

Economic Appraisal of the Bournemouth International Growth Programme

Final Report

Prepared for Dorset LEP

September 2016

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Executive Summary

ES1 Background

The strategic economic growth ambition for Dorset is set out in the Strategic Economic Plan (SEP) for Dorset, which has been updated in 2016 with a refreshed vision statement. This involves the delivery of more and better quality jobs in the LEP area. The SEP sets out a number of projects to deliver this economic growth ambition, including the enhanced delivery of employment land at the Bournemouth Airport business park – known as Aviation Park – for which there are two possible masterplan options. In addition, the development of a number of other sites will help to deliver the strategic growth ambition, including the Wessex Fields site adjacent to the A338.

The Bournemouth International Growth (BIG) Programme has been established to deliver a package of transport projects, skills and training projects, and demand stimulation projects to help bring forward the Aviation Park and Wessex Fields sites, and support the creation of new employment on these sites. In particular, these sites will enable growth in the Aerospace & Advanced Manufacturing sector and Financial Services & Insurance sector – both of which are target growth sectors in Dorset. The projects that make up the BIG Programme are set out in the figure below.

Figure : The Bournemouth International Growth Programme

Phase 1 (Funded by Growth Deals 1 and 2)

A338 Reconstruction
Hurn Roundabout
Chapel Gate Roundabout
Blackwater Interchange
Bear Cross Junction
Longham Mini Roundabouts
A338 Cooper Dean to Blackwater
Mountbatten Junctions
Wessex Fields Junction

Phase 2 (Funded by Growth Deal 3)

Parley Cross Junction
Parley Easter Link Road
Parley Western Link Road
Bus Enhancements on the A338 and B3073
Cycle Links

Other projects (other funds or unfunded)

Local Development Order for the airport sites
Skills escalator feasibility study
Business support
Business networking
ICT voucher scheme
Marketing and promotion

Source: Bournemouth International Growth Programme, May 2016

The location of these projects, showing how they relate to the Aviation Park and Wessex Fields sites can be seen in the map in Figure 2 below.

ES2 Purpose of this Economic Appraisal

The purpose of this economic appraisal is to ensure that a rigorous process is undertaken to develop the BIG programme from first principles. The appraisal needs to test whether public funds are spent on activities that provide the greatest benefits to society, and that the funds are spent in the most efficient way. Options appraisal is essential to this approach.

ES3 Our Approach

Our approach to undertaking this appraisal has comprised:

1. Consultations with key stakeholders to inform our understanding of the context, development of options and testing of options
2. Documentary review to inform our understanding of the context, development of options and testing of options
3. Options development to set out a long-list of options
4. Modelling of the costs and benefits associated with each of the options to move from a long-list to a short-list
5. Options appraisal informed by the modelling and the contextual review developed from the first two stages
6. Selection of the best option to meet the objectives

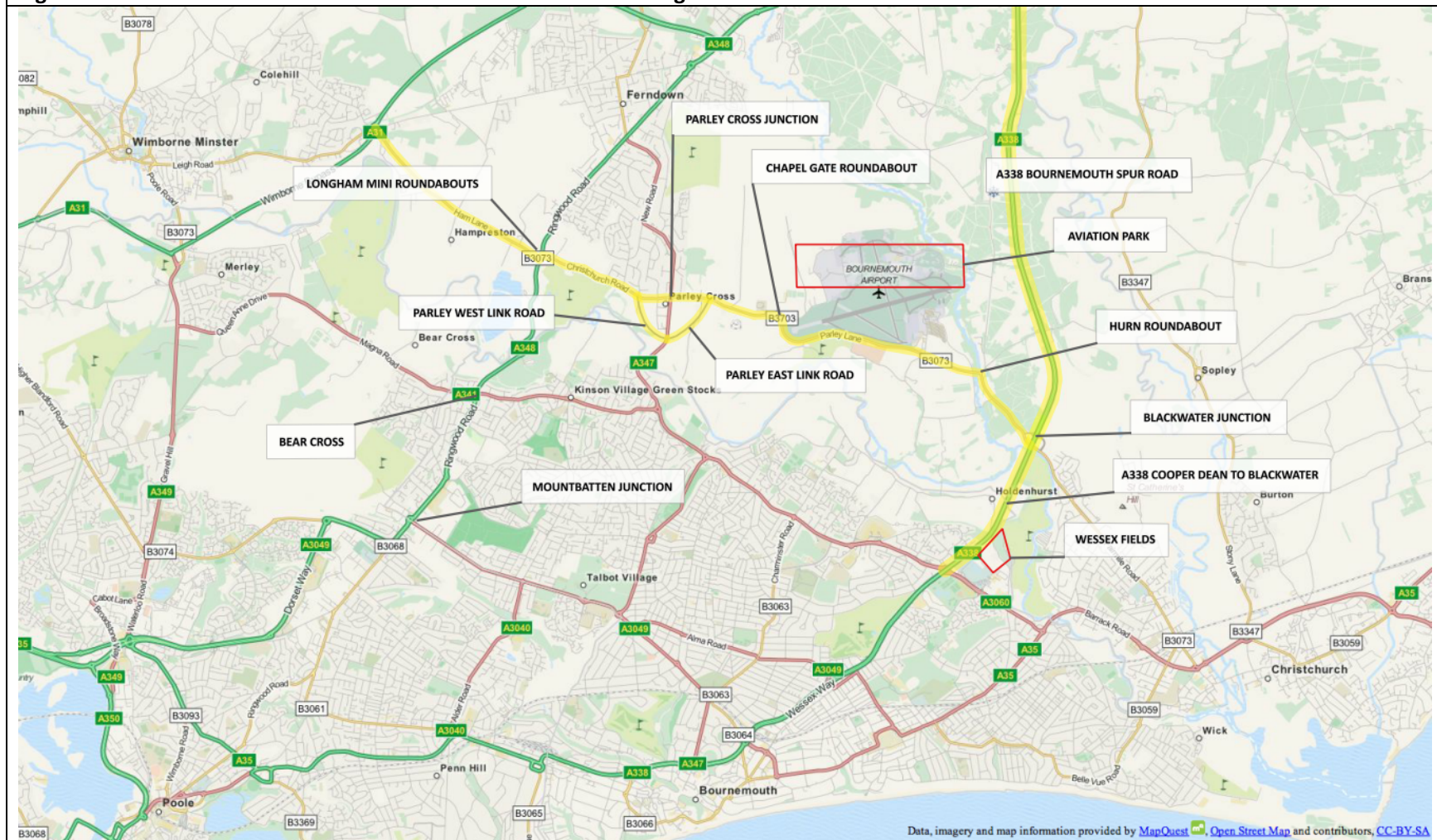
ES4 Justification for the Intervention

The Dorset SEP sets out the case for public sector intervention to help to deliver the growth aspiration for Dorset, which includes creating 40,000 new jobs by 2021. However, the market is failing to deliver sufficient employment sites of the right quality in the right locations to support this economic growth aspiration. In large part this is because site allocations cannot be delivered without significant transport infrastructure improvements. Dorset County Council's 2012 Workspace Strategy and the work undertaken to inform a refresh of this strategy provide evidence of the under-supply of employment land to meet future growth needs, particularly in the Bournemouth-Poole conurbation. This case is supported by the views of property agents active in the local market. The Christchurch & East Dorset Local Plan Core Strategy sets out the need for transport and accessibility improvements to allow the delivery of significantly more employment land at Aviation Park. Wessex Fields cannot be developed without the delivery of a new junction to provide access from the A338.

There is a lack of suitable skills in the local labour market to support significant growth in the Aerospace & Advanced Manufacturing sector and Financial Services & Insurance sector. There is anecdotal evidence and an initial feasibility study which both show a shortage of skills in the Aerospace & Advanced Manufacturing sector. There is also a shortage of focused business support activity to help stimulate growth in existing and new businesses on the two sites.

The BIG Programme helps to address all of these market failures.

Figure 2: An Overview of Bournemouth International Growth Programme



ES5 Objectives of the Intervention

The outcomes that have been set for the BIG Programme are:

- To create at least 10,000 new jobs in Dorset
- And at least £500 million of GVA

The outputs that will be needed to achieve these outcomes include:

- Delivering more attractive locations to invest i.e. up to 60 ha of accessible and attractive employment land
- Helping to deliver suitable and accessible sites and premises i.e. c.170,000 sq m of employment premises (broadly 105,000 sq m of B1, 44,000 sq m of B2 and 22,000 sq m of B8) in accessible locations that are attractive to employers who want to invest in Dorset
- Training of local people in relevant skills to enable them to access the jobs that are created
- Supporting existing and new businesses to grow in the Dorset economy

ES6 Long-List of Options Considered

A long-list of options has been considered, to see how they meet the objectives set out above.

Do-Nothing

Under this option there would be no investment in any of the BIG Programme activities. Even with no intervention the market will continue to deliver some limited further development and employment creation at Aviation Park, but no development at Wessex Fields. This option is not realistic, as investment in the A338 has already taken place, but this option forms an important part of the deadweight calculation within the appraisal methodology i.e. taking account of what would happen with no public funding or intervention.

Do-Minimum: A338 Only

In this option the A338 major maintenance scheme would be completed, but no further transport improvements or other projects would be delivered. This will make a small contribution to improved transport accessibility to the Aviation Park site as the A338 becomes more reliable, and will lead to a small uplift in the rate at which jobs are created at the site. It will not enable any development to take place at Wessex Fields. We have modelled this option, but it does not create jobs or GVA close to the levels set out in the objectives, so it is not considered as a short-listed option.

BIG Transport Corridor Improvements

Under this option the A338 major maintenance scheme will be completed, along with all of the other transport projects set out in the BIG Programme. This will make a significant improvement to the accessibility and therefore attractiveness of the Aviation Park site, and will enable development to take place at Wessex Fields. However, this option does not deliver any skills or demand stimulation projects. This option does lead to a significant increase in the rate of employment creation in the Dorset LEP area, so is considered further as a short-listed option.

Current BIG Programme

This option includes the A338 major maintenance scheme, all other transport projects described above, and the current skills and demand stimulation projects set out in the BIG Programme. These additional projects mean that this option will lead to a higher rate of employment creation in the Dorset LEP area, so is considered further as a short-listed option. However the impact of this option is limited because the current skills project is only a feasibility study, and the demand stimulation projects are limited in scope.

Enhanced BIG Programme

This option builds on the previous option and includes better developed skills and demand stimulation projects. We do not have indicative budgets for these, so have included some high level cost estimates. By delivering more skills and demand stimulation support, a higher rate of employment creation will result. Although limited information is available, this option has been considered further as a short-listed option.

Additional Larger Transport Projects

In this option bigger and more expensive transport projects are considered i.e. dualling of the B3073 and a direct access from the A338 into Aviation Park. However, the former is discounted because of deliverability, cost and value-for-money issues; and the latter for cost and deliverability issues. This option is not considered further in the short-list because it is not deliverable.

ES7 Short-Listed Options

Of the above options, the BIG Transport Corridor Improvements, Current BIG Programme and Enhanced BIG Programme have been taken forward for further consideration. There are two masterplan options for Aviation Park – the current local plan allocation (34.5 ha) masterplan and a more ambitious 60 ha masterplan (which delivers 60 ha of new and replacement development). As well as covering a larger area, the latter also includes a higher density of development, so can accommodate significantly more jobs than the former. Both masterplan options have been considered when looking at the benefits of the short-listed options.

We have looked at the benefits of the short-listed options over the period to 2031. The results of our economic modelling are summarised in the figure below. The Gross Direct Effect shows the jobs and GVA created directly on site. The Net Additional Local Effect takes account of:

- **Displacement** i.e. any benefits (such as jobs) that may be displaced from other parts of the Dorset economy to the two sites
- **Leakage** of any benefits out of the local area
- **Multiplier effect** i.e. other benefits that are generated in the Dorset economy, due to employees' spend in the local economy and supply chain activity in the Dorset economy
- **Deadweight** i.e. what is likely to happen on the Aviation Park and Wessex Fields sites in the absence of any investment in any of the projects that make up the BIG Programme

The numbers set out in the figure below are for the operation of the Aviation Park and Wessex Fields sites only i.e. they do not include the impacts of construction, which have been calculated separately.

Figure 3: Benefits of the short-listed options by 2031

| | Area delivered (ha) | Gross Operational Jobs | Net Operational Jobs | Gross GVA Uplift Per Annum | Net GVA Uplift Per Annum |
|---|---------------------|------------------------|----------------------|----------------------------|--------------------------|
| Aviation Park local plan allocation masterplan and Wessex Fields | | | | | |
| Transport Corridor Improvements | 42.2 | 11,100 | 5,400 | £715m | £345m |
| Current BIG Programme | 42.2 | 11,100 | 5,400 | £715m | £345m |
| Enhanced BIG Programme | 42.2 | 11,100 | 5,400 | £715m | £345m |
| Aviation Park 60 ha masterplan and Wessex Fields | | | | | |
| Transport Corridor Improvements | 53.2 | 13,400 | 7,100 | £847m | £449m |
| Current BIG Programme | 54.5 | 15,400 | 8,700 | £968m | £545m |
| Enhanced BIG Programme | 54.5 | 16,200 | 9,300 | £1,016m | £581m |

From the table above, it can be seen that all three of the BIG Programme options end up delivering a similar amount of jobs and annual GVA by 2031 under the two masterplan scenarios. Whilst all of the options considered deliver more than 10,000 Gross Direct jobs, none delivers more than 10,000 Net Additional jobs – although the Aviation Park 60 ha masterplan along with Wessex Fields comes close to this. All of the options considered deliver more than £500 million of Gross Direct GVA uplift per annum by 2031, although only the Aviation Park 60 ha masterplan along with Wessex Fields delivers more than £500 million of Net Additional GVA uplift per annum by 2031.

However, the rate at which the jobs and GVA are created differs, and this can be seen in the figures below. The Enhanced BIG Programme would deliver jobs and GVA more quickly than the Current BIG Programme, which would in-turn deliver jobs more quickly than the Transport Corridor Improvements. These figures do not include the impacts of construction, which are discussed separately in Appendix 3.

