Past the Peak

Exploring and forecasting the economic impact of COVID19 on NUTS2 regions in England and Wales

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Executive Summary

- Covid-19 has brought unique challenges to all sectors throughout the UK, with some better equipped to manage than others.
- There is clear evidence that the manufacturing, retail, accommodation, food service activities, arts, entertainment and recreation sectors have all been severely affected in the short-term.
- The communication and health sectors have both seen limited output gains from the new challenges posed by the current epidemic.
- Sectors hit severely may be able to begin to recover in Q3&4, however the pace of this recovery will be dependant on the magnitude of the economic contraction suffered as a result of the initial lockdown period and crucially whether there will be another global spike in infection in the future.
- Short-term economic planning after lockdown by local economic growth teams in councils should seek to develop short term investment and skills partnerships with local business, and identify where labour can be reassigned should long-term economic trends deteriorate.
- Long-term development of regions should focus on reskilling the workforce and encourage investment in lowcarbon jobs which is crucial to future economic and environmental sustainability.
- Manufacturing, services, utilities and construction should be at the forefront of post-Covid economic development as there is evidence of long-term low-carbon jobs growth within the sectors and GVA output is high and equally spread across regions.

Methodology

Part 1: Regional impact analysis

To calculate the impact on gross value added in the top five GVA producing sectors in UK regions, the GVA figures for 2018 were used from the 'Regional activity by gross value added (income approach) by industry' dataset published by the ONS. From this, the top five SIC07 sectors were extrapolated based on GVA per region.

For each sector, the percentage change forecast from output estimates by the Office for Budget Responsibility as of April 14th 2020 was applied. This allowed the economic impact of COVID-19 to be forecast on a sectoral basis. From this the percentage GVA change of the top five sectors per region was illustrated and the risk level forecast. The risk level was calculated on an equally distributed three point scale.

Part 2: Sectoral impact analysis

A range of qualitative and quantitative sources were analysed to rank demand, import and exports, labour market and productivity on a scale of four - positive impact, minimal impact, significant impact, severe impact. Sources drawn upon included, but were not limited to, ONS Business Impact of COVID19 Survey and reports by associations and industry leaders.

Good growth potential was analysed through three factors - environmental sustainability, adaptability and skills and economic sustainability. Environmental sustainability considers how the sector can adapt to a world increasingly under the pressures of climate change. Adaptability focuses on the way in which sectors can change to develop new revenue streams and operate in a post-Covid economy. Whereas skills focuses on the way labour can be transferred between sectors to sustain employment and develop the economy through challenging conditions. Sustainability looks at long-term job growth, creation and retention. A particular focus is on low-carbon jobs. The evidence gathered is a mix of anecdotal and empirical in all three categories.

Part 1

The Impact of Covid-19 on the top five GVA Producing Sectors in NUTS2 Regions

Summary

- All NUTS2 regions in England and Wales are expected to experience output reductions of greater than 20% in their top five GVA producing sectors, according to calculations based on OBR long term estimates.
- **Retail and real estate** are the two key drivers of regional GVA, as they are the most prevalent sectors across the top five of each region. Despite their considerable output, research suggests they are also two of the most economically fragile sectors and dependant on primary industry. **Manufacturing and construction** also feature prominently.
- All four sectors could be highly susceptible to the long-term negative impact of the magnitude
 of the economic contraction suffered as a result of the initial lockdown period and if there will
 be another global spike in infection within the next year. There is the possibility that retail
 could be particularly vulnerable, as 27% of businesses interviewed have less than three months
 worth of cash reserves left (BICS).
- Regions with the largest percentage reduction in GVA within their top five sectors by GVA are spread across the country **without particular geographic concentration** in any specific area.
- While overall traditional sectors such as retail have seen a negative employment trend since the 2008 financial crisis, local areas should use the current crisis as an opportunity to plan an **environmentally and economically sustainable future**.
- Through the creation and co-ordination of new local skills plans, harnessing preexisting
 economic regional sectoral speciality and new environmentally sustainable resources, local
 areas can plan for a long-term economic transition to harness the potential of low-carbon jobs
 and manage the decline of certain sectors.
- Local government should look to develop **short-term investment and skills partnerships with local business**, and identify where labour can be reassigned should long term economic trends deteriorate. Short-term development of the health sector and information and communication sector may be appropriate to take advantage of current demand.
- In addition, local government could focus on developing and adapting sectors to create
 sustainable low carbon jobs with long-term sustainable growth potential. Manufacturing,
 services, utilities and construction should be considered to be at the forefront of post-Covid
 economic development.

National Risk Matrix and Regional Top 5 GVA Impact Analysis

Region	Total Top 5 GVA Forecast (£mil)	Total Top 5 GVA 2018 (£mil)	Percentage GVA Change in Top 5	Risk Level to Top 5
Bedfordshire and Hertfordshire	£17,393	£31,966	-46%	Severe
Hampshire and Isle of Wight	£15,382	£27,834	-45%	Severe
Cheshire	£10,477	£18,636	-44%	Severe
Berkshire, Buckinghamshire and Oxfordshire	£31,852	£54,309	-41%	Severe
Gloucestershire, Wiltshire and Bath/Bristol Area	£21,046	£35,223	-40%	Severe
Outer London - West and North West	£25,757	£42,537	-39%	Severe
Herefordshire, Worcestershire and Warwickshire	£13,236	£20,484	-35%	Severe
Leicestershire, Rutland and Northamptonshire	£15,723	£24,103	-35%	Severe
West Midlands	£23,292	£35,672	-35%	Severe
East Yorkshire and Northern Lincolnshire	£7,824	£11,858	-34%	Severe
Cumbria	£4,707	£7,095	-34%	Severe
Derbyshire and Nottinghamshire	£17,933	£26,868	-33%	Severe

Region	Total Top 5 GVA Forecast (£mil)	Total Top 5 GVA 2018 (£mil)	Percentage GVA Change in Top 5	Risk Level to Top 5
Lancashire	£13,787	£20,648	-33%	Severe
North Yorkshire	£7,327	£10,964	-33%	Severe
Essex	£16,504	£24,629	-33%	Severe
South Yorkshire	£10,088	£15,047	-33%	Severe
Outer London - East and North East	£14,826	£22,056	-33%	Severe
Shropshire and Staffordshire	£13,378	£19,821	-33%	Severe
Kent	£15,220	£22,472	-32%	Severe
Lincolnshire	£5,694	£8,391	-32%	Severe
Cornwall and Isles of Scilly	£4,253	£5,984	-29%	Significant
Merseyside	£12,486	£17,525	-29%	Significant
Dorset and Somerset	£11,855	£16,620	-29%	Significant
Inner London - East	£47,054	£65,671	-28%	Significant
Inner London - West	£99,312	£137,520	-28%	Significant
East Anglia	£23,426	£32,070	-27%	Significant
Outer London - South	£13,644	£18,341	-26%	Significant

Region	Total Top 5 GVA Forecast (£mil)	Total Top 5 GVA 2018 (£mil)	Percentage GVA Change in Top 5	Risk Level to Top 5
Surrey, East and West Sussex	£31,804	£42,494	-25%	Significant
Greater Manchester	£26,419	£34,936	-24%	Significant
Northumberland and Tyne and Wear	£12,503	£16,248	-23%	Significant
Tees Valley and Durham	£9,716	£12,625	-23%	Significant
West Yorkshire	£21,441	£27,372	-22%	Significant
West Wales and The Valleys	£16,271	£20,680	-21%	Significant
Devon	£10,675	£13,499	-21%	Significant

