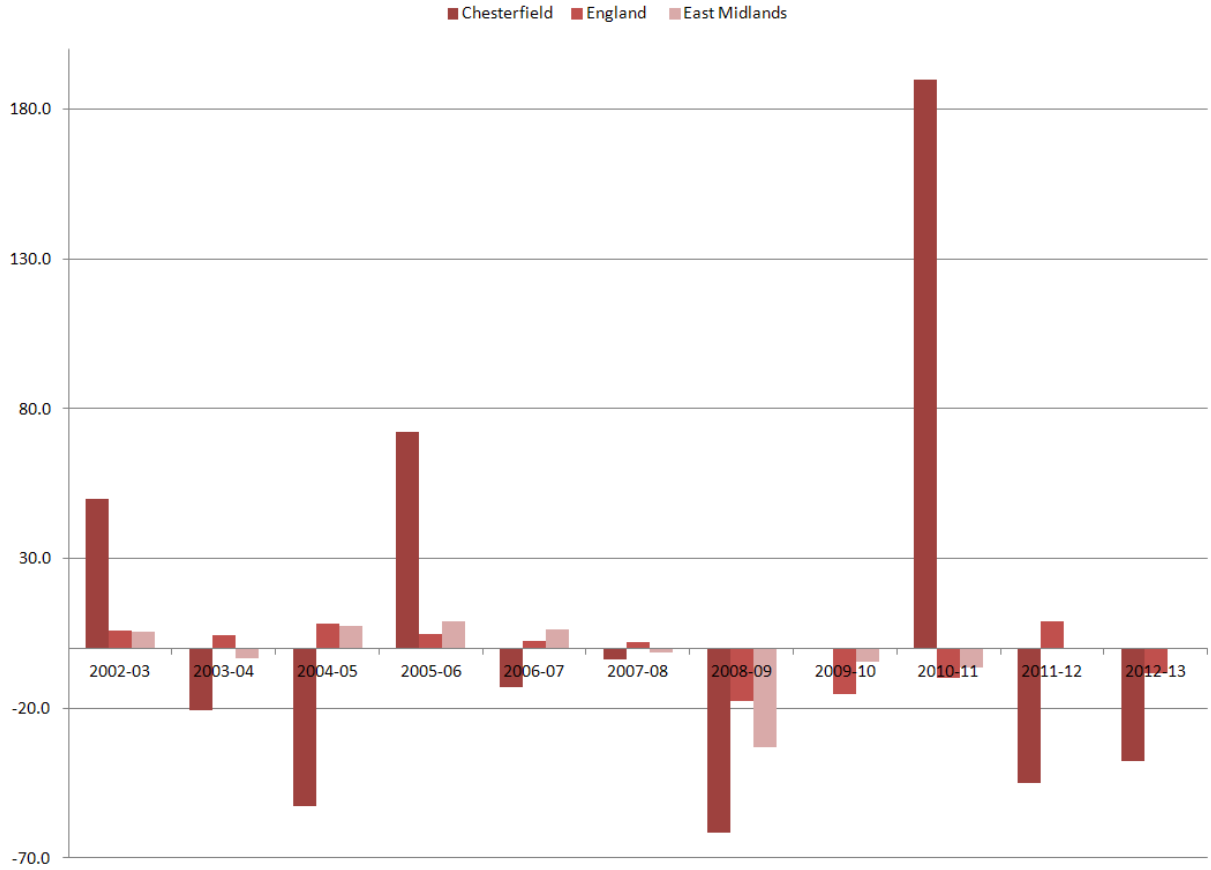
	Total Employees	Construction (%)	Transport and Storage (%)
Bolsover	27,149	6.9	4.2
Chesterfield	51,013	3.1	4.1
North East Derbyshire	26,631	6.9	3.3
Barrow Hill and New Whittington	761	3.7	0.0
Brimington North	568	2.1	1.1
Brimington South	1,279	7.2	0.8
Hollingwood and Inkersall	1,588	4.1	15.3
Lowgates and Woodthorpe	2,117	7.6	7.6
Middlecroft and Poolsbrook	1,829	2.4	0.0
Old Whittington	3,935	2.9	2.5
Commuter Catchment Area	**12,077**	**4.3**	**4.3**
Chesterfield 003A	302	7.6	0.0
D2N2	873,998	4.6	3.9
East Midlands	1,894,744	4.3	5.2
England and Wales	24,403,799	4.4	4.6