Figure 4: Gross New Jobs (Operational Jobs Only)

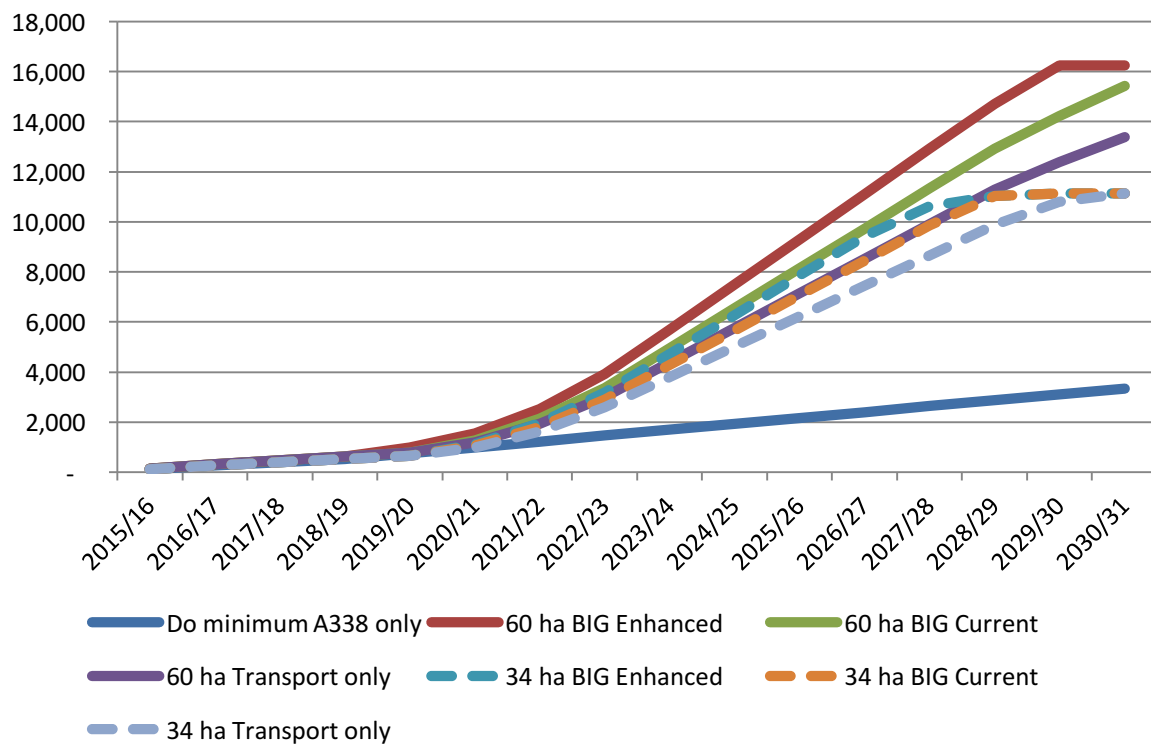
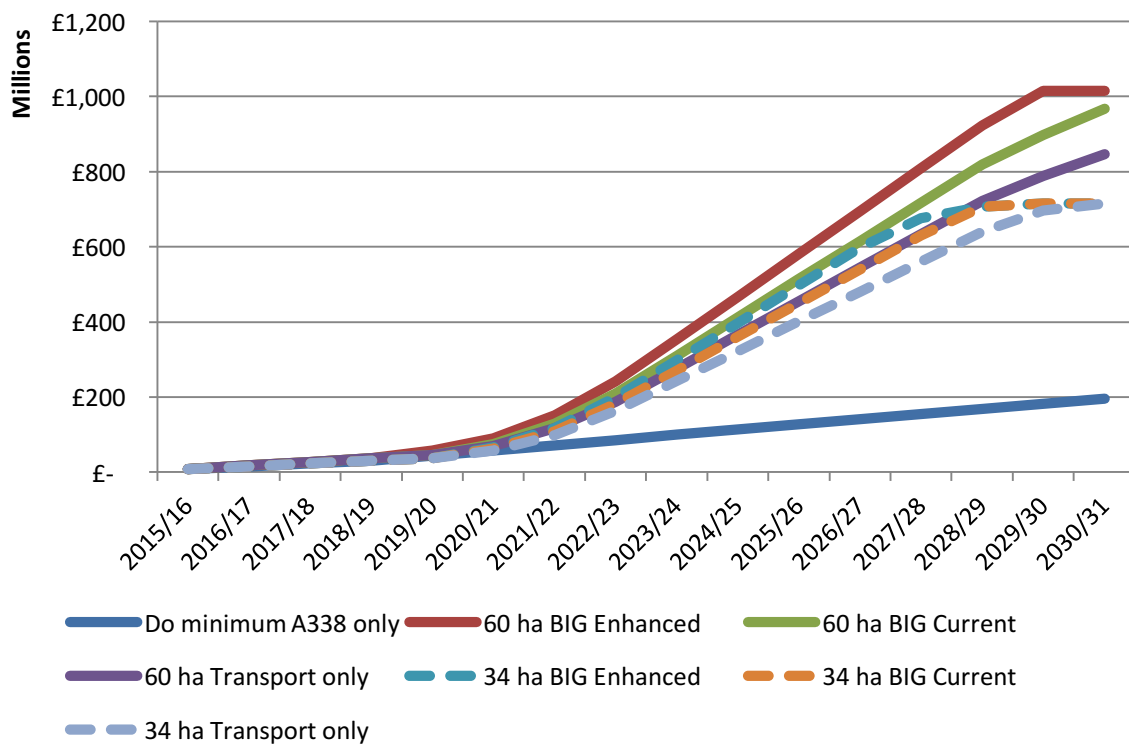
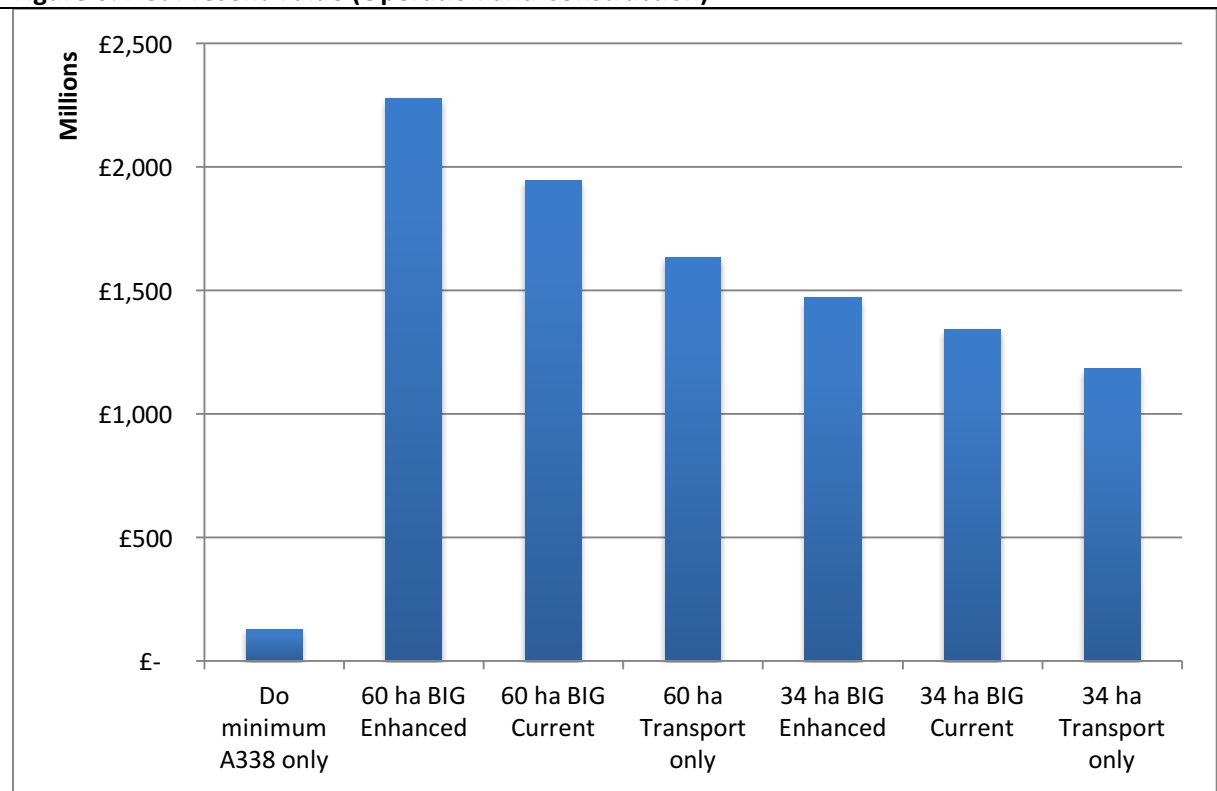


Figure 5: Gross Annual GVA Uplift (Operation Only)



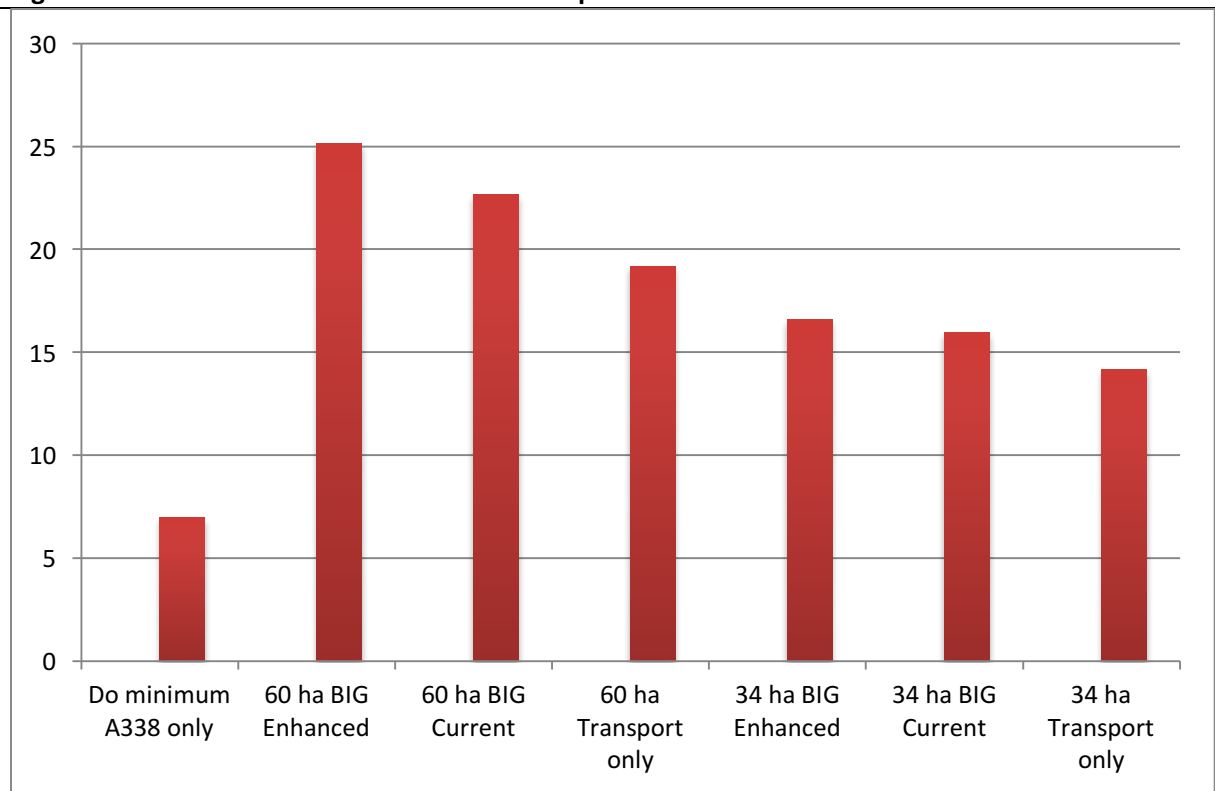
The Enhanced BIG Programme provides the greatest level of benefits for the longest time. This can be seen in the analysis of the Net Present Value (NPV), which gives an indication of the benefits of each option over the period to 2031. This can be seen in the figure below.

Figure 6: Net Present Value (Operation and Construction)



The Enhanced BIG Programme also provides the best benefit to cost ratio, which can be seen in the figure below.

Figure 7: Benefit to cost ratios for shortlisted options



ES8 Preferred Option

There are two dimensions to the choice of the preferred option:

- The level of public sector funded intervention (and the projects that it supports); and
- The choice of masterplan (i.e. either 34.5 ha or 60 ha)

In terms of meeting the objectives set out for the BIG Programme (10,000 new jobs and £500 million of GVA), delivery of the Enhanced BIG Programme and delivery of the 60 ha masterplan will best meet these objectives. The choice of masterplan to be delivered will ultimately be made by the landowner MAG, but the public sector can support MAG in achieving this. At present, the Enhanced BIG Programme of activities has not been worked up, so the delivery of the Current BIG Programme with a commitment to develop an Enhanced BIG Programme is the preferred option.

ES8 Next Steps

To deliver maximum benefit to the local economy, the Enhanced BIG Programme should be developed and delivered. Key steps in this will include:

- Further development of skills interventions. A first stage feasibility study looking at skills has been carried out, which suggests that this concept can be taken further.
- Further development of demand stimulation interventions, including business support and business networking, which are needed to encourage business growth and new business starts, especially in the key sectors of Advanced Manufacturing & Aerospace and Financial Services & Insurance.
- Further development of proposals for marketing and promotion.

1 Introduction

Hardisty Jones Associates (HJA) has been commissioned by Dorset LEP to carry out an economic appraisal of the Bournemouth International Growth (BIG) Programme.

1.1 Background

The Dorset Strategic Economic Plan (SEP) sets out Dorset's collective aspiration to create more and better jobs in Dorset over the period to 2021 and beyond, contributing to a national drive to create economic growth. A number of major strategic projects have been established to support Dorset's growth aspiration and its contribution to national economic growth. The development of Aviation Park, comprising two major employment sites adjacent to Bournemouth Airport (East and West), has been a long-standing ambition in Dorset and a priority for Dorset's Local Enterprise Partnership (LEP). The development of the Wessex Fields site, adjacent to the A338, is another LEP ambition, also located on the eastern side of the South East Dorset Conurbation.

A programme of project investments, known as the Bournemouth International Growth (BIG) Programme, has been assembled to help to support the delivery of new additional employment on these two sites. The BIG Programme comprises road infrastructure projects and a number of complementary projects. Funding has been bid for (or will be bid for), or has been awarded under the Growth Deals between the LEP and Government. Together, this programme of projects is expected to enable the development of up to 45 ha of employment land at Aviation Park, 7.7 ha of employment land at Wessex Fields, and their contribution to economic growth aspirations in Dorset.

1.2 The Bournemouth International Growth Programme

The BIG programme has evolved from an original City Challenge bid for funding, which has been further developed through bids to Growth Deal rounds 1, 2 and 3. The original focus on development at the airport – Aviation Park – has been widened to include development at Wessex Fields.

The vision set by the Programme steering group focuses on the development at the Airport. It is shown in the figure below. This does not include reference to Wessex Fields, which has recently been introduced as part of the Programme.

