Statement of Common Ground

Between Whitehill & Bordon Regeneration Company (on behalf of Defence Infrastructure Organisation) and the South Downs National Park Authority in regard to Apple Pie Depot, Longmoor, Hampshire

October 2018

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1. Representation by Whitehill & Bordon Regeneration Company (WBRC), on behalf of the Defence Infrastructure Organisation (DIO) to the Pre-Submission version of the South Downs Local Plan

2. Notes of meeting held 11 April 2018

1. Introduction

1.1 This Statement of Common Ground (SoCG) is a jointly agreed statement between the Whitehill & Bordon Regeneration Company (WBRC) as WBRC act on behalf of DIO's behalf, and the South Downs National Park Authority (SDNPA). It sets out the position and understanding with respect to key matters related to the redevelopment of Apple Pie Depot, Longmoor ("the site") near Greatham, Hampshire.

1.2 Section 62 of the Environment Act 1995 (which amends the National Parks and Access to the Countryside Act 1949) requires all relevant authorities, including the Defence Infrastructure Organisation, to have regard to the purposes of National Parks[1]. Section 61(1) of the Act identifies the following purposes:

- To conserve and enhance the natural beauty, wildlife and cultural heritage of the area;
- To promote opportunities for the understanding and enjoyment of the special qualities of the National Park by the public;

The SDNPA also has a duty when carrying out the purposes to

- To seek to foster the social and economic well-being of the local communities within the National Park.

1.3 As a National Park Authority and Local Planning Authority, plan-making and the determination of planning applications by the SDNPA is subject to the National Planning Policy Framework (NPPF). It should be noted that for the purpose of the South Downs Local Plan examination and thus for the preparation of this SoCG, all references to the NPPF will be to the 2012 and not the 2018 version. This is in line with the paragraphs 15 to 20 of the Guidance Note from the Appointed Inspector (INSP.3). This states that Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless specific policies in the NPPF indicate that development should be restricted. An example of such restrictions is policies relating the development of sites within a National Park, as set out in Footnote 9 of the NPPF.

1.4 Paragraph 115 of the NPPF states that great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.

1.5 The DEFRA Vision and Circular on English National Parks and Broads is referenced in the NPPF and provides guidance to National Park authorities on how to meet their purposes and duty[2]. Paragraph 72 identifies the ability of such authorities to, amongst other matters, foster an appropriate planning regime to encourage new development to broaden the economic base and foster more diverse and higher-value local employment opportunities.

1.6 Paragraph 74 of the Vision & Circular states that the National Park authorities' role in fostering a positive environment for sustaining and developing business in the National Parks should be cognisant of those

[1] Environment Act 1995, s.62(1)(3) defines "relevant authorities" to include any public body. The Defence Infrastructure Organisation constitutes a public body for the purposes of the Act.

[2] NPPF, footnote 25: 'English National Parks and the Broads: UK Government Vision and Circular 2010'.

sectors and activities which are most likely to sustain their communities, are appropriate to their setting and maximise the benefits of a high quality environment. In particular, authorities should look to achieve a sectoral mix which includes:

- High value, knowledge-intensive jobs, which are likely to attract and retain people of all ages, but particularly intended to appeal to young people;
- Employment that achieves the critical mass needed to drive provision of modern communications infrastructure, from which all businesses and communities can benefit;
- Opportunities for economic activity which capitalises on public access and recreation and appropriate forms of tourism; and
- Food processing and marketing to add value to local farm produce.

2. Purpose of this Statement of Common Ground

2.1 The purpose of the SoCG is to consider the redevelopment of the site, which comprises Joint Supply Chain Services JSCS Longmoor, aka Apple Pie Depot, near Greatham in Hampshire. The need for this document arose from the representation made by WBRC on behalf of the DIO to the Pre-Submission South Downs Local Plan. A copy of the representation is enclosed at **Appendix I** of this document.

2.2 A meeting was held on 11 April 2018 between the SDNPA, GVA, the DIO and the WBRC. It was decided at that meeting to prepare a SoCG on the site. The notes of the meeting form Appendix 2 of this document.

2.3 The SDNPA is preparing its first Local Plan – the South Downs Local Plan (SDLP). This is a landscape-led plan with ecosystem services (the goods and services we get from the natural environment) at its heart. The SDLP will provide a comprehensive development plan document to cover the whole of the National Park, and will include a policy to address all types of development, with the exception of minerals and waste.

2.4 The site is not identified in the SDLP. The SDNPA was not aware of the site becoming available for development prior to WBRC's representation to the Pre-Submission South Downs Local Plan being received. The advanced status of the draft plan at that stage precluded the ability to identify the site as a proposed employment allocation. A copy of the representation has been provided to the Inspector in accordance with Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations 2012.

2.5 The first part of the SoCG explains the location, history, constraints and opportunities for the site. The remainder of the SoCG sets out seven key issues regarding the redevelopment of the site. This section clearly sets out those matters that are agreed between the two parties, and those which are not.

3. Apple Pie Depot, Longmoor

3.1 DIO confirmed the disposal of the site in 2016[3]. This process is now underway and the MoD is due to withdraw all defence equipment and support operations from the site by September 2018. There are 14 buildings on the site which collectively form the depot and whose disposal has been confirmed. The site area for disposal is 8.4 ha, of which 7.4 ha constitutes previously development ('brownfield') land. WBRC are retained by DIO as development manager to manage the planning and delivery of the site's future use. The disposal site forms part of a wider parcel of land which is currently within MoD ownership, totalling 24.42 ha. This includes two cadet buildings and a parcel of training estate land (parcel N1A); these assets are not included in the current disposal.

3.2 The site is located approximately 150 metres east of the Greatham village settlement boundary as defined on the Policies Map for the Submission SDLP. The principal access into the site is via the A325, close to the junction with the A3. Access is also available from Longmoor Road, which runs alongside the southern boundary of the site. The site is strategically well-placed and readily accessible to London (approximately 43 miles) and major transport hubs such as Heathrow (32 miles), via the national highway network.

3.3 The site has been occupied by MoD operations since 1890, with subsequent acquisition in 1956. It has served as an engineering, maintenance and storage facility for MoD vehicles and plant machinery, thereby performing an integral role in the supply chain services for the MoD and employing a significant number of civilian and military personnel.

3.4 Testament to the site's operational requirements, the site accommodates large-scale hangar structures and associated red-brick buildings, whose gross external floorspace cumulatively totals 28,269 m^2 (304,000 ft^2). The buildings sit within extensive areas of hardstanding, with only limited green space present at the site's eastern and western extremities.

3.5 The site is wholly within the defined boundary of the South Downs National Park. It is also situated within the 400-metre buffer zone of the Wealden Heaths Phase II Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). The SPA also incorporates the Woolmer Forest Special Area of Conservation (SAC).

3.6 The site also adjoins, but is excluded from, two Sites of Importance for Nature Conservation (SINCs). These are site nos. 23 (EH0455) – Land at Greatham (South of Woolmer Road) and 24 (EH0464) – Woolmer Road Triangle and Playing Field[4]. The implications of the designated sites in biodiversity terms are addressed in Section 5 of this Statement.

[3] 'A Better Defence Estate', MoD [2016]

[4] Hampshire Biodiversity Information Centre (HBIC)

4. Major Development

4.1 Paragraph 116 of the NPPF sets out the approach local planning authorities should take to major development in national parks. The National Planning Guidance (NPPG) states that: "whether a proposed development in these designated areas should be treated as a major development, to which the policy in paragraph 116 of the Framework applies, will be a matter for the relevant decision taker, taking into account the proposal in question and the local context.'

4.2 The NPPF does not define major development. The National Park Authority has sought legal opinions on what constitutes major development. These opinions are that the definition of 'major development' is based on whether, prima facie, the development might potentially have adverse impacts on a national park, rather than whether, after a careful and close assessment, it will have such adverse impacts.

4.3 Core Policy SD3: Major Development provides the local policy context on what constitutes major development in the South Downs.

4.4 It is the opinion of the SDNPA that the redevelopment of the site does have the potential to have a serious adverse impact on the natural beauty, wildlife or cultural heritage of, or recreational opportunities provided by, the South Downs National Park. The potential for serious adverse impact relates particularly to wildlife as the site is located less than 400 metres from the boundary of the Wealden Heaths Phase II Special Protection Area (SPA).

4.5 The redevelopment of the site is therefore considered by the SDNPA to be major development. The SDNPA will require the proposed development to comply in full with paragraph 116 of the NPPF and criteria 2 and 3 of draft Policy SD3 of the Local Plan.

4.6 The development of the site would see the redevelopment of a large vacant brownfield site that comprises 28,269 sq m of gross floorspace. The redevelopment of a large brownfield site would ensure the efficient use of land and would accord with the guidance set out in paragraph 111 of the NPPF.

4.7 The WBRC consider that whilst the redevelopment of the site would constitute major development, it is acknowledged that the site already accommodates significant development pertaining to its former usage.

4.8 It is agreed between the parties that the disposal of the site presents a significant opportunity for redevelopment to provide sustainable employment uses in this part of the National Park.

4.9 It is recognised that the site is well-placed to meet the potential requirements of a range of established and emerging employment sectors within the Hampshire region.

4.10 WBRC will provide a comprehensive suite of environmental and technical assessments to form part of a planning application for the site. These will endeavour to demonstrate that there are no known technical constraints, which could preclude the development of the site.

4.11 WBRC has confirmed that the site is available for development and not constrained by issues of multiple ownership or third party interests.

4.12 Details of the type of businesses whose needs could be met by a suitable development of the site are set out in Section 7 of this Statement. Whilst this capitalises upon existing and emerging connections with other businesses in the surrounding area, the attractiveness of the site to suitable occupiers will also be complemented by the expanding resource opportunity provided by higher education facilities in the surrounding area.

4.13 It is agreed between the parties that the site's redevelopment for employment use could help to facilitate economic growth within the National Park by virtue of having the potential to provide suitable and sensitively designed buildings which could meet the needs of businesses. It is recognised that there is potential for the site to address demand from emerging sectors, such as those focused on the entertainment and high-technology markets.

4.14 It is agreed that the site, subject to the agreement of a comprehensive masterplan which addresses the Local Plan's landscape-led objectives, could deliver development which is conducive to supporting the economic and social wellbeing of local communities within the National Park for the purposes of Policy SD34 of the Local Plan.

A comprehensive redevelopment of the site that conserves and enhances the natural beauty, wildlife and cultural heritage of the National Park, whilst providing high quality facilities that are attractive to businesses across a range of sectors in the area is supported by the parties. The potential of the site to accommodate businesses to meet the needs of the National Park's economy is recognised, which could include the following sectors:

- Digital
- Environmental
- Farming
- Forestry
- Tourism

5. Biodiversity

5.1 The site is located close to a number of internationally and nationally designated nature conservation sites. In particular the site is located within 400 metres of the Wealden Heaths Phase II Special Protection Area (SPA). Any scheme that will have likely significant effects on the SPA will require an Appropriate Assessment. This would be completed by the SDNPA as the competent authority and the WBRC will provide all the necessary information.

5.2 It is recognised that the site presents opportunities for biodiversity enhancement which would be developed through the planning application process. It is agreed that appropriate mitigation measures, where required either on or off-site in order to mitigate any identified biodiversity impacts of development, would be implemented in accordance with an approved Ecological Mitigation plan. This should be able to provide a net gain in biodiversity in line with paragraph 109 of the NPPF.

5.3 To manage surface water drainage for the operational lifetime of development on the site, and to avoid the risk of flooding to off-site receptors, the drainage system would be designed in accordance with Sustainable Urban Drainage System (SUDS) principles. Where necessary, this may include storage of the required volume to be accommodated within the site, with sufficient allowance for flood risk and climate change events.

5.4 The site is located within a wider triangular piece of land bounded by the A325, Petersfield Road and Longmoor Road. The site is close to a large area of heathland known as the Woolmer Forest and Longmoor Enclosure, which is part of the Heathlands Reunited project. This is led by the SDNPA and seeks to expand and connect the existing 1% of heathland left in the National Park.

6. Local Plan Employment Figures and the principle of development

6.1 The SDNPA recognises that the site comprises a significant brownfield resource and welcomes the opportunity to work with WBRC and the DIO to enable development to come forward. This SoCG will be supported by a Vision Document/ Illustrative Masterplan, which seeks to articulate the extent of development that could be accommodated.

6.2 All parties support criterion 2(d) of Policy SD25 of the Local Plan and recognise that it relates positively to the redevelopment of the site:

'Exceptionally, development will be permitted outside of settlement boundaries, where it complies with relevant policies in this Local Plan, responds to the context of the relevant broad area or river corridor, and:

… It is an appropriate reuse of a previously developed site, excepting residential gardens, and conserves and enhances the special qualities of the National Park.'

6.3 The SDNPA consider that the provision of 10.3 hectares of new employment land in draft Policy SD35 of the South Downs Local Plan is correct and that it is based on robust evidence set out in the Employment Land Review and the Housing and Economic Development Needs Assessment. This is fully explained in its Position Statement on Matter 5: Employment Land. The WBRC consider, based on evidence provided by GVA, that there is a demand for 67.18 hectares of employment land across the National Park, which represents an uplift of 56.88 hectares. This is fully explained in its Position Statement on Matter 5: Employment Land.

7. Types of Future Businesses

It is recognised by the parties that the site, by virtue of its location, is well-placed to attract prospective occupiers from a range of growing employment sectors in the region. These include those focused on the digital economy – a key area whose growth is supported by the M3 Local Enterprise Partnership (LEP) and reflected in emerging initiatives such as TechForest at nearby Whitehill and Bordon. The potential of the site to accommodate businesses within the three key sectors of the National Park's economy namely farming, forestry and tourism along with established and emerging employment sectors within the region such as environmental sciences, and digital media is recognised.

7.1 The site has the ability to accommodate potential future requirements from the following sectors in particular:

- Environmental sciences, geospatial mapping and waste management
- Film, digital and gaming
- Agribusiness and technical support services
- Aerospace, avionics and defence
- Speciality manufacturing

7.2 Notwithstanding the above, the parties are not in agreement with regard to the quantum of employment floorspace needed to meet the needs of the SDNPA over the plan period to 2033.

8. Exemplary Landscape-Led Design

8.1 The parties recognise the landscape-led objectives which will inform the plan-making and decision-taking processes for development in the National Park.

8.2 It is agreed between the parties that a holistic approach to the design of future development on the site will be required. A comprehensive masterplan for the site is to be prepared and will address the following objectives:

- The need for development to be sympathetic to, and harmoniously integrated with, the landscape character of the surrounding area.
- The creation of a high-quality public realm which has the potential to be influenced by the historical context of the site and natural features present within the surrounding area.
- The incorporation of green corridors and other natural features, where appropriate, to facilitate and enhancement the connectivity of natural habitats within the area, including those which may be present within the nature conservation sites.
- Accommodate the required quantum of development in an appropriate form, with respect to delivering buildings of an appropriate design, height and scale, which do not adversely impact upon the landscape setting of the site or views within this part of the National Park.
- Integrate sustainable design and energy efficiency measures in an appropriate manner, which protect the visual integrity of the site and the surrounding area.

8.3 It is intended that the masterplan evolves through meaningful dialogue with key stakeholders. This shall include consultation with the South Downs Design Review Panel, officers of the SDNPA and the wider public, which will be undertaken in preparing a planning application for site.

8.4 It is agreed that, as part of the technical evidence which forms part of a planning application for the site, the design and effects of development on the National Park shall be assessed through a Landscape and Visual Impact Assessment (LVIA).

9. Whole Estate Plan

9.1 Draft Policy SD25: Development Strategy of the Submission South Downs Local Plan provides the following policy hook for Whole Estate Plans (WEP):

'In considering development proposals outside settlement boundaries within rural estates and large farms, positive regard will be had to the following:

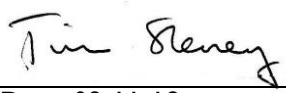
a) The development proposals are part of a Whole Estate Plan or Large Farm Plan that has been endorsed by the National Park Authority; and

b) The development proposals deliver multiple benefits in line with the purposes and the special qualities of the National Park and in regard to ecosystem services.'

9.2 The document 'Whole Estate Plans Preparation Guidelines' has been published as part of the Core Document Library (TSF06)and provides useful information for all those considering whether to a prepare a WEP for their landholding.

9.3 It is recognised, however, by both parties that the outside of the Apple Pie Depot site is currently operational military training estate and has not been declared surplus to requirement. As such, the parties agree that investigation of a future WEP can only take place with the future operational limitations that may be imposed by MoD, who as landowner will retain overall control.

Signed on behalf of Whitehill & Bordon Regeneration Company on behalf of the Defence Infrastructure Organisation 
Date: 01-11-2018
Position: Project Director

Signed on behalf of the South Downs National Park Authority 
Date: 09-11-18
Name: Tim Slaney
Position: Director of Planning

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GVA

An APLEONA company

Report

3 Brindleyplace
Birmingham
B1 2JB

T: +44 (0)8449 02 03 04
F: +44 (0)121 609 8314

South Downs Local Plan Pre-Submission

Representations

Land at Longmoor Depot, Greatham

November 2017

W&B
WHITEHILL&BORDON
REGENERATION COMPANY

Contents

Appendices

Prepared By: Laurence Holmes

Status: Associate

Draft Date: November 2017

For and on behalf of GVA Grimley Limited

1. Introduction

1.1 GVA is instructed by Whitehill and Bordon Regeneration Company (WBRC) on behalf of Defence Infrastructure Organisation (DIO) to make representations to the Pre-Submission version of the emerging South Downs Local Plan (SDLP). WBRC is DIO's appointed Development Manager at Whitehill and Bordon.

1.2 Specifically, the representations establish the case for an allocation of land known as Longmoor Depot ("the site") for Class B1/B2/B8 employment uses. The representations are submitted, and should be read in conjunction, with the attached Vision that has been prepared for the site. A Site Location Plan is also enclosed for reference (**Appendix I**).

1.3 The Longmoor Deport has been identified by the DIO for disposal to secure the sustainable redevelopment of the site. This follows a review of the defence estate, which identified the site as being surplus to MoD requirements. A phased redeployment programme will see existing operations cease and the site is scheduled to become vacant and available for redevelopment in 2019[1].

1.4 The attached Vision provides a design framework for employment-generating development on the site and demonstrates how this could be delivered so as to align with the SDLP's vision and objectives for the South Downs National Park. In addition, the representations also draw upon evidence of wider strategic employment needs and sector-specific demand for new provision within the local area.

1.5 In order that the SDLP can be found sound, the representations address those draft planning policies deemed relevant to the site, its potential for allocation, and the requirement for employment needs generated within the National Park to be met in full during the plan period.

1.6 The remainder of this document consists of the following:

- **Section 2** provides the background and context to the site, including its existing uses and relevant environmental designations;
- **Section 3** provides an objectively informed review of employment needs within the National Park and identifies existing and emerging sectors whose growth could be realised in this location;
- **Section 4** sets out a critique of relevant draft policies within the SDLP and recommendations to ensure their soundness in the context of NPPF requirements;

[1] Ministry of Defence, November 2016, 'A Better Defence Estate', p35

- **Section 5** identifies the opportunities presented by the site in meeting employment needs within the National Park and outlines its case for allocation; and
- **Section 6** provides the key conclusions and recommendations arising from the findings of this document.

Contact Details

1.7 Should any further information be required please contact:

Jon Kirby
Director
T: 0121 609 8351
E: jon.kirby@gva.co.uk

2. Site Background and Context

2.1 The site comprises 8.4ha, of which around 7.4ha is previously developed and which lies approximately 150 metres to the east of the Greatham village settlement boundary[2] and is accessed from Longmoor Road. Located adjacent to the A325 junction with the A3, the site is strategically well-placed and readily accessible to London and its national / international travel hubs, including Heathrow.

2.2 The site lies within the boundary of the South Downs National Park, as defined by the draft SDLP. The site also adjoins two Sites of Importance for Nature Conservation (SINC); No.23 (EH0455) – Land at Greatham (South of Woolmer Road), and No.24 (EH0464) – Woolmer Road Triangle and Playing Field[3].

2.3 In addition to the above, the site lies within a 400-metre buffer zone of Wealden Heaths Phase II Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). The SPA also contains the Woolmer Forest Special Area of Conservation (SAC). Draft policies of the SDLP pursuant to all statutory and non-statutory environmental designations relevant to the site are addressed in **Sections 4 and 5**.

2.4 Forming part of a wider parcel of land (totalling some 24.42 ha), the site has a longstanding history as an engineering, maintenance and storage facility for MoD vehicles and plant machinery. It has thus performed an integral role in the supply chain services for the MoD, employing a number of civilian and military personnel.

2.5 There are currently 16 buildings within the site, occupying a total built footprint of approximately 26,000 m^2. These include substantial hangar structures for maintenance and storage uses which are accompanied by associated areas of hardstanding, in addition to interlinked red brick buildings containing office accommodation.

2.6 Both SDNPA and EHDC online records identify a limited planning history for the site. This is likely to be attributed to the status of the site as operational Crown land[4], which was exempt from planning control prior to enactment of the 2004 Act[5], and has been the subject of extended permitted development rights thereafter[6].

2.7 Notwithstanding the above, informal planning consultations identified by EHDC records confirm that minor development associated with required operations at the site has been

[2] East Hampshire District Local Plan – Joint Core Strategy 2014 Proposals Map
[3] Hampshire Biodiversity Information Centre (HBIC)
[4] Town and Country Planning Act 1990, s.293
[5] Planning and Compulsory Purchase Act 2004
[6] Town and Country Planning (General Permitted Development) (England) Order 2015, Schedule 2, Part 19

implemented without objection from officers. Notably, this has included the following (overleaf):

- **Planning Ref. F.35406/002/GOVMS**: Spraybake Facility with 6 Extract and Two Intake Flues. Facility for the paint spraying of MoD vehicles forming part of shed buildings 2 and 3, and complementing paint mixing, preparation, carpentry and workshop areas. No objection response dated 02.10.2001.
- **Planning Ref. F.26606/001/GOV/LL:** Extension to building to provide single-storey office space. No objection response dated 13.01.2004.

2.8 As set out in **Section 1**, the site has now been declared surplus to requirement by the DIO, with all existing operations scheduled to cease in 2019.

3. Employment Land Requirement

3.1 In setting out draft policies for meeting employment needs within the National Park, the SDLP is reliant upon the findings of the South Downs National Park Employment Land Review (ELR) 2015, and the 2017 ELR Update which focuses on supply matters.

3.2 The ELR identifies a requirement of 8 to 12 ha to accommodate net additional Class B1a/b, B1c, B2 and B8 floorspace within the National Park, for the period up to 2033. This compares with a requirement of 10.4 ha of additional land for employment use being identified for the National Park by the Housing and Employment Needs Assessment 2017.