GVA - Northumberland and Tyne and Wear					
	1	Manufacturing	£4,089m	-55	
	2	Real Estate Activities	£3,859m	-20	
North East (England) Northumberland, and Tyne and Wear	3	Human health and social work activities	£3,323m	+50	
th West land) mbria Yorkshire and The Humber	4	Wholesale and retail trade; repair of motor vehicles	£2,166m	-50	
The number	5	Public administration and defence	£1,628m	-20	
			Output Loss Total:	-95	

Employees -	- Nortl	humberland and Tyne a	ind Wear
~~~ <u>}</u>	1	Human health and social work activities	102,000
North East (England) Northumberland and Tyne and Wear th West land) Tees Valley and Durham land) Mbria Yorkshire and	2	Wholesale and retail trade; repair of motor vehicles	86,000
	3	Manufacturing	64,000
	4	Administrative and support service activities	57,000
The Humber	5	Education	55,000

Tees Valley and Durham					
	1	Manufacturing	£3,722m	-55	
North East (England) Northumberland and Tyne and Wear  th West Tees Valley and Durnam land) mbria Yorkshire and The Humber	2	Real Estate Activities	£2,868m	-20	
	3	Human health and social work activities	£2,241m	+50	
	4	Wholesale and retail trade; repair of motor vehicles	£2,930m	-50	
	5	Information and Communication	£2,047m	-45	
			Output Loss Total:	-120	

Employees - Tees Valley and Durham					
~~~	1	Human health and social work activities	68,000		
North East (England) Northumberland and Tyne and Wear th West land) Tees Valley and Durham land) Torkshire and	2	Wholesale and retail trade; repair of motor vehicles	64,000		
	3	Manufacturing	50,000		
	4	Education	45,000		
The Humber	5	Administrative	30,000		

GVA - Cumbria					
North East (England)	1	Manufacturing	£2,498	-55	
North West (England) Cumbria	2	Real Estate Activities	£1,666m	-20	
Yorkshir The Hur North Yor	r _	Wholesale and retail trade; repair of motor vehicles	£1,237m	-50	
Merseyside West Yorkshire West Wanneser Yorkshire Merseyside West Yorkshire West Yorkshire West Yorkshire West Yorkshire West Yorkshire West Yorkshire	4	Human health and social work activities	£936m	+50	
st Wales Shropshire and	5	Construction	£758m	-70	
			Output Loss Total:	-145	

	Emp	oloyees - Cumbria	
North East (England) Northumberland and Tyne and Wear	1	Wholesale and retail trade; repair of motor vehicles	40,000
North West Tees Valley and Durham (England) Cumbria	2	Manufacturing	37,000
Yorkshir The Hur North Yor	_	Human health and social work activities	30,000
Merseyside West Yorkshire Greater Sou Yorks	4	Accommodation and food service activities	27,000
cheshire Derbys Notting	5	Education	19,000

GVA - Greater Manchester					
North East (England)	1	Real Estate Activities	£8,311m	-20	
North West (England) Cumbria	2	Wholesale and retail trade; repair of motor vehicles	£7,976m	-50	
Yorkshir The Hur North Yor Lancashire West Yorkshire	3	Manufacturing	£7,065m	-55	
Merseyside Greater Sou Yorkshire Manchester Sou Yorks Cheshire Derbys Notting	4	Human health and social work activities	£6,281m	+50	
st Wales Shropshire and	5	Professional, scientific and technical activities	£5,303m	-40	
			Output Loss Total:	-115	

Employees - Greater Manchester				
North East (England) Northumberland and Tyne and Wear	1	Wholesale and retail trade; repair of motor vehicles	224,000	
North West Tees Valley and Durham (England) Cumbria		Human health and social work activities	159,000	
Yorkshir The Hui North Yor		Administrative and support service activities	142,000	
Merseyside West Yorkshire Manchester Sou	4	Professional, scientific and technical activities	121,000	
cheshire Derby Notting	5	Manufacturing	104,000	

GVA - Lancashire					
North East (England)	1	Manufacturing	£6,293 m	-55	
North West (England) Cumbria	2	Wholesale and retail trade; repair of motor vehicles	£5,080m	-50	
Yorkshir The Hur North Yor Lancashire Vorkshire West Vorkshire Merseyside Vorkshire Sou	3	Real estate activities	£3,863m	-20	
	4	Human health and social work activities	£3,084m	+50	
st Wales Shropshire and	5	Construction	£2,328m	-70	
			Output Loss Total:	-145	

Employees - Lancashire						
North East (England) Northumberland and Tyne and Wear	1	Wholesale and retail trade; repair of motor vehicles	113,000			
North West Tees Valley and Durham (England) Cumbria	2	Human health and social work activities	94,000			
Yorkshir The Hur North Yor Lancashire		Manufacturing	87,000			
Merseyside West Yorkshire Merseyside Manchester Sou Yorks	4	Education	58,000			
Cheshire Derby Notting Shropshire and	5	Accommodation and food service activities	46,000			

		GVA - Cheshire		
North East (England)	1	Manufacturing	£7,092m	-55
North West Tees Valley and Clengland) Cumbria	2	Real estate activities	£3,495m	-20
Yorkshir The Hui North Yor Lancashire West Yorkshire	r _	Wholesale and retail trade; repair of motor vehicles	£3,397m	-50
Merseyside Greater Sol Yorks North N	. 4	Professional, scientific and technical activities	£2,507m	-40
st Wales Shropshire and	5	Administrative and support service activities	£2,145m	-40
			Output Loss Total:	-205

Employees - Cheshire					
North East (England) Northumberland, and Tyne and Wear	1	Wholesale and retail trade; repair of motor vehicles	84,000		
North West (Tees Valley and Durham) (England) Cumbria		Professional, scientific and technical activities	65,000		
Yorkshir The Hur North Yor		Human health and social work activities	52,000		
Merseyside West Yorkshire Wanchester Sou Wanchester Yorkshire	4	Administrative and support service activities	46,000		
Shropshire and	5	Manufacturing	41,000		

		GVA - Merseyside	•	
North East (England)	1	Manufacturing	£4,262m	-55
North West (Tees Valley and Urnam) (England) Cumbria	2	Real estate activities	£3,861m	-20
Yorkshir The Hui North Yor Kancashire West Yorkshire	r _	Human health and social work activities	£3,667m	+50
Merseyside Yorkshire Merseyside Greater Sou Yorks Cheshire Derby Notting	4	Wholesale and retail trade; repair of motor vehicles	£3,513m	-50
st Wales Shropshire and	5	Education	£2,222m	-90
			Output Loss Total:	-165

Employees - Merseyside						
North East (England) Northumberland and Tyne and Wear	1	Human health and social work activities	110,000			
North West Tees Valley and (England) Cumbria		Wholesale and retail trade; repair of motor vehicles	99,000			
Yorkshir The Hu North Yo	r	Education	58,000			
Merseyside West Yorkshire Manchester Sol	4	Administrative and support service activities	53,000			
cheshire Derby Notting	5	Manufacturing	49,000			