Figure 1.2: Bournemouth International Growth Programme Vision

The Airport Growth Programme is a series of projects aimed at developing up to 60 Hectares of Employment land at a key strategic location in Dorset. The successful completion of the programme will bring with it a large increase in new employment numbers and economic output which will be felt across Dorset and beyond. Our vision for the business park and the operating Airport is that within the next 10 -15 years it will be:

- *The premier Business Park for Aerospace and Advanced Manufacturing in the South West*
- *A place where ideas and innovation flourish based on a close working relationship between the business, education and public sectors*
- *An accessible and well connected working environment by road or air with International connectivity*
- *A pleasant and modern place to do business based on a high quality environment and up to date infrastructure, all within a thriving and growing conurbation*
- *A productive business environment attractive to inward investors based on good quality business support networks led by the Business community*
- *A supportive business environment where local facilities such as Housing and Leisure are easily accessible*

By:

- *Transform accessibility to and around the airport through a major programme of road improvements and other infrastructure such as improved Broadband*
- *Develop 60 hectares of high quality employment land catering for a range of Business needs*
- *Improve business support networks and activities*
- *Develop a new approach to skills development better tailoring it to the needs of businesses in key sectors*
- *Simplify the Planning regime to make expansion and relocation easier for Businesses*
- *Market and promote the site as part of the total Conurbation and wider Dorset “offer” to both national and international audiences*

Source: Bournemouth International Growth Programme Update, Spring 2016

The Wessex Fields development is part of a *vital area of employment for Dorset¹*, and the two sites that form the opportunity at Wessex fields *have considerable economic potential*.

The BIG Programme comprises a series of projects, set out in two main phases and a further set of projects beyond these phases. Phase One projects are funded under Growth Deals 1 and 2, and Phase Two projects are seeking funding under Growth Deal 3. Further projects are funded by other sources, or there is no funding yet in place. The projects are shown on the map in Figure 1.1 and listed in the figure below.

¹ Bournemouth Borough Council (undated) Wessex Fields LEP Scheme – A338 Wessex Way/Castle Lane East: Unblocking the Network – Unlocking Jobs: Local Growth Fund Top-Up Bid, Addendum to Summary Business Case to Take Account of Reduced Funding

Figure 1.3: The Bournemouth International Growth Programme

Phase 1 (Growth Deals 1 and 2)

A338 reconstruction
Hurn Roundabout
Chapel Gate Roundabout
Blackwater Interchange
Bear Cross Junction
Longham Mini Roundabouts
A338 Cooper Dean to Blackwater
Mountbatten Junctions
Wessex Fields Junction

Phase 2 (Growth Deal 3)

Parley Cross Junction
Parley Easter Link Road
Parley Western Link Road
Bus enhancements on the A338 and B3073
Cycle links

Other projects (other funds or unfunded)

Local Development Order for the airport sites
Skills escalator feasibility study
Business support
Business networking
ICT voucher scheme
Marketing and promotion

Source: Bournemouth International Growth Programme, May 2016

1.3 Context

The BIG Programme is important to the delivery of the Dorset Strategic Economic Plan (SEP)² which sets out the growth aspirations for transformative change in the Dorset economy over the period to 2021. The development of Bournemouth Airport, including the business park, is one of the priority projects within the SEP.

A recent refresh of the SEP vision³ reinforced Dorset's economic growth aspirations, including higher economic activity rate and higher Gross Value Added (GVA) per worker, in part through more employment in the key sectors, which include Advanced Manufacturing and Financial Services & Insurance. Bournemouth Airport is now highlighted in the vision as one of the priority locations for economic growth.

The refresh of the SEP highlighted the tightening of the labour supply in Dorset, with almost no forecast growth in the working age population over the period to 2031. The economic activity rate (of those of working age) is already higher than the national average and the unemployment rate is low. In-migration is constrained by high house prices and poor housing affordability. Future economic growth will be driven by increased productivity (i.e. output per worker), and more people in employment. However, the constraints on the workforce could limit the level of economic

² Dorset LEP (2014) Transforming Dorset: Strategic Economic Plan

³ Dorset LEP (February 2016) A Strategic Economic Vision for Dorset

growth. Therefore, creating higher value, higher productivity jobs and providing training and skills development to enable people to access these jobs are both crucial in supporting future economic development.

1.4 Purpose

The purpose of this economic appraisal is to ensure that a rigorous process is undertaken to develop the BIG programme from first principles. The appraisal needs to test whether public funds are spent on activities that provide the greatest benefits to society, and that the funds are spent in the most efficient way. Options appraisal is essential to this approach.

1.5 Our Approach

The appraisal is designed to meet the principles set out in the HM Treasury Green Book⁴. This means delivering the following steps:

- Establishing the justification for public sector intervention
- Setting out the objectives that the intervention will meet
- Identifying options for meeting the objectives
- Selecting the best option and developing a solution

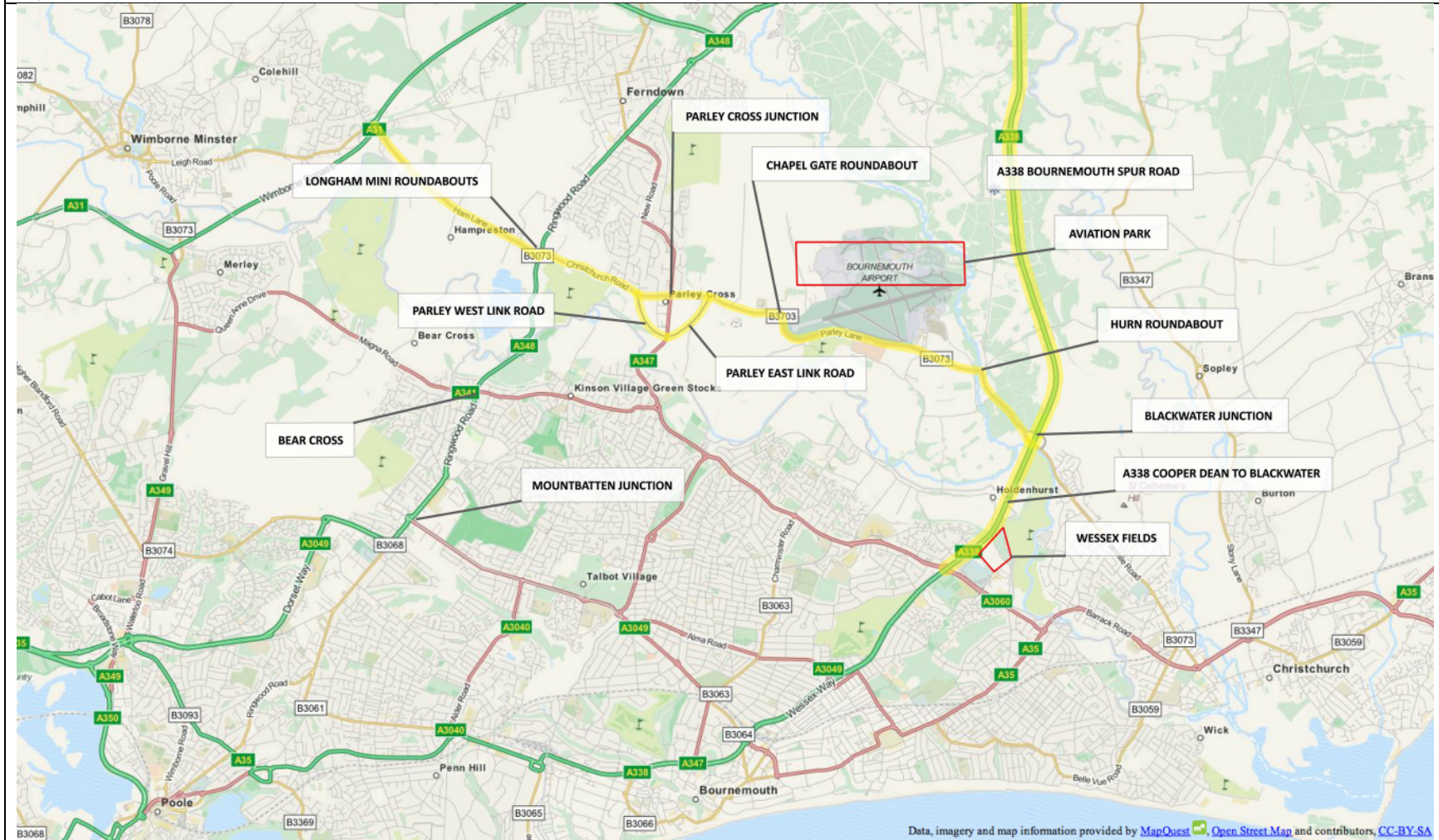
To do this we undertook a number of research stages:

1. Consultations with key stakeholders to inform our understanding of the context, development of options and testing of options
2. Documentary review to inform our understanding of the context, development of options and testing of options
3. Options development to develop a long-list of options
4. Modelling of the costs and benefits associated with each of the options to move from a long-list to a short-list
5. Options appraisal informed by the modelling and the contextual review developed from the first two stages
6. Selection of the best option

Appendix 2 sets out further details on the methodology used to deliver this economic appraisal.

⁴ HM Treasury (2011) The Green Book: Appraisal and Evaluation in Central Government

Figure 1.1: An Overview of Bournemouth International Growth Programme



1.5.1 Considering the options

For each option we have considered both the gross direct impact and the net additional local impact. These are discussed in more detail in Government's latest guidance on additionality⁵, but it is worth noting that the following effects are considered when moving from gross to net additional impacts:

- **Deadweight** i.e. what is likely to happen on the Aviation Park and Wessex Fields sites in the absence of any investment in any of the projects that make up the BIG Programme. This is likely to include any jobs already created on the site, and jobs that are created before the investment is committed
- **Displacement** i.e. any benefits (such as jobs) that may be displaced from other parts of the Dorset economy and on to the Aviation Park and Wessex Fields sites, thus not bringing additional benefit to the Dorset economy. In the modelling that we have undertaken, we have assumed a standard level of displacement, based on latest Government guidance. However, if a successful cluster is developed (e.g. in Aerospace and Advanced Manufacturing), then more supply chain businesses may be attracted to the Aviation Park site in particular, thus reducing the opportunity for the displacement of existing Dorset businesses onto the site
- **Leakage** of any benefits out of the local area. This typically includes values like the leakage of construction expenditure if specialist construction firms are brought in from outside Dorset
- **Multiplier effect** i.e. other benefits that are generated in the Dorset economy, due to employees' spend in the local economy and supply chain activity in the Dorset economy. Estimates of up to 6,000 further supply chain jobs in Dorset have been suggested, but this would suggest a massive multiplier effect, and there is no evidence to substantiate this. We have therefore used latest Government guidance to inform the modelling of the multiplier effect, but this could be refined if new interventions are designed.

Our focus for this appraisal has been on the effect on the Dorset economy. For this reason, we have looked at the gross and net effects of workplace-based employment rather than residence-based employment.

1.6 The Rest of this Appraisal

The further chapters of this appraisal are summarised below.

- Chapter 2 presents the justification for public sector investment in the BIG Programme
- Chapter 3 defines the objectives for the intervention carried out through the BIG Programme
- Chapter 4 sets out the long-list of options that have been considered in order to meet the objectives defined in the previous chapter
- Chapter 5 identifies the preferred option for the delivery of the BIG Programme objectives and shows how this option meets the objectives set out in Chapter 2

⁵ Homes & Communities Agency (2014) Additionality Guide: Fourth Edition

2 Justification for Intervention

2.1 Introduction

The first step in the appraisal is to identify a clear need which requires public sector intervention. There must be a clear rationale for intervention, and it must be reasonably assumed that any public sector intervention will generate benefits that are greater than its costs. Public sector intervention is usually justified when there is a market failure.

2.2 Achieving Dorset's Growth Ambition

The current Growth Deals between Dorset LEP and Government are expected to create 26,000 new jobs, 3,000 new homes, and generate £650 million of public and private investment by 2021⁶. These targets are a subset of those set out in the Dorset Strategic Economic Plan (SEP)², and the updated SEP Vision³ in early 2016. The future growth aspirations for the Dorset economy set out in these documents include the creation of more employment and better quality employment, measured by indicators such as:

- 40,000 additional jobs by 2021 (p.25 of SEP)
- An increased economic activity rate i.e. a greater proportion of working-age people in employment
- Increased GVA per worker i.e. greater productivity
- Increased skills, graduate numbers and apprenticeships
- More employment in Dorset's key sectors, which include Advanced Manufacturing and Financial Services & Insurance

The SEP sets out the case for public sector interventions to meet these economic objectives for Dorset. This need for intervention is fundamental to the notion of a SEP and the establishment of a Local Enterprise Partnership (LEP). The Dorset SEP and LEP are part of a national effort to promote economic growth.

Promoting growth at Bournemouth Airport is one of the highest priority projects set out in the Dorset SEP. Market failure, largely caused by poor road transport access to the site is the main barrier to the delivery of this site (p.58). Bus enhancements along the A338 and B3073 are also highlighted as important transport projects in the SEP (p.159).

2.3 Market Failure

Market failure is defined in the HM Treasury guidance on project appraisal, the Green Book⁴ which states (p.11):

"Market failure refers to where the market has not and cannot of itself be expected to deliver an efficient outcome; the intervention that is contemplated will seek to redress this."

In this case the market mechanism alone will fail to deliver the target level and type of employment set out in the Growth Deal and the SEP. Significant reasons for this include the lack of suitable and

⁶ <http://dorsetlep.co.uk/priority-project-refresh/>

accessible employment land in the right locations and the lack of suitable skills in the local labour market. These market failures are discussed below.

2.3.1 Lack of suitable employment land

The Dorset Workspace Strategy⁷, which was prepared by Dorset's local authorities, makes the case that there is a strong current and future demand for employment land, and this is not being met. In particular, the shortfall will be seen in the Bournemouth and Poole conurbation (sometimes referred to as an SSCT or Strategically Significant City or Town):

"On the whole, in the 2011-31 period in Bournemouth, Dorset and Poole there appears to be the potential for a shortage in the supply of available land to meet demand ... Any potential shortfall is likely to be most noticeable in the Bournemouth & Poole SSCT, particularly in the short-term. (p.5)

The workspace strategy is currently being updated, and as part of this process a meeting was held with a group of local property market agents to understand the short and long-term state of Dorset's employment land and workspace market⁸. When asked about the investment potential of Dorset:

"The agents considered that in relation to Eastern Dorset there is insufficient employment land and premises of the right type, quality and location that is available in the short term to meet the needs of the market ... This is considered to have a significant adverse impact on investment potential ... Business has been lost from the area due to the lack of available premises to meet needs" (p.4)

And:

"Overall the view of agents in Eastern Dorset is that the current quality, size and location of industrial premises available to the market is insufficient to meet existing needs. Industrial supply is perceived as generally poor with not a significant amount of new industrial space coming onto the market." (p.8)

The property agents also considered how this situation might be tackled:

"Improvements in highways infrastructure will help to facilitate growth and improve prospects for economic investment. The planned A338/B3073 improvements will provide extra capacity to the network to help unlock key employment sites such as Bournemouth Airport Business Park." (p.5)

The role of Aviation Park in addressing this market failure is also highlighted in work undertaken by Nathaniel Lichfield & Partners for Christchurch & East Dorset Councils in 2013⁹:

⁷ Dorset County Council (2012) Bournemouth, Dorset & Poole Workspace Study: Employment Land Projections 2012 Update

⁸ Note of the meeting of Bournemouth, Dorset and Poole Workspace Strategy Eastern Dorset Meeting 8th December 2015, 2.00pm, Borough of Poole Civic Offices, transcribed by George Whalley, Christchurch & East Dorset Councils

⁹ NLP (2013) Bournemouth Airport: Delivery Trajectory for Development Land. Final Report

“The availability of development land at Bournemouth Airport is a critical component of meeting future employment land needs in the Bournemouth and Poole SSCT” (Para 3.21-1)

Bournemouth Airport’s business park (i.e. Aviation Park) is identified in the Christchurch & East Dorset Local Plan¹⁰ as one of the main employment development sites in the two districts. The Local Plan suggests that around 30 ha of the employment land at Aviation Park will be developed over the plan period (2013 – 2028) subject to the improvements to the local infrastructure set out in the BIG Programme. The Local Plan states:

“This supply is critical for meeting projected employment land requirements for the South East Dorset sub region ... Bournemouth Airport Business Park is a key strategic site within the sub region and is required to contribute towards future requirements and particularly the undersupply in Bournemouth” (para 7.9, p.72)

The Local Plan also references an earlier Nathaniel Lichfield & Partners report which suggests that 80% of the development at Aviation Park should be industrial and 20% office development. The Local Plan goes on to state that the site is attractive to businesses in general manufacturing, advanced engineering, financial & business services, ICT and distribution & logistics. The demand for premises ranges from small and large industrial units, through small purpose-built office units, warehousing, start-up incubator premises to recycling and environmental industries.