3.3 In forecasting employment need over the plan period, it is noted that the ELR has established a 'best-fit' of Middle-Level Super Output Areas (MSOAs). The MSOAs are aggregated to form what is termed the 'Wider South Downs Area' (WSDA); this includes some settlements which are located outside of the National Park boundary.

3.4 This analysis has been used to define 6 Functional Economic Market Areas (FEMAs) which overlap with the National Park; this includes 'Central Hampshire', within which the site is located. The projected employment floorspace requirement, based on labour demand-based projections, is disaggregated on a proportionate basis across each of the FEMAs[7], culminating in a total for the plan period of 7.9 ha.

3.5 In recognising the limitations of the above approach, namely that the combined MSOAs do not accurately reflect the National Park area, the ELR has also undertaken a trend-based analysis which sets out a projection of future employment land requirements based on historic employment floorspace delivery within the National Park over previous 5 and 10-year periods. This results in a net additional floorspace requirement of 11.9 ha being identified for the plan period, based on a 2005 – 2013 trend-based projection[8].

Analysis of Forecast Employment Needs

3.6 Whilst it is acknowledged that the National Park, by virtue of how its boundary is defined, presents limitations in the use of datasets typically used in forecasting demand for employment land, it is considered that the approach taken by the ELR, as outlined above, has resulted in requirements being significantly under-estimated for the plan period.

3.7 GVA has analysed forecast economic growth over a 20-year period (2013 – 2033) based upon extrapolated Experian econometric demand forecast data and ONS Business Register and

[7] South Downs National Park Employment Land Review 2015, Section 7, Table 11
[8] South Downs National Park Employment Land Review 2015, Section 7, Table 17

Employment Survey (BRES) data. This has been performed at local authority level (there are 12 authorities whose boundaries fall within the park) to develop a forecasting model. This converts estimated economic growth/decline (in jobs) to land-take (in hectares) by applying a number of factors including employment and plot density, and 5-digit SIC codes. We have overlaid the administrative boundaries of the 12 authorities and extrapolated growth based upon the percentage LPA area within the National Park. The forecast growth period is consistent with that applied by the ELR.

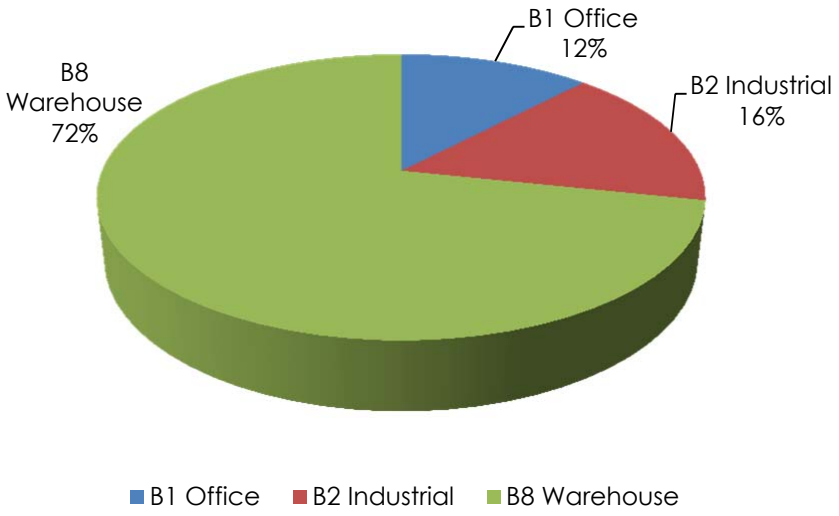
3.8 This analysis has identified significant levels of demand, totalling 67.18 ha across the National Park during the plan period (3+ ha per annum). This represents an uplift of 56.88 ha to that identified by the SDLP's evidence base. A breakdown of the identified demand by B class employment sectors for each local authority area is set out in **Table 3.1**.

Table 3.1: Forecast Demand for South Downs National Park (2013 – 2033)

	Hectares			
	B1	B2	B8	
Local Authority	Office	Industrial	Warehouse	Total
Adur	0.27	1.64	3.09	**5.00**
Arun	0.44	-0.59	0.88	**0.73**
Brighton	1.46	1.41	1.6	**4.47**
Chichester	1.19	4.03	9.27	**14.49**
Eastbourne	0.5	0.01	2.61	**3.12**
East Hampshire	0.72	0.85	6.46	**8.03**
Horsham	0.16	0.4	3.41	**3.97**
Lewes	0.76	-3.39	1.53	**-1.10**
Mid Sussex	0.1	0.66	5.22	**5.98**
Wealden	0.16	-0.08	0.14	**0.22**
Winchester	2.21	5.82	12.23	**20.26**
Worthing	0.18	0.1	1.73	**2.01**
Total	**8.15**	**10.86**	**48.17**	**67.18**

3.9 The above demonstrates that the majority of demand (72%) arising over the 20-year period to 2033 is for B8 warehouse space (48.17 ha), with the remaining 28% (19.01 ha) assigned to Class B1 and B2 requirements. The latter represents floorspace that will be sought by businesses within the digital economy (see below) to meet their needs, of which there is currently a lack of supply. **Figure 3.1** illustrates the requirements proportionately.

Figure 3.1: Total Requirements by Sector (%)



3.10 As this is based solely on econometric forecast data, this does not include any adjustment to take into account the requirements that are expected to arise from future growth sectors. This is pertinent in respect of the National Park as the ELR has not addressed latent demand which is expected to arise from a number of emerging sectors in this area, despite acknowledging that:

"...the forecasts are based on an econometric model rather than real-world market dynamics, and it could be that there is employment floorspace in a use class lost in one part of the National Park, whilst in another, business expansions generate a need for additional floorspace demand. Some flexibility should thus be built into forecasts."[9]

3.11 Evidence prepared by MASelby and Associates in 2016[10] (included as **Appendix 3)** in the context of Whitehill and Bordon has identified a number of growth sectors which include a focus on the digital economy, speciality manufacturing and agri-tourism industries and support service as advocated and supported by the M3 Enterprise LEP. This includes the following:

- Environmental sciences, geospatial mapping and waste management;
- Video games, digital media and film;
- Speciality manufacturing;

[9] South Downs National Park Employment Land Review 2015, paragraph 7.41

[10] MASelby & Associates, September 2016,'Economic relationships, skills and competencies within the Whitehill & Bordon area and recommendations for developing them further'

- Aerospace, avionics and defence; and
- Agribusiness and technical support services;
- Ecobuild and;
- Wood craftmanship.

3.12 It is imperative that SDNPA considers this significant new evidence in addition to that produced to date through the ELR if the SDNPA is to succeed in meeting its objectives; *"to protect and provide for the social and economic wellbeing of local communities".*

3.13 The findings are especially relevant to the site and the wider area within this part of the National Park, as the growth sectors are identified within a 20 and 30-minute drive-time catchment of nearby Whitehill and Bordon, which is a focus of policy aimed at achieving social and economic regeneration.

3.14 Whilst the findings of the 2016 report are not exhaustively reproduced here (a copy is submitted in full with these representations), the economic relationships and skills that exist pursuant to the aforementioned sectors within the catchment area have been analysed, with latent and potential economic clusters identified for development. Amongst its key conclusions, the report highlights that:

- The area hosts a range of diverse producers and innovative businesses within the aerospace and avionics sector that are currently disconnected, with Government-led funding potentially being available to support the delivery of new facilities which would allow better interconnectivity;
- There is the ability to develop an Advanced Manufacturing Research Centre (AMRC) which would support specialised manufacturing businesses within the area, in particular those focused on optics, ruggedising technologies and high-tolerance fabrication, finishing and packaging. This would capitalise on links to higher education facilities in Hampshire;
- New opportunities are emerging in Augmented and Virtual Reality technologies in the entertainment, media, aerospace, automotive, health and technology sectors, which will enable local companies to develop new collaborative ventures and expand into potentially highly profitable growth markets;
- The area sits within the 'ICT Triangle' (stretching from West London to Newbury and Portsmouth) within which many major technology businesses are head-quartered. These include web and app develops, cyber-crime specialists and digital agencies with significant potential for bi-lateral business growth; and

- There is potential for the area to capitalise on Hampshire's record of film attraction (testament to 137 service-related businesses being located in the county), by providing new purpose-built sound and film production studios to address a deficiency in existing provision.
- Discussions with identified companies reveal a desire to scale their businesses, improve productivity, sales, distribution and brand recognition. Organisations such as Hampshire Fare, based near Southampton, provide good support and promotion for locally produced food and drink. The opportunity exists to develop a centre to assist the agri-tech and tourism based business sector to assist in upscaling of local business to achieve growth across rural markets that can support local jobs and farm diversification. The Food and Drink sector has good brand recognition and a sound base of cooperative working and development of the country market network across Hampshire.
- There are a small number of eco-builders but this is a sector that could quickly respond to development and which can benefit from collaboration with the Construction Skills Centre and W&B housing developers. There is a strong opportunity to grow the number of eco-builders in the region and to have a central Building Information Modelling BIM) Centre to accelerate this.
- The high quality of wood craftsmanship is unusual. This comprises individual and world quality restoration of historic wooden infrastructure. An extended linkage is to the International School of Wooden Boat Building in Pier 4 Portsmouth. This sector can also benefit from collaborative working with the Construction Skills Centre at WB and with developers.

3.15 Government funding made available through the LEP will support the growth of the sectors identified by the 2016 report. Notwithstanding this, GVA's market intelligence confirms that there is already considerable latent demand from companies within these sectors that are actively seeking land and property in this area, but have been frustrated by the lack of fit-for-purpose employment land and premises being available.

3.16 In view of the above, the current findings of the ELR would, if upheld by the SDNPA for plan-making purposes, significantly restrict the ability of companies to expand and cluster within the SDNP catchment area. This would result in companies seeking locations outside of the area, resulting in a significant adverse impact on economic growth and employment diversification which is of fundamental importance in achieving a prosperous and sustainable economic future for National Park residents.

3.17 The failure to delivery new employment land to meet the needs of the SDNP area would also be likely to result in increased levels of outward commuting, which in turn would increase

environmental pollution and which would be likely to damage the park in terms of reducing tranquillity and impact upon biodiversity.

3.18 In this respect, the Employment Background Paper (October 2017) sets out the three Local Plan objectives relevant to employment and which include:

- To conserve and enhance the settlements of the National Park as thriving centres;
- To protect and provide for the social and economic wellbeing of local communities; and
- To protect and provide for local businesses.

3.19 Importantly, whilst a key role of the National Park is to protect the natural and environmental qualities of the National Park, it still has a duty to foster the economic and social well-being of local communities within the Park.

3.20 Further, the Vision and Circular on English National Parks and the Broads states that national park authorities should maximise the socio-economic benefits of delivering national park purposes (paragraph 66). It also says that authorities should foster appropriate planning regimes that encourages new development to broaden the economic base of the national parks (paragraph 72) and foster a positive environment sustaining and developing businesses (paragraph 74).

4. Critique of Draft Local Plan Policies

4.1 The draft SDLP sets out a number of draft core planning policies which require consideration, having regard to the findings set out in **Section 3** and the potential of the site to realise a sustainable form of redevelopment which is aligned with National Park objectives. These objectives reflect the purposes of the National Parks as set out by the 1995 Act[11].

4.2 As set out in the Employment Background Paper 2017, objectives (7), (8) and (9) set out under Figure 2.2 of the SDLP are relevant to employment in the National Park and seek to:

- Conserve and enhance the villages and market towns of the National Park as thriving centres for residents, visitors and businesses;
- Protect and provide for the social and economic wellbeing of National Park communities supporting local jobs; and
- Protect and provide for local businesses that are broadly compatible with and relate to the landscapes and special qualities of the National Park.

4.3 It must be made clear at the outset that relevant policies of the draft SDLP, as currently conceived, will not result in the objectives set out above being fully realised. The effect of this, if not rectified, will be to undermine the soundness of the SDLP for examination purposes.

Strategic Policy SD34: Sustaining the Local Economy

4.4 Policy SD34 of the draft SDLP sets out to support development proposals that foster economic and social wellbeing of local communities within the National Park, subject to meeting one or more specified criteria. There are two strands to this policy which require consideration:

1. The policy's support for more efficient use of brownfield land in respect of employment uses and how this can be satisfied by the Longmoor Depot site; and

2. The need to recognise the emergence of new employment sectors and associated expansion of business premises on sustainable sites which adhere to wider National Park objectives and will help to realise economic growth in the area.

4.5 In the context of (1) above, Criteria (f) of the policy is pertinent and seeks to:

"Intensify the commercial use of an employment site and make a more efficient use of brownfield land."

[11] Environment Act 1995, s.62

4.6 The policy does not include a definitive list of employment sites within the National Park; the only reference to specific sites is that set out subsequently at paragraph 7.153, constituting safeguarded land which is outside of the defined settlement boundaries. This does not include the site at Longmoor Depot.

4.7 It is understood that the SDNPA has not approached DIO regarding the site's future status in planning terms. Whilst the DIO has publicly declared the site as being surplus to requirement (and therefore being available for development) at 2019, it is unclear as to whether this position has been consciously disregarded by the SDNPA in advancing the preparation of the SDLP and / or that officers were unaware of the type of uses in operation.

4.8 As evidenced in Section 2, the uses of the site to date can be considered to fall primarily within Classes B2 and B8, in addition to the existence of ancillary B1(a/b) provision. This has included industrial processes relating to the maintenance of machinery and vehicles, for example paint spraying (falling within the definition of B2 use) and storage (falling within the definition of B8 use). As highlighted earlier, operations at the site have been performed by sizable civilian and military personnel.

4.9 In view of its usage to date, the site should be expressly defined as an employment site within the SDLP. Its use and status as previously developed land means that the site would be able to facilitate development which is consistent with criteria (f) of Policy SD34.

Would redevelopment of the site compromise the special qualities of the National Park?

4.10 The Council will be aware that one of the core planning principles of the NPPF is to encourage the effective use of land by reusing land that has been previously developed, provided that it is not of a high environmental value[12].

4.11 To this end, it is noted that the draft SDLP supports the principle of commercial development on employment sites where this makes an efficient use of previously developed land and provided that it does not compromise the special qualities of the National Park[13]. This principle is not disputed by WBRC.

4.12 The above is effected by Policy SD25 (2) of the draft SDLP, which is applicable to the site and stipulates that:

[12] National Planning Policy Framework, paragraph 17

[13] South Downs Local Plan Pre-Submission, September 2017, paragraph 7.139

"Exceptionally, development will be permitted outside of settlement boundaries, where it complies with relevant policies in this Local Plan, responds to the context of the relevant broad area or river corridor; and

(a) It is allocated for development or safeguarded for the use proposed as part of the Development Plan; or…

(d) It is an appropriate reuse of a previously developed site, excepting residential gardens, and conserves and enhances the special qualities of the National Park."

4.13 The starting position in considering whether the future development of the site would satisfy the relevant subsections of Policy SD25 is its physical characteristics and immediate environs.

4.14 The land available in question is wholly developed; this comprises of buildings which are of substantial scale and footprint, with the remainder of the site being primarily covered with hardstanding. It is expected to be of little or no value in biodiversity terms.

4.15 Aside from its location which falls within the defined National Park area, there are no other statutory or non-statutory environmental designations which specifically cover the site itself. Similarly, there are no environmental features within the site, for example trees which are of high amenity value or understood to be the subject of a Tree Protection Order (TPO), ponds or watercourses.

4.16 Views into the site are largely restricted from all directions. The site cannot be seen when approaching from either the north or south along the adjacent A3; this part of the route features a dense mix of mature and semi-mature woodland planting, which includes coniferous trees.

4.17 Existing buildings occupying the eastern part of the site can be partially glimpsed between belts of trees in the vicinity of the site's access from the A325 Woolmer Road, however belts of semi-mature and mature trees along the remainder of this route ensure that the site is completely screened from view.

4.18 The site is screened from view from Greatham. When approaching the village from the east via Petersfield Road, there is a substantial separation of the site afforded by a naturalised area which is comprised of swathes of semi-mature and mature self-set trees. Similarly, the site cannot be viewed from Longmoor Road, where this runs through the eastern part of the village.

4.19 The significant degree of screening afforded to the site by surrounding woodland is consistent with its location within the *Wealden Farmland and Heath Mosaic*. The 2006 Landscape

Character Assessment forming part of the evidence base to the draft SDLP is pertinent to the consideration of impact arising from development at the site[14]. This observes that:

"…Extensive areas of post-1800 woodland plantations cover areas of former common land and provide a strong sense of enclosure and containment."

4.20 One of the key characteristics identified by the 2006 assessment which is of relevance to the above observation is that views are limited by dense woodland cover[15]. The surrounding environs of the site can be said to share this key characteristic, in contrast to other areas of the National Park where there are sensitive and long-ranging views which will be more susceptible to the visual impacts of development.

4.21 The *perceptual / experiential* landscape considerations of the 2006 assessment are also worthy of note in respect of considering the effects of development at the site. Pertinent to this area in particular, it concludes that[16]:

"…the presence of the A3(T) and overt human impact due to the presence of army camps and industrial buildings, impinge on the sense of remoteness and tranquillity in localised areas."

4.22 As explored within the accompanying Vision, the development of the site to provide for future employment uses could be achieved so as to protect and enhance its setting. There is potential to achieve environmental / visual betterment would be facilitated by an improved configuration of development on the site.

4.23 An appropriately configured development could include buildings of appropriate height with smaller footprints arranged so as to enable a coherent scheme of landscaping to run around the site to assist in screening the already limited views into the site.

4.24 Notwithstanding the evolved woodland which is prevalent within the surrounding area, regard may also be had to the effects of the site's development on the neighbouring SINCs. The larger of the two – 'Land at Greatham' – is historically an area of heathland which has largely succeeded to woodland in accordance with the designation criteria afforded by HBIC[17]. The second – 'Woolmer Road Triangle & Playing Field' – is designated as agriculturally unimproved grassland.

[14] East Hampshire District Landscape Character Assessment Final Report 2006, Part 2, Section 8b 'Woolmer Forest / Weaver's Down

[15] East Hampshire District Landscape Character Assessment Final Report 2006, paragraph 8.1

[16] East Hampshire District Landscape Character Assessment Final Report 2006, paragraph 8B8

[17] Hampshire Biodiversity Information Centre, SINC 23 (EH0455), Designation Criteria 3bii

4.25 If development were to be confined to the site as defined by the extent of existing development, the SINCs would be preserved without any direct impact. The DIO is not aware of any identified heathland restoration programme for the SINCs, such that the immediate visual effects of development on the site would warrant a more in-depth review.

4.26 Whilst the presence of any protected species would need to be verified by an up-to-date Phase 1 Habitat Survey and on-site investigations, any indirect impacts of the development could, where necessary, be satisfactorily mitigated.

4.27 More generally, the site's development for employment use would not result in the type of indirect impacts which could arise from residential development. For example, employment uses on the site would not generate additional visitors to either the SINCs or the Wealden Heaths Phase II SPA and SSSI. Conversely, this issue can arise in respect of residential development, where increases in the local population can lead to recreational pressure on environmentally sensitive areas.

4.28 Whilst the risk of detrimental impact to watercourse receptors in the surrounding area is expected to be low, any potential for contamination at construction stage (e.g. through the mobilisation of sediment within water surface run-off) would be addressed through mitigation measures implemented in accordance with an approved Construction Environment Management Plan (CEMP). The CEMP would be prepared following the undertaking of a Flood Risk Assessment (FRA) to support a proposed development at planning application stage.

4.29 To manage surface water drainage for the operational lifetime of development on the site, and to avoid the risk of flooding to off-site receptors, the drainage system would be designed in accordance with Sustainable Urban Drainage System (SUDS) principles. Where necessary, this may include storage of the required volume to be accommodated within the site, with sufficient allowance for flood risk and climate change events.

4.30 Reflecting upon the environmental considerations identified above, it can be deduced that the site's development for employment uses would not compromise the ability of the SDLP to fulfil its environmental objectives for the National Park. In particular:

- The release of brownfield land for development would assist by avoiding the need for the release of greenfield land to meet the need for economic growth;.
- The site's development would not restrict the ability to conserve and enhance the cultural heritage of the National Park.
- The site's development would not impinge the conservation and enhancement of high-quality and well-managed habitat..

4.31 In essence, there are no site-specific environmental constraints which would preclude a sensitively designed development on the site. The site constitutes viable brownfield land which is able to make a meaningful contribution towards facilitating economic growth within this part of the National Park, whilst ensuring that its special qualities are protected and enhanced.

4.32 In the context of the second strand of Policy SD34, the criteria are tailored towards supporting the needs of certain business types operating within the National Park. These include those linked to ecosystem services and rural supply chain services.

4.33 Whilst the policy recognises support for small and micro-businesses, in addition to those which are already established in the area, it does not make provision for new and emerging sectors, namely the expansion of high-value digital technology businesses.

4.34 The NPPF requires that local planning authorities should have a clear understanding of business needs within the economic markets operating in and across their area. This includes working with local enterprise partnerships to understand likely changes in the market, as well as the needs of existing businesses[18]. This is further reflected in Government advice which requires that planning regimes encourage new development to broaden the economic base of national parks[19].

4.35 As highlighted in **Section 3**, evidence is submitted to demonstrate the potential for growth in the digital technology sector, which could be facilitated by this area through the creation of new facilities which would enable such businesses to cluster together and benefit from 'cross-fertilisation' of expertise. The growth of such businesses is indeed recognised by the M3 Enterprise LEP.

Remedies to ensure soundness of the SDLP

1. Given the evidence provided by the Mark Selby report, the criteria of Policy SD34 should be expanded to capture the potential of the following sectors to contribute to the economic wellbeing of the National Park economy;

- Environmental sciences, geospatial mapping and waste management;
- Video games, digital media and film;
- Speciality manufacturing;
- Aerospace, avionics and defence; and

[18] National Planning Policy Framework, paragraph 160
[19] English national parks and the broads: UK government vision and circular 2010, paragraph 72

- Agribusiness and technical support services
- Ecobuild and;
- Wood craftmanship.

2. In view of its usage to date, the site at Longmoor should be expressly identified as a large brownfield resource and an employment site within the SDLP. Its use and status as previously developed land means that the site would be able to facilitate development which is consistent with criteria (f) of Policy SD34.

Policy SD35: Employment Land

4.36 At present, Policy SD35 (1) of the draft SDLP carries forward the recommendations of the ELR in respect of requirements for Class B1a/b, B1c/B2 and B8 employment uses which have been identified for the plan period. In total this equates to a net additional requirement of 10.3 ha – in line with that identified by the 2017 HEDNA and between the forecast need and trend-based figures identified by the ELR.

4.37 As evidenced at **Section 3**, the objectively assessed need for employment land which has been identified by GVA (67.18 ha) results in a significant uplift of 56.88 ha against the requirement identified by the draft SDLP.