GVA - Ea	st Yo	orkshire and Northe	ern Lincoln	shire
st Tees Valley and Durham	1	Manufacturing	£4,634m	-55
	2	Real estate activities	£2,268m	-20
The Humber North Yorkshire ashire West Vorkshire Greater Anchester South	3	Wholesale and retail trade; repair of motor vehicles	£2,069m	-50
Lincolnshire Shire Derbyshire and Fast Midland Nottinghamshire (England)	4	Human health and social work activities	£1,686m	+50
onshire and 📞 😅 🦯 🕻	5	Construction	£1,201m	-70
			Output Loss Total:	-145

Employees - Ea	ast Yo	rkshire and Northern L	incolnshire
Condition of the state of the s	1	Manufacturing	68,000
Yorkshire and The Humber North Yorkshire ashire West Yorkshire West Yorkshire West Yorkshire West Yorkshire Lincolnshire South Yorkshire Lincolnshire Shire Derbyshire and Nottinghamshire (England)	2	Wholesale and retail trade; repair of motor vehicles	58,000
	3	Human health and social work activities	53,000
	4	Education	35,000
nnshire and	5	Administrative and support service activities	34,000

	(GVA - North Yorksh	ire	
st Tees Valley and Durham Yorkshire and The Humber North Yorkshire and State of the Humber and State	1	Real estate activities	£3,242m	-20
	2	Manufacturing	£2,441m	-55
	3	Wholesale and retail trade; repair of motor vehicles	£2,294m	-50
Greater South Vorkshire Lincolnshire Shire Derbyshire and East Midlan Nottinghamshire (England)	4	Human health and social work activities	£1,564m	+50
onshire and	5	Education	£1,423m	-90
			Output Loss Total:	-165

Employees - North Yorkshire						
Constitution of the state of th	1	Wholesale and retail trade; repair of motor vehicles	56,000			
Yorkshire and The Humber North Yorkshire ashire West Yorkshire West Yorkshire Workshire Workshire Workshire Greater Vorkshire Vorkshire Lincolnshire Shire Derbyshire and Nottinghamshire (England)	2	Human health and social work activities	46,000			
	3	Accommodation and food service activities	44,000			
	4	Manufacturing	36,000			
onshire and	4	Education	36,000			

GVA - West Yorkshire						
st Tees Valley and Durham Yorkshire and	1	Manufacturing	£6,810m	-55		
	2	Real estate activities	£6,085m	-20		
The Humber North Yorkshire Ashire West Vorkshire Greater Manchester South	3	Wholesale and retail trade; repair of motor vehicles	£2,924m	-50		
Lincolnshire Shire Derbyshire and East Midlan Nottinghamshire (England)	4	Human health and social work activities	£4,509m	+50		
nnshire and	5	Financial and insurance activities	£3,913m	-5		
			Output Loss Total:	-80		

Employees - West Yorkshire						
St Tees Valley and Durham Yorkshire and The Humber North Yorkshire South Lincolnshire South Vorkshire South Chromoshire Conshire and Chromoshire South Chromoshire South Chromoshire Conshire and Chromoshire South	1	Wholesale and retail trade; repair of motor vehicles	157,000			
	2	Human health and social work activities	138,000			
	3	Manufacturing	116,000			
	4	Administrative and support service activities	105,000			
	5	Education	103,000			

GVA - South Yorkshire						
gano tyric and year g	1	Wholesale and retail trade; repair of motor vehicles	£3,398m	-50		
st Tees Valley and Durham Yorkshire and	2	Manufacturing	£3,119m	-55		
The Humber North Yorkshire ashire West Yorkshire Unclinshire Northern Lincolnshire	3	Human health and social work activities	£2,924m	+50		
Greater Anchester South Yorkshire Lincolnshire Shire Derbyshire and Nottinghamshire (England)	_	Real estate activities	£2,913m	-20		
onshire and	5	Education	£2,693m	-90		
			Output Loss Total:	-165		

Employees - South Yorkshire						
Control Type difference of the control of the contr	1	Human health and social work activities	88,000			
Yorkshire and The Humber North Yorkshire ashire West Yorkshire West Yorkshire West Yorkshire West Vorkshire And Northern Lincolnshire Lincolnshire Shire Derbyshire and Nottinghamshire Lincolnshire Lincolnshire Lincolnshire	2	Wholesale and retail trade; repair of motor vehicles	87,000			
	3	Manufacturing	64,000			
	4	Education	60,000			
	5	Administrative and support service activities	47,000			

GVA - Derbyshire and Nottinghamshire					
West \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1	Manufacturing	£7,774m	-55	
Yorkshire South Yorkshire Lincolnshire East Midlands	2	Wholesale and retail trade; repair of motor vehicles	£6,084m	-50	
Derbyshire and East Middalds Nottinghamshire (England)	3	Real estate activities	£5,335m	-20	
Vest land land land land land land land land	4	Human health and social work activities	£4,541m	+50	
	5	Education	£3,134m	-90	
			Output Loss Total:	-165	

Employees	s - De	rbyshire and Nottingha	mshire
West Yorkshire	1	Wholesale and retail trade; repair of motor vehicles	151,000
South Yorkshire Lincolnshire Derbyshire and Nottinghamshire (England)	2	Human health and social work activities	132,000
Nottlinghamshire (England) nd e nds Leicestershire, Rutland and Northamptonshire	3	Manufacturing	125,000
West idlands Vorcestershire ickshire Bedfordshire and Hattandabira	4	Education	89,000
	5	Administrative and support service activities	70,000

GVA - Leice	ester	shire, Rutland and	Northampt	onshire
Yorkshire Lincolnshire Yorkshire Lincolnshire Fast Midlands	1	Manufacturing	£6,860m	-55
	2	Wholesale and retail trade; repair of motor vehicles	£5,858m	-50
Derbyshire and Ceast Wildianus Nottinghamshire (England) nd e nds Leicestershire, Rudand and Northamptonshire	3	Real estate activities	£5,145m	-20
Vertex (Idlands) Vorcestershire (ickshire) Bedfordshire) and	4	Construction	£3,141m	-70
	5	Human health and social work activities	£3,099m	50
			Output Loss Total:	-145

Employees - Leicestershire, Rutland and Northamptonshire					
West Yorkshire	1	Wholesale and retail trade; repair of motor vehicles	143,000		
Derbyshire and Nottinghamshire (England) Leicestershire, Rutland and Northamptonshire Eas idlands Vorcestershire ickshire Bedfordshire and Northamptonshire and ickshire	2	Manufacturing	102,000		
	3	Human health and social work activities	97,000		
	4	Administrative and support service activities	82,000		
	5	Education	76,000		

GVA - Lincolnshire						
Yorkshire Yorkshire South Yorkshire Lincolnshire Lincolnshire Lincolnshire East Midlands	1	Manufacturing	£2,261m	-55		
	2	Wholesale and retail trade; repair of motor vehicles	£1,932m	-50		
Derbyshire and East Midfallus Nottinghamshire (England) nd Leicestershire, Rutland and Northamptonshire	3	Real estate activities	£1,892m	-20		
Vorcestershire likishire Bedfordshire	4	Human health and social work activities	£1,254m	+50		
	5	Construction	£1,052m	-70		
			Output Loss Total:	-145		