Policy BA1 of the Local Plan Core Strategy sets out a vision for the airport, including Aviation Park, which states:

“The northern business parks will be redeveloped to provide a range of employment land and premises to serve the local and sub-regional economy. This will include the potential to attract new business sectors in knowledge based industries and other growth sectors to increase opportunities for higher skilled employment and to stimulate economic growth. The business parks will utilise their extensive high quality airside access, to encourage further growth in the aviation and aviation related business sectors.” (p.75)

Policy BA1 goes on to link the development of Aviation Park with the transport improvements sets out in the BIG Programme:

“Online junction improvements are required along the B3073 to facilitate growth of the operational airport, business park and development in the wider area ... Successful implementation of the airport’s area wide travel plan is required to help facilitate sustainable access to the airport and business park.” (p.75/76)

Local property agents suggest that there is very strong demand for industrial and warehousing premises (i.e. Planning Use Classes B2 and B8), but less strong demand for offices.

2.3.2 Transport and accessibility barriers to the delivery of employment land

The section above shows that Aviation Park is part of the potential supply of employment land that can help to meet and accommodate current and future demand. However, a major barrier to the

¹⁰ Christchurch & East Dorset Councils (2014) Christchurch & East Dorset Local Plan: Part One – Core Strategy

delivery of Aviation Park is road access, which is currently very poor. There is regular congestion on roads to the site, particularly at peak times. Congestion is exacerbated by through-traffic passing the site as well as by traffic to and from it. It has been suggested by some commentators that existing businesses located on the site are considering their position due to the high levels of congestion – therefore safeguarding of current employment becomes an issue as well as accommodating new employment.

The Local Plan¹⁰ states:

Achievement of the airport's development potential is limited by poor strategic and local road access (particularly for the North East business park), traffic congestion [etc.] ... The enhancement of public transport services/facilities for cyclists for the airport and business park is a priority in reducing harmful emissions and ensuring development can come forward within the capacity of the highway network. Significant online improvements are also required to the highway network and associated junctions primarily along the B3073 and A338 to realise projected growth at the airport and associated business park, as well as accommodating other development in the area and natural growth in traffic. (Para 7.17, p.73)

Looking at this within the wider local context, the Bournemouth, Poole and Dorset Local Transport Plan 3¹¹ sets out a strategy for improving transport across the whole of the Dorset LEP area. Supporting economic growth is one of the priority goals of the Local Transport Plan (p.17). Key challenges to meeting this goal include (p.26):

- Improving the reliability and predictability of journey times on key local routes
- Creating a lasting shift to more sustainable transport behaviours
- Improving inter and intra-regional connectivity
- Supporting planned growth in Dorset
- Providing improved access to key employment sites, including growth areas

Plans to improve the B3073 corridor, which will improve access to Aviation Park, are set out in the implementation plan appended to the Local Transport Plan (p.38). The South East Dorset Multi Modal Study¹² was undertaken in parallel to the Local Transport Plan to inform the future development of transport strategies for the conurbation. An objective of the eventual strategy is *supporting national economic competitiveness and growth* (p.14). One of the short/medium term measures emerging from the Multi Modal Study is for junction improvements at key locations, including the B3073 corridor from the A338 to Bournemouth Airport. In the long-term this will be enhanced with a showcase bus corridor (p.18-19). Improved cycling and walking facilities are set out as a key part of the proposed solution (p.22).

The Multi Modal Study highlighted key junctions with congestion at peak times (Chapter 8, p.222-258), and particular junctions that could be improved. These include:

¹¹ Bournemouth Borough Council, Borough of Poole, Dorset County Council (2011) Bournemouth, Poole and Dorset Local Transport Plan 3: Strategy Document 2011-2026

¹² Atkins (2012) South East Dorset Multi Modal Transport Study: Final Report

- Blackwater junction
- Longham (mini roundabouts)
- Parley Cross: where there is potential for a gyratory system
- Hurn
- A338 Blackwater
- Bear Cross: which could be signalised
- Chapel Gate
- Mountbatten Arms: where roads could be widened
- Widening of the A338 from Blackwater to Cooper Dean

At para 8.91 the Multi Modal Study sets out the notion of tackling congestion along corridors rather than individual junctions:

“In exploring the potential remedies to the problems at the series of junctions, it was identified that improvements to individual junctions would be unlikely to solve the underlying problem created by a lack of capacity for the major east west movement across the conurbation. A series of east- west corridors were considered ... ”

This corridor approach, including all of the junctions mentioned above forms the basis of the BIG Programme. It will be important to ensure that creating 350 new homes at Parley does not exacerbate local traffic congestion.

Looking to Wessex Fields, the land is allocated for employment development, but there is insufficient access to the site to enable development to take place at present. Only with a new junction from the A338 enabling access to the site will it be deliverable. However, it is not financially viable for a private developer to deliver the junction. There is significant congestion on Castle Lane East, the main access road into the site at the moment, which exacerbates the constraints to the development of the site.

The market rarely invests in major road projects as public roads are (generally) public goods, and it is difficult for private investors to capture all of the benefits from investments in roads and infrastructure and therefore make it a worthwhile investment. A market failure therefore exists whereby the road infrastructure to unlock a key development employment opportunity will not be delivered through the market mechanism without public intervention.

2.3.3 Lack of suitable skills

Another barrier to achieving the growth aspirations set out in the SEP is the lack of suitable skills in the local labour force. The transferable nature of skills often mean that employers will not fully fund them directly, and because of imperfect information individuals will under-invest in their own skills. Anecdotal evidence claims that a potential aerospace employer considered re-locating to the Aviation Park site but did not do so because of the lack of suitably skilled labour in the local area. There is also anecdotal evidence of local employers (not necessarily in the advanced manufacturing sectors) having difficulty recruiting workers locally, often because of housing affordability issues. A Skills Escalator feasibility study has recently been commissioned by Christchurch & East Dorset Councils to investigate the case for a new skills and training facility. If jobs created at Aviation Park

and Wessex Fields cannot be filled by local residents then they will be filled by in-commuters. This could mean the leakage of economic benefits out of the Dorset LEP area.

A study was commissioned by Christchurch & East Dorset Councils to investigate the feasibility of developing a centre of excellence for aerospace and advanced manufacturing skills¹³. This study included a survey of aerospace and advanced manufacturing businesses in the local area. All of the respondents to the survey reported that there were skills shortages in the local area. A further workshop with employers confirmed that there are skills shortages in the local area and that there is an urgent need to tackle this.

Possible future actions have been suggested to address the skills needs in the local area. These include:

- Working with local schools and colleges to better meet employers' needs
- Developing a new skills and training facility on the Aviation Park site

No costs and benefits have been worked up for these options. However, by delivering training to address specific skills needs, particularly in aerospace and advanced manufacturing, these options are likely to help enhance the attractiveness of the Aviation Park site to new investors.

The lack of skills is exacerbated by the poor affordability of homes in the local area, which impacts on people who want to buy homes either to stay in Dorset or to move to the area. Although the BIG Programme does not directly address the issue of housing affordability, the transport improvement schemes at Parley will enable housing development to take place.

2.4 Addressing the Market Failures

The BIG Programme has been designed to address the market failures discussed above. The logic chain for overcoming these market failures is set out below.

1. There is a current and future expected shortfall of suitable high quality employment sites in the Dorset LEP area, and the delivery of the Aviation Park and Wessex Fields sites to the market have been identified as critical to overcoming this shortfall
2. There is a current and future expected shortfall of suitable skills in the Dorset labour market, particularly for the advanced manufacturing sector
3. The Aviation Park site will better meet the needs of the advanced manufacturing sector than other alternative sites
4. Poor road infrastructure is hindering the development of the sites and the creation of new jobs
5. The BIG Programme will improve connectivity and access to the sites¹⁴ as well as the deliverability of the sites, and help to improve relevant workforce skills, particularly in advanced manufacturing

¹³ Cushman & Wakefield (2016) Aerospace and Advanced Manufacturing Centre of Excellence: Feasibility Study Stage 1 Summary Report

¹⁴ Note also that Highways England has plans for improvements to the trunk road network that will contribute to improved access to the conurbation. However, if not delivered, then pinchpoints on the trunk road network could affect the overall accessibility of the conurbation

6. These will improve the attractiveness of the sites to developers, improve development viability, and improve the attractiveness to occupiers. This will create confidence in the location, leading to development momentum
7. This will lead to investment in employment premises on the sites
8. Leading to the creation of new additional jobs in the Dorset LEP area
9. These will contribute to the economic growth target for Dorset and the UK economies

3 Objectives for the Intervention

The objectives for the public intervention in support of the delivery of the BIG programme must be stated clearly, to allow the identification of a full range of alternative options to be properly considered. The objectives are expressed in this chapter in terms of outcomes, outputs and targets.

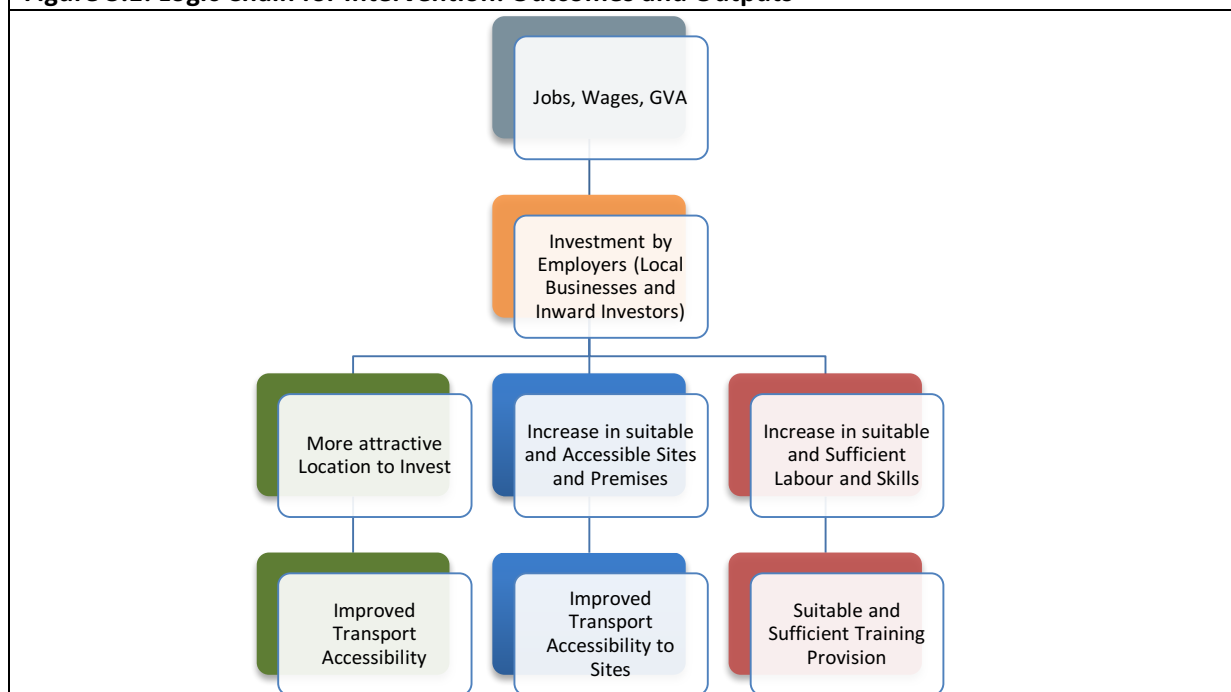
3.1 Objectives

The objective of the BIG programme is to **support and enable the creation of new high quality, high productivity jobs in the Dorset LEP area, and safeguard existing jobs**. It will support the delivery of the Strategic Economic Plan for Dorset by:

- Delivering the major infrastructure needed to enable the creation of new job opportunities at Aviation Park (with a focus on advanced manufacturing and aerospace) and Wessex Fields; and
- Supporting the improvement of skills within the local population to enable local residents to access these new job opportunities

The section below set out the outcomes, outputs and targets that are needed to meet these objectives. The logic chain below shows how the outcomes and outputs are inter-related. The elements of this are discussed below.

Figure 3.1: Logic Chain for Intervention: Outcomes and Outputs



3.2 Outcomes

The outcomes are the eventual benefits to society delivered by the intervention. In this case the outcomes are:

- To create at least 10,000 new jobs in Dorset
- And at least £500 million of gross GVA

Investment by existing businesses and new businesses will be needed to deliver these outcomes. This means existing businesses increasing their workforce and their productivity (i.e. output per worker), new businesses being created, an inward investors coming to Dorset, creating new jobs and output.

3.3 Outputs

Some of the outputs that are needed in order to achieve these outcomes are:

- A more attractive location to invest i.e. up to 60 ha of accessible and attractive employment land
- Suitable and accessible sites and premises i.e. c.170,000 sq m of employment premises (broadly 105,000 sq m of B1, 44,000 sq m of B2 and 22,000 sq m of B8) in accessible locations that are attractive to employers who want to invest in Dorset
- Training of local people in relevant skills to enable them to access the jobs that are created

3.4 Targets

The targets that help to make progress towards the achievement of the outputs and outcomes are:

- Improvement of accessibility to the Aviation Park and Wessex Fields sites to allow sufficient transport movements per day, by:
 - Improvements to the A338
 - Junction improvements along the B3073 corridor, including at Blackwater Junction, Hurn, Chapel Gate, Parley Cross, two new Parley link roads, Longham mini roundabouts, Bear Cross and Mountbatten Junctions,
 - Improved access to Wessex Fields, including a new junction into the site from the A338 and widening of a stretch of the A338
 - Bus enhancements
 - Cycle links
- Delivery of a facility that will allow the training of people in advanced manufacturing skills
- Activity to stimulate demand for new additional jobs in Dorset, including:
 - Support to local businesses
 - Attraction of new inward investors

3.4.1 Improving access to Aviation Park

Current employment growth at Aviation Park

Two planning permissions are currently in place for development at Aviation Park. Application 8/11/0329 has been granted as outline planning permission for up to 42,000 sq m of B1, B2 and B8

floorspace. Application 8/14/0637 has been granted as outline planning permission for 31,200 sq m of B1, B2 and B8 floorspace.