4.38 It should be borne in mind that GVA's identified requirement is calculated from forecast need based on ONS-derived sectors which either exclude, or are not fully aligned with, those cited at paragraph 3.10. Consideration must therefore be given to an additional upward adjustment of the identified requirement, in order to capture the latent demand for additional facilities and premises that is expected amongst businesses in the growing digital technology sector.

4.39 In order to fully realise the economic and social wellbeing of local communities within the National Park, which underpins Policy SD34 of the draft SDLP, the employment land requirements set out in respect of office, industrial and small-scale warehousing uses for the purposes of Policy SD35 (1) should be reviewed and amended in light of the evidence submitted herewith.

4.40 The recognition and protection of employment sites for the purposes of Policy SD35 (4) is supported by DIO. However, it is submitted that Longmoor Depot is expressly recognised as an employment site on the Policies Map which will accompany the SDLP. This will safeguard its potential to deliver high quality facilities which could potentially accommodate the needs of digital technology businesses over the plan period.

Remedies to Ensure Soundness of the SDLP

4.41 In view of the findings set out above, it is submitted that the following amendments are made to the SDLP to ensure that relevant policies are justified and effective for the purposes of paragraph 182 of the NPPF:

3. Longmoor Depot should be expressly recognised as an employment site, in addition to the list of sites set out at paragraph 7.153, as an allocation within the wording of Policy SD35 and on the Policies Map.

4. The disaggregated employment land requirements identified in Policy SD35 (1) should be amended for the plan period to 2033 as:

- Office (B1a/b): approximately 8.2 ha
- Industrial (B1c/B2): approximately 10.9 ha
- Small-Scale Warehousing (B8): approximately 48.2 ha

5. Incorporate a review mechanism under Policy SD35 to ensure that objectively assessed requirements can be met during the plan period.

5. Site Opportunity and Case for Allocation

5.1 As established at the outset of these representations, the site is scheduled to become available for development in 2019 and represents a significant opportunity in helping to facilitate economic growth within the National Park.

5.2 As demonstrated in **Section 3**, there is need for the site to be retained and developed for employment use. This is evidenced from the econometric demand forecast and sector research which confirms that there is latent demand from the digital technology sectors in the National Park area.

5.3 Whilst the site has thus far not been recognised by the draft SDLP, it presents a number of key attributes which render it suitable for longer-term employment use:

- The site constitutes approximately 7 ha of previously developed land and is primarily comprised of a number of buildings and hardstanding, with no topographical constraints.
- The MoD's operations on the site primarily represent Class B uses, thereby establishing the principal of employment use for the purposes of allocation.
- The site is accessibly located for London and the wider South East, being adjacent to the strategic highway network (A3) and proximate to a range of existing businesses which collectively operate within the digital economy of Hampshire.
- The site is sustainably located in terms of providing suitable and high-value job and training opportunities for communities residing in settlements within and around this part of the National Park.
- There are no site-specific environmental constraints to the site's redevelopment, with the potential for any off-site impacts capable of being addressed through appropriate mitigation measures implemented during the construction and operational stages of development.

Vision

5.4 A comprehensive redevelopment of the site is envisaged and would provide high quality facilities which are expected to be attractive to businesses across a range of sectors in the National Park and is illustrated in the Illustrative Masterplan at Appendix 2. As established in **Section 3**, these include businesses specialising in environmental sciences, aerospace and avionics, agribusiness, and digital media, gaming and film.

5.5 Drawing upon examples from the above, the accompanying Vision demonstrates how the site could be developed to provide a range of facilities which include those focused towards

digital media, gaming and film production, agri-tech, ecobuild and specialist manufacturing businesses.

5.6 The Illustrative Masterplan at Appendix 2 envisages the site being developed in four plots, across which there will be the potential to provide approximately 10 buildings, offering gross floorspace areas of between circa 1,250 m^2 and 9,450 m^2. This would include headquarter-style buildings and studio facilities. Buildings would typically not exceed a two-storey height.

5.7 The scheme would be well-placed to attract occupiers given the rich and well-established pool of specialist skills prevalent within the surrounding area. This would be complemented by an expanding pool of graduates from the universities of Bournemouth, Southampton, Surrey and Farnham.

5.8 Early discussions with potential tenants indicate that the envisaged scheme for the site could help to address demand within the emerging entertainment and high-technology markets. Such growth is attracting major financial support from the investor community and corporations within the South East, including Samsung, Microsoft and Sony.

5.9 Support is also bolstered by the commitment of the M3 Enterprise LEP towards the growth of the high-technology markets within its Strategic Economic Plan and Local Growth Fund submissions.

5.10 The Government's Industrial Strategy Challenge Fund presents a key opportunity to secure financial support to kick-start and support the development of technology facilities on sustainable sites such as Longmoor Depot.

Key Considerations

5.11 There are a number of key planning policy considerations with which the Vision for the site's development is cognisant:

- The site's retention and allocation for employment use would enable it to make a tangible contribution towards facilitating economic growth within the National Park, helping to meet the shortfall of land currently identified and providing high quality facilities to serve the needs of businesses. Accordingly, it would provide a form of development which is conducive to fostering the economic and social wellbeing of local communities within the National Park for the purposes of **Policy SD34** of the draft SDLP.
- The site area as defined for the purposes of the allocation sought is comprised of previously developed (brownfield) land. It therefore represents a sequentially preferable location within which to accommodate economic development in the National Park for the purposes of Policy **SD25**.

- The site presents the opportunity for an improved form of development, whose high quality design and configuration would enable its visual and environment effects to be minimised, so as not to have a serious adverse impact on the natural beauty, wildlife, cultural heritage and recreational value of the National Park for the purposes of **Policy SD3**.
- The development of the site would ensure that the adjacent SINCs and nearby designated areas (namely Wealden Heaths Phase II SPA/SSSI and Woolmer Forest SAC) are safeguarded, with no encroachment of the developable area into the natural landscape. The design and layout of the envisaged form of development would also provide for potential planting to the site boundaries, thereby helping to conserve and enhance the landscape for the purposes of **Policy SD4**.
- The envisaged form of development would be of an appropriate height, scale and massing, providing the opportunity to improve upon the form and physical characteristics of development which exists on the site at present. This would be complemented by high quality hard and soft landscaping, with the latter having the potential to accommodate native tree and plant species suitable for the National Park. This would commit to a landscape-led approach to design consistent with the objectives of **Policy SD5**.
- The landscape characteristics of the surrounding area ensure that the development of the site, whilst having the potential to achieve aesthetic improvements and reduced impact, can be integrated in such a way as to preserve the visual integrity and scenic quality of the National Park. As such, there will be no adverse impact to existing landmark views and those from any publicly accessible areas within the National Park for the purposes of **Policy SD6**.
- At the detailed planning stage, an appropriate scheme of lighting would be agreed with the SDNPA which would be conducive to meeting the objectives of **Policy SD8**. This would include design measures to reduce obtrusive light, whilst the imposition of an appropriate condition within a detailed planning permission would afford the SDNPA with greater control over the extent and duration of lighting within the site during night-time hours.
- Whilst the existing site is expected to be of no or little value in biodiversity terms, there is potential to introduce enhancements through the envisaged development, for example the incorporation of planting and other measures which would be agreed with the SDNPA and relevant statutory bodies at planning application stage. This would ensure consistency with **Policy SD9**.
- The envisaged development would incorporate measures to eliminate any risk of pollution to groundwater features during the construction and operational phases of development, whilst also incorporating SUDS measures to ensure satisfactory surface water drainage for the purposes of **Policy SD17**.

5.12 In essence, the site has the potential to deliver a sustainable form of development which would perform an integral role in facilitating economic growth within the National Park for the economic and social wellbeing of its residents, whilst balancing this with the wider environmental objectives for the park, thus ensuring that its special qualities are conserved and enhanced.

6. Conclusion and Recommendations

6.1 These representations have been made on behalf of DIO by WBRC in respect of seeking an allocation of land known as Longmoor Depot for employment-use development within the SDLP. This is intended to secure a viable future for the site upon the departure of the MoD in 2019.

6.2 In demonstrating that an allocation of the site for employment use would be justified within the SDLP, it is submitted that

- Operations on the site to date constitute Class B uses and therefore the principle of employment development has been established. This should be recognised by the SDLP through express reference to the site as an employment allocation within Policy SD34 and the supporting Policies Map.
- There is significant potential for growth of the digital technology sectors within the SDNPA/ Hampshire area, with requirements for high quality facilities expected to emerge at sustainable locations within the National Park. WBRC impress upon SDNPA to consider the findings of analysis undertaken by MASelby and Associates and submitted with these representations.
- The potential for economic growth across a range of sectors should be acknowledged within the emerging SDLP and in particular under Policy SD34 in fostering a flexible approach towards broadening the local economy, such that its objective of achieving the economic and social wellbeing of local communities is fully realised. This should include;
    - Environmental sciences, geospatial mapping and waste management;
    - Video games, digital media and film;
    - Speciality manufacturing;
    - Aerospace, avionics and defence; and
    - Agribusiness and technical support services;
    - Ecobuild and;
    - Wood craftmanship
- The employment land requirement currently expressed in Policy SD35 is not considered robust. Analysis undertaken by GVA and evidenced in this document confirms that the objectively assessed need for employment land significantly exceeds that identified by the SDLP's evidence base, equating to 67 ha for the National Park during the plan period.

- Policy SD35 should express the above requirement flexibly, in the absence of any additional uplift to take into account the latent demand of emerging and expanding employment sectors within the area. Alternatively, the SDNPA may wish to consider an appropriate adjustment of the objectively assessed requirement in order to respond to latent demand.
- The form of development envisaged for the site, and set out in further detail within the supporting Vision Document, is intended to meet the needs of businesses within the digital technology sectors whose growth during the plan period is expected to result in new facilities being sought. The site is well-placed to meet such needs, providing the ability for such businesses to grow and cluster, thereby creating new employment and training opportunities for local communities.
- The site offers the potential to achieve a form of development which is more effectively integrated within the landscape by virtue of is design and appearance than that which exists currently. A sensitively designed development will ensure that the visual beauty and wider special qualities of the National Park are not adversely impacted upon.
- The landscape character of this part of the National Park, being defined by heavily wooded enclosed areas, ensures that the site's development would not adversely impact upon existing landmark views or indeed those from any publicly accessible area.
- Whilst not subject to any site-specific environmental designations, the potential for any indirect impacts which could arise from the site's development on adjacent statutory and non-statutory designated areas can be mitigated by appropriate measures agreed at planning application stage.

6.3 In summary, the site's allocation for employment use would be consistent with the wider objectives, policies and vision for the National Park as expressed through the SDLP. It is respectively requested that SDNPA considers the evidence set out within these representations and implements the recommendations forthwith, such that the SDLP is robust and can be found sound.

GVA

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Appendix 1
Site Location Plan

Do not scale off this drawing

Date	Rev.	Revisions

Site Boundary
(8.40Ha/20.75 Ac)

N

10 0 50 25 100m

Project
MOD Longmoor Disposal
Near Whitehill & Bordon

Title
Site Boundary

Job	Drawing No.	Rev.
16005	15-1	A
Drawn	Scale	Date
TS	1:2000@A2	11/2017

URBAN PLACE LAB
37 Stoke Fields, Guildford, GU1 4LT, Tel 07887 743567

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Appendix 2 Illustrative Masterplan

Do not scale off this drawing

Date	Rev.	Revisions

Site Boundary
(8.40Ha/20.75 Ac)

HQ plot - New Building

Existing Building

New Building

Overall Land Budget

Plot	Land Use	Area Ha	Area Ac
1	Office	0.60	*1.48*
2	Employment*	1.50	*3.71*
3	Employment	3.50	*8.65*
4	Employment	1.90	*4.70*
Sub Total		***7.50***	*18.53*
Infrastructure/ Roads		0.90	*2.22*
Total		**8.40**	*20.76*

* Using existing buildings

Development Figures

Plot	Plot Size Ha	Plot Size Ac	Unit	Approx. Size of Unit m²	Approx. Size of Unit *ft²*
1	0.60	*1.48*	HQ	3,500	*37,000*
2	1.50	*3.71*	A	9,450	*100,000*
3	3.50	*8.65*	B	2,800	*30,000*
			C	2,000	*21,500*
			D	1,500	*16,000*
			E	1,500	*16,000*
			F	1,250	*13,000*
			G	1,875	*20,000*
			Sub total	***10,925***	***116,500***
4	1.90	*4.70*	H	3,250	*35,000*
			I	2,650	*28,000*
			Sub total	***5,900***	***63,000***
Total	**7.50**	*18.53*		**29,775**	***316,500***

N

10 50
0 25 100m

Project

MOD Disposal Longmoor
Near Whitehill & Bordon

Title

Sketch Master Plan
including initial Land Budget

Job	Drawing No.	Rev.
16005	14-1	A
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URBAN PLACE LAB

37 Stoke Fields, Guildford, GU1 4LT, Tel 07887 743567

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GVA

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Appendix 3 Report by MASelby and Associates

Economic relationships, skills and competencies within the **Whitehill & Bordon** area and recommendations for **developing them further**

A research project undertaken for
Whitehill & Bordon Regeneration Co.
By MASelby & Associates

September 2016

Project leaders
M.Selby
P.Lamacraft

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EXECUTIVE SUMMARY

Project Purpose

This Research Project undertook both quantitative and qualitative analysis of the economic base of the Whitehill & Bordon (W&B) catchment. The objective was to identify the key economic relationships, skills and competencies within the area (hidden triggers to economic growth), and then provide interpretation on how to rapidly activate and develop them further. This can then develop a secure base of high value jobs for the newly developed area.

This report makes recommendations based upon key findings of current and not historical regional skills, strengths, capacity, and unmet needs.

Recommended actions give core focus of development to secure a sustainable base for the Enterprise Zone by attracting aligned companies and services suitable for the nature of the future W&B.

For the research, 4 types of Cluster and Sector were considered:

1. **Working, or Established Cluster** - A critical mass of local knowledge, personnel, and resources create agglomeration economies that are used by firms to their advantage in competing with those outside the cluster. Often attract resources from other locations.

2. **Latent Cluster** - Clusters with a significant number of firms but with a low level of interaction due to the lack of knowledge, awareness or trust and low cooperation.

3. **Potential Cluster** - Some elements for the development of successful clusters are already in place but need to be deepened and broadened.

4. **Policy driven/Wishful thinking Cluster** – Often chosen by government to support but which lack a critical mass of firms or favourable conditions for organic development; Sometimes more “wishful thinking” than real cluster opportunities

Area in Scope

Global findings demonstrate that the most sustainable economic growth is local growth with strong external links. Intelligent external linkages and the supplementing of local skills is the most rapid and sustainable way to develop, and to expand, high value employment.

In this context, the area in scope was initially defined by peak hour drive time. This meant mapping within two bands: that of 20 minutes peak hour drive time from W&B, and that of 30 minutes peak hour drive time. There proved to be too few findings of significance within the 20 minutes peak hour drive time boundary, so more intense evaluation was made of the broader 30 minutes peak hour drive time.

From this base there were significant findings. However many of the companies studied in detail revealed strong relationships that extended beyond these boundaries of peak hour traffic. It later proved that analysis of specific clusters required the inclusion of other centres outside the original area. Therefore the final area in scope included these related centres of activity, adding Andover, Winchester, Basingstoke, Newbury, Hook, Fleet, Farnborough, Guildford, and Liphook.

Project Methodology

Following initial review of the most active sectors within the B&W catchment of 20 and 30 minutes peak hour drive time to find the hidden triggers for future growth, the most robust sectors were identified:

1. Environmental Sciences and Waste Management
2. Video Games, Digital Media, and Film production
3. Specialty Manufacturing
4. Fabrication and Finishing
5. Aerospace, Avionics and Defence
6. Food, Drink and Tourism
7. World Class Wood Craftsmanship

Online research, telephone, and face-to-face discussions were subsequently conducted with a total of 46 private and public sector executives of each of these sectors, within two geographic areas. These included senior management and the service industry to the sectors, including recruitment agencies, accountants, lawyers and bankers.

The objective of these interviews was to identify the following:

Within Area 1 (30 minutes peak hour drive time)

1. Current skills, assets, research and business activities
2. Existing, latent or potential groupings of business activities
3. Key functionalities and subsequent synergies between business activities

Within Area 2 (90 minutes peak hour drive time)
Current skills, assets, research and business activities that currently do, or possibly could have impact in the future on activities within Area 1

Opportunities for business activities in Area 2 to benefit from the regeneration of Area 1

Picking "winners"

In regeneration efforts the temptation is to "pick winners" and target companies and sectors that are of general economic significance, but often not well-suited to the area in question.

These recommendations take a different approach. A newly regenerated area has unique opportunities to respond to industry needs in such a way that plans are made and particular types of infrastructure developed to offer opportunities for higher-value job creation, and that in turn attract the retail and hospitality sector to invest in the new location.

Experience has proven that best effects come from first identifying the current growth triggers for an area, and then creating a series of targeted events that extract from identified fast growth and/or innovative companies what is needed for their future expansion and growth. Such events should focus on a commercially attractive "hook" – usually this means believable and/or often formerly not well-understood opportunities for market growth and investment.

These events, when well-planned, bring together the supporting stakeholders and professions within a sector as well as companies providing goods and services to the sector. They offer:

- a showcase of regional goods and services applicable to the sector to promote greater understanding of local supply-chain opportunities
- presentations and workshops that reveal new ideas and innovations that are actively seeking wider collaboration
- a memorable and non-traditional approach that creates an atmosphere of possibility
- clear outlines of funding opportunities and how to secure them
- overviews of concepts under development that seek the contribution of new innovators
- a harvesting of identified needs and opportunities
- clear and succinct summary of outcomes
- 3/6/9 month actions that retain momentum as the outcomes mature into projects and wider opportunities

The recommendations of this report focus on what are the catalytic actions from which others logically will follow. These are based on an understanding of effective cluster development, the commercial realties on busy decision makers and what makes it worthwhile to engage at the outset.

The challenge of any proposed event is to identify sufficient value that such people continue to be engaged in enlightened self-interest (in other words, it makes good business sense but benefits a wider group than the individual company).

Recommendations

The lack of awareness amongst companies and senior executives in the W&B catchment of the capabilities, talents and skills in their midst can be addressed through structured stewardship. This will help identify and nurture concrete opportunities for effective collaboration between the companies, focusing on specific goals and outcomes.

Headline recommendations:

- **Develop High Value Technologies Symposium, Workshops and Showcase events**
- **Foster the AR/VR sector by establishing a focused working group, a local network and skills development**
- **Offer a Film Officer Continuing Professional Development Workshop and begin discussions regarding relocating the Hampshire Film Office to W&B**
- **Begin discussions with the Food and Drinks sector regarding establishing a Food Enterprise Centre in W&B – focus on scaling business**

Specific recommendations for the identified sectors and cluster groupings are detailed later in this report.

Key Findings

Finding 1: Seven sectors high in innovation & growth

From 1452 enterprises reviewed, the study eventually identified 186 companies that are high in growth and innovation within the following sectors:

1. Environmental Sciences, Geospatial Mapping, and Waste Management
2. Video Games, Digital Media, and Film
3. Specialty Manufacturing
4. Aerospace, Avionics, and Defence
5. Food, Drink, and Tourism
6. Eco-builders and Wood Craftsmanship
7. Agribusiness and technical support services

Finding 2 – Key sectors are priority areas for government

The first four sectors above are priority areas for development with government backing for their development. The last three are focus areas for rural development.

Finding 3 – Three main sector groupings

Synergies across the seven sectors were found to be relatively extensive, with common skill bases, technologies, methodologies, and/or functionalities. This led to three logical groupings:

Group 1- High Tech

- Environmental Sciences, Geospatial Mapping and Waste Management
- Video Games, Digital Media, and Film
- Aerospace and Defence

Group 2 – Specialty Manufacture

- Specialty Manufacturing, including: Optics, Electronics, Analytical Instruments, and Fabrication and Finishing

Group 3 – Rural Business

- Food, Drink and Tourism
- Eco-builders and World Class Wood Craftsmanship
- Agribusiness and technical support services

Finding 4: Cluster status: 1 Established, 1 Latent and 3 Potential

In the report, these sector groupings are considered for their capacity to extend economic impact by becoming clusters, or to evolve an established cluster to wider strengths.

Group 1- High Tech (Latent)

- Environmental Sciences, Geospatial Mapping and Waste Management (Potential)
- Video Games, Digital Media, and Film (Latent)
- Aerospace and Defence (Established)

Group 2 – Specialty Manufacture (Potential)

- Specialty Manufacturing, including: Optics, Electronics, Analytical Instruments, and Fabrication and Finishing (Potential)

Group 3 – Rural Business (Potential)

- Food and Drink (Latent)
- Tourism, Eco-builders and World Class Wood Craftsmanship, Agribusiness and technical support services (Potential)

Finding 5: Significant electronics specialty business

This sector has a range of specialist electronics manufacturing and services with diverse export destinations.

Finding 6: Wide cross-sector use of simulation and 2D, 3D technologies

Simulation and 2D and 3D is being used locally in aerospace, cyber-security, first responder training, other training and learning, traffic modeling, advanced building management systems, specialty manufacture, prototype modeling and games.

Finding 7: Well established games cluster

Guildford is the centre of one of the greatest clusters of games companies in the UK. Games applications extend beyond pure entertainment and are being used extensively within the aerospace, education and training, design, and other sectors of the region, without direct connection to the local cluster, often sourcing from beyond.

Finding 8: Strong geospatial technology and optics

Both geospatial technologies and optics are critical components of command and control systems, satellite image display, and diagnostics.

Finding 9:Strong potential film sector

Hampshire County Council hosts Hampshire Film Office and local councils have a film officer and site location gallery. Limited success has been achieved but are not adequately funded nor staffed with professionals. Appears to be a reactive organisational structure rather than seeking new film opportunities. There are some well-connected companies within the area and two film studios (Lasham and Winchester).

Finding 10: Geographic mid-point advantage

For Aerospace and Defence, Specialty Manufacture, Fabrication & Finishing, and Geospatial Mapping – W&B is a geographic mid point in its supply chain and professional relationships.

Finding 11: Limited medical technology sector but similar skill sets

There is a very low level of medical/veterinary technology or medical device manufacture companies for which the same skills and technologies are required as for Specialty Manufacturing, and Fabrication and Finishing. These two sectors are of uniquely high standard – possibly driven by the needs of the defence, aerospace

industries and there are many clean room facilities in use (of different orders of category).

Finding 12: Not an attractive location for high-tech digital companies

Key known attractors for digital technology companies were absent at the level required, both now and in the plans to date for the future developed city. These include an immediately adjacent University or Research establishment, high-speed broadband access, frequent and easy transportation, and a varied and vibrant 24/7 cultural and entertainment fabric.