Source: Business Register and Employment Survey; ONS; 2012

Housing Start-ups and Completions

A.28 Figure 22 shows that the growth rate of dwellings completed in Chesterfield behaves far more erratically than the England and East Midlands averages. More importantly, in most years the growth rate is lower in Chesterfield than in the other two geographies.

Figure 22 Year-on-Year Growth Rate of All Dwellings Completed



Source: Department for Communities and Local Government

A.29 Table 16 displays a time series of the average house price: median annual income ratio. The result is the number of years of earnings it would take to be able to afford the average house in the geography specified. It is evident that as time progresses the ratio increases for both Chesterfield and England overall. This is not surprising as wages are much stickier than house prices. Generally, firms do not like raising wages as it is very difficult to then lower them if an economic slump requires such action. However the increase in the ratio for England as a whole is markedly greater. In both geographies house prices have, on average, exceeded growth of median earnings. But in Chesterfield the difference in the two rates is less pronounced. So house prices in the area have not risen so rapidly relative to wages, compared with England. There are a whole host of possible reasons as to why this has been the case; most prominently, the fact that there is a relatively high degree of social housing and semi-detached properties. Subsequently there are fewer high-value properties.

A.30 The other characteristic of Table 16 is that the levels of the ratios in Chesterfield are consistently and significantly less than those found for England overall. This means wages are relatively large compared to house prices, in Chesterfield. For instance in England as a whole, the average price of a house was nearly 12 times the average income,

in 2010. In Chesterfield, house prices were just 7 times the average annual pay. Other things equal, an average earner in Chesterfield would be able to afford a house nearly twice as quickly as an average earner in England.

Table 16 House price: Median Annual Wage Ratio; years

Year	Chesterfield	England
2002	5.4	7.4
2003	6.0	8.7
2004	6.7	9.7
2005	7.4	9.9
2006	7.6	10.4
2007	7.9	11.0
2008	7.4	10.8
2009	6.6	10.4
2010	7.1	11.7

Source: Annual Survey of Hours and Earnings; ONS, DCLG

A.31 Social Renting is a means of affordable housing and allows residents with low incomes to live in a property which, without the scheme, they would not be able to afford. Table 17 reveals that the commuter catchment area has a high degree of social housing; 25.5 per cent of households, which compares with 17.2 per cent in the D2N2. In particular, Chesterfield 003A and Middlecroft and Poolsbrook have nearly half of all households living in socially rented accommodation. This is why the house price: earnings ratio is so low – because houses are relatively inexpensive. This also highlights the type of population living within the immediate vicinity of the proposed IMD - it is relatively deprived.

Table 17 Percentage of Households which Socially Rent

	All households	Social rented	%
Chesterfield	46796	10832	23.1
Chesterfield 003A	693	342	49.4
Barrow Hill and New Whittington	2666	588	22.1
Brimington North	1854	334	18.0
Brimington South	2697	476	17.6
Hollingwood and Inkersall	3159	558	17.7
Lowgates and Woodthorpe	1949	625	32.1
Middlecroft and Poolsbrook	2047	1011	49.4
Old Whittington	1962	578	29.5
Catchment Area Average	**16334**	**4170**	**25.5**
D2N2	895342	153775	17.2
East Midlands	1895604	300423	15.8
England	22063368	3903550	17.7

Source: National Census 2011; ONS