Two local businesses are currently developing new premises on the Aviation Park site. AIM aviation has developed a building of 14,700 sq m which is expected to start operating at the end of 2016 with 450 jobs on-site (which is part of the outline permissions set out above), and Curtis Wright is developing a building of 14,900 sq m with 550 jobs on site which is likely to start operating at the end of 2017 (which is additional to the two outline permissions set out above). Both businesses are increasing their local employment in Dorset as a result of their developments on the Aviation Park site. Both businesses have included further capacity in their new buildings, so there is scope for further growth in their employment on the site. AIM Aviation already has premises on the Aviation Park site, and Curtis Wright is relocating from nearby Christchurch, and bringing existing employees to Dorset from sites elsewhere. Therefore some of the employment created in these new developments will be displaced from elsewhere in the local area and not net additional. A number of suppliers to both businesses are located in the local area, so any direct growth in these businesses is likely to have supply chain benefits throughout the local economy.

The Christchurch & East Dorset Local Plan Core Strategy sets out the policy for development at Aviation Park¹⁰ – policy BA1. The whole business park is potentially allocated for development, with an expectation that 30 ha of land will be developed between 2013 and 2028, based on a programme of transport improvements along the B3073 corridor set out in policies KS9 and KS10.

Figure 3.2: Local Plan Transport Policies

Policy KS9: Transport Strategy and Prime Transport Corridors

The transport corridors proposed for improvement include:

- B3073 Wimborne town centre - Longham mini roundabouts - Parley Cross - Chapel Gate - Hurn roundabout - Blackwater Interchange. (A338 junction)

Policy KS10: Strategic Transport Improvements

Short term improvements (2013-2017) include:

- B3073 Hurn roundabout improvement. A338 reconstruction from A31 junction - County boundary (joint scheme with Bournemouth Borough Council which will deliver the section from County Boundary - A3060 Cooper Dean).
- A338 widening from A338/B3073 Blackwater junction - County boundary (joint scheme with Bournemouth Borough Council which will deliver the section from County Boundary - A3060 Cooper Dean).

Medium term improvements (2018-22) include:

- B3073 Parley Cross junction improvements and associated development link roads
- B3073 Blackwater Junction improvements
- B3073 Chapel Gate junction improvements

Long-term improvements (2022-2028) include:

- B3073 widening between Chapel Gate to Blackwater junctions.

Source: Christchurch & East Dorset Local Plan Core Strategy

With the exception of the long-term project to widen the B3073, the BIG programme is helping to deliver all of the transport improvements set out in the figure above, which will enable development to take place at Aviation Park. Potentially, more development can take place during the local plan period if greater transport improvements are implemented, and the road capacity is being delivered quicker than was expected.

Potential further development at Aviation Park

Manchester Airports Group (MAG), the owner of the Aviation Park site, has prepared a number of masterplans for development on the site that are being tested for deliverability. These are confidential and not publically available, but have been reviewed by HJA to inform the estimates of the economic impact of development at Aviation Park. In summary:

- Masterplan 1 is the current Local Plan allocation and sets out plans for 34.5 ha of employment development on the site, comprising premises in Use Classes B1, B2 and B8. Average plot density is just under 30%
- Masterplan 2 sets out plans for up to 47 ha of new and replacement employment development, also comprising premises in Use Classes B1, B2 and B8. Average plot density is just under 36%, so higher density than Masterplan 1. This is known colloquially as the 60 ha masterplan, as the full site will be 60 ha

In discussion with MAG, we have agreed the following assumptions about the development that will take place under these two masterplans:

- 10% of the total ground-floor area will be developed for pure offices at an average of 2.5 storeys high
- 90% of the total ground-floor area will be developed for manufacturing, storage and distribution

However, as the focus of Aviation Park is on high-tech advanced manufacturing businesses:

- One-quarter of the total ground-floor area designated for manufacturing, storage and distribution will be developed as office space that is ancillary to these activities, which will be developed at an average of 2.5 storeys high
- Half of the total ground-floor area designated for manufacturing, storage and distribution will be developed as manufacturing space at one storey high
- One-quarter of the total ground-floor area designated for manufacturing, storage and distribution will be developed as storage and distribution space at one storey high

Some of the premises will have direct airside access, although this is not necessary for many of the businesses that will occupy premises at Aviation Park.

3.4.2 Improving access to Wessex Fields

Current situation at Wessex Fields

Wessex Fields was previously known as Riverside Avenue, and is referred as such in some documents. It is allocated as a key employment site in the Bournemouth Local Plan Core Strategy¹⁵. There was planning permission for offices on the site, which was (and still is) dependent on a new

¹⁵ Bournemouth Borough Council (2012) Bournemouth Local Plan: Core Strategy

junction to the A338 being delivered. However, it was not financially viable for a private developer to deliver the junction, and hence development on the site has not taken place. Planning permission has now lapsed, although the site remains allocated within the Local Plan. It is unlikely that speculative build will take place on the site because local office rental values are not high enough to justify this, so an occupier will need to commit to the site before development takes place.

Potential development at Wessex Fields

The current Local Plan site allocation is for offices, but local property agents have suggested that the site might work better as a mixed-use development. Bournemouth Borough Council is keen to explore the potential for a focus on innovation and collaboration across a number of sectors, which would require a mix of offices and light industrial workshops (i.e. B1a and b).

The application to the Local Growth Fund to support the investment in the site states that the site could accommodate 2,500 new jobs¹⁶. By providing a new access into the site, it will also relieve traffic congestion in the local area, secure the viability of other local employers, and therefore safeguard other local jobs. The funding application also states that the transport improvements will help to create a further 500 additional jobs amongst business already located at the Wessex Fields site¹⁷.

3.4.3 Skills and training

Investments in skills and training will be essential to ensure that there is sufficient local labour with the right skills to fill the jobs that are created at Aviation Park and Wessex Fields. Without interventions to deliver the right sort of training there is a risk that there will be insufficient labour with the right skills and qualifications to fill the job opportunities that are created in Dorset. It is likely that potential investors will not invest in Dorset if they are not confident that they can attract and recruit the labour that they need.

This issue has not yet been addressed in great detail, although a feasibility study into the potential for interventions to support skills development for the aerospace and advanced manufacturing sectors has been carried out on behalf of Christchurch & East Dorset Councils¹³. This is an early stage feasibility study and does not reach any firm conclusions about the nature or scale of skills and training that are required, although it does suggest that there is demand in the local area for 500 apprenticeships in aerospace and advanced manufacturing, and that supply is not keeping up with demand. A number of possible solutions to addressing skills needs in the local area are proposed, but none are explored in detail.

3.4.4 Demand stimulation

Support to businesses – both existing businesses and new businesses - will help to generate growth in the businesses and therefore employment at both of the local sites. Without interventions to support demand stimulation there is a risk that there will be insufficient growth in the local business community to create the demand for new premises in Dorset.

¹⁶ Bournemouth Borough Council (undated) Wessex Fields LEP Scheme – A338 Wessex Way/Castle Lane East: Unblocking the Network – Unlocking Jobs: Local Growth Fund Top-Up Bid, Addendum to Summary Business Case to Take Account of Reduced Funding

¹⁷ HJA has not tested any of these assumptions about the level of possible development on the site

There is a nascent cluster of aerospace and advanced manufacturing businesses in the local area. Support is needed to develop this either into a fully functioning business cluster, or to link local businesses into existing aerospace clusters already established elsewhere. This will include activities such as network development, collaboration support, marketing and knowledge transfer.

Wessex Fields is located next to Bournemouth's main hospital. There is potential to attract businesses in the medi-tech or care-tech sectors that will benefit from close relationships with the hospital. Commentators have also suggested possible linkages between medi-tech and finance and insurance.

3.4.5 General

It will be important to phase the delivery of the junction improvements to ensure that traffic is able to move in the local area throughout the construction period.

4 Long List of Options

A number of options have been considered and reviewed to consider the potential range of actions that can be taken, to ensure that the solution meets the objectives set out in the previous chapter and provides value-for-money.

We look at a number of sets of options that have been and are being considered during the development of the programme:

- The options considered in the selection of sites to be made more accessible
- The options considered before the decision to invest in improvements to the A338
- The options (including the A338) considered to meet the full set of objectives set out in Chapter 3

For each of the options, we consider its gross direct impact and net additional local impact. More details about these figures are set out in Chapter 1 and Appendix 2.

4.1 Site Selection Options

4.1.1 Aviation Park

The Dorset SEP² and the SEP vision refresh³ set out the employment sites that are strategically important to enabling future economic growth in Dorset and the Bournemouth and Poole conurbation. Aviation Park at Bournemouth Airport is one of the highest priority development sites set out in both documents. It has been identified as a priority development site in Dorset for many years and featured in the bid for City Deal funding in 2013¹⁸. Two major sites were identified in this bid as enabling significant growth in the South East Dorset conurbation and Dorset more widely – Aviation Park and the Port of Poole. Significant road improvements are needed to maximise the economic contribution of both to local economic growth. The Port of Poole is the subject of a separate package of transport projects that is being progressed in parallel with the BIG programme.

The Christchurch & East Dorset Local Plan¹⁰ sets out a hierarchy of employment sites at Policy PC1. Aviation Park is the only *strategic higher value site* identified within the policy. The policy states that the purpose of the site hierarchy is:

“... to influence the location of employment uses across sites in Christchurch and East Dorset. ‘Higher order’ uses that are economically productive offering highly skilled and well paid employment will be located on ‘Strategic Higher Quality’ and ‘Higher Quality’ sites which offer the necessary locational attributes.” (Policy PC1, p.180)

Two options for the development of Aviation Park have been discussed in the previous chapter:

- 34.5 ha masterplan
- 60 ha masterplan

These two masterplan options eventually deliver different amounts and densities of development, so will deliver differing amounts of workspace (and therefore jobs) at any point in time. The details of this are discussed in more detail below.

¹⁸ Dorset LEP (2013) Bournemouth and Poole City Region – City Deal Expression of Interest

4.1.2 Wessex Fields

Wessex Fields is identified in the Bournemouth Local Plan Core Strategy as a key employment site¹⁵. It has significant potential to accommodate up to 3,000 new additional jobs, and being located on adjacent to the A338 on the edge of Bournemouth it is one of the most attractive locations in the Dorset LEP area.

By delivering a new junction and access directly from the A338, a site which could not otherwise be developed is brought into productive use. It is this step-change in accessibility and therefore the economic benefits associated with this project that makes it the highest priority for public intervention in Bournemouth.

4.1.3 Conclusion

Aviation Park is a sub-regional priority employment site within Dorset, and Wessex Fields is a local priority employment site in Bournemouth with significant potential to benefit from public investment. With investment in transport infrastructure, both will be able to accommodate significant amounts of new employment in Dorset, helping to meet the objectives set out in Chapter 3, namely:

- The creation of new high quality jobs
- Leading to an increase in pay, and
- An increase in local GVA

The sites will directly contribute to the output target for creating new employment land, and indirectly to the target for new premises.

4.2 A338 Options

The A338 (Bournemouth Spur Road) is a strategic dual carriageway to the east of the Bournemouth and Poole conurbation that links Bournemouth to the trunk road network and motorway network (see Figure 1.1). It is a critical part of Dorset's connectivity to the rest of the country. It is the most heavily trafficked road in Dorset¹⁹. However, the quality and therefore reliability of the road is declining:

“The A338 carriageway is now displaying longitudinal cracking, as well as transverse cracking, and is experiencing failures requiring ongoing emergency repairs and will require more planned extensive patching repairs and reconstruction ... Deflectograph surveys indicate that this construction is now coming towards the end of its structural life, and will require ongoing major maintenance across the next 20 years.” (A338 Business Case, Appendix 1, p.2)

Significant investment is needed to improve the quality of the road in order for it to continue to function reliably. Alternative options considered were:

¹⁹ Dorset County Council (undated) Appendix 1 to A338 Business Case: Supporting Evidence Based on Highway Asset Maintenance

- Continued, ad hoc reactive repairs combined with some phased structural repairs on an annual basis. County Council funding would be unlikely to meet the cost of this ongoing maintenance
- A major maintenance scheme comprising:
 - Improved highways drainage
 - Verge clearance and ecological measures
 - Road widening
 - Full central safety barrier replacement with a concrete barrier
 - Replacement of highways signs
 - Sections of reconstruction
 - Laying of a new surface course
 - Maintenance to structures and protection to bridge piers

According to the Business Case Appendix 1¹⁹ the cost of ongoing repairs over 20 years would be significantly in excess of the cost of the major maintenance scheme described above. The option chosen by Dorset County Council is the major maintenance scheme. However, this maintenance scheme does not increase road capacity or accessibility to key sites, other than by improving the reliability of the road. As the road was in poor condition and would need ongoing works to remain open and usable, this would likely create ongoing and regular congestion on the road, thus affecting the attractiveness of Aviation Park, Wessex Fields and other sites accessed via the A338. The chosen option (once completed) enables continued and reliable access into the conurbation, thus enhancing the attractiveness of employment sites in the conurbation.

Dorset County Council has carried out an economic impact assessment of the improvements to the A338 and B3073²⁰. However, this does not consider the A338 in isolation of the broader package of investments, and includes job creation at Aviation Park.

The redevelopment of the A338 is one of the targets set out in Chapter 3, which will contribute towards achieving the outputs and outcomes for Dorset.

4.3 Options for the Delivery of the BIG Programme

The options considered for the delivery of the BIG Programme are:

- Do-nothing
- Do minimum i.e. A338 improvements only
- A338 and B3073 transport corridor improvements only
- Current BIG Programme of activities (i.e. the above option plus additional projects)
- BIG Programme of activities with enhanced training and demand stimulation activities
- A Programme of activities with larger transport intervention projects

Do-nothing is not a practical option, as the development of the A338 is already underway. However, this is considered for the purpose of comparison, and to understand the deadweight associated with the rest of the options considered. Under the do-nothing scenario there would be some employment created at Aviation Park, but none at Wessex Fields – because the latter is dependent

²⁰ Dorset County Council (2016) Improvements to the A338/B3073: Economic Impact Assessment – January 2016 Update

on a new junction on the A338 which would not be delivered. The do-nothing option is considered in more detail in Appendix 2. The other options are discussed in more detail below.