Employees - Lincolnshire						
Ywest Yorkshire South Yorkshire Lincolnshire Derbyshire and Nottinghamshire (England)	1	Wholesale and retail trade; repair of motor vehicles	50,000			
	2	Human health and social work activities	41,000			
Nottlinghamshire (England) nd e nds Leicestershire, Rutland and Northamptonshire	3	Manufacturing	38,000			
West idlands Vorcestershire ickshire and Bedfordshire and Illandshire Illa	4	Administrative and support service activities	27,000			
	5	Education	24,000			

GVA - Herefo	ordsł	nire, Worcestershire	e and Warv	vickshire
Miss on	1	Manufacturing	£6,450m	-55
Cheshire Derbyshire Nottingham: Shropshire and Staffordshire West Midlands Leices Rutia	2	Real estate activities	£5,122m	-20
(England) West Northan Midlands Mest Midlands Mi	3	Wholesale and retail trade; repair of motor vehicles	£4,465m	-50
Gloucestershire Wiltshire and Bath/Bristol	4	Human health and social work activities	£2,224m	+50
	5	Construction	£2,223m	-70
			Output Loss Total:	-145

Employees - Herefordshire, Worcestershire and Warwickshire					
Cheshire Derbyshire Nottlinghams	1	Wholesale and retail trade; repair of motor vehicles	104,000		
Shropshire and Staffordshire West Midlands Leices	2	Manufacturing	82,000		
(England) West Northan Midlands Widlands Herefordshire, Worcestershire	3	Human health and social work activities	77,000		
Berks	4	Administrative and support service activities	53,000		
Gloucestershire Wiltshire and Oxfo	5	Education	52,000		

GVA - Shropshire and Staffordshire					
There is an	1	Manufacturing	£5,457m	-55	
Cheshire Derbyshire Nottinghams Shropshire and Staffordshire West Midlands Leices.	2	Wholesale and retail trade; repair of motor vehicles	£4,585m	-50	
West Midlands (England) West Northar Midlands Herefordshire, Worcestershire and Warwickshire	3	Real estate activities	£4,289m	-20	
Berks	4	Human health and social work activities	£2,960m	+50	
Gloucestershire and OXfi	5	Construction	£2,530m	-70	
			Output Loss Total:	-145	

Employees - Shropshire and Staffordshire					
Cheshire Derbyshire Nottlinghams	1	Wholesale and retail trade; repair of motor vehicles	120,000		
Shropshire and Staffordshire West Midlands Leices	2	Human health and social work activities	93,000		
(England) West Northan Midlands Widlands Herefordshire, Worcestershire	3	Manufacturing	89,000		
Rarks	4	Education	57,000		
Gloucestershire Berks Wiltshire and Bath/Bristol	5	Administrative and support service activities	51,000		

GVA - West Midlands					
There is an	1	Manufacturing	£10,173m	-55	
Cheshire Derbyshire Nottinghams Shropshire and Staffordshire West Midlands Leices	2	Wholesale and retail trade; repair of motor vehicles	£7,753m	-50	
West Midlands (England) West Midlands Northan Midlands Herefordshire, Worcestershire and Warwickshire	3	Real estate activities	£6,845m	-20	
Gloucestershire Wiltshire and Bath/Bristol	4	Human health and social work activities	£5,908m	+50	
	5	Education	£4,993m	-90	
			Output Loss Total:	-165	

Employees - West Midlands					
Cheshire Derbyshire Nottlingham	1	Wholesale and retail trade; repair of motor vehicles	200,000		
Shropshire and Staffordshire West Midlands Leices	2	Human health and social work activities	175,000		
(England) West Northar Midlands St. Herefordshire, Worcestershire and Warwickshire	3	Manufacturing	132,000		
mary of	3	Education	132,000		
Gloucestershire Wiltshire and Oxfo	4	Administrative and support service activities	118,000		

		GVA - East Anglia		
Lincolnshire	1	Real estate activities	£7,953m	-20
East Midlands re (England) shire and conshire and constitution and const	2	Manufacturing	£7,943m	-55
East Arigina East of England	3	Wholesale and retail trade; repair of motor vehicles	£6,708m	-50
Bedfordhire and Hertfordshire Essex e shire See London Inset (South East Med (England)	4	Human health and social work activities	£4,951m	+50
	5	Professional, scientific and technical activities	£4,515m	-40
			Output Loss Total:	-115

Employees - East Anglia						
Lincolnshire East Midlands	1	Wholesale and retail trade; repair of motor vehicles	180,000			
shire, and onshire	2	Human health and social work activities	147,000			
East Anglia East of England	3	Education	110,000			
Bedfordshire and Hertfordshire Ishire Shire See London Inset	4	Manufacturing	106,000			
South East Kent (England)	5	Administrative and support service activities	102,000			

GVA - Bedfordshire and Hertfordshire					
Lincolnshire	1	Wholesale and retail trade; repair of motor vehicles	£7,836m	-50	
East Midlands re (England) shire.	2	Real estate activities	£7,713m	-20	
East Angila East of England Bedfordshire	3	Manufacturing	£6,304m	-55	
enshire See London Inset	4	Construction	£5,335m	-70	
(South East (England)	5	Professional, scientific and technical activities	£4,778m	-40	
			Output Loss Total:	-235	

Employees - Bedfordshire and Hertfordshire						
Lincolnshire East Midlands (England)	1	Wholesale and retail trade; repair of motor vehicles	152,000			
shire, and onshire	2	Administrative and support service activities	132,000			
East Anglia East of England	3	Professional, scientific and technical activities	112,000			
Bedfordshire and Hertfordshire Essex e. shire See London Inset	4	Human health and social work activities	88,000			
South East Kent (England)	5	Education	77,000			

		GVA - Essex		
Lincolnshire	1	Real estate activities	£6,958m	-20
East Midlands re (England) shire. Bedfordshire Hertfordshire Essex South East (England) Kent (England)	2	Wholesale and retail trade; repair of motor vehicles	£5,659m	-50
	3	Construction	£4,693m	-70
	4	Manufacturing	£4,075m	-55
	5	Human health and social work activities	£3,244m	50
			Output Loss Total:	-145

Employees - Essex						
Lincolnshire East Midlands	1	Wholesale and retail trade; repair of motor vehicles	129,000			
shire, and onshire	2	Human health and social work activities	94,000			
East Anglia East of England	3	Education	69,000			
Bedfordshire and and Hertfordshire Essex enshire See London Inset	4	Professional, scientific and technical activities	62,000			
South East Kent (England)	5	Administrative and support service activities	58,000			

GVA - Inner London - West						
London	1	Financial and insurance activities	£43,381m	-5		
	. 2	Professional, scientific and technical activities	£34,240m	-40		
Outer London West Order London East and North West Order London East and North West Order London Lead to London London Lead and London London Lead and London London London Lead and London Landon London East and North Lead London London East and North Lead London East and North London East and North Lead L	3	Information and communication	£26,872m	-45		
	4	Real estate activities	£20,877m	-20		
	5	Wholesale and retail trade; repair of motor vehicles	£12,150m	-50		
			Output Loss Total:	-160		