Finding 13: Quality R&D/facilities/equipment/courses in adjoining region

Although there is no immediately close University or Research Centre, R&D and specialties of the universities and competence centres in the adjoining region relate to the seven growth-target sectors

Finding 14: High level of specialty technical consulting services

From precision environmental management, marine technology, and disaster recovery through to marine technologies and composites development, the range of high-level niche consulting services is notable.

Finding 15: Latent food & drink cluster and good brand recognition

The quality of food and drink production and small scale manufacture is high and already has brand recognition. High quality food and drink products are not being scaled for wider production and transportation of goods to London is operationally fragmented.

Early thoughts of developing a local Farmers Market have been discarded by later research that illustrates how it is better to support the strongest local farmers market rather than diminish its economy through smaller less successful ones[1].

Winchester is the most established and largest farmers market in the near region and initiatives to promote its growth would harness more benefit to local farmers.

Finding 16: Potential cluster of wood craftsmanship and eco-builders

A significant number of high quality woodcrafts businesses, from refined gift items to bespoke building and heritage restoration (to National Trust standard), and small number of eco-builders.

Finding 17: Strong & sophisticated agribusiness

The agribusiness sector in the W&B catchment has many specialties such as exotic animal and bird husbandry, niche crops such as truffles, agricultural engineering,

[1] https://aeon.co/ideas/foodie-localism-loves-farming-in-theory-but-not-in-practice

cooking schools, construction & contracting, dairy, fish farming, mineral water extraction and an Artificial Insemination export sector. However the status of the sector following the recession of 2008 has not been documented.

Finding 18: Evidence of large number of women entrepreneurs

There are many women who have founded SMEs in the region, or are productively self-employed.

This is important and something which can be built upon. The gender gap in the UK is wide by comparative international measurements.

The World Economic Forum places the gender gap in UK economic participation in 2015 as 37th globally (study now includes 142 countries) for size of the gender gap in business and shows a significant increase since the first report on women in 2014 (initial report included statistics from 115 countries). This is an improvement from the 2014 figure with the UK at 46th, but shows the work required to benefit from the skills and abilities of the women of the UK.

In terms of educational attainment, which in 2014 placed the UK at 46th, the 2015 report places the UK at 37th.

Convergent Opportunities

Convergent Opportunity 1

The UK is a leader in fostering development of Fintech (Technology for Financial Services). Santander has a $100million fund, and this relates to the UK Strategy for UK Data Capability[2], and other complementary strategies and initiatives.

So What?

According to industry forecaster IDC the data analysis market is projected to grow by 23.1% over the 2014-2019 forecast period.

The rapid increase in cross-sector migration of technology brings convergence of sector competencies. This is locally demonstrated by the MUPPITS Project at Portsmouth University which started as a way of transferring graphics files for film and TV and has now attracted interest from the Financial Services sector, there are opportunities within the sectors identified within this report to possibly access some of of the available funding to support the hybridisation of technology through cross-sector collaboration.

Through development of a "High-Value Technologies Cluster" there is a possibility of accessing this and other suitable grant funding to develop cross-sector synergies that will stimulate market growth in the W&B catchment and offer possibilities for the W&B Enterprise Zone.

Convergent Opportunity 2

Aerospace and Avionics fall under national priority focus for re-shoring/repatriation of supply chain.

So What?

The W&B catchment hosts a wide range of diverse producers and innovators in businesses that are currently disconnected. There is a real opportunity to secure funding through existing central government programmes to foster better inter-connectivity that will generate increased on-shoring for the sector.

Convergent Opportunity 3

Autodesk is actively supporting the government funded efforts to develop the specialty manufacturing sector – through involvement with Advanced Manufacturing Research Centre (AMRC) in Sheffield. HQ and Autodesk University are located in Farnborough (33minutes).

So What?

Specialty manufacturing as described by this report includes optics, ruggedizing technologies and high tolerance fabrication, finishing & packaging. This is a previously undocumented regional strength and has therefore not had any support to foster cluster development.

[2] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/254136/bis-13-1250-strategy-for-uk-data-capability-v4.pdf

An opportunity to host an AMRC traditionally depends upon closer proximity to a higher educational facility that W&B offers, but encouraging such an AMRC to be located in the near proximity in or near to Farnborough or Guildford (both approx 35 minute drive time from Bordon) will have positive local effects.

Convergent Opportunity 4

The Microsoft Centre for High Performance Computing in Southampton is one of nine such institutes worldwide and the only one in the UK. The only other one in Europe is in Stuttgart.

So What?

Engineering design is an iterative, multidisciplinary process that is often data intensive and computationally expensive due to the application of high fidelity analysis models for the simulations of physical phenomena. In the past few decades, engineering design has become increasingly dependent on computing and IT to underpin the process of design from initial modelling and analysis through optimisation to fabrication and testing of prototypes.[3]

Through the Microsoft Centre for High Performance Computing and the University of Southampton, it is possible for businesses or collaborations of businesses to develop a Knowledge Transfer Partnership (KTP). Through a KTP, two-thirds of the project costs can be grant funded to improve business through accessing the wide skills, expertise and facilities within the University and the Microsoft Centre by working with a University academic team and a newly qualified graduate. A KTP offers access to other institutes in China, Malaysia, Singapore as well as the 18 top university collaboration of the World Universities Network[4]

Convergent Opportunity 5

An EY Report on the potential for resurgence of UK Manufacturing identifies three W&B sectors as priority focus areas for re-shoring based on them being in the top 10 GVA per GDP: Electronics & Optical Products (top); Defence (7th) ; Aerospace (9th) Automotive is second.

So What?

See Convergent Opportunity 2. This report substantiates our research.

Convergent Opportunity 6

DEFRA funds development of the eco-building sector. The previous programme has now finished and new funding is expected.

So What?

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[3] *Direct quote from the Microsoft Institute for High Performance Computing page on the University of Southampton website* *http://www.southampton.ac.uk/engineering/research/groups/CED/microsoft_institute_for_high_performance_computing.page*

[4] *http://www.southampton.ac.uk/global-connections/worldwide-universities-network.page*

At a local level, projects can get up to 75% of their total cost from a Sustainable Development Fund grant. This is available upon submission of a business proposition from small community-based organisations and would be enabled through a LEAF Grant by the local Community Foundation.

Convergent Opportunity 7

Digital Built Britain Strategy[5] released in 2015 moves the former Level 2 Strategy to a higher level of requirements in delivering government infrastructure projects. Building Information Modelling (BIM)[6] is collaboration between disciplines to improve and speed deign, procurement and construction for the construction and facilities management industry.

So What?

There is an opportunity to hold a BIM collaboration day at W&B for all developers in collaboration with Autodesk and FARO who develop and manufacture high-precision 3D measurement, imaging and comparison of parts and compound structures that sit within production and quality assurance processes. The devices are used for inspecting components and assemblies, production planning, documenting large volume spaces or structures in 3D. A recent workshop at UCL[7] could be replicated/ adapted as an opportunity to attract sector innovators from the W&B catchment as well as for the development companies working on the new W&B.

Convergent Opportunity 8

EU LEADER funding is assigned for Hampshire and includes funding categories for Food & Drink and for Tourism. Funding is secure, previously allocated, and is unaffected by Brexit.

So What?

A currently disconnected sector with very specific localised needs and some pockets of strong collaborative activity once coordinated, could access LEADER funding to facilitate a Food Enterprise Centre.

Convergent Opportunity 9

The national Rural Economy Growth Review (REGR) 2011 recommended measures for the rural sector grouped under 5 themes: Enabling rural businesses to grow and diversify; supporting rural tourism; expanding the food & drink sector and reducing regulation on farms.

So What?

Investigation of how these action outcomes are being promoted for the W&B catchment may reveal new opportunities.

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[5] http://www.designingbuildings.co.uk/wiki/Digital_Built_Britain *Digital Built Britain level 3 Building Information Modelling – Strategic Plan*

[6] *Building information modelling (**BIM**) is a process involving the generation and management of digital representations of physical and functional characteristics of places.*

[7] *http://www.bimtaskgroup.org/faro-autodesk-ucl-aec-tech-collaboration-day/*

Convergent Opportunity 10

Creative South East funds development of the Creative Industries for the wider South East but has little data on the structure of the sector in the W&B catchment.

So What?

There is an opportunity to achieve funding for updated research into the nature of the digital economy in this section of the South East of England.

Convergent Opportunity 11

The April 2015 Tier 2 Shortage Occupation List which lists target professions for immigration permits identifies shortages in the following fields:

- IT Business analysts, architects and systems designers, programmers and software development professionals
- systems engineers in visual effects and 2D/3D computer animation for the film, television or video games sectors
- Animators in visual effects and 2D/3D computer animation for the film, television or video games sectors

The following jobs in visual effects and 2D/3D computer animation for the film, television or video games sectors:

- 2D supervisors
- 3D supervisors
- computer graphics supervisors
- producers
- production managers
- technical directors
- visual effects supervisors
- graphics designers
- compositing artists
- matte painters
- modellers
- riggers
- stereo artists
- texture artists

The following jobs in the aerospace industry:

- aerothermal engineers
- stress engineers
- chiefs of engineering
- advance tool and fixturing engineers

Construction related ground engineering industry:

- contaminated land specialist, geo-environmental specialist, landfill engineer

So What?

These shortages identify areas that may be addressed by better cross-cluster collaboration to utilise SME skills deployed in other sectors. They also highlight areas where collaborative training efforts can rapidly skill people who already hold some complementary skills.

Detailed Findings and Observations

Finding 1: Seven sectors high in innovation & growth

From 1452 enterprises reviewed, the study eventually identified 186 companies that are high in growth and innovation within the following sectors:

1. Environmental Sciences, Geospatial Mapping, and Waste Management
2. Video Games, Digital Media, and Film
3. Specialty Manufacturing
4. Aerospace, Avionics, and Defence
5. Food, Drink, and Tourism
6. Eco-builders and Wood Craftsmanship
7. Agribusiness and technical support services

Observation

Company leaders interviewed had little knowledge of the development of W&B

Finding 2 – Three main sector groupings

Synergies across the seven sectors were found to be relatively extensive, with common skill bases, technologies, methodologies, and/or functionalities. This led to three logical groupings:

Group 1- High Tech

Environmental Sciences, Geospatial Mapping and Waste Management
Video Games, Digital Media, and Film
Aerospace and Defence

Group 2 – Specialty Manufacture

Specialty Manufacturing
Fabrication and Finishing

Group 3 – Rural Business

Food, Drink and Tourism
Eco-builders and World Class Wood Craftsmanship

Observations

Group 1 – High Tech

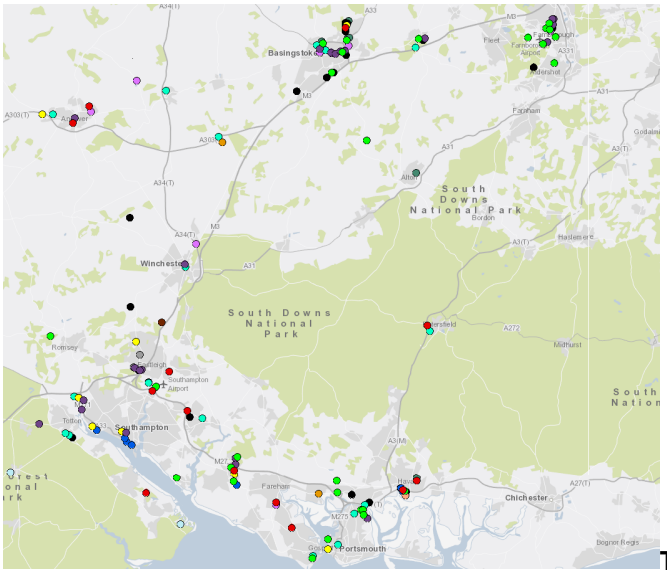
Waste management was seen as the one subject guaranteed to unite the W&B area in opposition. However, the possibilities of crossovers of technology, knowledge, and systems between Group 1 companies may produce new products and services, or refinements to those in use by companies in specialised areas of the sector, e.g. Oil Spill Recovery and Satellite Imaging/Geospatial mapping.

Knowledge of the variation in speciality and the specific nature of activity of companies other than those within their sector was generally extremely low. Some companies had developed linkages based on particular needs, but overall there was little understanding of the possibilities for collaborative activity.

This group shares many characteristics with a medical cluster e.g. precision measurement, testing laboratories, clean rooms, optics, and nanotechnology manufacture. There may therefore be linkages that can form the basis on new cross-sector collaboration with the medical clusters located on the periphery of the W&B catchment in Winchester, Newbury, Guildford and Basingstoke. These have particular specialty in the manufacture of surgical medical instrumentation, pharmaceuticals, measuring and controlling devices, and environmental monitoring.

W&B has two striking attractors to set itself as a focal point to attract activities that can utilise the crossover of these technologies between sectors: the Healthy Towns initiative, and a new population to be housed in the 3,500 residences to be built - an ideal test case group.

The UK is one of the leading countries developing state of the art telemedicine equipment and services and is one of the slowest to implement them. A new town – a new "Healthy Town" could be an ideal demonstration of the effectiveness of telemedicine and become a focal point for conferences, R&D collaborations etc.



Tech company locations

Group 2 - Specialty Manufacture

There is a uniquely high quality to the companies operating in the Specialty Manufacture sector and together with specific requirements of Aerospace this leads to high quality Fabrication & Finishing. However, each company appears to have a focus on a limited number of specific supply and output chains. These could possibly be expanded to wider markets.

Group 3 – Rural Business

Food & Drink

The Food and Drink sector has good brand recognition and a sound base of co-operative working and development of the country market network across Hampshire. There is no such town-based country market in W&B, although there are several private collaborative ventures. Early thoughts of developing a local Farmers Market in W&B have been revised by later research that demonstrates greater

benefit from support of the strongest local farmers market, rather than diminishing the takings through smaller, less successful ones. Nevertheless, establishing W&B as a destination on the schedule of the Hampshire Farmers Market schedule is encouraged.

While there are many high quality small food and drink manufacturers, a Farmers Market group, and a very successful coordinating organisation in Hampshire Fare[8], there is no physical centre that offers mentored support to foster the industry and scale production. Hampshire Fare has expressed interest in being the augmenting body for development of a Food & Drinks Business Incubator if it were able to be positioned close to a motorway.

There are several high quality consulting service companies in this sector within the region in scope. There are many small companies who are individually transporting their goods to the high-end London market, many travelling at far less than capacity load.

Tourism

There is a peak season deficit of accommodation in Hampshire in general. For example, Winchester Tourism Bureau reports turning away over 100 accommodation requests a weekend in the summer.

Developers may be approached to develop a small number of new purpose-built B&B-suitable homes.

Eco-builders and woodworking

There are a small number of eco-builders but this is a sector that could quickly respond to development and which can benefit from collaboration with the Construction Skills Centre and W&B housing developers.

There is a strong opportunity to grow the number of eco-builders in the region and to have a central Building Information Modelling (BIM) Centre to accelerate this.

The high quality of wood craftsmanship is unusual. This comprises individual craftsmen for smaller, decorative items through to include bespoke garden buildings and world quality restoration of historic wooden infrastructure. An extended linkage is to the International School of Wooden Boat Building in Pier 4 Portsmouth. This sector can also benefit from collaborative working with the Construction Skills Centre, and with developers.

Finding 3: Geographic mid-point advantage

For Aerospace, Defence, Specialty Manufacture, Fabrication & Finishing, and Geospatial Mapping – W&B is a geographic mid-point in its supply chain and professional relationships.

Observations

According to the Aerospace Growth Initiative the UK Aerospace Sector is rated Number 1 in Europe and Number 2 in the world. The UK Government sees this

[8] *Previous week long Press Tour resulted in 18 page spread in Food & Drink – with national and international readership. 2016 Press Trip in June.*

sector as a priority for stewardship and development. Given a small number of W&B companies serving the aerospace industry and its geographic proximity to the aerospace centres at Farnborough, Andover and Guildford, a core tenant with credibility in the sector can be the magnet for attracting other high technology companies and their high skill base. However, this will only be an attractor to very specific types of activity for this sector due to the caution in Finding 4 (below). It may be more pragmatic to create a training or knowledge sharing centre or some other activity that serves the sector that will benefit from the mid-point advantage of the location.

Finding 4: Not an attractive location for high-tech digital companies

Key known attractors for digital technology companies were absent, both now and in the plans to date for the future developed W&B. Critically these include: high-speed broadband access, a rich supporting cultural scene with a vibrant 24hour retail and leisure offering; co-location with other high-tech companies; easy transport; and a top University (or Universities) or Research facility or facilities in close proximity.

Observations

This means that for most sophisticated companies with digital technologies at their core, W&B is not a contender as a Head Office or main branch location: it lacks the supporting infrastructure to attract and keep workers highly skilled in these technologies. Nevertheless, this project has identified a number of highly skilled technology workers in the W&B catchment. These include independent contractors or remote home-based employees of larger companies in London, Basingstoke, Reading, etc., or contracting to international consortia (especially in aerospace).

Lack of a close by University or Research Facility is a key impediment so developing relationships with regional universities who have specialty research focus aligned with W&B sector development plans will be important. All activities to develop sectors should include representatives of the surrounding relevant learning, training and R&D centres (this means specific identification of possibly multiple representation from one University).

Finding 5: Latent cluster: Specialty Manufacture/ Fabrication & Finishing

The Specialty Manufacturing and fabrication and finishing sectors are of uniquely high standard – possibly driven by the needs of the defence, aerospace and avionics industries. Similarly, there are many clean room facilities in use (of different orders of category).

Observations

There is a very low level of medical technology or medical device manufacture companies within the W&B catchment for which the same skills and technologies are required. It will be worthwhile exploring with the nearby medical and veterinary cluster around Guildford to explore potential from cross-sector synergies.

Finding 6: Strong niche R&D/facilities/courses in adjoining region

R&D and specialties of the universities and competence centres in the adjoining region relate to the seven growth-target sectors. In addition to Universities and other specialist teaching institutes, there is the Microsoft Institute for High Performance Computing in Southampton; BMW Group Academy & Autodesk University in Farnborough; and Fitzpatrick Referrals in Godalming a teaching veterinarian surgical prosthetics practice**.**

SOUTHAMPTON

Microsoft Institute for High Performance Computing at the University of Southampton is one of a total of nine institutes worldwide and the only one of its kind in the UK.

National Oceanography Centre – a Research Centre wholly owned by the Natural Environment Research Council (NERC).

University of Southampton

- Optoelectronics Research Centre
- The IT Innovation Centre
- Nanoelectronics and Nanotechnology Group
- Institute for Complex Systems Simulation
- ORCHID: Robotics and autonomous systems & human collectives
- Southampton Nanofabrication Centre
- Pervasive Systems Centre (PSC) – including telemedicine

Southampton Solent

University Creative and Digital Industries hub: visual art, visual design, cultural memory, interactive media, fashion, screen media, creativity and communications.

Maritime, Technology and Environment Research and Innovation Hub: acoustics, maritime, built environment, and computing research

PORTSMOUTH

University of Portsmouth

- Biophysical Laboratories
- Rock Mechanics Laboratory
- Ecotoxicology and Environmental Monitoring Group
- Epigenetics and Developmental Biology group
- Aquatics Centre
- Shallow water research and testing platform

Petersfield Earth & Environmental Sciences School

- Crisis and Disaster Management MSc
- Electron Microscopy and X-Ray Laboratory
- Environmental Chemistry Analysis Laboratory
- Soil Mechanics Laboratory
- Palaeontology Laboratories
- Remote Sensing and Spectroscopy Applied Physics Laboratories
- Mass Spectrometry and Laser Ablation Laboratory
- Centre for Forensic Investigation

SALISBURY
Defence Science and Technology Laboratory (Dstl)[9]

GUILDFORD
Surrey Clinical Research Centre
SPACeR Group
(Surrey Peri-Operative, Anaesthesia & Critical Care Collaborative Research Group)
Surrey Space Centre
University of Surrey
- 5G Innovation Centre
- School of Veterinary Medicine
- Department of Nutritional Sciences
- School of Health Sciences
- Hospitality, Events, Tourism and Transport
- Aeronautical and Manufacturing Engineering
- Communication and Media Studies

[9] *CDE Centre for Defence Enterprise funds novel, high-risk, high-potential-benefit research. We work with the broadest possible range of science and technology providers, including academia and small companies, to develop cost-effective capabilities for UK armed forces and national security.*

General Recommendations

1. It would be beneficial to harness the input of the most active business sector leaders in scoping requirements for the type of environment that would be a magnet for them within the Enterprise Zone.

2. Early, high quality and creative awareness raising workshops that focus on cross-use of skill bases and resources available locally will benefit the growth of the regional sectors. These should be designed to always provide new information of interest to the sector and which can be applied to engage, offer new ideas, and develop new collaborations. If these are regularly held within the existing infrastructure of the B&W development, this will create an expectation of this being an environment that attracts top quality talent and enterprise.

3. Early promotion and involvement of leaders in the key sectors identified will assist regional businesses to consider the business case to locate an extension of their main office, or to totally relocate to within the Enterprise Zone – or even to encourage supply chain and other peers to take up opportunities there. This must be targeted on those businesses to whom the transport impediments are minimal.

4. It would be beneficial to provide regular mini bus services from railway points to the Enterprise Zone, such as is done by the Farnborough Business Park.

5. A rich socio-cultural environment is essential to the attraction of highly skilled IT savvy professionals, high earning millennials, and “creative class workers”, as is ease of travel from effective transport infrastructure. The richness of the design and surrounding and supporting infrastructure of work hubs within the Enterprise Zone needs to be considered and implemented well and then advertised to target groups in meaningful communication.

Observations outside the original scope:

- **A rise in Home Schooling** locally led to further research that shows a national (and international) trend.
  Possible concept: Home schooling presents challenges to many parents who are seeking educational, cultural, sporting and community experiences/activities for their home-schooled children. There are opportunities for W&B to provide space on a short term day rental basis, thus obviating academy status and governance.

- **Growth of University of the Third Age U3A** a movement of voluntary free learning for older people.
  Possible concept: an experiential facility available to lease on short term day rental for W&B U3A members’ use with specific focus on three of the key learning groups: Art and Music, Creative Writing, Science and Technology and draw upon the retired local expertise in each of these areas. This can have dedicated buildings and utilise underutilised community infrastructure. If actively supported, this can also become a destination for residential programmes offered to remote U3A chapters.

- **An increasing number of women entrepreneurs in self-employment and SME startups.**
  Possible concept: Design a conference facility capable of attracting small conferences and develop a calendar of events targeting women, home school parents, U3A organisers and other special interest groups. Conference Planning should include coach travel from relevant major transport hubs and offer on-site or nearby accommodation and include the local tourism offer.