4.4 Do Minimum: A338 Maintenance Scheme Only

Description

The A338 scheme is described in the previous section of this chapter. In summary this is a major maintenance scheme that improves the reliability of the A338 but does not increase its capacity. Under this option we have assumed there would be some additional employment created at Aviation Park because the improved reliability of the A338 will increase the market attractiveness of the site. However there will be no development at Wessex Fields because this is dependent on a new junction on the A338, which would not be delivered under this option.

Costs

Construction of this scheme is already underway. The scheme will be completed during the financial year 2016/17 and the total cost will be £22 million. £19.8 million of this will be from the Growth Deal, and the balance contributed by Dorset County Council.

Benefits

According to NLP⁹ there is a latent level of demand for employment land at the Aviation Park site of about 1.0 ha per year. Under the do-minimum scenario, we have assumed that this latent level of demand will be met, because the investment in the A338 will have an impact on the accessibility and therefore attractiveness of the Aviation Park site. Therefore we have assumed that 1.0 ha of land at Aviation Park will be developed each year.

The benefits of the do-minimum option are summarised in the figure below.

| Figure 4.1: Benefits of Do-Minimum Scenario | |
|---|--------------|
| | 2031 |
| Contribution to targets | |
| This option only delivers the A338 maintenance scheme | |
| Contribution to outputs | |
| Area developed (ha) | 16.0 |
| Premises developed (sq m) | 86,500 |
| Contribution to outcomes | |
| Gross direct impact | |
| Gross new jobs accommodated | 3,300 |
| Gross GVA generated per annum | £196 million |
| Net additional local impact | |
| Net additional new jobs accommodated | 580 |
| Net additional GVA generated per annum | £34 million |
| Costs and benefits | |
| Present value of costs (to public sector) | £22 million |
| Present value of benefits (to 2031) | £152 million |
| Net present value | £130 million |
| Benefit to cost ratio | 7:1 |

4.5 A338 and B3073 Transport Corridor Improvements

All options beyond the A338 only are about encouraging more use of alternative transport modes (bus, cycling, walking) as well as improving junctions to improve road access.

Description

This option includes a set of road and junction improvements that help to improve accessibility to Aviation Park, and provides a new access into Wessex Fields, allowing development to take place. The proposed package of projects is listed in the figure below. These can also be seen on the map set out in Figure 1.1.

| Figure 4.2: A338 and B3073 corridor improvement projects | |
|--|--|
| Phase 1 (Growth Deals 1 and 2) | |
| A338 reconstruction Hurn Roundabout Chapel Gate Roundabout Blackwater Interchange Bear Cross Junction Longham Mini Roundabouts A338 Cooper Dean to Blackwater Mountbatten Junctions Wessex Fields Junction | |
| Phase 2 (Growth Deal 3) | |
| Parley Cross Junction Parley Easter Link Road Parley Western Link Road Bus enhancements on the A338 and B3073 Cycle links | |
| Source: Bournemouth International Growth Programme, May 2016 | |

Costs

All of the costs set out below have been provided by the Dorset LEP's BIG Programme manager.

Figure 4.3: Costs of A338 and B3073 Corridor Improvements

| Project | Total cost (£) | Public sector (£) | Private sector (£) |
|---------------------------------|----------------|-------------------|--------------------|
| Phase 1 | | | |
| A338 Reconstruction | 22,000,000 | 22,000,000 | 0 |
| Hurn Roundabout | 2,400,000 | 2,000,000 | 400,000 |
| Chapel Gate | 3,300,000 | 3,300,000 | 0 |
| Blackwater Interchange | 8,000,000 | 6,500,000 | 1,500,000 |
| Bear Cross | 1,800,000 | 1,800,000 | 0 |
| Longham Minis | 2,000,000 | 1,800,000 | 200,000 |
| A338 Cooper Dean to Blackwater | 7,300,000 | 5,300,000 | 2,000,000 |
| Mountbatten Junctions | 1,800,000 | 1,800,000 | 0 |
| Wessex Fields | 10,700,000 | 5,700,000 | 5,000,000 |
| Phase 2 | | | |
| Parley Cross Junction | 3,500,000 | 3,500,000 | 0 |
| Parley Eastern Link Road | 2,000,000 | 0 | 2,000,000 |
| Parley Western Link Road | 5,450,000 | 3,000,000 | 2,450,000 |
| Bus enhancements A338 and B3073 | 500,000 | 500,000 | 0 |
| Internal link road | 1,000,000 | 0 | 1,000,000 |
| Cycle links | 5,173,000 | 5,173,000 | 0 |

This option will require total Growth Deal funds of £57,373,000. Other public sector funds, primarily from the local authorities, will be £5,000,000. Private sector funds – CIL and s106 – amount to £14,275,000. Note that the delivery of certain projects is dependent on private funding and this is a risk to the delivery of the Programme.

However, good practice at this point in an options appraisal is to apply an allowance to all of the costs to take account of optimism bias. In discussion with the client, we have agreed an allowance for optimism bias of 44%²¹. This is not applied to the A338 reconstruction (as this is almost completed), and a figure of 20% has already been applied to the Wessex Fields costs, so the 20% is removed and replaced with 44%.

With optimism bias applied, the total cost of the Current BIG Programme increases from £77 million to £99 million. This means that funds will need to be found to cover this higher cost, or the total cost reduced.

Benefits

There are two potential scenarios for the benefits that will be generated by this option:

- Delivery of a 34.5 ha masterplan at Aviation Park plus 7.7 ha at Wessex Fields

²¹ Which is the upper value for capital expenditure on standard civil engineering projects as set out in the Supplementary Green Book Guidance on Optimism Bias (undated)

- Delivery of a 47 ha masterplan (known colloquially as the 60 ha masterplan) at Aviation Park, plus 7.7 ha at Wessex Fields

The two masterplan options have different densities of development on-site, so more employment space and therefore more jobs are accommodated per Hectare of development in the 60 ha masterplan option than in the 34.5 ha masterplan option.

The rate at which the Aviation Park site will be delivered (and therefore jobs created) has been based on the NLP work on deliverability⁹, and modelled to take account of the rate at which the road investments are delivered. The NLP work suggests a maximum delivery rate of 5 ha of employment land per year. This is optimistic, based on the historic levels of take-up (i.e. 0.55 ha per annum), and we assume that a full package of skills support and demand stimulation projects would be needed to reach that level. Therefore we have looked at a lesser scenario of 3.5 ha per annum.

| Figure 4.4: Benefits of A338 and B3073 Corridor Improvements (34.5 ha Masterplan) | |
|--|----------------|
| | 2031 |
| Contribution to targets | |
| This option delivers all of the transport schemes but not the additional projects related to training and demand stimulation | |
| Contribution to outputs | |
| Area developed (ha) | 42.2 |
| Premises developed (sq m) | 186,400 |
| Contribution to outcomes | |
| Gross direct impact | |
| Gross new jobs accommodated | 11,100 |
| Gross GVA uplift per annum | £715 million |
| Net additional local impact | |
| Net additional new jobs accommodated | 5,400 |
| Net additional GVA uplift per annum | £345 million |
| Costs and benefits | |
| Present value of costs (to public sector) | £90 million |
| Present value of benefits (to 2031) | £1,273 million |
| Net present value | £1,183 million |
| Benefit to cost ratio | 14:1 |

Delivery of the 60 ha masterplan will result in a faster rate of delivery of benefits, as the density of development is greater than in the 34.5 ha masterplan.

| Figure 4.5: Benefits of A338 and B3073 Corridor Improvements (60 ha Masterplan) | |
|--|----------------|
| | 2031 |
| Contribution to targets | |
| This option delivers all of the transport schemes but not the additional projects related to training and demand stimulation | |
| Contribution to outputs | |
| Area developed (ha) | 53.2 |
| Premises developed (sq m) | 286,000 |
| Contribution to outcomes | |
| Gross direct impact | |
| Gross new jobs accommodated | 13,400 |
| Gross GVA uplift per annum | £847 million |
| Net additional local impact | |
| Net additional new jobs accommodated | 7,100 |
| Net additional GVA uplift per annum | £449 million |
| Costs and benefits | |
| Present value of costs (to public sector) | £90 million |
| Present value of benefits (to 2031) | £1,725 million |
| Net present value | £1,635 million |
| Benefit to cost ratio | 19:1 |

4.6 The Current BIG Programme

Description

This option will deliver all of the above road improvement projects, plus a group of other projects, which are set out in the figure below. However, there is less detail available about these projects and their potential level of benefits.

| Figure 4.6: Additional projects to be delivered under the Current BIG Programme |
|--|
| Other projects (other funds or unfunded) |
| Local Development Order for the airport sites |
| Skills escalator feasibility study |
| Business support |
| Business networking |
| ICT voucher scheme |
| Marketing and promotion |
| Source: Bournemouth International Growth Programme, May 2016 |

Costs

In addition to the costs for the transport corridor projects set out above, the following projects will also be delivered.

| Figure 4.7: Additional costs for the Current BIG Programme | | | |
|---|-----------------------|--------------------------|---------------------------|
| Project | Total cost (£) | Public sector (£) | Private sector (£) |
| Local Development Order | 80,000 | 80,000 | 0 |
| Escalator feasibility | 80,000 | 80,000 | 0 |
| Business support | n/a | n/a | 0 |
| Business networking | 25,000 | 25,000 | 0 |
| ICT voucher scheme | n/a | n/a | 0 |
| Marketing and promotion | 150,000 | 125,000 | 0 |

This option will require total Growth Deal funds of £57,373,000. Other public sector funds, primarily from the local authorities, will be £5,710,000. Private sector funds – CIL and s106 – amount to £14,275,000. Note that the delivery of certain projects is dependent on private funding and this is a risk to the delivery of the Programme. As mentioned above, an allowance for optimism bias will add 44% to these cost figures.

Benefits

There is limited information on the additional level of benefits that these projects will deliver in addition to the previous option as most of these additional projects are not worked up in any detail, in particular the skills support interventions. Therefore we cannot quantify the benefits precisely. However, we can assume that the development at Aviation Park will happen more quickly than would be the case without these additional projects. For the purposes of this appraisal, we have assumed that the delivery of all of these projects in addition to the road improvement projects set out in the previous option will help to increase the rate of employment land delivery to 4.25 ha per annum.

Figure 4.8: Current BIG Programme (34.5 ha Masterplan)

| | 2031 |
|---|----------------|
| Contribution to targets | |
| This option delivers all of the transport schemes and the current projects related to training and demand stimulation. These training and demand stimulation projects are limited in scope and scale, and do not enable the delivery of employment land at the maximum possible rate. | |
| Contribution to outputs | |
| Area developed (ha) | 42.2 |
| Premises developed (sq m) | 186,400 |
| Contribution to outcomes | |
| Gross direct impact | |
| Gross new jobs accommodated | 11,100 |
| Gross GVA uplift per annum | £715 million |
| Net additional local impact | |
| Net additional new jobs accommodated | 5,400 |
| Net additional GVA uplift per annum | £345 million |
| Costs and benefits | |
| Present value of costs (to public sector) | £90 million |
| Present value of benefits (to 2031) | £1,435 million |
| Net present value | £1,345 million |
| Benefit to cost ratio | 16:1 |

Delivery of the 60 ha masterplan will result in a faster rate of delivery of benefits as the density of development is greater than in the 34.5 ha masterplan.

Figure 4.9: Current BIG Programme (60 ha Masterplan)

| | 2031 |
|---|----------------|
| Contribution to targets | |
| This option delivers all of the transport schemes and the current projects related to training and demand stimulation. These training and demand stimulation projects are limited in scope and scale, and do not enable the delivery of employment land at the maximum possible rate. | |
| Contribution to outputs | |
| Area developed (ha) | 54.5 |
| Premises developed (sq m) | 286,000 |
| Contribution to outcomes | |
| Gross direct impact | |
| Gross new jobs accommodated | 15,400 |
| Gross GVA uplift per annum | £968 million |
| Net additional local impact | |
| Net additional new jobs accommodated | 8,700 |
| Net additional GVA uplift per annum | £544 million |
| Costs and benefits | |
| Present value of costs (to public sector) | £90 million |
| Present value of benefits (to 2031) | £2,037 million |
| Net present value | £1,948 million |
| Benefit to cost ratio | 23:1 |

4.7 Enhanced BIG Programme

Description

This option would include the Current BIG Programme as described above, with additional interventions to deliver skills improvements and demand stimulation. This is likely to include:

- Interventions to deliver training
- Further demand stimulation interventions, such as business support

Costs

As these further interventions have not been worked up, there are no costs available for them yet. However, we would expect further significant interventions to cost several millions of pounds. We have included indicative costs of £3 million for completion of the skills escalator, and £200,000 per year for business support over ten years, totalling £2 million.

Benefits

As with the previous option, we cannot ascertain the exact level of benefits that this option would deliver. For the purposes of this appraisal, we have assumed that the delivery of all of these projects in addition to the road improvement projects set out in the previous option will help to increase the rate of employment land delivery to the maximum value of 5.0 ha per annum.

Figure 4.10: Enhanced BIG Programme (34.5 ha Masterplan)

| | 2031 |
|--|----------------|
| Contribution to targets | |
| This option delivers all of the transport schemes and an enhanced set of projects related to training and demand stimulation. These enhanced training and demand stimulation projects enable the delivery of employment land at the maximum possible rate. | |
| Contribution to outputs | |
| Area developed (ha) | 42.2 |
| Premises developed (sq m) | 186,400 |
| Contribution to outcomes | |
| Gross direct impact | |
| Gross new jobs accommodated | 11,100 |
| Gross GVA uplift per annum | £715 million |
| Net additional local impact | |
| Net additional new jobs accommodated | 5,400 |
| Net additional GVA uplift per annum | £345 million |
| Costs and benefits | |
| Present value of costs (to public sector) | £94 million |
| Present value of benefits (to 2031) | £1,565 million |
| Net present value | £1,471 million |
| Benefit to cost ratio | 17:1 |

Delivery of the 60 ha masterplan will result in a faster rate of delivery of benefits, as the density of development is greater than in the 34.5 ha masterplan.

Figure 4.11: Enhanced BIG Programme (60 ha Masterplan)

| | 2031 |
|--|----------------|
| Contribution to targets | |
| This option delivers all of the transport schemes and an enhanced set of projects related to training and demand stimulation. These enhanced training and demand stimulation projects enable the delivery of employment land at the maximum possible rate. | |
| Contribution to outputs | |
| Area developed (ha) | 54.5 |
| Premises developed (sq m) | 286,000 |
| Contribution to outcomes | |
| Gross direct impact | |
| Gross new jobs accommodated | 16,200 |
| Gross GVA uplift per annum | £1,016 million |
| Net additional local impact | |
| Net additional new jobs accommodated | 9,300 |
| Net additional GVA uplift per annum | £581 million |
| Costs and benefits | |
| Present value of costs (to public sector) | £94 million |
| Present value of benefits (to 2031) | £2,374 million |
| Net present value | £2,279 million |
| Benefit to cost ratio | 25:1 |

4.8 Larger Transport Intervention Projects

Several additional road projects have been considered, in recent years.