Employees - Inner London - West					
	1	Professional, scientific and technical activities	354,000		
London	2	Financial and insurance activities	239,000		
Outer London West Outer London West Inner London North West London London	3	Information and communication	200,000		
South South	4	Administrative and support service activities	196,000		
	5	Accommodation and food service activities	191,000		

GVA - Inner London - East						
London	1	Financial and insurance activities	£16,008m	-5		
	2	Information and communication	£14,411m	-45		
Outer London West Outer London West Outer London West Outer London West Outer London Set and Outer London	3	Professional, scientific and technical activities	£14,344m	-40		
	4	Real estate activities	£13,844m	-20		
	5	Administrative and support service activities	£7,064m	40		
			Output Loss Total:	-150		

Employees - Inner London - East					
	1	Professional, scientific and technical activities	201,000		
London	2	Human health and social work activities	152,000		
Outer London West Inner London North East North West West Unden North East and East North	2	Administrative and support service activities	152,000		
	3	Wholesale and retail trade; repair of motor vehicles	121,000		
	4	Information and communication	115,000		

GVA - Outer London - South					
London	1	Real estate activities	£7,839m	-20	
	. 2	Wholesale and retail trade; repair of motor vehicles	£2,665m	-50	
Outer London Flast and Outer London Control Flast and Outer London Control Flast and Outer London Outer London Outer London	3	Construction	£3,718m	-70	
V 3 3000	4	Professional, scientific and technical activities	£2,456m	-40	
	5	Human health and social work activities	£2,409m	50	
			Output Loss Total:	-130	

Employees - Outer London - South					
	1	Wholesale and retail trade; repair of motor vehicles	75,000		
London	2	Administrative and support service activities	63,000		
Outer London West Outer London West Inner London North West Inner London Inner London Sast and North Sast North Sast North Sast North Sast North Sast	3	Human health and social work activities	62,000		
South	4	Education	46,000		
	5	Professional, scientific and technical activities	40,000		

GVA - Outer London - East and North East						
Coter London West Other London Stat and London South	1	Real estate activities	£9,123m	-20		
	. 2	Construction	£4,050m	-70		
	3	Wholesale and retail trade; repair of motor vehicles	£3,718m	-50		
	4	Human health and social work activities	£2,812m	+50		
	5	Education	£2,353m	-90		
			Output Loss Total:	-180		

Employees - Outer London - East and North East					
	1	Wholesale and retail trade; repair of motor vehicles	95,000		
London	2	Human health and social work activities	80,000		
Outer London West And Inner London North West London West London Vest London Lo	3	Administrative and support service activities	66,000		
South	4	Education	63,000		
	5	Accommodation and food service activities	39,000		

GVA - Outer London - West and North West					
	1	Real estate activities	£193,142731rm	-20	
London	2	Information and communication	£8,705m	-45	
Outer London Seat and Outer London West Order London West And Seat North West London Lond	3	Wholesale and retail trade; repair of motor vehicles	£3,808m	-50	
	4	Transportation and storage	£7,325m	-35	
	5	C5dstrattitio n	£2, 3 53m	-90	
			Output Loss Total:	-220	

Employees - Outer London - West and North West					
	1	Wholesale and retail trade; repair of motor vehicles	19338,000000		
London	2	Human health and social work activities	96,000		
Outer London West North West Unner London North West Unner London North West Unner London East North East North East North East	3	Administrative and support service Transport and storage activities	92,000		
South South	4	Administrative and support service activities	89,000		
	5	PAofessionadation tifid foodselvical activities	39,000		

GVA - Berk	cshire	e, Buckinghamshire	e and Oxfo	rdshire
East of England Bedfordshire Berkshire Berkshire Berkshire	1	Information and communication	£14,169m	-45
	2	Wholesale and retail trade; repair of motor vehicles	£12,342m	-50
Hampshire and South East Liste d Wight (England) Surrey, East and West Sussex	3	Real estate activities	£11,729m	-20
	4	Professional, scientific and technical activities	£8,489m	-40
	5	Manufacturing	£7,580m	-55
			Output Loss Total:	-210

Employees - Berkshire, Buckinghamshire and Oxfordshire					
East of England Bedfordshire Buckinghamshire and Oxfordshire and Oxfordshire See London Inset Kent Hampshire and South East Kent Surrey, East and West Sussex	1	Wholesale and retail trade; repair of motor vehicles	212,000		
	2	Professional, scientific and technical activities	140,000		
	3	Education	139,000		
	4	Human health and social work activities	136,000		
	5	Administrative and support service activities	123,000		

GVA - Surrey, East and West Sussex					
East of England Bedfordshire England Bedfordshire Essex Hernordshire See London tol Responsible See London tol South East Kent Hampshire and (England) Surrey, East and West Susses	1	Real estate activities	£14,666m	-20	
	2	Wholesale and retail trade; repair of motor vehicles	£8,624m	-50	
	3	Professional, scientific and technical activities	£6,994m	-45	
	4	Manufacturing	£6,431m	-55	
	5	Human health and social work activities	£5,779m	+50	
			Output Loss Total:	-170	

Employees - Surrey, East and West Sussex						
estershire East of England Bedfordshire and Oxfordshire See London	1	Wholesale and retail trade; repair of motor vehicles	202,000			
	2	Human health and social work activities	179,000			
Hampshire and South East Sise of Wight (England) Surrey, East and West Sussex	3	Education	119,000			
	3	Professional, scientific and technical activities	119,000			
	4	Administrative and support service activities	107,000			

GVA - Hampshire and Isle of Wight					
Berkshire Buckinghamshire and Oxfordshire see London to like with the see London the see London to like with the see London the see London to like with the see London the see Lo	1	Real estate activities	£7,655m	-20	
	2	Wholesale and retail trade; repair of motor vehicles	£6,510m	-50	
	3	Manufacturing	£5,069m	-55	
	4	Information and communication	£4,568m	-45	
	5	Construction	£4,032m	-70	
			Output Loss Total:	-240	

Employees - Hampshire and Isle of Wight						
East of England Bedfordshire Hertfordshire Bud Oxfordshire Ire Bud Oxfordshire Ire and Oxfordshire See London Inset Kent Hampshire and South East Sle of Wight (England) Surrey, East and West Sussex	1	Wholesale and retail trade; repair of motor vehicles	141,000			
	2	Human health and social work activities	116,000			
	3	Education	82,000			
	4	Administrative and support service activities	74,000			
	5	Professional, scientific and technical activities	70,000			

		GVA - Kent		
Bedfordshire Bedfordshire Bedfordshire Ferrordshire Ferro	1	Real estate activities	£7,146m	-20
	2	Wholesale and retail trade; repair of motor vehicles	£4,967m	-50
	3	Construction	£4,146m	-70
	4	Manufacturing	£3,375m	-55
	5	Human health and social work activities	£2,838m	+50
			Output Loss Total:	-145

Employees - Kent			
East of England Bedfordshire B	1	Wholesale and retail trade; repair of motor vehicles	123,000
	2	Human health and social work activities	95,000
	3	Education	72,000
	4	Administrative and support service activities	61,000
	5	Accommodation and food service activities	51,000