- There is a great **shortage of accommodation for the Free Individual Traveller** (FIT) with local Tourism Centres turning away significant numbers of potential overnight stays each weekend (Winchester quotes over 100 per weekend)
  Possible concept: As W&B housing developments are established, develop within the housing offer several residences suitable for offering B&B

General Observations

1. Awareness of W&B development opportunities within the catchment

Awareness of the W&B regeneration project was surprisingly low amongst private sector respondents within Area 2.

Respondents currently or previously working/living in the W&B area have a generally positive attitude towards the area.

Future Enterprise Zone implications:
Early promotion and involvement of leaders in the key sectors identified will assist future planning decisions to locate an arm of business or to relocate to within the Enterprise Zone – or even to encourage supply chain and other peers to take up opportunities there.

2. Awareness of other companies and skillsets/technologies in the area

Company respondents had a low awareness of the nature and skill base of other companies working in Areas 1 and 2.

Future Enterprise Zone implications:
Early, high quality and creative awareness raising workshops that focus on cross-use of skill bases and resources locally available will benefit the growth of the regional sectors. These should be designed to always provide new information of interest to the sector and which can be applied to engage and benefit the sector. If these are regularly held within the existing infrastructure of the B&W development, this will create an expectation of this being an environment that attracts top quality talent and enterprise.

3. Infrastructure concerns

Concerns were expressed regards W&B transportation infrastructure, with particular note of the lack of rail access. The impending additional traffic levels from the number of houses being built impacting already congested rush hour travel was of high concern both for workers commuting INTO the W&B area and for clients and staff to be able to access business sites within the area.

When considering site location – relocation or satellite expansion sites – companies universally ranked transportation access as one of the highest scoring decision points considered.

The cost of housing and office space in the Guildford area is reportedly resulting in workers and companies moving south along the A3. Company leaders confirmed the views expressed by individual workers that staff travelling north on the A3 find work in the W&B area an appealing prospect, as the push further north is one of increasing traffic delays.

For the digital industry sector this is compounded by the fact that companies already located within the two areas recruit from Portsmouth. This is due to the increased use of contract staff at BAE Systems following the departure of VT Group from the consortium. This has created an opportunity to source a highly desirable work force with transferable and highly sought-after technical skills seeking permanent roles.

To this group the proximity of W&B to Portsmouth would be a big attraction and help in the constant competition to recruit into otherwise unfilled jobs. The challenge for the Guildford-based companies (and others in the hinterland of W&B) is of being able to pay a wage for the required skills at a rate that enables a worker to live in appropriate accommodation within the commuting zone.

Future Enterprise Zone implications

It would be beneficial to provide regular mini bus services from railway points to the Enterprise Zone such as is done by the Farnborough Business Park.

At least one Guildford-based company interviewed during this research began actively considering the construction of a new facility in W&B and visited the site to view potential premises. Having a small facility already there (through acquisition) they already occasionally co-locate Guildford-based but Portsmouth home-based staff there as they prefer to work closer to home.

While touring the W&B available site they expressed the consideration factors that they are a world leader in their field, working on highly sophisticated equipment and high profile projects. While the appeal of the relative affordability of the site and its suitability for adaptation by adding purpose built clean rooms within the main infrastructure, and quick uptake when contracts were won (as is expected in the near future), this must be counter-balanced by the image factor of weary ex-MOD outer buildings and a low socio-cultural environment.

This was evident in the lack of food outlets for quality take-away lunches and suitable places to take lunch. This was immediately a consideration as they posed aloud the effects this might have on their ability to attract new highly skilled recruits to work on the sophisticated technology programmes for which they are renowned.

Ultimately they advised that there was too much investment required in what would be a temporary facility to make it suitable for their purposes. The other factors mentioned during their inspection of the site may have contributed to that decision and make a useful case study of needs for relocation of a highly sophisticated workforce.

A rich socio-cultural environment is essential to the attraction of highly skilled IT savvy professionals, millennials and “creative class workers”, as is ease of travel from effective transport infrastructure.

This is a known finding globally but was reflected by a number of local company leaders interviewed.

In Richard Florida’s “The Rise of the Creative Class”[10] of why some cities become talent magnets while others struggle, a rich socio-cultural 24/7 life was identified as a major attractor to the Creative Class. This group of people are defined by the fact that they create meaningful new forms. They are a diverse group: scientists and engineers, university professors, poets and architects, and those working in design, education, arts, music and entertainment. Their common economic function is to create new ideas, new technology and/or creative content

This group often have non-conformist working hours and work dress. Many work for themselves and value Independence. They expect it in the workplace

In this context there is an opportunity to attract entrepreneurial creative class workers to the new Enterprise Zone, **but only if it offers** the socio-cultural environment that appeals to them as home workers or those who work outside the traditional business environment and hours.

The richness of the design and surrounding and supporting infrastructure of work hubs within the Enterprise Zone needs to be considered and implemented well and then advertised to target groups in meaningful communication**.**

It would be beneficial to harness the input of the most active business sector leaders in the creative sector as defined above into scoping requirements for the type of environment that would be a magnet for them within the Enterprise Zone.

[10] *The Rise of the Creative Class spawned international debate and subsequent studies along the same theme. All have come to similar conclusions from survey data drawn from interviews with high-earning creative class workers.*

Environmental Sciences, Geospatial Mapping and Waste Management Cluster

Classification Of Cluster Status: Sectors (Latent) Cluster (Potential)

The reason for classifying these three segments as a potential cluster is that there are many synergies in functionality, capability, technology and focus. If these were to be understood by the individual companies, there is a very real expectation of increased collaborative opportunity that could generate increased economic value and new employment.

There are government priorities to develop each of these sectors and enhance the UK's competitive advantage in them.

Cluster Context: What has been discovered?

Within the W&B catchment, the three sectors of environmental sciences, geospatial mapping and waste management are each poorly connected within their own sector and certainly have few current points of connection to the other sectors. Exceptions are those companies that have established some form of alliance with those in the Specialty Manufacturing sector.

Of the 34 identified companies that proved of interest due to specialty, innovation, or growth within this potential cluster in the W&B catchment, Waste Management in particular operates within a limited environment. However this is a sector that is constantly expanding as the market demands require increased technical support.

It must be noted that companies and skills described in the Rural Cluster section below are also relevant to this cluster (e.g. rural broadband and TV White Space technologies).

Sector Status: Environmental Sciences

Although there is a presence of large companies and organisations such as The Environment Agency located in Guildford, Southern Water in Otterbourne, Balfour Beatty and Willlmott Dixon in Basingstoke, and Hampshire Rivers, in Winchester, this sector is largely made up of small SMEs and consulting practices.

Specialty skills are extensive and those within this sector often operate under great pressure in dealing with urgently needed remediation following accidents and natural disasters. There is some crossover to specialty manufacturing and digital sectors. The knowledge base encompasses marine, terrestrial, space, bio-decontamination and GIS f(Geographic Information Systems) for a wide range of planning and land remediation activities.

Research revealed no organised networking or collaboration outside "business as usual" commercial relationships or established Joint Ventures.

The lack of awareness of local complementary skill sets and technologies suggest that there is great potential to develop new business through fostering wider business interconnectivity.

There is a Hampshire Renewable Energy Co-Op advising and sponsoring small local and community renewable projects, and many companies in specialty consulting in this field including: multi-disciplinary marine surveys.

Southampton University is a leading environmental sciences university, teaching Fluid Dynamics, Energy and Climate Change, and Geo-mechanics and Geo-technics.

The University has collaborated with a wide number of companies to make significant contributions to groundwater control, retaining wall performance, landfill engineering, soil behaviour, field and laboratory instrumentation, geotechnical numerical modelling, railway geotechnical engineering and the use of pile foundations as heat exchangers for ground source heat pump energy systems.

Relevant companies in the W&B catchment include the following: power controls and relay modulators; occupancy and lighting controls; power supplies; gas and smoke detection equipment; temperature and relative humidity controls; monitoring and metering manufacture; manufacture of energy efficient lighting.

Sector Status: Geospatial Mapping

From global giants such as Lockheed Martin providing geo-spatial & intelligence products and services to counter cyber-security threats and Warship Electronic Chart Display and Information Systems, to companies within the digital sector developing geospatial recognition for augmented and virtual reality, the companies within the W&B catchment provide products of their own design and manufacture, contract manufacture, and consultancy based on specialist experience and background.

An example of difficulties in classification is Bordon-based Swale Oceanographic. Swale is a distributor, but also provides equipment and technical advice based on extensive experience and knowledge in the ocean science industry. Swale also manufactures accessory power supplies. There may be other similar specialist distributors with the same diverse characteristics of appearing to be solely a distributor agency but in fact also providing specialist consulting services and/or manufacture.

Due to the nature of developments of geospatial mapping for space exploration and defence, there is a great deal of crossover to aerospace. What is interesting is that by contrast, there is little apparent crossover between this sector and the digital sector.

Within the W&B catchment, specialties within this sector include Command and Control and tactical computational skills combined with good geospatial mapping. The precision tracking antenna solutions & complete ground stations for remote sensing, communication and TT&C (Telemetry, Tracking & Control), and autonomous ground/space vehicles developed in the W&B catchment all use geospatial mapping.

Recent commercialisation of geospatial mapping from the Defence Science and Technology Laboratory (Dstl) through their Ploughshare[11] programme has developed new collaborations and commercial opportunities. Dstl has developed a multidisciplinary modelling environment that bridges a gap previously poorly addressed by Commercially Available Off the Shelf (COTS) CAD and Finite Element (FE) software.

Within the W&B catchment are local contacts within global disaster recovery networks, such as the Global Oil Spill Recovery Service, with 24/7 standby 727s based at Lasham airfield. These networks have highly sophisticated geospatial mapping with a special emphasis on bathyspheric mapping, and through the local W&B contacts may contribute to development of the cluster, as latest technologies and developments are crucial for them to harness for their disaster recovery.

Southampton National Oceanographic Centre has expertise in 4D mapping, i.e. spatial mapping and temporal monitoring of seafloor habitats and ecosystems. The Centre already operates with a multi-disciplinary approach, using the skills of geologists, geophysicists, biologists, oceanographers and technology developers in integration of basic mapping data with other data. They are therefore pre-disposed to be a good partner for developing this cluster.

> It may be possible to engage the Southampton National Oceanographic Centre, Southampton University, the Ordinance Survey and a potential user of new technologies, the British Antarctic Survey, in the cluster development so that their local pool of expertise and opportunity for wider commercial collaborations widens.

Example of sector technology crossover

The Ordinance Survey (OS) is located in proximity to the W&B catchment, in Southampton. These activities of the OS are examples of cross-over technologies between other W&B sectors of digital media, film, AR/VR, aerospace, and environmental/geospatial mapping, plus use of common technologies such as 3D modelling, sophisticated data acquisition and storage, etc

In July 2016 the £10m CityVerve, UK's IoT Demonstrator city of Manchester was launched. This is a project for large scale deployment of Internet of Things (IoT) technology. OS are part of a winning consortium of over 20 public and private sector organisations, ranging from SMEs to large global corporates. Over two years they will use Manchester as a living model from which to develop IoT sensor-driven applications for Transport, Energy, Health and Culture – and set up a biometric sensor network for chronic respiratory services, talkative bus stops, smart lighting and smart air quality

The OS will provide the geospatial framework and location expertise. They have already undertaken point cloud and aerial imagery capture for the future 3D city model content for use in the project. A point cloud is a large collection of points acquired by 3D laser scanners or other technologies to create 3D representations of existing structures.

[11] http://www.ploughshareinnovations.com/

The OS is also part of the Atlas Initiative working on autonomous vehicles.

Sector Status: Waste Management

Waste Management appears through our research to be the least well-connected sector to its peers and possible collaborators in the W&B catchment. However this sector has immediate potential for growth. It has a direct relationship with Environmental Sciences and although there are experts in this field within some of the larger companies, the broad crossover between them does not appear to be developed and would benefit from stewardship to do so.

The sector within the W&B catchment includes consulting & equipment supply for wastewater; water & effluent analysis; waste disposal and processing; telemetry, data transmission and communications, monitoring, and control in the water, wastewater, industrial effluent and environmental industries.

These companies currently serve general civil waste disposal and treatment, plus environmental agencies, universities & research establishments, coastal engineering, defence, dredging, O&G, renewable energy & survey sectors.

The largest UK family owned company in this field when interviewed reported a current focus on site acquisition rather than a priority on R&D. Nevertheless the same company has been a leader in developing sophisticated waste handling systems and methods and was eager to participate in developments that would enhance the sector.

Recycling through effective waste management in itself produces new products and services. Growth in this part of the sector is happening without any stewardship on a purely economic disposal basis and not through a planned intervention to foster more of it.

Supplies from waste management go to the building, construction & civil engineering industries, including brick manufacturing, golf course construction and maintenance.

Many regions have harnessed this sector to introduce new regional investment that produces new jobs. From creating energy from restaurant and hotel waste to using new innovative recycled thermal products there has been a great deal of success in this field.

Several highly reputed small consultancies operate from within the W&B catchment and these service both national and global clients.

Waste Management is a devolved responsibility. It would be beneficial to instigate activities within the W&B catchment to contribute to the Waste Management Strategies of all borough councils and Hampshire County Council, both in terms of developing voluntary industrial waste handling activities and in adapting existing technologies to new uses or developing new technologies.

It is anticipated that such a project would receive funding and support from Hampshire County Council and Borough Councils as well as the LEP and commercial operators.

Within the Hampshire Minerals Waste Management Plan[12], protection and supply of clay for the brickworks at Selborne, near W&B are noted priorites. The brickworks also must comply with the Clay Bricks and Clay Blocks Resource Efficiency Action Plan for the UK[13]

Within the UK Action Plan for clay bricks and blocks, a training programme developed with RIBA, UKCG, the Royal Institution of Chartered Surveyors (RICS) and Construction Skills was to be developed and for Continued Professional Development (CPD) Courses to be established. These would include education on the recoverable value of commercial waste.

It will be worthwhile to investigate the opportunity to deliver such courses within the W&B catchment

Within the Minerals Waste Management Plan item 2.3 identifies a need to supplement traditional ground based extraction with recycled materials.

In item 2.41 it is noted that the level of commercial waste recovered from landfill is not as high as that recovered from Municipal Solid Waste and that this is a target area. There is an expectation stated within the plan that anaerobic digestor plants and composting be placed in suitable rural areas which may provide an opportunity for both commercial operators and farm diversification revenue.

A cross-over technology challenge could be mounted from W&B with prize money sourced from a mix of government and private sector, with three focus areas:

- to enhance the already technologically advanced waste recycling programme of Hampshire and Portsmouth by new applications of resident technologies within the region;
- to identify advanced technologies and local professional expertise in Environmental sciences
- to identify advanced technologies and local professional expertise in geospatial Mapping

The most technologically advanced Materials Recovery Facility in the country is located in Alton, operated by Veolia.

Waste management within the UK is monitored electronically and there are opportunities for existing technologies developed and used within the W&B catchment by other sectors to have cross-over applications.

[12] http://documents.hants.gov.uk/mineralsandwaste/HampshireMineralsWastePlanADOPTED.pdf

[13] http://www.brick.org.uk/wp-content/uploads/2013/10/Download-the-full-version-of-CBCB-REAP-October-2013.pdf

Cluster Development Recommendations

1. Mount a cross-over technology challenge for the sectors within W&B catchment within this cluster.

There is current government focus on improved waste management. At the same time, companies are keen to develop new markets. Bringing innovation to resolve technology challenges can offer companies a chance to identify and engage with innovators at an early stage so that they can jointly commercialise innovation to gain early market dominance.

Why?
There are many synergies both within the sub-sectors of this cluster and with other sectors within the W&B catchment. By limiting the participants to within the W&B catchment, if well-planned and executed, it may generate co-operative ventures with companies and individuals from outside the area, both nationally and internationally.

Such an initiative will also champion British innovation and local government initiative in hosting such a project.

2. Develop a strategy to foster growth of the cluster

Why?
Isolation of expertise within these three sectors was the most notable of that found in identified potential high-growth clusters within the W&B catchment.

A cluster development plan should incorporate the identified opportunities to :

- Arrange locally offered relevant CPD Courses and identify needs for others

- Identify ways in which the commercial sector and local professional expertise can contribute to the various relevant local and national plans

- Engage the Southampton National Oceanographic Centre, Southampton University, and the Ordinance Survey so that their local pool of expertise and opportunity for wider commercial collaboration

- Engage the rural community in initiatives for anaerobic waste management and bio-fuel crops as identified within the UK Anaerobic Digestion Strategy[14].

  To achieve this, showcase other developments such as that of Reule Farm[15] near Wolverhampton which successfully achieved a government grant that helped it gain bank finance for the balance of its development of its own bio-energy company. The farm is using high quality recycled waste fertiliser that removes reliance on commercial and potentially more hazardous chemical fertilisers, and is co-financing other complementary developments in its area.

[14] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69400/anaerobic-digestion-strat-action-plan.pdf

[15] http://www.lr-bioenergy.co.uk/

Supporting Documentation

In terms of Waste Management, the Waste Management Plan for England identifies several aspects that can be harnessed by the companies within the W&B catchment. Within that plan, the hierarchy of waste management is shown in the following diagram.

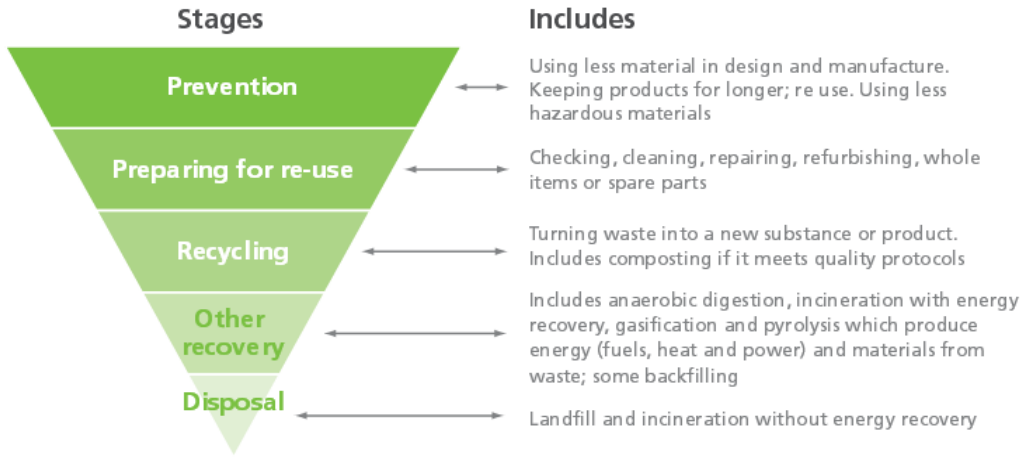
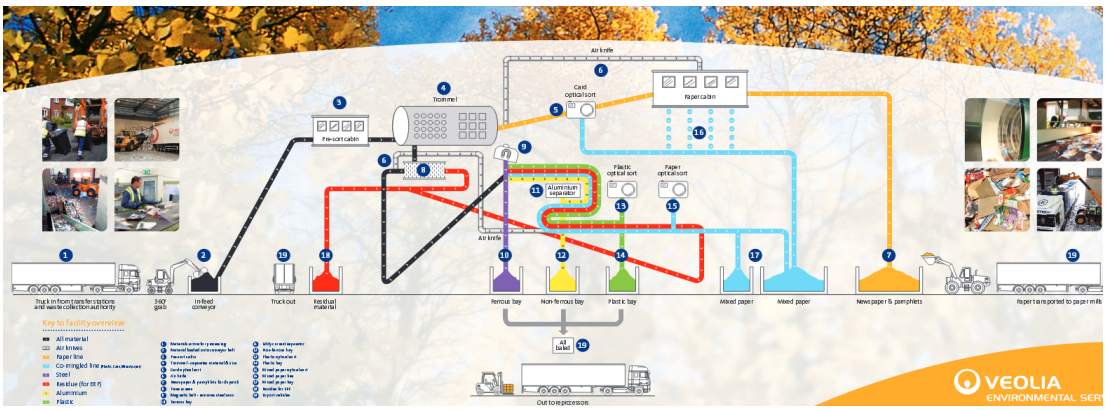


Diagram of the Veolia Materials Recovery Facility at Alton



Identification of the range of commercial waste recycled in 2009 (most recent figure able to be identified)

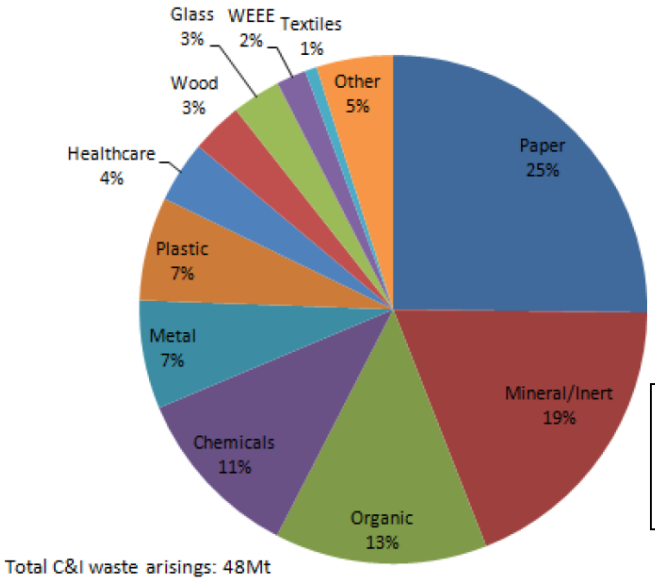
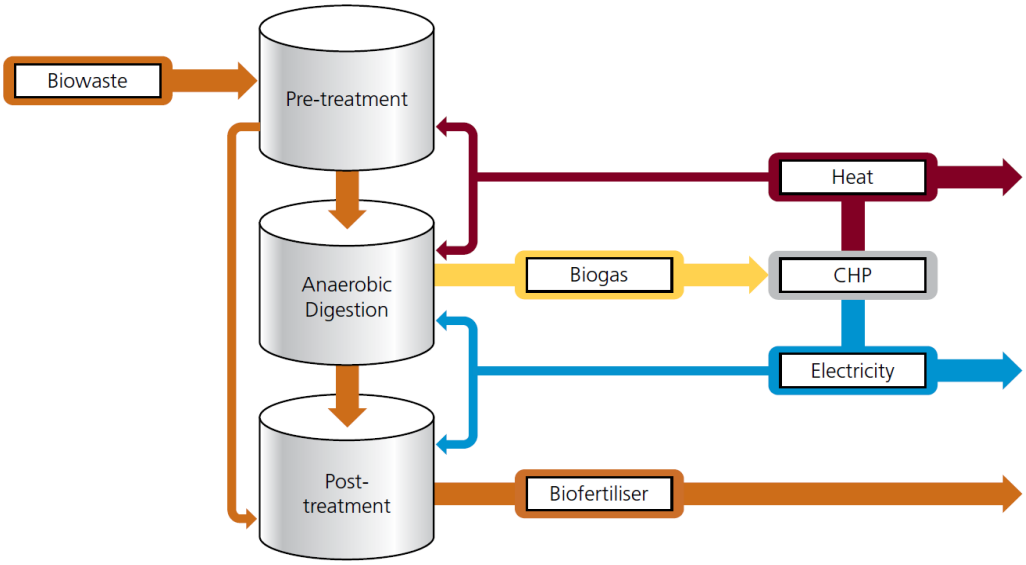


Figure 2: Composition of commercial and industrial waste in 2009

Example of anaerobic energy generation



Video Games, Digital Media, and Film Cluster

Classification of cluster status: Sectors (Established) Cluster (Latent)

Video games, digital media and film are three distinct but established sectors in the W&B catchment. Research has indicated early but rapidly growing synergies due to gamification processes, emerging Augmented and Virtual Reality (AR/VR) technologies, their market potential and applicability to entertainment, training and multiple industry sectors. Structured stewardship is required to accelerate cross-sector skills development and economic collaborations.