One option is for the delivery of all of the road infrastructure projects, plus a Hurn Southern bypass and dualling of the B3073. The estimated cost of this is an additional £95 million, with little additional transport benefit and much more risk to deliverability. Because of the poor benefit to cost ratio this option has not been considered further.

A direct access from the A338 into the Aviation Park has also been considered in the past – referred to as the T6 link road in the former Dorset structure plan. However, this has not been progressed because of environmental designations and therefore constraints on the land between the A338 and Aviation Park. For cost as well as environmental reasons there has been a focus on enhancing the existing road network rather than creating any new roads.

4.9 Conclusion

We have considered a long-list of options in this chapter. The do-nothing option should not be considered further as work is already being undertaken on the A338 and so this is not feasible. It does, however, form part of the deadweight calculation for the other options. The do-minimum option, i.e. investing only in the major maintenance scheme for the A338, has almost been delivered at the time of preparing this appraisal report. However, it only has a small impact on the creation new jobs and GVA so should not be taken forward as a short-listed option.

Delivery of the A338 and B3073 transport corridor improvements does meet the objectives that have been set, so should be considered further as a short-listed option. The current BIG Programme, i.e. the previous option plus other investments, also meets the objectives that have been set, so

should be considered further. The enhanced BIG Programme also meets the objectives, although the quantification of benefits is more difficult because some of the additional projects are not well defined. However, this should be considered further as a short-listed option. The final option, including significant additional road projects, incurs significantly more cost than the BIG Programme options but does not generate more benefits. Therefore this option should not be considered further.

The short-listed options that will be considered further are:

1. Delivery of the A338 and B3073 transport corridor improvements
2. Delivery of the current BIG Programme i.e. the above option plus additional projects
3. Delivery of an enhanced BIG Programme, with additional investment in skills and demand stimulation projects

Two masterplan options for the Aviation Park site have been prepared, so both of these will be considered, i.e.:

- 34.5 ha – with lower density of development
- 60 ha – with higher density of development

5 Preferred Option and Solution

In this chapter we consider the short-listed options and identify the preferred option.

5.1 Short-list of options

The options that are considered are:

- Delivery of the A338 and B3073 transport corridor improvements leading to the development of the 34.5 ha masterplan
- Delivery of the A338 and B3073 transport corridor improvements leading to the development of the 60 ha masterplan
- Delivery of the Current BIG Programme leading to the development of the 34.5 ha masterplan
- Delivery of the Current BIG Programme leading to the development of the 60 ha masterplan
- Delivery of the Enhanced BIG Programme leading to the development of the 34.5 ha masterplan
- Delivery of the Enhanced BIG Programme leading to the development of the 60 ha masterplan

5.1.1 Contribution to targets

The targets for the intervention are set out in section 3.4. In short, they include the delivery of all of the transport projects, skills related projects, and demand stimulation projects.

The delivery of only the transport corridor improvement projects fails to deliver any of the skills or demand stimulation objectives, so fails to contribute to all of the targets.

The delivery of the Current BIG Programme meets the targets in part, but does not deliver a comprehensive training intervention (only a feasibility study at present), and delivers limited demand stimulation activity.

Delivery of the Enhanced BIG programme provides the best contribution to the targets set for the intervention, as it involves the delivery of a comprehensive training intervention and demand stimulation as well as the transport improvement projects. However, at present there is no detail on the further interventions, and insufficient funds to deliver the training intervention.

5.1.2 Contribution to outputs

The outputs for the intervention are set out in section 3.3. In short these are the delivery of up to 60 ha of attractive sites; up to 170,000 sq m of suitable and accessible premises; and training of local people in relevant skills to enable them to access the jobs that are created.

The delivery of only the transport corridor improvement projects eventually delivers less than the 60 ha target for employment land, but in excess of the 170,000 sq m target for new premises. This option does not deliver any skills interventions, so does not impact on local skills supply.

The delivery of the Current BIG Programme helps to meet the outputs, although it does not deliver a comprehensive skills intervention and so is not strong in that respect. As above, neither masterplan option delivers the full 60 ha of employment land, but both deliver in excess of the 170,000 sq m floorspace target.

The delivery of the Enhanced BIG Programme will help to achieve these outputs, albeit that the largest masterplan option delivers 54.5 ha rather than 60 ha, and the smaller option delivers 42.2 ha. The rate at which premises are delivered varies between the 34.5 ha masterplan and the 60 ha masterplan (due to different development densities), with the latter delivering premises more quickly than the former. Both masterplan options eventually deliver in excess of 170,000 sq m of premises, with the larger option delivering 290,000 sq m across the two sites, and the smaller option delivering 190,000 sq m across the two sites.

5.1.3 Contribution to outcomes

The outcome targets for the intervention are set out in section 0. In short they are the delivery of 10,000 new jobs and £500 million of additional GVA per annum. When gross direct jobs and GVA are considered, all of the options that have been short-listed meet these outcome targets. However, when net additional local impact values are considered, none of the options fully meets the jobs target, although the Enhanced BIG Programme and Current BIG Programme both come close, delivering 9,400 net additional local jobs by 2031 when the 60 ha masterplan is delivered, but not with the 34.5 ha masterplan. Similarly, all three options deliver in excess of £500 million of net additional local GVA when the 60 ha masterplan is delivered, but not with the 34.5 ha masterplan.

The rate at which both jobs and GVA are delivered varies between the options. The figures below show that the Enhanced BIG Programme delivers jobs and GVA more quickly than the Current BIG Programme, which in-turn delivers jobs and GVA more quickly than the Transport Corridor Improvements only. Whilst all of the options eventually deliver the same number of jobs and GVA per annum (under the two masterplan scenarios), the more intensive options deliver them more quickly, which generates more benefits in the local area over the period to 2031. This is shown more explicitly in the NPV calculation below.

Figure 5.1: Gross Operational Jobs

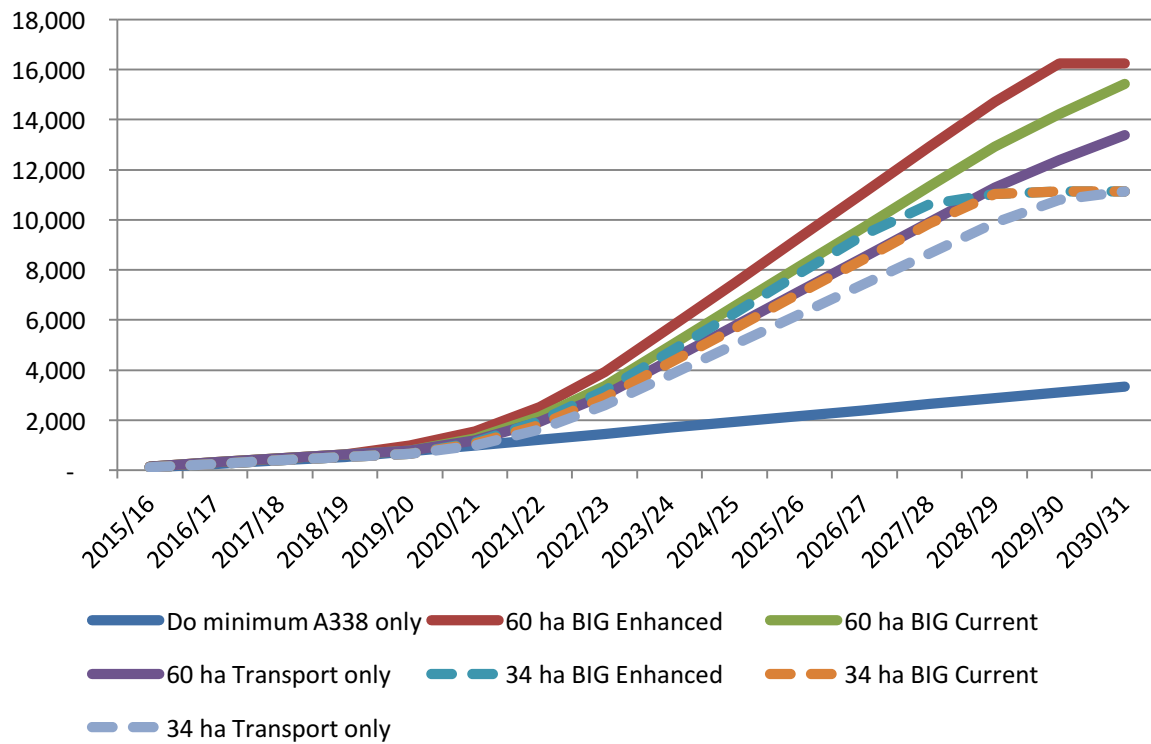


Figure 5.2: Net Operational Jobs

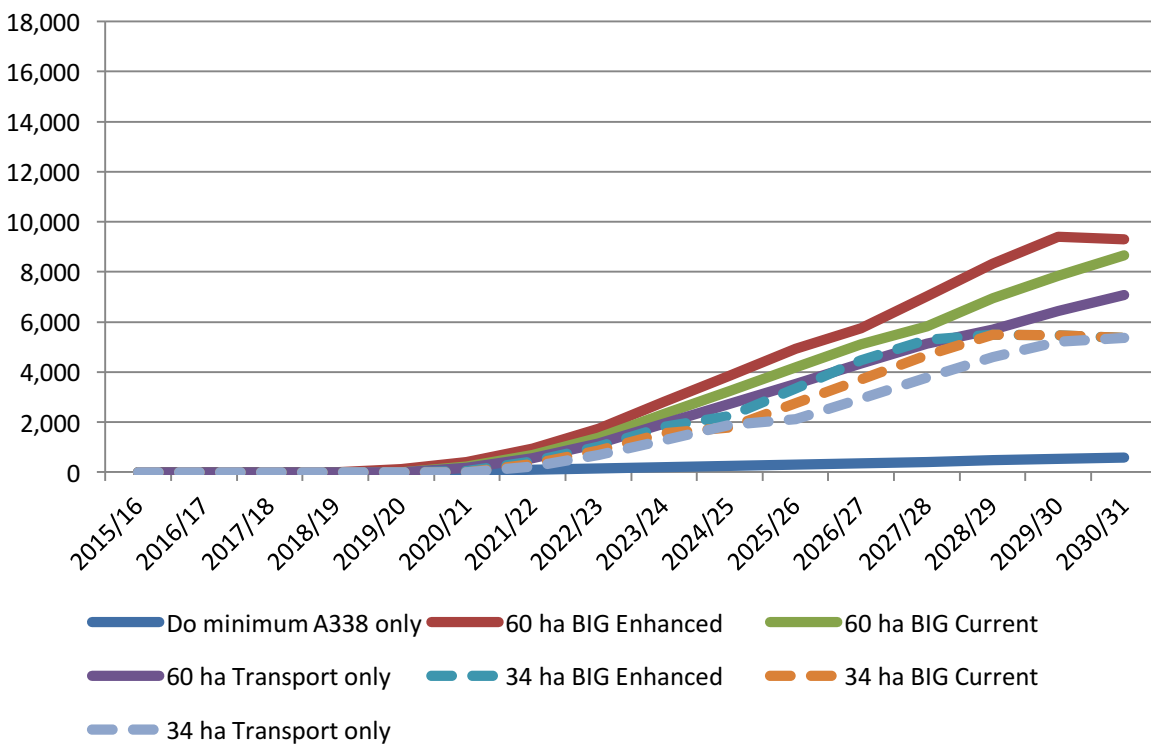


Figure 5.3: Gross Operational GVA Per Annum

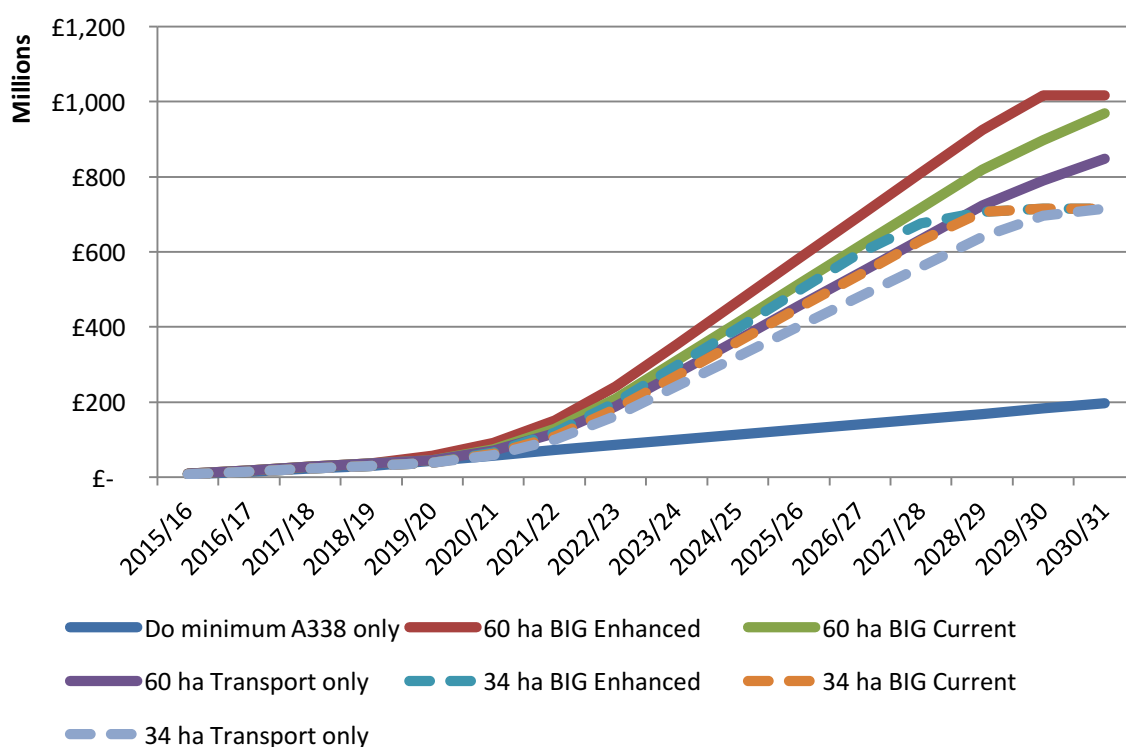
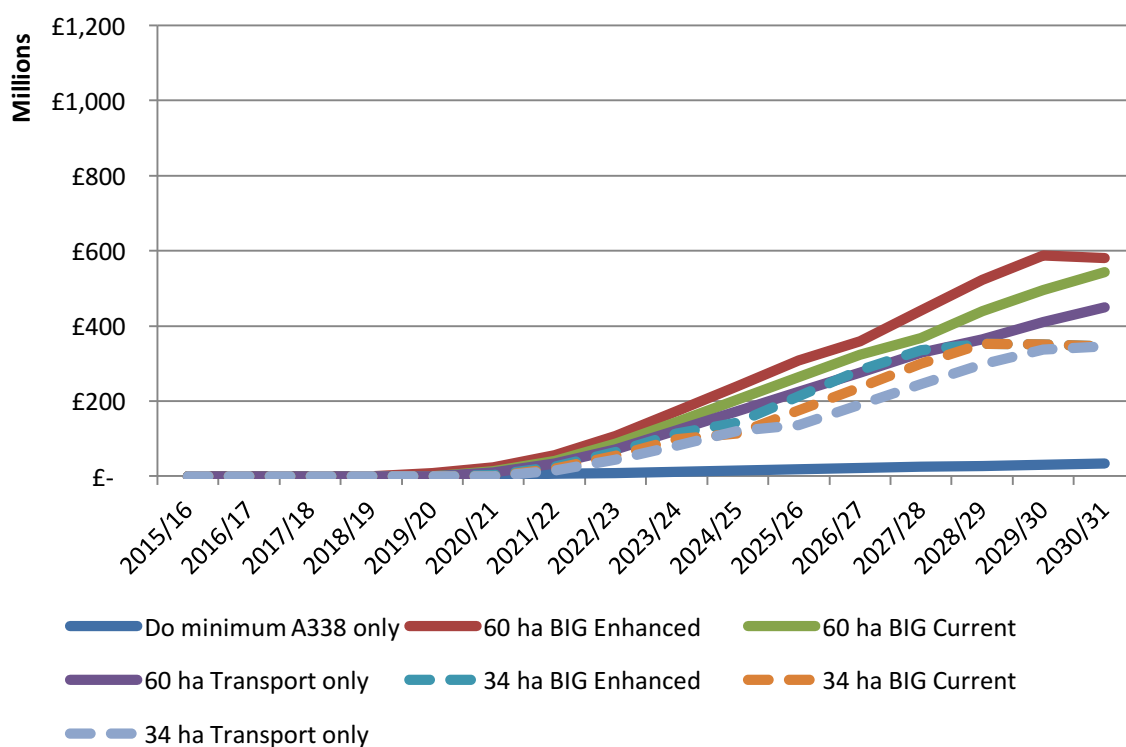


Figure 5.4: Net Additional Operational GVA Per Annum



5.1.4 Overall contribution to the objectives

The contribution that each of the short-listed options makes to the overall objectives of the intervention can be seen in the figure below.