GVA - Gloud	este	rshire, Wiltshire and	d Bath/Bris	stol area
7 West by Miglands	1	Real estate activities	£9,367m	-20
Vales Herefordshire, Worcestershire and Warwickshire les	2	Manufacturing	£8,033m	-55
Gloucestershire and on a minimum and on	3	Wholesale and retail trade; repair of motor vehicles	£7,566m	-50
(England) Devon	4	Professional, scientific and technical activities	£5,375m	-40
	5	Administrative and support service activities	£4,882m	-40
			Output Loss Total:	-205

Employees - Gloucestershire, Wiltshire and Bath/ Bristol area					
Vales Herefordshire, Worcestershire and Warwickshire	1	Wholesale and retail trade; repair of motor vehicles	181,000		
les Gloucestershire Buckin and O Wilishire and Bath/Bristol area South West Dorset and Somerset (England) Devon	2	Human health and social work activities	163,000		
	3	Professional, scientific and technical activities	106,000		
	4	Public administration and defence	104,000		
W.	5	Manufacturing	99,000		

	GVA	A - Dorset and Som	erset	
7 West of Milliands American	1	Real estate activities	£5,245m	-20
Vales Wales Herefordshire, Worcestershire les Gloucestershire and Warwickshire	2	Manufacturing	£3,420m	-55
Gloucestershire and O and O and O area area area area area area area ar	3	Wholesale and retail trade; repair of motor vehicles	£3,203m	-50
(England) Devon	4	Human health and social work activities	£2,577m	+50
	5	Construction	£4,882m	-70
			Output Loss Total:	-145

Employees - Dorset and Somerset				
West Midlands Wildlands Wales Herefordshire, Worcestershire and Warwickshire	1	Human health and social work activities	91,000	
les Gloucestershire and Output area and Warwickshire and Output area area area area and Output area area area area area area area are	1	Wholesale and retail trade; repair of motor vehicles	91,000	
	2	Manufacturing	56,000	
South West Dorset and Somerset (England) Devon	2	Accommodation and food service activities	56,000	
W.	3	Education	49,000	

		GVA - Devon		
	1	Real estate activities	£4,142m	-20
West Wales	2	Wholesale and retail trade; repair of motor vehicles	£2,744m	-50
South West (England) Devon	3	Manufacturing	£2,481m	-55
The state of the s	4	Human health and social work activities	£2,239m	+50
	5	Public administration and defence	£1,893m	-20
			Output Loss Total:	-95

Employees - Devon					
West Wales	1	Wholesale and retail trade; repair of motor vehicles	80,000		
	2	Human health and social work activities	78,000		
South West (England) Devon	3	Accommodation and food service activities	53,000		
Commission of soully beyon	4	Education	45,000		
	5	Manufacturing	41,000		

GVA - Cornwall & Scilly					
	1	Real estate activities	£1,612	-20%	
West Wales	2	Wholesale and retail trade; repair of motor vehicles	£626	-50%	
South West (England) Devon	3	Construction	£298	-70%	
Committee of the second	4	Human health and social work activities	£1,344	50%	
	5	Manufacturing	£373	-55%	
			Output Loss Total:	-145	

Employees - Cornwall & Scilly					
West Wales	1	Wholesale and retail trade; repair of motor vehicles	38,000		
	2	Accommodation and food service activities	34,000		
South West (England) Devon	3	Human health and social work	33,000		
Commission de la Commis	4	Education	17,000		
	5	Manufacturing	15,000		

GVA - West Wales and The Valleys					
Merseyside A	1	Manufacturing	£5,741m	-55	
West Wales	2	Real estate activities	£4,432m	-20	
Wales Wales Herefo	3	Human health and social work activities	£3,989m	+50	
West Wales	4	Wholesale and retail trade; repair of motor vehicles	£3,521m	-50	
		Public administration and defence	£2,997m	-20	
			Output Loss Total:	-95	

Employees - West Wales and The Valleys						
Merseyside	1	Human health and social work activities	130,000			
West Wales Shr	2	Wholesale and retail trade; repair of motor vehicles	106,000			
Wes Wes (Eng	3	Manufacturing	81,000			
Wales Wales Wales	4	Education	70,000			
	5	Accommodation and food service activities	62,000			

GVA - East Wales					
Merseyside 🗡	1	Manufacturing	£5,049m	-55	
West Wales Che	2	Real estate activities	£3,313m	-20	
Wales Wales Herefo	3	Human health and social work activities	£2,711m	+50	
West Wales	4	Wholesale and retail trade; repair of motor vehicles	£2,471m	-50	
	5	Public administration and defence	£2,012m	-20	
			Output Loss Total:	-95	

Employees - East Wales						
Merseyside Konna	1	Human health and social work activities	83,000			
West Wales West Wales West West West West West West West Wales Wales	2	Wholesale and retail trade; repair of motor vehicles	71,000			
	3	Manufacturing	62,000			
Wales Wales Wales	4	Administrative and support service activities	48,000			
and and the	5	Education	45,000			

Part 2

An Economic Sectoral Impact Analysis of Covid-19

Summary

- Analysis suggests sectors with high instances of face-to-face contact and output that occurs
 'in situ' have been hit hardest by the short-term impact of Covid-19 due to the impact of the
 government lockdown.
- Negative labour market impact across the sectors has been limited. This mitigation may be due
 to the widespread adoption of the **Coronavirus Job Retention Scheme**. Demand, and
 productivity, to a lesser degree, have been the main drivers of short-term negative economic
 impact.
- Instances of severe short-term damage to output may include, but are not limited to, the
 manufacturing, retail, accommodation, food service activities, arts, entertainment and recreation
 sectors.
- The communication and health sectors have both seen **limited output gains** from the new challenges posed by the current epidemic.
- As the government lockdown eases through the summer months, sectors may struggle with new trading conditions. Sectors hit severely could be most affected if they are unable to adapt to operation outdoors or socially distanced indoors.
- Long-term growth may depend on a number of factors. The magnitude of the economic
 contraction suffered as a result of the initial lockdown period, whether there will be another
 global spike in infection in the future and whether consumers are willing to return to preCovid spending levels could be considerable factors. These three aspects are seen to be key to
 understanding and planning the long-term resilience of businesses across all sectors.
- A second spike in infections could lead to further social distancing and lockdown procedures.
 Although businesses would be far better equipped to adapt due to the precedents from the
 initial spike, a lack of outdoor adaptation potential in the winter months and the limiting of
 already depleted cash reserves may see terminal decline in some sectors.
- Sectors where research suggests there is possible risk of **long-term decline** include retail, accommodation, food, administrative, support services, arts, entertainment and recreation.
- **Good growth potential for short-term** economic adjustment focuses on the ability to quickly reskill and adapt local economies to absorb job losses. Sectors with the highest instances may include manufacturing, health and transportation.
- Long-term good growth potential for economic adjustment focuses on environmental and economic sustainability. Sectors with potentially high levels of green jobs include utilities, professional services and manufacturing.