These high value sectors contribute over £6billion to the UK economy and are therefore an area of focus to government for their further development and export potential.

A July 2016 analysis of creative clusters in the UK by NESTA and Creative England[16] supports the findings of the research undertaken; specifically the scale of companies and talent in the area and its economic significance locally.

Using DCMS's official classification of creative industries and occupations (including Design; Software and Digital; Advertising; Film, Radio and TV; Architecture; Publishing; Music and Performing Arts) the analysis maps the UK by Travel-To-Work-Areas (TTWA's).

The NESTA analysis, summarised in the table below, confirms the size of the local creative industries but includes skills that extend beyond the specific video games, digital media and film cluster identified by this research project.

Travel-to-Work-Area	Guildford and Aldershot	Southampton	Basingstoke
Number of creative businesses	5,120	2,614	1,946
Creative businesses (% of total)	13.20%	8.90%	14.20%
Creative employment	38,963	12,877	7,825
Creative employment (% of total)	8.80%	3.80%	4.20%
Creative jobs	30,300	20,737	*
Creative jobs (% of total)	9%	6%	*
Sales per worker (£K GBP)	153.88	68.48	119.37
Average firm size	7.61	4.93	4.02
Creative GVA	2,941,964	972,299	590,839
Creative GVA (% of total)	14.90%	6.00%	7.10%

Source: ONS, Business Structure Database, Annual Business Survey, Annual Population Survey; Nesta analysis.

According to the report on Women in IT Scorecard 2015[17] over half of IT specialists working as employees in 2014 were working in micro/small and medium sized enterprises (SMEs) and this observation holds true for both females and males employed in such roles (i.e. 59% and 56% respectively). Female self-employed IT workers was much higher (57%), than in other industry sectors, although lower than males (70%).

[16] http://www.nesta.org.uk/publications/geography-creativity-uk *Source: ONS, Business Structure Database, Annual Business Survey, Annual Population Survey; NESTA analysis.*

[17] https://www.thetechpartnership.com/globalassets/pdfs/research-2015/womeninit_scorecard_2015.pdf

Creating a purpose built Women in IT hub at W&B can be an attractor of entrepreneurial women within the digital design, support, development and consultancy sector.

Interviews within the games, media and film sectors revealed a significant lack of awareness of the others sectors in this cluster grouping. Each sector has remained largely insular. Exceptions mainly arise from digital media companies serving games and film clients. Reciprocal business was surprisingly low – one example was the number of digital agencies building mobile apps for clients but not using the local independent quality assurance or testing services in Aldershot (used by games studios from the UK and overseas.

Cluster Context: What has been discovered?

Our research indicates early but rapidly growing synergies across the video games, digital media and film sub-sectors due to market potential and applicability. These synergies are being driven by Augmented and Virtual Reality (AR/VR) technologies, as well as by the growing application of gamification processes in other sectors.

The AR/VR interest is being triggered by several factors:

- the range of headsets and gamer equipment now being launched by Facebook, HTC, Sony, Google, etc. These manufacturers are urgently seeking exclusive content for their devices.

- the extraordinary success of new games such as Pokemon GO (launched during this research, increasing Nintendo's market capitalisation by £6.6Bn in the space of 8 days).

- The use of new computer-generated imagery (CGI) technologies and skills within video production, ranging from short commercials to long form movies and TV production. This Augmented Reality uses many games developer skills and technologies.

- The growing interest in "immersive entertainment" as demonstrated by The Void https://www.youtube.com/watch?v=cML814JD09g an entertainment facility in the US. This combines VR technology with physical experiences. The former skills coming from video games development, the latter from film and special effects. Digital technology and media skills then provide specific enabling technologies (e.g. tracking and haptic accessories), promote offerings, build active and loyal user communities, enable ecommerce and further interactions.

The combination of digital technology with the physical world is creating new opportunities for AR and VR in the entertainment, media, aerospace, automotive, health and technology sectors. There is tangible excitement amongst individuals and companies in the wider W&B catchment regarding the opportunities that are emerging.

The Defence Science and Technology Laboratory (Dstl) initiatives to commercialise their technologies in developing synthetic environments offers an opportunity to the AR/VR sector to capitalise on world leading developments in positional recognition and other systems.

These developments are an opportunity for local companies to develop new collaborative ventures, and are a route away from the diminishing profitability of current business towards potentially highly profitable growth markets. An example of this emerging market change is how mobile games apps are struggling with fragmented Android platforms and rampant counterfeiting (particularly in Asian markets).

Beyond the limits of the games sector itself, there is currently widespread use of simulation and 2D, 3D applications in entertainment, training, and multiple industry sectors, including; Aerospace and Defence, Medical & Veterinary, Oil & Gas, Petrochemical, Environmental Services, and Specialty Manufacture.

Gamification capabilities are being increasingly employed to respond to the specific training needs of defence, medicine, traffic monitoring and regulation, driver training, improving the uptake of social benefits, clarity of first responder diagnostics, and other broader emergency services response training.

Sector Status: Gaming Technologies and Gamification

The video games sector centred in Guildford is one of the most significant games hub in the UK. The geographic area of this sector includes Guildford, Aldershot, Farnborough, Godalming, Basingstoke and Southampton.

The specific origins of the local video games sector can be traced to flight simulation developers working in the aerospace sector who moved into the nascent games industry in the 1980's. This is when Sinclair and Acorn home computers were becoming popular and demand for games rose enormously. UKIE (the UK Interactive Entertainment trade body) estimates there are 54 games companies in the local area but confirmation of this number is difficult due to the range of SIC codes used by the individual companies. This does not include self-employed creatives within the sector.

High level of travel of skills between companies

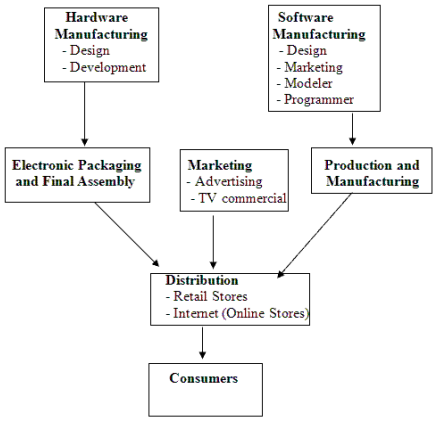
The local games sector has a rich history of start-ups, mergers, acquisitions, growth and spin-off companies. A significant example of this activity occurred during the research undertaken. Lionhead studios was founded in Guildford in 1996 and acquired by Microsoft in 2006. In April 2016 Microsoft announced the closure of the studio, resulting in some employees moving to other local studios while others have created a number of new start-ups, or are now offering their individual skills as contractors.

Another example of this travel of talent within the area is Phygital, which began as Mediastation based in Cranleigh, but has now also moved to the Guildford periphery. Mediastation was spawned from talent leaving EA Games and Samsung. It gained early prominence in developing the Wizarding World of Harry Potter for Universal

Orlando, and other significantly global successes that create virtual experiential worlds.

> Although the whole of the games sector in the area is a sum of its parts, the interconnections of the various related sectors with which it has synergies is remarkably undeveloped.
>
> Structured stewardship is required to accelerate cross-sector skills development and economic collaborations of individually robust and active smaller networks within the gaming and digital technologies sector.

Apart from developers, the Games Supply Chain has diverse elements, as shown in this diagram developed by Portsmouth University. This supply chain is commonly left out of mapping of the sector, but should be included in future work within the region.



Recruitment Issues:

Leaders in major Visual Effects and Gaming companies have registered major problems in recruiting people with the needed basic skills for employment in this sector.

Traditional Higher Educational Institutes are failing to both appreciate the importance of the sector to the UK economy, or to understand the actual skills required by potential employers. According to a NESTA Digital Skills Taskforce Report in 2014[18], the third sector should be encouraged to develop training courses that are more relevant, as it will take longer for the traditional schooling community to adapt its resources to supply the type of training needed. The report indicates several other successful interventions that could be applicable to boosting employment in the sector within the Bordon catchment.

The Universities of Surrey, Southampton and the Creative Arts in Farnham are all looking at expanding their courses to meet the needs of the sector.

> There is an opportunity to develop a games training hub that will accelerate learning and skills development across all the levels indicated within the Commission for Employment and Skills Report and respond directly to the stated needs of the companies within the local cluster.

[18] http://www.ukdigitalskills.com/wp-content/uploads/2014/07/Binder-9-reduced.pdf
Digital Skills for Tomorrow's World: The independent report of the UK Digital Skills Taskforce Beta Edition July 2014

There is a core of experienced digital media skilled workers in and around the W&B catchment. However, a June 2015 report[19] by the UK Commission for Employment & Skills reveals a chronic shortage of people trained in relevant skills for the sector. The EU referendum conducted during the research is causing initial concern regarding the potential loss of overseas talent currently resident within Hampshire and Surrey.

Current networking events:

The sector is served by two industry associations, UKIE (UK Interactive Entertainment) and TIGA (The Independent Games Association) and there is a disconnect as to which is perceived by local companies as being the most relevant to the sector within the Bordon catchment. Other local initiatives include: Meetups (VR in Southampton, Animation in Camberley); the Guild for Developers (a quarterly networking event organized by Testology); and G3 Futures (Galvanising Guildford Games), which holds an annual conference at the University of Surrey and occasional evening events.

W&B feedback:

Concerns were expressed regards W&B transportation infrastructure, with particular note of the lack of rail access. The impending additional traffic levels from the number of houses being built impacting already congested rush hour travel was of high concern both for workers commuting INTO the W&B catchment and for clients and staff to be able to access business sites WITHIN the area. When considering site location, either for relocation or seeking expansion sites, companies universally ranked transportation access as one of the highest scoring decision points.

The cost of housing and office space in the Guildford area is reportedly resulting in workers and companies moving south along the A3. Company leaders confirmed the views expressed by individual workers that staff travelling north on the A3 find work in the W&B catchment an appealing prospect, as the push further north is one of increasing traffic delays.

For the digital industry sector this is compounded by the fact that companies already located within the area recruit from Portsmouth, due to the increased use of contract staff at BAE Systems following the departure of VT Group from the consortium. This has created an opportunity to source a highly desirable work force with transferable and highly sought-after technical skills seeking permanent roles. To this group the proximity of W&B to Portsmouth would be a big attraction and help in the constant competition to recruit into otherwise unfilled jobs.

The challenge for the Guildford-based companies (and others in the hinterland of W&B) is of being able to pay a wage for the required skills at a rate that enables a worker to live in appropriate accommodation within the commuting zone.

> Development of a creatively designed W&B live:work hub centred around shared services and technological equipment in a games technology enterprise hub would be an attractive lure to the high quality digital media

[19] https://goo.gl/TrK8qj *Sector insights: skills and performance challenges in the digital and creative sector; Evidence Report 92 June 2015*

In many cases leading technological developments in animation and the development of virtual worlds have been pioneered within, or adjacent to the W&B catchment area. One example is the MUPPITS Project developed through the IT Innovation Centre at Southampton University. This is an example of cross-over between sectors.

The MUPPITS Project was first developed to enable the sale or purchase of expensive rendering capacity specifically for film and TV. This has now expanded to encompass the management, storage, billing, and inter-facility transfer of file-based content. The project has developed a process of whole process of sending tapeless content between post houses, managing metadata and business.

The MUPPITS content is stored in a secure central data warehouse and can be searched and accessed by users within the production process, processing services, and potentially others needing to manage Big Data.

Sector Status: Digital Media

W&B sits within the old "ICT Triangle" (from West London to Newbury to Portsmouth) that contained the HQ's of many major ICT companies. Digital media skills are plentiful in and around the W&B catchment. They include individual web developers, social media specialists, data analytics, app developers, cyber crime specialists, IT outsourcing companies, and digital agencies providing support for large and small companies throughout the region.

Given the range of digital media skills currently deployed within the gaming and film sub-sectors (detailed in the sections above and below) many of the findings related to digital media are not repeated here. However, the scope for increasing awareness between the three sub-sectors and resulting bi-lateral business growth must be re-emphasised.

It is interesting to note that the annual global event Hackfu[20], developed by a Basingstoke company to identify and develop cyber security experts, is largely unknown within the games and video sector.

Structured stewardship and networking is required to accelerate cross-sector collaborations and drive economic growth

Sector Context: Film

According to an Oxford Economics report in 2012[21], UK film contributed over £4.6 billion to the economy, and its growth outstrips that of any other sector over the period of the reports study, despite many of those years being recessionary.

[20] https://hackfu.mwrinfosecurity.com/

[21] http://www.bfi.org.uk/sites/bfi.org.uk/files/downloads/bfi-economic-impact-of-the-uk-film-industry-2012-09-17.pdf
The Economic Impact of the UK Film Industry, September 2012

The sector employs more people at significantly higher average salary than either Fund Management or Pharmaceutical Manufacturing.

The UK Film industry has a strong international reputation for more traditional skills such as acting, scriptwriting and production, as well as in development of groundbreaking new visual effects, and in music. Recent tax incentives have also encouraged production in the UK.

The report identifies a lack of production studios – despite the extension of these facilities at both Pinewood and Shepperton, and the Warner Brothers studios at Leavesden. The 80 hectare Leavesden site revitalised a closed aircraft manufacturing facility in 1994 when it was transformed for film production. It was later to become home to the Harry Potter series until 2010.

This production studio shortage has increased with the interest of overseas film-makers to site productions in the UK, and the changes in technology that make it easier for British independent film makers to operate effectively.

According to a Scottish Enterprise research report in 2015[22] which mapped UK wide production studio capacity, availability had also been impacted by long-running contracts with Hollywood film makers at the major studios, effectively removing previously accessible space from wider sector access.

The national shortage of film production facilities indicates a real opportunity for W&B, with its early attraction of a film service company as a core tenant.

This sub-sector includes the production of films and television programmes; post-production activities such as editing, the addition of titles, sub-titles, credits, computer graphics, animation and special effects; the distribution of films and television programmes; the projection of films in cinemas or at other events; and activities related to the music industry, such as the recording, distribution and publishing of music.

Sector Status: Film

Hampshire has an enviable record of film attraction and lists 137 service businesses to the film industry on the Film Hampshire film services database.

Film Hampshire is a department of the Hampshire Economic Development Department and has done a credible job in providing and expanding a Film Location Library, database of related services, guidelines for filming within the county and other supporting services. However, a minimally resourced film office cannot achieve what better resourced film offices regularly do. These carefully planned and well-funded offices actively seek significant new projects by direct contact with, and understanding of the needs of globally significant location agents and film producers, as well as responding effectively to enquiries.

Smaller Parish Councils within Hampshire generally have an identified officer to assist location companies, but throughout this network, staffing is not from those

[22] http://www.scottish-enterprise.com/knowledge-hub/articles/insight/production-space-for-film-and-tv-options-appraisal
Film and TV Studio Update December 2015

whose background includes professional training in effective Film Office structures and activities. It is unclear from the current research how the activities of each are co-related and collaboratively connected.

An active and well-resourced Film Office has been shown to develop significant new film attraction and to raise the economic base of the local region together with building a robust supporting sector. This includes the full range of digital media.

There is an opportunity to provide Continuing Professional development (CPD) for the Hampshire film officers from all local councils and update and refresh their focus and skills with international best practice.

With additional funding, Hampshire Film could expand its services to secure increased film activity in the region.

Creative South East is the Central Government sponsored strategy for the Creative Industries of the region. Support of the film industry in Hampshire falls under the regional organisation of Screen South.

Screen South has a goal of developing the growth of the screen industry in the South East through creative hubs and despite one in Oxford and one in Brighton, there is no such hub serving the region of which W&B is central.

The Creative South East Strategy[23] is based on a Hub and Spoke Model and W&B is central to the regional sector which hosts two film studios - at Lasham and Winchester, 17 Film and TV production companies in the wider region that includes Southampton and environs (according to current research), and a wide range of supporting companies and services.

A relocation of the Film Hampshire office to a purpose-built site co-located with the existing W&B film tenants would form a central point for the film services and supporting industries in the region. The office could have co-located post-production or other facilities working in collaboration with existing companies to form a central hub.

Current Barriers

Disconnect between sub-sectors

Awareness of common interests across the three sectors of games, digital media and film is generally weak but varies within each sector.

There is an opportunity to nurture and steward effective AR/VR collaborations between the identified companies and individuals.

[23] http://www.coast2capital.org.uk/images/Creative_South_East_Final_02_2016.pdf

AR/VR Specific Issues

Apart from the skills gap previously documented, AR/VR requires changes to existing technologies and processes deployed. To realise the full scope of emerging opportunities, closer co-operation between the disconnected games, digital media and film sectors needs to be fostered.

AR/VR is not just "Business as Usual". It will require new skills, and pose technology, deployment, and scaling challenges. Experimentation will be required and funding to enable it. Our research suggests an appetite for both.

These technologies are being deployed and are of wider interest to other sectors in the W&B catchment: environmental sciences, specialty engineering, medical and veterinary, optics, defence and aeronautics. However, there are no organised connection points for accelerating cross-sector collaboration.

What collaboration is taking place across these disciplines is currently happening through personal contact and haphazard chance connections.

Interview responses highlighted W&B's lack of appeal to a younger, creative and technology-skilled workforce. Key known attractors for digital technology companies are absent at the level required, both now and in the plans to date for the future W&B. These include an immediately adjacent University or Research establishment, frequent and convenient public transportation, and a varied and vibrant 24/7 cultural and entertainment fabric.

If AR/VR technologies provide a desired core focus of the future W&B, then it will be vital to design in from the start some of these location attractors as the new town centre for W&B is developed.

A training presence could be sustained on a mini-campus that brings visiting expertise from highly regarded universities and institutes – possibly based around semester or quarterly subject themes.

Multi-sector Digital Media Specific Issues

The synergies between digital media in use for entertainment and that in use in defence, aerospace and avionics, specialty manufacturing, medical and veterinary, and environmental sciences are not being recognised, and therefore not capitalised upon in any systematic fashion.

Bringing together representative users of digital media in all these sectors to identify and develop activities to fast-track collaboration will generate new products and services and increased value-add that will translate into more high-value W&B employment.

Next Steps

The research has identified a range of individuals and companies interested in, or actively exploring, AR/VR. These are expected to stimulate new economic activity and skills development locally.

Given the lack of awareness of W&B's regeneration amongst many interviewees, initiatives centred in the W&B catchment would raise awareness of the potential of the location.

Cluster Development Recommendations

1. Establish an AR/VR Working Group and skills training

a) Create a focused working group, hosted and led by a W&BRC representative. The objective is to identify specific projects (see The Void example above) that genuinely inspire companies and individuals in the W&B catchment to collaborate to build and deploy new AR/VR solutions in the market. A similar initiative focusing on animation recently started in Camberley with local council support. Within 6 weeks, this initiative had gathered 84 members.

Why?
The very act of creating this group will raise cross-sector awareness amongst participants, encourage cross-sector collaborations and identify additional, relevant skills in the W&B catchment that this research has not identified.

b) Deliver a schedule of training courses for those wishing to enter the games and digital media sectors. These will be targeted at 16+ year olds and will comprise weekly, structured programmes that assist participants' applications to local universities and employment within local companies.

Why?
This will help address the local skills shortage, raise W&B's visibility and encourage inward investment. It will assist constructive co-operation with local schools.

c) Deliver residential training courses for those wishing to refresh and develop their existing skills within games and digital media. Courses will be undertaken in association with leading application and middleware suppliers e.g. Unity, Unreal Engine and Ikinema.

Why?
This will raise W&B's profile and help develop the W&B games and digital media community.

2. Address growth needs of Film Hampshire and provide training

a) Film Hampshire Office Competence Based Development Training: Enhance the existing success of Film Hampshire by offering a purpose-designed 2 day training programme for Hampshire film officers to uplift skills drawn from global experience and successful practice.

Why?
To improve funding and services for Film Hampshire and other film officers.

Film Hampshire is advertised as a free location-finding service located within and hosted by Hampshire County Council. Whilst its location efforts are credible, its functions could be refined to work in collaboration with professional location agencies such as that which has recently located to W&B. The services currently offered could be refined to provide wider services.

Lessons learned from working with some highly successful film office developments, and studying many more, demonstrate that some additions and enhancements to existing practice can rapidly produce significant increased local investment. These include precise tailoring to the needs of the film production agenda to be an easy first point of call for all prospective location agents and filming of all sorts. Such Competence Based Development (CPD) training will also refine the databank to be more comprehensive in the information supplied.

In the course of the program such core up-skilling will identify sufficient background information to access wider funding and better resourcing for Film Hampshire and its associates.

b) Hampshire Film Industry Workshop:
Together with Film Hampshire co-develop an industry event with a goal of developing a 7point Action Plan to achieve and document an increase in both film location attraction of high value productions and an increase in supporting film services

Why?
There is no currently identified structured method of developing the sector as a sector. Until it is developed within the sub-sector, the benefits of participating in the wider cluster development cannot be effectively realised.

c) Possible relocation of Hampshire Film Office to W&B
Currently, Film Hampshire is a free film location service operating as part of the Economic Development Department of Hampshire Council. A professional independently located partnership organisation located in purpose-built facilities can achieve much more than as an adjunct to usual economic development activities.

Why?
Purpose-built within the new town centre, this would offer a real central focus on W&B as a hub of film related industry and activities. An “Extras” centre could be co-located with skills development and services such as wardrobe and makeup also co-located.

d) Establish a BFI Film Academy[24] Schedule at W&B

[24] http://www.screensouth.org/content.aspx?parent=125&page=149 *BFI Film Academy*

The BFI Film Forever Plan is designed to promote education in film production for 5-19 year olds so that the UK retains its prominence in the global film industry.