Figure 5.5: Benefits of the short-listed options by 2031

| | Area delivered (ha) | Gross Jobs | Net Jobs | Gross Uplift in Annual GVA | Net Uplift in Annual GVA |
|---|---------------------|------------|----------|----------------------------|--------------------------|
| Aviation Park 34.5 ha masterplan and Wessex Fields | | | | | |
| Transport Corridor Improvements | 42.2 | 11,100 | 5,400 | £715m | £345m |
| Current BIG Programme | 42.2 | 11,100 | 5,400 | £715m | £345m |
| Enhanced BIG Programme | 42.2 | 11,100 | 5,400 | £715m | £345m |
| Aviation Park 60 ha masterplan and Wessex Fields | | | | | |
| Transport Corridor Improvements | 53.2 | 13,400 | 7,100 | £847m | £449m |
| Current BIG Programme | 54.5 | 15,400 | 8,700 | £968m | £544m |
| Enhanced BIG Programme | 54.5 | 16,200 | 9,300 | £1,016m | £581m |

5.2 Indirect benefits

The Programme will lead to the creation of new additional jobs at the Aviation Park and Wessex Fields sites. However, improving accessibility, improving skills, and providing business support and inward investment support will also help to create new additional jobs elsewhere in the Dorset economy by improving access across a large part of the Bournemouth-Poole conurbation. This impact has not been quantified in this study, but should be considered when making the decision to invest public funds.

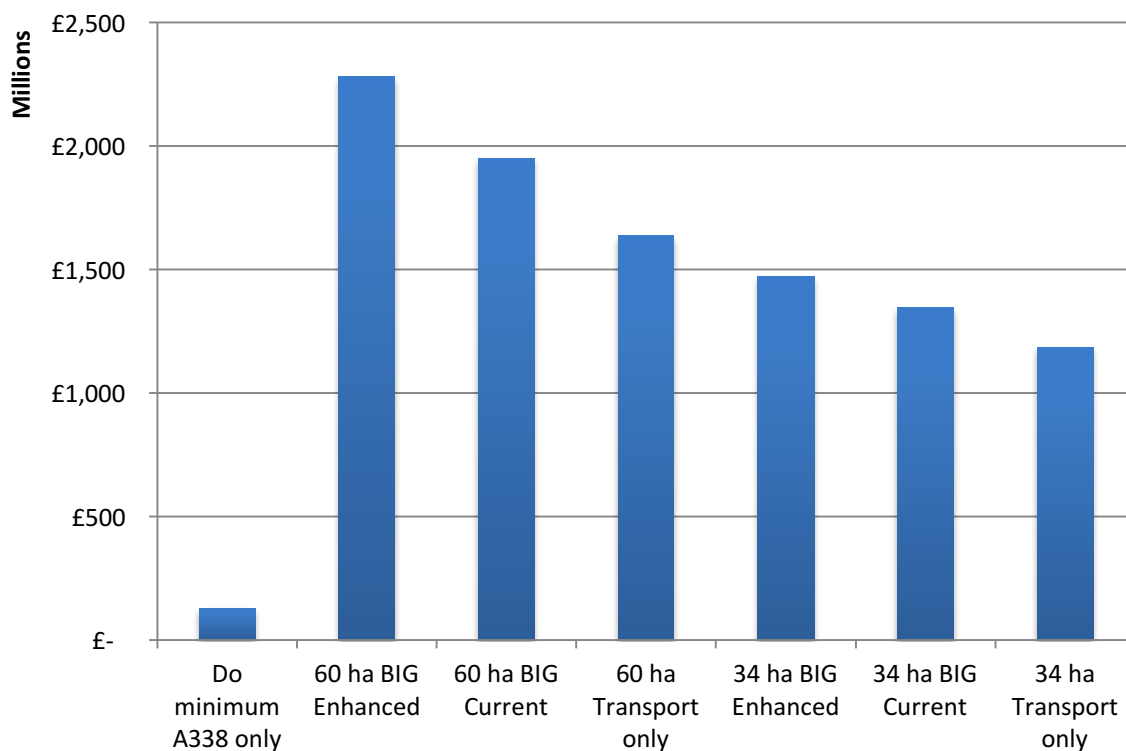
5.3 Selecting the best option

The HMT Green Book⁴ states that the best option “is likely to be the one with the highest risk adjusted net present value” (p.37).

5.3.1 Net present value

The Net Present Value (NPV) for each of the short-listed options (and the do-minimum option for the sake of comparison) can be seen in the figure below. The NPV calculation uses the Present Value of the net additional local GVA (for both operation and construction) over the period to 2031, discounted by 3.5% per annum.

Figure 5.6: Net Present Value of Short-Listed Options



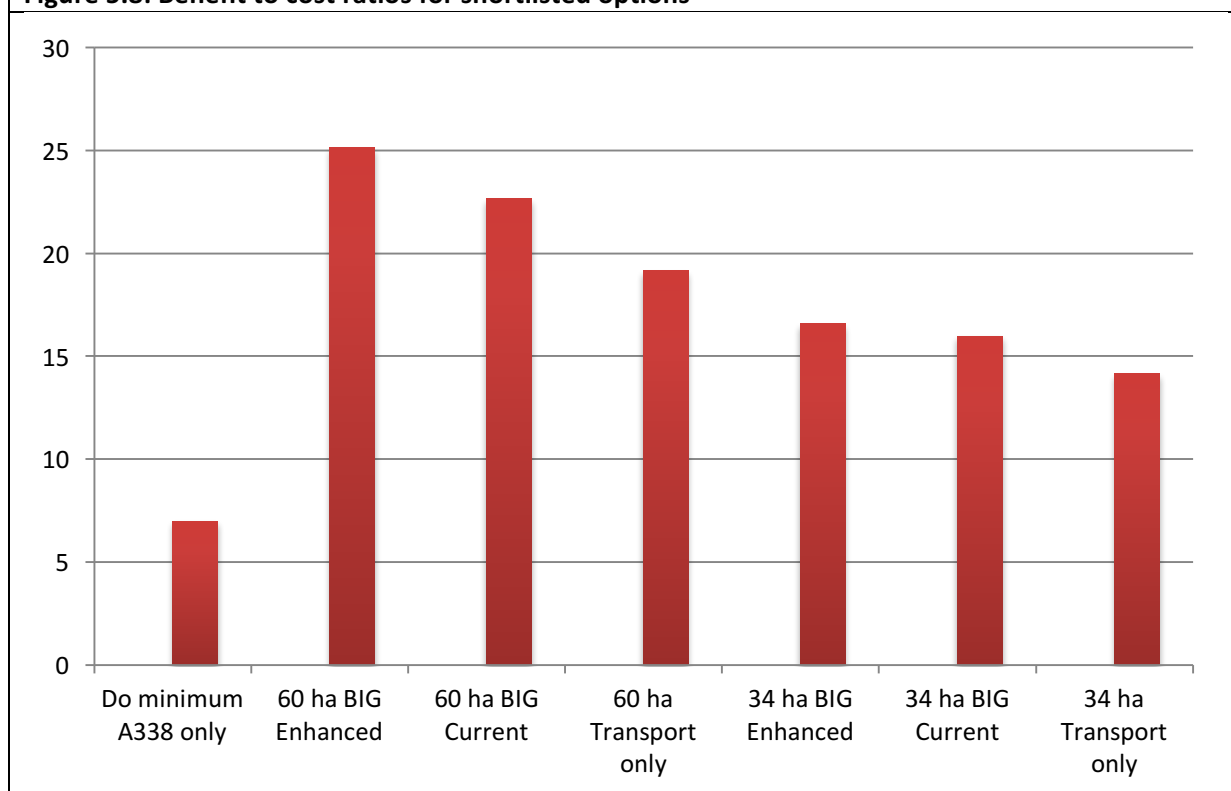
The figure shows that all of the options considered provide a positive NPV over the 15 years to 2031. The largest NPV is delivered by the Enhanced BIG Programme and the 60 ha masterplan.

5.3.2 Benefit to cost ratio

You are also interested in the benefit to cost ratio for each of the options. We have used the present value of benefits to 2031 to demonstrate this. Figure 5.7 shows the costs and benefits of each option, and Figure 5.8 shows the benefit to cost ratio.

Figure 5.7: Costs and Benefits of Each Option

| Option | Present Value of Cost (to the public sector only) | Present Value of Benefits (2031) | Benefit to cost ratio |
|----------------------|---|----------------------------------|-----------------------|
| Do Minimum A338 Only | £22 million | £152 million | 7:1 |
| 60ha BIG Enhanced | £94 million | £2,351 million | 25:1 |
| 60ha BIG Current | £90 million | £2,009 million | 23:1 |
| 60ha Transport Only | £89 million | £1,700 million | 19:1 |
| 34ha BIG Enhanced | £94 million | £1,547 million | 17:1 |
| 34ha BIG Current | £90 million | £1,414 million | 16:1 |
| 34ha Transport Only | £89 million | £1,255 million | 14:1 |

Figure 5.8: Benefit to cost ratios for shortlisted options

This chart shows that the benefit to cost ratios for the options range from 7:1 to 25:1. The best benefit to cost ratio is delivered by the Enhanced BIG Programme and the 60 ha masterplan. However, the full costs of the Enhanced programme of activity are only indicative and may be subject to change.

The cost figures above only include the cost of the public sector interventions and not the cost of construction of the Aviation Park or Wessex Fields developments. We have estimated these costs at around £170 million for construction of the 34ha masterplan at Aviation Park, £250 million for the construction of the 60ha masterplan at Aviation Park, and £33 million for the construction of the Wessex Fields development. These figures are indicative and should not be relied on, but they do provide an idea of the scale of private investment that could be stimulated by the public investment.

5.3.3 Risks

There are a number of areas of risk that could affect the interventions. These are discussed in the figure below, which considers how the risks may affect each of the short-listed options.

Figure 5.7: Main Areas of Risk

| Risk | |
|---|---|
| Lack of private sector funding (s106 and CIL) leads to delays in the delivery of some of the projects | This risk is common to all of the options. |
| Lack of take-up of sites | This risk is more pronounced with those options that include less investment in demand stimulation. The Transport Corridor only option includes no demand stimulation, so bears the highest risk. The Current BIG Programme includes limited demand stimulation, so bears moderate risk. The Enhanced BIG Programme includes most demand stimulation activity (albeit that it is not yet defined), so will bear the least risk of all three options. |
| Difficulty recruiting labour | This risk is more pronounced with the options that include less investment in developing local skills, as recruitment will depend on the availability of skilled labour resident in the local area. The Transport Corridor only option includes no skills support interventions, so bears the highest risk. The Current BIG Programme includes a feasibility study into the development of skills interventions which may lead to an eventual intervention, so bears moderate risk. The Enhanced BIG Programme includes most skills development activity (albeit that it is not yet defined), so will bear the least risk of all three options. |
| Difficulty recruiting suitably skilled labour | This risk is more pronounced with the options that include less investment in developing local skills. The Transport Corridor only option includes no skills support interventions, so bears the highest risk. The Current BIG Programme includes a feasibility study into the development of skills interventions which may lead to an eventual intervention, so bears moderate risk. The Enhanced BIG Programme includes most skills development activity (albeit that it is not yet defined), so will bear the least risk of all three options. |

5.4 The Preferred Option

The preferred option is the delivery of the Enhanced BIG programme, i.e. transport improvements, training intervention and demand stimulation interventions, to promote development at the quickest possible rate. However, the full set of training and demand stimulation interventions are not yet fully worked up and costed. The Current BIG Programme delivers the full set of transport interventions and some initial training and demand stimulation projects, so this should be taken forward, with the intention of working up a more comprehensive set of training and demand stimulation projects to support the delivery of the new employment in Dorset.

5.5 Next Steps

Adding an allowance for optimism bias to the cost estimates increases the overall costs of the BIG Programme. Further funds will be needed to cover these costs. It may be the case that efficiency savings from some projects can release funds which will cover the additional costs associated with the optimism bias. If not, then additional funds will need to be sought, possibly through the Growth Deal.

This options appraisal has identified that the preferred option is the delivery of the Enhanced BIG Programme. There are a number of elements of this option that have not yet been worked up in detail. These are:

- Further development of skills interventions. A first stage feasibility study looking at skills has been carried out, which suggests that this concept can be taken further.
- Further development of demand stimulation interventions, including business support and business networking, which are needed to encourage business growth and new business starts, especially in the key sectors of Advanced Manufacturing & Aerospace and Financial Services & Insurance. This will require feasibility work, business planning, cost planning, funding, identification of a delivery partner and funding.
- Further development of proposals for marketing and promotion.

These elements of the Enhanced BIG Programme are not yet fully costed and will add further cost to the BIG Programme. As mentioned above, it may be the case that efficiency savings from some projects can release funds which will cover the additional costs associated with the enhanced option. If not, then additional funds will need to be sought, possibly through the Growth Deal.