Sector	GVA Output Change	Demand	Imports & Exports	Labour Market	Productivity
Agriculture, Forestry and Fisheries (A)	0	Minimal Impact	Minimal Impact	Severe Impact	Significant Impact
Mining and Quarrying (B)	-20	Significant Impact	Severe Impact	Minimal Impact	Significant Impact
Manufacturing (C)	-55	Significant Impact	Severe Impact	Significant Impact	Significant Impact
Utilities (D & E)	-20	Severe Impact	Significant Impact	Minimal Impact	Minimal Impact
Construction (F)	-70	Severe Impact	Minimal Impact	Significant Impact	Significant Impact
Wholesale and retail trade; repair of motor vehicles (G)	-50	Severe Impact	Severe Impact	Significant Impact	Severe Impact
Transportation and Storage (H)	-35	Minimal Impact	Severe Impact	Significant Impact	Minimal Impact
Accommodatio n and food service activities (I)	-85	Severe Impact	N/A	Significant Impact	Severe Impact
Information and Communication (J)	-45	Positive Impact	Minimal Impact	Minimal Impact	Significant Impact
Financial and insurance activities (K)	-5	Minimal Impact	Minimal Impact	Minimal Impact	Minimal Impact
Real estate activities (L)	-20	Significant Impact	N/A	Minimal Impact	Severe Impact
Professional, scientific and technical activities (M)	-40	Significant Impact	Significant Impact	Minimal Impact	Significant Impact
Administrative and support service activities (N&O)	-40	Severe Impact	Significant Impact	Significant Impact	Severe Impact
Education (P)	-90	Severe Impact	Minimal Impact	Minimal Impact	Severe Impact
Human health and social work (Q)	+50	Positive Impact	Significant Impact	Positive Impact	Minimal Impact
Arts, entertainment and recreation (R)	N/A	Severe Impact	Severe Impact	Significant Impact	Severe Impact

Section A - Agriculture, forestry and fishing

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Agriculture, Forestry and Fisheries (A)	0	Minimal Impact	Minimal Impact	Severe Impact	Significant Impact

Impact Analysis

- Both domestic demand and imports/exports have suffered in the short-term, however long-term indicators suggest the sector could rebound, with the exception of concerns among dairy farmers.
 - ILO data suggests that global food demand has not fallen to previously estimated levels, and should recover as nations exit lockdowns. However, the NFU has outlined concerns from dairy industry representatives throughout the supply chain that the industry may suffer irreparable damage in the long term.
- Sectoral dependance on migrant and older workers could be a severe long-term threat to the sector. This could have a knock on effect on productivity.
 - 47% currently employed are aged between 60-69 (ONS: *Labour market economic commentary: April 2020*). This raises the risk of future shielding requirements if there is a 'second wave'. Migrant workers total around 75,000 strong each year, however this pool of labour is at risk due to the changes outlined in the Immigration Bill.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
 There is no agreed definition of what constitutes environmentally sustainable agriculture. However it is to be the centrepiece of the government's '25 Year Future Farming Plan'. Government focus on restoring natural capital and improving resource efficiency to be outlined in post-Brexit legislation. Scope for long term development. 	• A sector that is already highly diversified, with over 60% of farms reporting they have alternative revenue streams (DEFRA, <i>Defra's Farm Business Survey</i>).	 Potential for over 100,000 jobs in bioenergy nationally by 2050 (LGA: Estimating the number of low-carbon and renewable energy jobs.) The sector's importance may be amplified by a reduction in imports due to post-Brexit tariffs.

Section B - Mining and Quarrying

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Mining and Quarrying (B)	-20	Significant Impact	Severe Impact	Minimal Impact	Significant Impact

Impact Analysis

- Research suggests there could be severe short-term weakening of the import/export market and failure of increased domestic demand, with potential long-term implications on financial viability.
 - Chinese demand for oil imports year on year are 2.5% below Q2 2019, however are expected to recover to up to 13 million barrels per day (b/d) in Q2 2020, up 16.3% compared to Q1 2020 (Wood Mackenzie.).
- Minimal labour market issues however evidence suggests productivity affected by lockdown. If demand was not to recover, long-term redundancy may be an issue.
 - Oil and gas workers have been given a Covid-19 quarantine exemption by the UK Home Office, allowing for favourable labour market conditions and long-term insurance productivity.
 - Heavy use of the furlough scheme in the short-term by firms (Energy Voice, *Petrofac to furlough 200 north-east workers*), and risk of further long-term layoff (Sky News, *Coronavirus: BP slumps to loss as industry body warns on UK oil and gas jobs.*).

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
Mining supports around 45% of the world's economic activities, however is extremely unsustainable . There may be little scope for an environmentally sustainable future.	• Technological change and automation estimated to lead to job losses of 35% in traditional mining practices (and up to 75% for operators of mining equipment like truck drivers (United Nations Conference on Trade and	Demand for the UK mining sector internationally is predicted to increase into the future due to rising energy costs, social and geopolitical risks, infrastructure shortages and resource nationalism (Deolitte).
• With the transition to green energy alternatives, the	Development.)	(Beomite).
industry is under pressure to adapt (Kellogg Innovation Network).	 Lack of short-term up-skilling potential due to structure of high-tech stem education to equip skills for the mining industry. 	

Section C - Manufacturing

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Manufacturing (C)	-55	Significant Impact	Severe Impact	Significant Impact	Significant Impact

Impact Analysis

- Domestic demand, imports and exports all fell to record lows during Q1, however businesses are recovering with the easing of lockdown.
 - Businesses are importing and exporting, but less than usual (Exports: 58%, Imports 78% (BICS).
- Businesses are fairly resilient, with 43% reporting reserves that can last four months or more (ONS BICS) however most expect annual profits to be significantly lower than usual.
 - 86% expect profits to be reduced or much reduced over the next six months and 85% see sales turnover being reduced or much reduced over the same period (Manufacturing Barometer Q4).
- Research suggest significant reliance on furlough and prediction of layoff in the long-term.
 - 89% of business relied on the furlough scheme when temporarily closed (BICS) and 55% expect staff numbers to be reduced or much reduced over the next six months (Manufacturing Barometer Q4).

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
• Scope for optimising processes that minimise negative environmental impacts, such as conserving energy and natural resources.	Prevalence of manual jobs makes the sector ideal for upskilling workers from other sectors more effected by Covid-19.	Potential for a share of jobs from the low emission vehicles and infrastructure, specifically in the manufacture of EV batteries and electric cars.
• Manufacturing innovations like IOT, automatisation, 3D print offer lower production and labour costs and greater efficiency, aiding environmental sustainability.	Sector has adapted to meet demand in different manufacturing areas, such as pharmaceutical and medical goods. Examples include the manufacture of surgical scrubs, ventilators and face-masks.	• Future sector worth 200,000 jobs by 2050 and is crucially environmentally sustainable, however is dependant on the development of skills within the workforce.

Sections D & E - Utilities

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Utilities (D & E)	-20	Severe Impact	Significant Impact	Minimal Impact	Minimal Impact

Impact Analysis

- Domestic demand is around 15% lower than this time last year.
 - The impact of COVID-19 on public finances has led to the cancellation of direct debits. These have run at three times their normal levels for domestic suppliers, and 10 times for non-domestic suppliers (KPMG).
- The impact on energy companies may be delayed as profits are reduced in the long-term.
 - Future cash flow problems and bad debts mixed with the operational challenges around social distancing rules may have led to late requests for government support (67% have applied for the Job Retention Scheme (BICS)).
- Dependence on commodities and primary sectors of the economy could leave utilities at risk of future long-term economic risk.
 - The collapse in the oil price may lead to the cutting back on capital spending and potential job losses (KPMG).