Why?
BFI Film Academies have run in the south in Kent but there has been no such Academy in the Eastern part of the South East.

3. Develop a High Value Technologies Cluster

To initiate development of a longer term High Value Technologies Cluster, comprised of members of the following identified W&B sectors of:

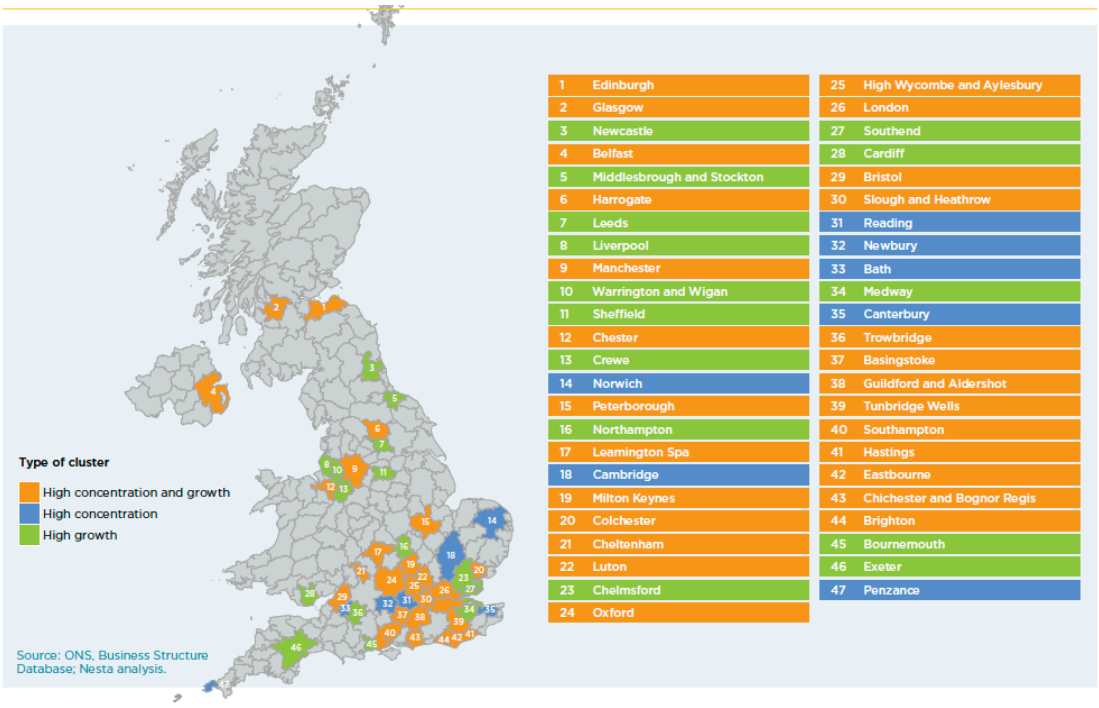
8. Gaming Technologies, Virtual Reality, Simulation, Digital Media, and Film
9. Specialty Manufacturing, Optics, Holographics, Haptics Ruggedizing Technologies, and fine tolerance Fabrication, Finishing, & Packaging nanotechnology, complex electro-mechanical devices, telemetry, composites, optics, haptics, holographics, and test & measurement and monitoring equipment,
10. Aerospace, Avionics, and Defence
11. Environmental Sciences, Geospatial Mapping, and sophisticated Waste Management

In the course of this development, identify specific initiatives that encourage cross-sector awareness of, and capitalise upon existing synergies.

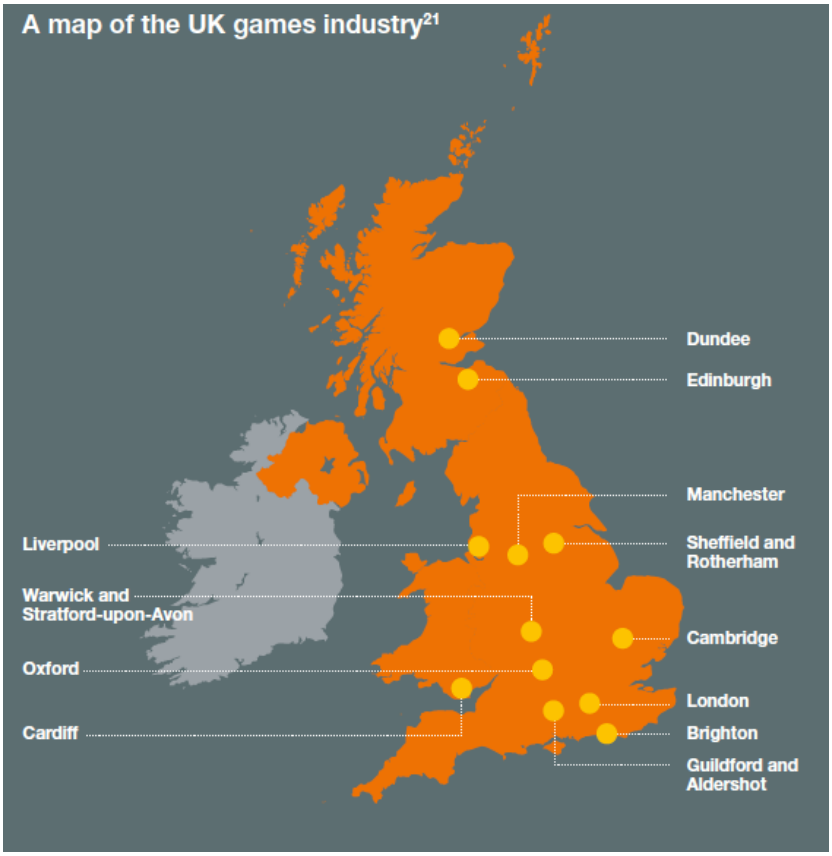
Why?
To:

- capitalise upon currently identified cross-sector synergies and identify others
- identify new cross sector collaborative projects
- document barriers to success for each sub-sector and suggested remedies
- gain support for development of a High Value Technologies Cluster to provide cross-sector support in identified areas of need e.g. skills development
- establish international collaborations
- develop a high-level roadmap to fast-track cluster development together with identification of who is missing and needs to be included

Supporting Data

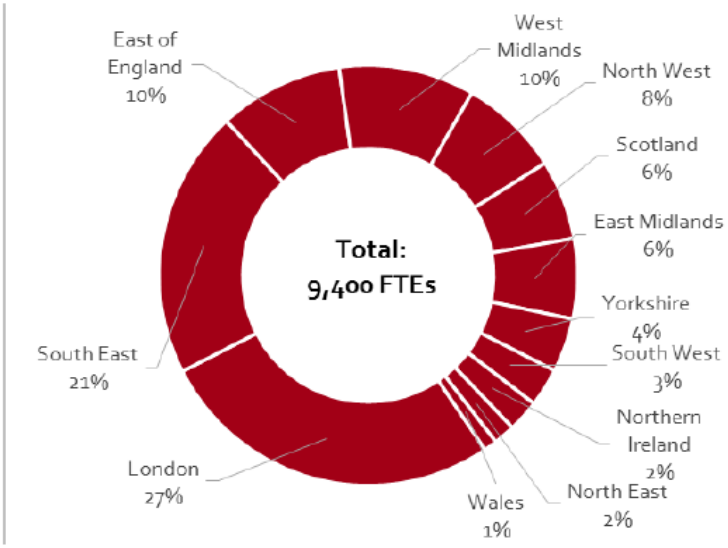


Source: Nesta “The Geography of Creativity in the UK” July 2016



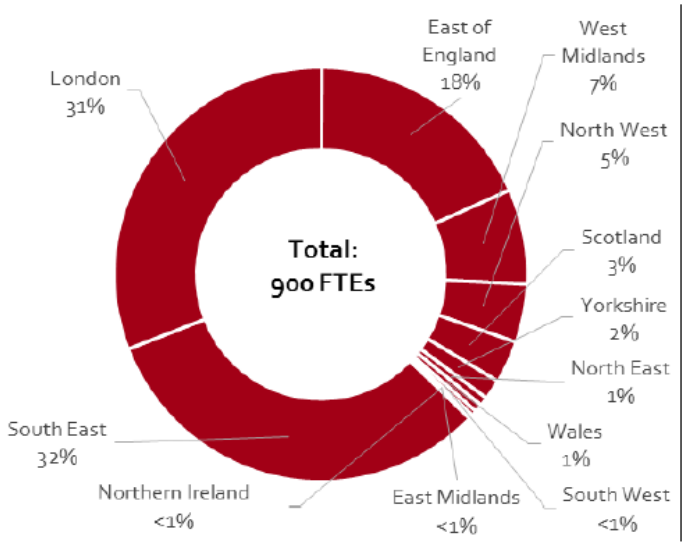
Source: Nesta “A Map of the UK Games Industry” Sept 2014

Regional distribution of employment in the development segment of core UK video games sector, 2013



Source: Olsberg•SPI/Nordicity estimates based on data from GIC, TBR, Ukie, Companies House, Dun&Bradstreet, Creative Skillset.

Regional distribution of employment in the publishing segment of core UK video games sector, 2013



Source: Olsberg•SPI/Nordicity estimates based on data from GIC, TBR, Ukie, Companies House, Dun&Bradstreet, Creative Skillset.

Specialty Manufacturing Cluster

Classification of cluster status: Cluster (Potential)

The Specialty Manufacturing, Fabrication and Finishing sectors in the W&B catchment are of a uniquely high standard – possibly driven by the needs of the defence, aerospace and avionics industries.

Due to the types of manufacture, there are many clean room facilities (of different orders of category).

This cluster includes Optics, Electronics, Robotics, Analytical Instrumentation, Nanotechnology, RFID, Holographics, and Fabrication & Finishing

Cluster Context: What has been discovered?

The UK Government has a focus on high value manufacture and its ability to re-shore the supply chain for key sectors such as automotive.

> Since 2012 a strategy for automotive has re-shored in excess of £1billion worth of purchasing of the £3billion targeted.
>
> There is potential opportunity to develop a strategy for the re-shoring of both the aerospace and environmental technology supply chains from a geographic mid-point node within the W&B catchment similar to the existing advanced manufacture cluster centred around Oxford

This sector is predominantly a service industry to other sectors. Within the catchment studied, sophisticated technologies are often used. In many cases, these combine purpose designed and built hardware and software with in-depth knowledge of the user environment. In this respect it can be considered a hub cluster serving the other sectors of Environmental, Aerospace, Medical and Veterinary, Defence, and Waste Management. It is also the sum of many parts which cross over to and from the digital cluster.

According to a recent report of the Aerospace consortium[25], "Industry 4.0" is the term used to describe the transformative nature of manufacturing of this era. The aerospace industry sector recognises the need to respond to, and collaborate with businesses that can enhance their sector through innovation and rapid response to emerging needs.

Industry 4.0 is characterised by a rapid, capital intensive shift to robotics, the Internet of Things, cyberphysical systems and 3D printing that are transforming techniques and markets.

As a result of serving other sectors, this cluster shares many synergies in both technology and knowledge with those sectors. This is apparent in the use of simulation and 2D and 3D rendering, holographics, electronics, prototype

[25] http://www.theagp.aero/wp-content/uploads/sites/9/2016/07/Means-of-Acscent-2nd-Edition-LoRes-02-08-16.pdf

development, test and measurement equipment and methodologies, and new “green” technologies.

The 111 companies identified within this sector as being innovative and high growth, are companies of various characteristics and sizes serving specialty segments of a wider market. They fall into three broad company types:

- expanding innovators who are forming joint ventures and making acquisitions to broaden the breadth of their product range and ability to service wider, high value markets.

- fast growth companies whose innovations have captured a market segment and are focused on growth to service the expanding order list.

- local subsidiaries (in many cases British innovative companies acquired by larger corporations) which retain to some level their specific position and character within the market

Within this group are 24 companies within the pharmaceuticals industry and one company with sophisticated fruit ripening technologies that has been included here due to it being a technology-based finishing - but of fresh fruit rather than man made products.

Besides the extensive range of SMEs, there are some major companies such as the four building campus of Fluor at Farnborough, housing consultants and designers working on global projects, many of which comprise specialty manufacturing solutions.

The unique aspect of the sector within the W&B catchment is the way skills are drawn from the proximity of several highly sophisticated sectors: Aerospace, centred around Farnborough; Marine, centred around Southampton and Portsmouth to the south; and Defence centred around Andover.

Sector Status: Specialty Manufacturing

The sector is diverse and disconnected, each sub-sector that serves a particular industry appearing to operate in relative isolation, but with W&B as the geographic mid-point..

Where there is crossover with other specialty manufacturers, this is generally developed by the client customer in another sector, who finds SME companies to solve a particular problem and not by outreach to explore synergies.

There are several companies undertaking contract manufacturing (outsourcing), and many who are responsible for valid certification of products: e.g. UL, CE Mark, US and UK Health Regulatory certificates, UKAS-certified calibration, LEED (green building), etc.

There is great scope to initiate wider cross sector usage of common skills and technologies and to ensure that when there are business closures – as there have been in some quite substantial companies – that skills are not lost from the area but re-allocated to companies with whom there are similar needs and synergies.

Because of the nature of their expertise and market relationships, any of the companies assigned for this report to Specialty Manufacturing, could also fit within the Digital, Aerospace & Defence, or Environmental clusters. This is not only because of their specialist production for these sectors, but the fact that in order to be an effective manufacturer, they have to have a well-advanced understanding of the sector for which they are making – and its particular requirements and operating conditions.

There is a high premium placed upon certification and recertification of staff. In one company they recertify their staff every 2 years.

Within this sector lie nanotechnology, complex electro-mechanical devices, telemetry, composites, optics, haptics, holographics, ruggedised battery packs; invention, design and build of 2-way radios for specialty applications; test & measurement and monitoring equipment, with some of the latter being ruggedised for harsh environments.

Specialties include working with silicones, glass, carbon fibre, photovoltaics, semiconductors, RFIDs, and miniaturisation, and in the area of finishing: high-tolerance finishing for challenging environments, for particle free surfaces and the removal of occluding surface gases.

The growth in composites and other technical areas of expertise is being fostered in discrete towers of focus: predominantly automotive, aerospace, and marine.

Holographics and other security technologies used in bank note printing may have relevance for other sectors, as may specialist developed techniques and systems,

One example of this crossover is Rapid Positioning Clips Ltd, whose clips were originally purpose-designed for the refrigeration market and are now used for UK railway and underground rolling stock and in under-floor heating.

There is an opportunity to bring to W&B, the geographic mid-point of these sectors, discussion about collaborative cross-sectoral activities.

Cluster Development Recommendations

1. Develop a cross-sector business showcase with a focus of "Re-shore: New Market Growth from cross-sector synergies"

Why?
The diversity of this sector and its engagement with other sectors key to the future development of the W&B economy make it difficult to find a fulcrum which will lever

such diverse interests to attend an event designed to harness their individual strengths to identify opportunities for both the sector and W&B.

Most companies are interested in making new business development easier. A well planned local showcase with a carefully structured event and discussion groups integrated within it, will form a baseline from which a strategic plan can be made to offer stewardship for the growth of the sector.

It should include Aerospace, Digital Environmental sectors PLUS the medical/veterinary cluster in Guildford, and pharma groups in Basingstoke, Farnborough and more sparsely grouped within the W&B catchment.

This event could be supported by AMRC - the University of Sheffield Advanced Manufacturing Research Centre - whose prime private sector partner is Autodesk – with its HQ in Farnborough. The reason for their support is that there could be a local node to their already advanced Midlands focus.

It should be possible to engage with Autodesk whose tagline for their 3D engineering and entertainment software is: "helps people imagine, design, and create a better world".

2. Develop a local cluster strategy similar to that of the North East of England Process Industry Cluster[26] serving the chemical industry

The Process Industry Cluster is a good example of how to refine a regional supply chain for diverse industries through collaborative effort. Since 2005 the cluster has secured 83 significant investments and 4,000 jobs, with particular growth in the SME sector through activities attributed to the cluster to the value of £2.5billion GVA per annum. The cluster has also harnessed the resources of cluster members to develop showcase programmes to engage young students into the study of STEM (Science, Technology, Engineering and Maths) subjects.

It should be possible to engage with Willmott Dixson who undertake Supply Chain Training and have a training facility in Basingstoke. This company could provide support for this initiative together with development of the cluster and its training needs.

Why?
Given the diversity and disconnected nature of the sector within the W&B catchment, there is a wide opportunity to develop local supply chains that extend beyond current sector-specific boundaries, thereby developing joint ventures and other collaborative efforts that spawn business growth and job creation.

Unlike in the Midlands where the Manufacturing cluster is designed around a supply chain to a single sector, the W&B Specialty Manufacturing sector serves Aerospace,

[26] https://chemicalparks.eu/organizations/nepic-the-north-east-of-england-process-industry-cluster

Defence, Film and Digital Media, and Medical & Veterinary. The opportunity to harness this diversity will evolve as the cluster matures.

3. Discuss with Autodesk the opportunity to have an extension of their Autodesk University co-located within the Enterprise Centre at W&B.

Autodesk University is designed for users of the Autodesk product range, which is often the software system of choice in developing products, prototyping and other aspects of R&D for manufacture.

Why?
By creating a local programme in collaboration with Autodesk, new users could be introduced to Autodesk methods and ease of design to capture formerly dormant or unidentified design and problem-solving capabilities for manufacturing and product development, and to spark new Autodesk users from the entrepreneurial community.

Aerospace and Defence Cluster

Classification of cluster status: Sectors (Established) Cluster (Established)

These three sectors have the most interconnectivity of all growth clusters developed within the W&B catchment. The sectors collectively and individually act effectively and there is no need for them to engage in W&B developments unless there is a good business case to do so.

The most benefit to W&B is to become the host to activities that bring SMEs and consulting expertise to cross-over from individual specialty areas to respond to some of the well-funded interventions within the scope of this cluster. This can generate new local high-value employment opportunities and an influx of highly paid residents to the new W&B, also offering spillover accommodation and conference facilities from those already present around Farnborough. A regular mini-bus service between a business incubator at W&B and Farnborough can allay the transportation impasse.

Cluster Context: What has been discovered?

Within the 111 companies identified within the specialty manufacture sector are 28 that serve the aerospace industry. Given the nature of focus of aerospace and defence on geospatial technologies, and those relevant to the Augmented Reality and Virtual Reality (AR/VR) developers, digital technologies relevant to command and control have immediate relevance.

Sector Status: Aerospace

Aerospace involves a wide range of disciplines and specialties that include:
l

- advanced wing design, integration and manufacture
- advanced aero-engines and landing gear systems
- aircraft and engine control systems
- electrical power systems
- wheels and brakes
- advanced propeller systems
- advanced rotor blade design
- avionics
- maintenance, repair and overhaul
- data management

There is a well developed national strategy for Aerospace that includes avionics[27]. The collaboration between government, research institutes and universities, and the private sector has already been productive. Between them there is a stated goal of expanding opportunities to engage with innovative SMEs and individuals with relevant expertise.

The strategy identifies skills shortages in advanced manufacturing, lean supply management and advanced technology.

[27] http://www.theagp.aero/

Companies within the W&B catchment can benefit from aerospace initiatives such as the National Aerospace Technology Exploitation Programme (NATEP), which runs in its present form until September 2017 and funds supplier generated ideas that are judged on their potential to deliver jobs, with winners receiving grants averaging £150,000 over 18 months.

According to the strategic vision of the national aerospace strategy:

> "Greener, quieter and more economical aircraft worth over £5.5 trillion will be required over the next 20 years. This is a great opportunity given our leading capability in complex, high value components and emerging technologies.
>
> In order to seize this opportunity, we need to invest even more in the next generation skills, in truly radical technologies and processes, and in increased productivity and competitiveness throughout the supply chain."

Farnborough Aerospace Consortium (FAC) is the local membership association fostering growth of the sector.

FAC were local facilitators to the £40million Aerospace Growth Partnership programme that has recently funded 114 growth projects nationwide for innovative products to rapidly mature their development and commercialisation.

It will be beneficial for these to be profiled through at the High Value Technologies Symposium and Showcase hosted by W&B to identify synergies and opportunities with other companies in the W&B catchment

Local companies within the W&B catchment who may, or may not currently have involvement with aerospace may benefit from exposure to, and involvement with actions targeted by the 2016 Industrial Strategy[28] for the UK Aerospace sector that include:

- Development of an Aerospace Industrial Cadets Programme and support for company designed apprenticeships
- Improving SME access to the High Value Manufacturing (HVM) Catapult (a centre with high value investment in expertise and equipment to accelerate sector growth)
- Establishing cross-sector relationships that bridge gaps in technological competencies within the sector – in particular targeting high-value design,

[28] http://www.theagp.aero/wp-content/uploads/sites/9/2016/07/Means-of-Acscent-2nd-Edition-LoRes-02-08-16.pdf

various developments in the wider digital sector, additive manufacture and developments with new composites and materials of various composition, refined manufacturing and finishing.

In response to the aims of the UK Aerospace Growth Partnership Strategy 2016 and the efforts of the Farnborough Aerospace Consortium's programme of enhancing Technology Transfer it is possible to engage them in active participation in a High Value Technologies Symposium and Showcase hosted by W&B

Sector Status: Defence

Of the 111 Specialty Manufacturing companies within the W&B catchment identified for innovation and/or rapid growth, 13 serve or have direct relationships with the defence sector. Not all companies surveyed by desktop research declare a Defence relationship, so this number possibly does not reflect actual numbers.

The Defence Science and Technology Laboratory (Dstl) has recently undergone a programme of commercialising some of its own inventions. Called Ploughshare[29] the technologies relate to the following sectors within the W&B catchment: Environmental; Geospatial Mapping; Digital in all aspects, but especially in AR/VR development; Aerospace; and Specialty Manufacturing. These are already in use in the Defence environment.

Some examples of these newly released innovations that have direct crossover potential include:

- algorithms that allow registration (alignment of multiple images of an area), change detection (identifying potential changes between images of the same area) and object identification. These can be tailored to specific problems, e.g. matching two images with very different observation angles
- video face recognition
- various bio-threat technologies
- enhanced decision analysis digital techniques for identifying specific activities and characteristics in crowds

The Defence Science and Technology Laboratory (Dstl) is looking to expand its Synthetic Environment Tower of Excellence (SE Tower) Community of Practice (COP) to work together with others on areas of research in simulation and synthetic environments.

It may be possible for representatives to be active participants in the event to explore a High Value Technologies symposium hosted by W&B

[29] http://www.ploughshareinnovations.com/

Cluster Development Recommendations

1. Develop an aerospace forum "Re-shore: New Market Growth from cross-sector synergies"

Conduct a scoping meeting with invited leaders of the Aerospace & Avionics Cluster and Defence research groups to develop a plan for a regional symposium and showcase to develop opportunities from identified cross-sectoral synergies.

Why?
To actively foster the cross-sector interactivity where synergies were identified and respond to opportunities currently available through both channels of funding and support.

2. In collaboration with FAC and Dstl develop a regional cluster that extends beyond the membership association

Why?
An industry Association represents the major players but dos not include the supporting professional infrastructure that a cluster does. Certainly there is merit in proposing that there should be wide cross-over between sectors and opportunities found to foster these to mutual benefit.

Supporting Data

Examples of companies that have benefited form Aerospace development initiatives and funding.

AGC AeroComposites, Yeovil-Derby

AGC has completed a NATEP supported project developing cutting edge composite joining technology. A novel welding technique allows rapid joining of high performance thermoplastic composites components to aerospace standards, using low cost equipment and materials.

Industry adoption of thermoplastic composites has been constrained by lack of appropriate joining techniques. This disruptive technology produces components with a typically 15-20% weight saving, together with strength and fatigue properties significantly superior to those assembled by traditional mechanical methods.

Lead project partners AGC AeroComposites work with the National Composites Centre and Nottingham-based TenCate Advanced Composites, with support from Rolls-Royce.

Aeromet International, Worcester, Sittingbourne and Rochester

Aeromet International Ltd is a leading British manufacturer of premium aluminium, magnesium sand and investment castings. Through long term investment and support from the ATI and NATEP, Aeromet has developed and commercialised a family of innovative high performance aluminium-based metal matrix composite alloys, branded A20X.

In both cast and 3D printed formats A20X matches or excels the strength, stiffness and operating temperature limits of the most advanced alternative products available. The ability to produce complex geometries spells significant reductions in cost and environmental footprint. When combined with state of the art methods for structural optimisation it opens hitherto unavailable design space for product designers.

Embracing continuous improvement programmes like SiG and SC21 has enabled Aeromet to focus on operational excellence and bring its world class product offering to the global market.

Rural Business Cluster

Classification of cluster status: Sectors: Food and Drink (Latent); Tourism, Eco-builders & Wood Craftsmanship, and Agribusiness and Technical Support Services (Potential) Cluster: Potential

Rural business is an often poorly understood segment of the economy of a region, but one that can generate significant regional value, and new employment. Our research suggests this to be the case in the WB catchment. As examples, there are many small but established food and drink producers, farming is an integral component of the region and significant craftsmanship is present. Of particular interest is an emerging ambition to develop new technical services for the provision of rural broadband and "smart farming" solutions.

Cluster Context: What has been discovered?

The national Rural Economy Growth Review (REGR) 2011 recommended measures for the rural sector grouped under 5 themes: enabling rural businesses to grow and diversify; supporting rural tourism; expanding the food & drink sector; delivering green growth; reducing regulation on farms.

Further investigation of how these action outcomes are being promoted for the W&B catchment may reveal new opportunities.

Farmers affected by BREXIT and the losses of Common Agricultural Policy (CAP) payments are expected to accelerate the trend towards greater farm income diversification. As many case studies demonstrate, innovation and a marrying of technologies to address local and national needs are developing across the agribusiness sector. These range from the more historical innovative accommodation ventures to bio-fuel generators and establishing other major farm-based technologies, as illustrated by the case studies in the Supporting Data section of this document.

According to a Tourism England report, Hampshire is the most visited county in England after London[30], and has a significant impact on the local economy.

There are a number of very high quality wood craftsmanship enterprises in the W&B catchment, and an emerging number of eco-builders.

Agribusiness has demonstrated globally that it is an early adopter of technologies that can enhance farm management and farm diversification. This is expected to accelerate after Brexit.

While the Common Agricultural Policy payments assisted, they were reputedly poorly managed and delays meant immense hardship for many smaller farms having to manage cash flow carefully. Many farmers had already started farm diversification projects to counteract this dependence. The fines imposed by the EU for delays in

[30] https://www.visitengland.com/sites/default/files/gbdvs_annual_report_2014_200515_0.pdf

implementing some policies are retrospective and will therefore influence the future amount available to support farmers nationally[31].

The Food and Drink Sector of the W&B catchment is in parts well organised and working collaboratively, but can benefit from fostering as a regional cluster.

Sector Status: Food & Drink

Hampshire has won a reputation for quality food and drink products, with many being represented on the menus of five star restaurants in London and elsewhere.

The Food and Drink sector has good brand recognition and a sound base of co-operative working. There is a well-established country market network across Hampshire.

Early thoughts of developing a local Farmers Market in W&B have been revised by later research that demonstrates greater benefit from support of the strongest local farmers market, rather than diminishing the takings through smaller, less successful ones[32]. Nevertheless, establishing W&B as a destination on the schedule of the Hampshire Farmers Market schedule is encouraged.

While there are many high quality small food and drink manufacturers, a Farmers Market group, and a very successful membership organisation in Hampshire Fare[33], that promotes member goods and services and organises the annual Hampshire Food Fare, there is no physical centre that offers mentored support to foster the industry and scale production.

The quality of food and drink production and small scale manufacture is high and already has brand recognition. However, in most cases this is still a "cottage industry", with high quality food and drink products not being scaled for wider production, and transportation of goods to London operationally fragmented.

EU LEADER funding assigned for Hampshire includes funding categories for Food & Drink and for Tourism. Funding is secure, previously allocated, and is unaffected by BREXIT.

A sector that is currently well established in parts, with very specific localised needs and some pockets of strong collaborative activity, once coordinated, could access EU LEADER funding to facilitate a Food & Drinks Business Incubator or Enterprise Centre.

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[31] *https://www.theguardian.com/environment/2016/jul/15/brexit-wont-free-uk-from-paying-for-botched-eu-farming-subsidies-warn-audit-office*

[32] *https://aeon.co/ideas/foodie-localism-loves-farming-in-theory-but-not-in-practice*

[33] *Previous week long Press Tour resulted in 18 page spread in Food & Drink – with national and international readership. 2016 Press Trip in June.*

Hampshire Fare has expressed interest in being the augmenting body for development of a Food & Drinks Business Incubator if it was positioned close to a motorway.

There are several high quality consulting service companies for this sector in the W&B catchment who can support such a facility.

Many small local companies individually transport their goods to the high-end London market, travelling at far less than capacity load, giving opportunity to incorporate a capacity for mutual "Hampshire Goods" transport through Hampshire Fare and/or the Food Enterprise Centre.

Sector Status: Tourism

It has been difficult to isolate tourism numbers for Hampshire as a whole, and those of Southampton, to identify whether the high visitation rate of Hampshire may be skewed by Southampton being the second busiest cruise port in Europe after Venice.

Many farms in the W&B catchment have tourism ventures as secondary income such as rare breeds, children's activities, fishing, glamping, B&Bs, farm shops, etc.

However, the Basingstoke & Dean[34] Cultural Strategy classifies over 48% of visitors to the area as film location tourists. This is in line with international analysis of film tourism as a percentage of local visits, and is therefore a key focus point to develop visitation and bed-night stays to the region. Creative England reports record levels of UK based filming boosting film tourism[35].

Hampshire has a published Film Map[36] but no Film Location Discovery Trail.

EU LEADER funding could also support relocation of the Hampshire Film Office and film tourism trails and activities.

Discovery trails have been proven to generate detailed following and more predictable tourism spend than a map enabling individual route plotting.

Therefore, developing a series of film trails that cause visitors to base in the area for several days can be an attractor to this growing tourism cohort – and encourage top quality restaurants and hotels to locate in W&B.

The switch to domestic, rather than overseas, holidays triggered by the economic downturn of 2009 has proven to be habit-forming rather than "a blip". Real disposable

[34] *Cultural Strategy Basingstoke and Deane* https://www.basingstoke.gov.uk/content/doclib/462.pdfouncil

[35] http://www.creativeengland.co.uk/production-services/film-tourism-research

[36] http://www3.hants.gov.uk/hampshire_film_map_web_version_2014.pdf

income has reduced and this impacts holiday decisions, with domestic tourism benefiting

However, there is a peak season deficit of accommodation in Hampshire in general. For example, Winchester Tourism Bureau reports turning away over 100 accommodation requests per weekend in the summer.

Developers may be approached to develop a small number of new purpose-built B&B-suitable homes in W&B.

Visit England's Tourism Trend Report[37] estimates that by 2033 over 9 million people with be over 75 years old and seeking shorter, and often more luxurious stays.

In this context there is an opportunity for W&B to foster the local chapter of the University of the 3rd Age (U3A)[38]. The "Age" refers to work patterns, not chronological age, and refers to those no longer in full-time employment or fully retired whose members share their knowledge, skills and experience to learn from each other. The Woolmer Forest U3A group has 140 members (the Farnham group has over 1,000 members and Petersfield has over 550).

> Designing a purpose built multi-use facility in W&B that supports the local U3A group and that can offer short residential courses to other U3A groups will attract people with extensive experience and passion for learning.

The current major cohort in tourism in England is aged 35-49, expected to shrink until 2023, and then slowly grow again.

> Those between 35-49 are known as the "Squeezed Middle Generation", with responsibilities to children and parents at the same time. They are time poor, and willing to treat themselves to short stays.
>
> In terms of W&B, this means that high quality short stay accommodation will benefit, and fostering this should be a priority action.

Other trends show a notable rise in tourism around major family intergenerational celebrations tied to longer visits, and experiential and learning tourism.

The extent of home schooling in the W&B catchment appears significant. The reasons given for this choice include special needs, religious or moral beliefs, dissatisfaction with local school choices or unaffordable school fees. Although

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37 https://d1myqg1v1ynzrd.cloudfront.net/sites/default/files/vb-corporate/Documents-Library/documents/England-documents/dom_leis_t_trends.pd
f

38 *University of the Third Age is a non-religious and non-political group offering continued learning to those who are no longer in full time employment (the 3rd Age). Each chapter is self-funded, with fees kept low to cover essential costs only, and no payment is paid to members for any services rendered to U3A.*

difficult to quantify the number due to the nature of home schooling[39], there are over 12 support groups for Hampshire. This is a largely untapped form of activity, education and tourism demand. A purpose-built innovation centre, perhaps attached to the Film Office and/or live:work spaces and technology hub could attract this cohort to live and work in W&B, and for visits from those home schooling outside the area.

Sector Status: Eco-builders & Wood Craftsmanship

There are a small number of eco-builders in the W&B catchment but this is a sector that could quickly respond to development and could benefit significantly from collaboration with the Construction Skills Centre and W&B developers.

There is an opportunity to:
- grow the number of eco-builders in the region
- have a central Building Information Modelling (BIM) Centre in W&B
- foster cross-over with geo-tech and environmental technologies

The high quality of wood craftsmanship is unusual. This comprises individual craftsmen for smaller, decorative items through to bespoke garden buildings and the world quality restoration of historic wooden infrastructure (to National Trust standard). An extended linkage of this W&B sector is to the International School of Wooden Boat Building in Pier 4 Portsmouth.

This sector could also benefit from collaborative working with the Construction Skills Centre, and with W&B developers.

This sector can also benefit from collaborative working with the Construction Skills Centre, and with developers.

Sector Status: Agribusiness and Technical Support Services

The agribusiness sector in the W&B catchment has many specialties such as exotic animal and bird husbandry, niche crops such as truffles, agricultural engineering, cooking schools, construction & contracting, dairy, fish farming, mineral water extraction and an Artificial Insemination export sector. However, the status of the sector has not been recently documented, and a 2010 report has a focus on measuring traditional farm activities and not new technological innovations[40].

Beyond Hampshire, there are several case studies of effective energy capture from English farmers employing sophisticated technology. Three is a current consortium of stakeholders applying sophisticated technology to pig farming to improve yield,

[39] *BBC Reports a 65% increase in Home Schooling in England* http://www.bbc.co.uk/news/education-35133119

[40] http://www3.hants.gov.uk/hampshire_farming_study_review_2010.pdf

piggery environments and profits through more effective data gathering that accelerates decision making.

One of the most interesting initiatives in the W&B catchment is being led by EMS, currently based at the soon to be closed Passfield Business Centre. EMS currently offer a range of connectivity solutions, including bonded 3G/4G router connectivity products. EMS is currently working on solutions that will use TV White Space (TVWS) spectrum.

While current WiFi technology offers high-speed connectivity it is not suitable for wide area applications due to the limited range of the RF frequencies used. TVWS uses much lower frequencies that are able to travel around hills, penetrate through trees and into buildings over distances of up to 10 Km. This is a game changer for the design and deployment of high speed wide area networks and could benefit rural connectivity enormously.

Discussions with EMS revealed a clear ambition to explore TVWS solutions for agribusiness and smart farming in partnership with universities and research institutions. These could include effective real-time data collection from drones being used to monitor soil and crop conditions and animal management. It is anticipated that this work displays significant growth potential and could greatly assist agribusiness in the W&B catchment.

There is an opportunity to join with Innovation for Agriculture (IfA)[41], a consortium of 15 English Agricultural Societies to promote on-farm innovation, through study tours and other activities. The Royal Agricultural Society also supports these activities and has developed extensive case studies of success[42]. Examples of on farm bio-digesters are in the Supporting Data for this sector, at the end of this report

Case study example: Wyke Farm[43] is a traditional Somerset cheddar cheese making farm that is "powered by poo", with three anaerobic digesters selling power back to the grid.

41 http://www.innovationforagriculture.org.uk/index.php/innovation/farmer-inventors

42 http://www.fre-energy.co.uk/pdf/RASE-On-Farm-AD-Review.pdf

43 http://www.bbc.co.uk/news/uk-england-somerset-35482839

Cluster Development Recommendations

1. Begin discussions with the Food and Drinks sector regarding establishing a Food Enterprise Centre in W&B (focus on scaling business)

Conduct a scoping meeting with invited leaders from Hampshire Fare and local food and drinks producers to develop a plan for a Food & Drinks Enterprise Centre or Business Incubator to be established in W&B.

Why?
Once coordinated, this sector could access EU LEADER funding to facilitate construction of the Centre, help local producers achieve economies of scale, greater trade across the UK and potentially help exports.

2. Engage Agribusiness and Technical Support Services in the cross-over technology challenge detailed in the Environmental Sciences, Geospatial Mapping and Waste Management cluster development actions detailed above.

Supporting Data

Lower Reule Farm

Lower Reule Farm is a family business focused on soft fruit production such as strawberries. Their AD plant takes in food wastes from local authority collections and commercial food production outfits. The AD plant generates biogas for the farm as well as digestate.

The plant was awarded funding of £750,000 from WRAP's capital grant scheme, which aims to support projects which would not have been able to proceed without assistance. Lower Reule managed to secure the remainder of the funding from their bank, partly as a result of being awarded the grant. The planners were supportive of the facility once the decision was taken to move the reception facility to the industrial estate.

The plant has enabled Local Authorities to implement planned weekly food waste collections, which is very challenging without having nearby processing capacity.

Case study and picture courtesy of WRAP and Lower Reule Farm

Hill Farm – Trevor Lea

Hill Farm is an 80 ha organic dairy farm. Feedstock for the 22-year-old digester is slurry from 80 cows housed indoors from October to April. Biogas is used for digester and farmhouse heating, cooking and dairy/farmhouse hot water. The purchase of the digester was made possible through a Ministry of Agriculture, Fisheries and Food (MAFF) 50% pollution abatement grant.

Trevor runs an organic farm, which means that whilst the digester runs very well, he cannot supplement gas production by bringing in organic substrates from outside the farm.

Trevor notes, "We use the gas to keep us warm and the digestate to nourish the land" and lauds the benefit of AD as an excellent slurry and nutrient management system. Both the liquid and fibre fractions of the digestate are applied on the farm as both can be easily spread and incorporated into routine pasture management.

Case study and picture courtesy of The Royal Agricultural Society of England and Hill Farm

Minutes of Meeting

Purpose of Meeting:	Longmoor Site Visit				
Location of Meeting:	Apple Pie Depot, Longmoor				
Date:	11 April 2018	**Ref:**	01B717123	**Meeting No:**	1

Details:			
Attendees present			
Lucy Howard	LH	South Downs National Park Authority	SDNPA
Tim Slaney	TS	South Downs National Park Authority	SDNPA
Margaret Paren	MP	South Downs National Park Authority	SDNPA
Vanessa Marden	VM	Defence Infrastructure Organisation	DIO
Chris Knott	CK	Whitehill Bordon Regeneration Company	WBRC
Thalita Ferizolla	TF	Whitehill Bordon Regeneration Company	WBRC
Mark Hughes-Webb	MHW	Space-2	S-2
Jeremy Peltzer	JP	Space-2	S-2
Jon Kirby	JK	GVA	GVA
Laurence Holmes	LTH	GVA	GVA

Sending apologies			
James Child	JC	Whitehill Bordon Regeneration Company	WBRC
Ravail Marwaha	RM	Whitehill Bordon Regeneration Company	WBRC
Robert Smith	RS	Defence Infrastructure Organisation	DIO

Meeting Minutes

11 April 2018

Meeting Reference: 01B717123

Meeting Number: 1

Meeting Items		Action
1.0	**Background on MoD Strategy / Disposals**	
1.1	VM advised the team of DIO's disposal of the site in accordance with 'A Better Defence Estate Nov 2016'. VM confirmed that the MoD's defence equipment and support operations are due to withdraw completely from the site by the end of 2018.	**VM**
1.2	VM confirmed the extent of the site for disposal as per that established through the Vision Document. Notwithstanding this, the cadet buildings and SINC/training estate may also come forward over time.	**VM**
1.3	VM advised the team of the site's history, with MoD operations having commenced in 1890, with subsequent acquisition in 1956. The site's cultural heritage links were noted.	**VM**
1.4	VM explained that the site is occupied by DE&S who are on course to complete a move from the site by end 2018	**VM**
1.5	JK advised that WBRC are appointed as DIO's development manager for the site, overseeing the planning and development strategy to secure its longer-term future.	**JK**
1.6	JK explained DIO's preferred approach was to work in partnership with SDNPA in bringing the site forward but that it was important to ensure a commercial approach to enable development to come forward.	**JK**
1.7	Explained the relationship of the site with SDNP and the importance that any development also needs to be seen to be performing the key function to conserve and enhance the National Park . Notwithstanding SNDPA recognised the site comprised a significant brownfield resource and welcomed the opportunity to work with DIO to enable development to come forward.	**TS**
1.8	Clarified that duty of the SDNPA was also to seek to foster the social and economic wellbeing of the local communities within the National Park.	**JK**
1.9	Agreed that meeting the needs of the National Park's communities was important but that this duty was pursuant to the purposes. This meant that all development propsoals needed to respect the National Park's assets, biodiversity and tranquillity	**TS**
2.0	**Local Plan Update**	
2.1	Explained that local plan process was very advanced and likely to be submitted for examination this month with EIP following during the summer or early Autumn	**LH**
2.1.1	Explained that it was too late to allocate the site at this stage. The site had not been submitted until Pre-Submission when major changes could not be made without a further round of consultation.	**LH**
2.1.2	Set out that DIO had raised objections across several areas of the Local Plan that questioned soundness but DIO's principal objective was to seek a modification of Policy SD34 and para 7.153 to secure identification of the site as a brownfield site that the Plan anticipated would come forward for development.	**JK**

Meeting Items		Action
2.1.3	Explained SDNPA had considered the objection fully but it was hoped that these would be able to be withdrawn. The argument in the representation that the employment floorspace figures set in Policy SD35 were flawed was based on floorspace figures based on land area rather than population. Suggested a way forward would be to prepare a Statement of Common Ground (SOCG) that recognised the site and that this should be supported by a Vision Document/ Illustrative Masterplan which sought to articulate the extent of development that could be accommodated. The SOCG needed to take into account areas adjacent to Apple Pie Depot such as the cadet building and trading estate.	**All**
2.1.4	Explained that DIO/WBRC would be keen to prepare a SOCG/Vision Document with SDNPA and hoped that this would enable the objection to be removed. Explained that the likelihood was that DIO may be "friendly" objector in order to seek to persuade the Inspector that a plan modification may be required.	**JK**
2.1.5	Agreed on need for urgency in terms of preparation of the SOCG and requested detailed of key contacts in order that matters could be progressed expediently. Suggested that following plan submission that resources may be available to assist process. Suggested that a Planning Performance Agreement may be the best way forwards with DIO contribution towards resources.	**JK**
3.0	**Way Forward**	
3.1.1	Explained the DIO's intention was to bring forward an outline or hybrid planning application. Ideally this would sit alongside the EIP but would more likely be targeted for end of 2018	**JK**
3.1.2	Explained that did not want to rush a submission and that this would be subject to detailed consultation with local community and key stakeholder. WBRC/DIO would like to proceed with submission with full support from SDNPA	**JK**
3.1.3	Agreed that a submission needed to be prepared collaboratively and set out importance of reaching agreement over masterplanning	**TS**
3.1.4	Explained that SDNPA viewed the land at the depot outside of the wire as important to a comprehensive scheme coming forward. Set out that SDNPA would like to see this land as part of the wider proposals. The enhancement of cultural heritage and heathland would be important as part of a wider scheme. In the future this could be addressed with a Whole Estate Plan, which could be signposted in the SoCG.	**TS/MP**
3.1.5	Clarified that the land was not currently within the disposal area but may come forward subject to discussion with DTE. DIO would investigate inclusion of the land but unlikely to take plan in immediate term as DIO internal evaluation needed to take place	**VM**
3.1.6	Explained that in other scenarios land had remained within DTE but had been able to receive environmental management and heathland restoration. Referenced Ash Ranges associated with disposal of Deepcut. Explained that any environmental enhancement needed to be part of proposals and where not any request for such needed to be justified in planning terms to meet CIL Reg 123/ NPPF tests with regard to planning gain.	**JK**
3.1.7	Set out the importance of any proposal referencing the heritage value of the site and how this could be captured within any proposal. Agreed need for clarity on planning gain but set out that proposals needed to deliver environmental enhancement and to mitigate any impact upon the SDNP.	**TS**

Meeting Items		Action
3.1.8	Agreed and set out that a full evidence base and technical suite of documents would be prepared and which would identify need for mitigation	**JK**
3.1.9	Reinforced the need to achieve NP objectives and the importance to SDNPA of achieving habitat restoration of the full depot site. Explained that this would be critical to success and support from SDNP.	**TS**
3.1.10	Referenced need to potentially prepare a Whole Estate Plan across the DIO interests within DNPA and potentially looking at the Longmoor area.	**TS**
4.0	**Key Actions**	
4.1.1	Agreed key actions coming out of the meeting were: - Preparation of SOCG; - Preparation of a Planning Performance Agreement (Local Plan and HPA/OPA); - Preparation of an agreed Illustrative Masterplan and Vision Document - Establishment of forward meeting structure and preparation of project contact list; and - Creation of project Governance Structure.	**All**