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
 Significant potential for environmentally sustainable growth during the transition to carbon zero. Expansion of low-carbon electricity, heat and alternative fuels may help 	Lack of short term up-skilling potential possibly due to structure of high-tech stem education to equip skills for the utilities industry.	• Future sectoral growth could create over 625,000 jobs by 2050 in low-carbon electricity, heat and alternative fuels (LGA: Estimating the number of low-carbon and renewable energy jobs).
reduce the dependance on fossil fuels such as gas and coal.		Impact of sectoral growth onto secondary and tertiary industry may allow for security of investment opportunity.

Sections F - Construction

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Construction (F)	-70	Severe Impact	Minimal Impact	Significant Impact	Significant Impact

Impact Analysis

- Despite sites suffering little loss to productivity as a result of limited closure, evidence suggests construction demand fell in the short-term.
 - The decrease in total demand (6.2%) in March 2020 could be due to falls in all new work sectors; private new housing and private commercial were the largest contributors, falling by 6.4% and 7.1% respectively (ONS).
- Imports and labour supply has also been reduced.
 - Demand for labour fell by 70% in April and 51% of businesses found that they were able to import less than normal (BICS).
- High levels of self employment and macroeconomic trends may suggest long-term difficulty.
 - 36% of all people working in the sector are self employed (NOMIS) and the sector only reached pre-crisis levels of growth this year. The sector may struggle to recover from a prolonged period of economic stress.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
Some potential for of "carbon locked" materials and other eco-friendly materials may help reduce the environmental impact of new building	Skills gap as of 15 key trades in the sector, 40% show skills shortages (The Federation of Master Builders.)	Future growth opportunity linked to the infrastructure required to reach carbon neutral.
projects.	 Ageing workforce as one in five construction employees were aged over 55 (ONS.) With the correct skills strategy, the sector may have considerable scope for adaptation. 	Low-carbon infrastructure will create a predicted 200,000 jobs nationally by 2050 (LGA: Estimating the number of low-carbon and renewable energy jobs).

Sections G - Wholesale and retail trade; repair of motor vehicles

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Wholesale and retail trade; repair of motor vehicles (G)	-50	Severe Impact	Severe Impact	Significant Impact	Severe Impact

Impact Analysis

- With the closure of all non-essential retailers, evidence shows the demand for and productivity of the sector has been hampered in the short-term.
 - Despite online sales surging in certain sub-sectors, short term footfall fell by 45% in March and sales by 18% in April.
- A long-term economic recession and possible second spike in infections could suggest poor demand may continue.
 - In the short-term, 96% of retailers reported cashflow difficulties, with 40% facing difficulties meeting tax liabilities. A further 31% of retailers also faced constraints on the availability of external finance (CBI).
- High profile insolvencies so far may be the tip of the iceberg, as more businesses could be at risk of collapse in the long-term.
 - Thousands of jobs have been lost at Debenhams, Laura Ashley, Oasis and Warehouse, and BrightHouse. 27% of businesses interviewed have less than three months worth of cash reserves left (BICS).

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
• Some potential to reduce the 300,000 tonnes of clothing every year that is incinerated or sent to landfill in the UK by investing in a smarter supply chain using blockchain and automation technology.	 Prevalence of manual jobs makes the sector ideal for upskilling workers from other sectors more effected by Covid-19. However, the long-term viability of jobs may be hampered by a second lockdown. Skills in the sector are transferable within subsectors. 	 There are indicators that long-term economic sustainability in the traditional retail setting is diminishing. A hybrid model of online and traditional retail may be the answer to ensure stability in the long-term to ensure post-Covid reslience.

Section H - Transportation and storage

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Transportation and Storage (H)	-35	Minimal Impact	Severe Impact	Significant Impact	Minimal Impact

Impact Analysis

- In the short-term, evidence suggests the impact of the closure of air transport hubs has appeared devastating for the transportation sector.
 - British Airways and Virgin Atlantic have seen vast redundancies. BA has given contract ultimatums to staff that has led to '42,000 people having their pay, terms and conditions totally torn up' (Transport Select Committee).
- However, significant demand for transportation and storage services have persisted domestically.
 - 95% of firms continued to trade during the height of the lockdown and government funding for domestic travel has seemingly safeguarded the industry.
- Long-term financial pressure and consumer confidence may lead to redundancies in international focused industry.
 - The air transport industry may not reach 2019 levels of demand until 2022 (IATA) and 28% of transport firms report that they have less than three months worth of cash reserves to remain operating.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
The transport sector is seen to be highly environmentally unsustainable, especially with its dependance on aviation and shipping.	Transport and storage requires relatively low levels of formal training , therefore may be idea for short term re-skilling.	• The sector is a vital support sector for the wider economy, therefore research suggests it will be sustained in the long-term.
An economic shift to electric vehicles may help combat the negative environmental impact.		
 Production of low-carbon infrastructure and batteries will assist the creation of low carbon jobs in other sectors. 		

Section I - Accommodation and food service activities

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Accommodation and food service activities (I)	-85	Severe Impact	N/A	Significant Impact	Severe Impact

Impact Analysis

- The sector has been forced to near totally shut down as a result of the widespread lockdown which is suggested to have stifled domestic demand and productivity.
 - 78.1% of businesses had temporarily closed or paused trading during the lockdown and the hospitality sector saw sales decline 21.3% in the first quarter of 2020.
- Adaptation by businesses may be seen to have helped combat some of the negative impact.
 - A government statutory instrument has allowed food service businesses to temporarily open as takeaways until March 2021, a move which as allowed large companies such as Pret and smaller businesses to 'get their supply chain up and running'.
- Long-term recovery may be dependent on the easing of the lockdown, tourism and public health, all of which are unpredictable factors.
 - 44% of businesses surveyed had less than three months of cash reserves available (the highest rate in the BICS), suggesting the sector is extremely vulnerable to any further economic shocks or shutdown.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
Some opportunity for suitability development of waste by the sector. Food being wasted in the sector is estimated at £3billion per year (WRAP). Future planning brings opportunities to reduce waste and save money.	As a sector under intense pressure and with a primarily youthful workforce (NOMIS), the skills in the sector are highly useful to diversify other economic sectors.	Further adoption and development of takeaway and outdoor retail opportunity.

Section J - Information and Communication

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Information and Communication (J)	-45	Positive Impact	Minimal Impact	Minimal Impact	Significant Impact

Impact Analysis

- Computer technology and cloud solutions have seen record levels of demand and potentially remain relatively unaffected by the virus.
 - 94.4% of companies interviewed have continued to trade thought the lockdown period in some capacity, and demand for cloud computing solutions in particular has soared, particularly in the health sector. Exports and imports have also remained steady, and could recover.
- Research suggests creative media, especially film and television, has suffered issues of productivity due to lockdown limitations however this could improve in the long-term.
 - ITV outlined losses of 42% in advertising revenue, furloughing 800 members of staff and 50,000 freelancers are estimated to have lost work as film production stalled (BECTU).
- Long-term issues may hamper the viability of offline media, such as the publishing industry.
 - Newspapers have seen a fall in sales of around 30% (The Guardian) and hyper-regional promotional events such as the Edinburgh Book Festival and Hay Literary Festival have been cancelled.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
Some opportunity for circular economic adaptation within the sector, and more broadly across the economy is necessary, such as increasing reliance on secondary metal production and encouraging a more effective, concerted waste management with a zero landfill approach.	Lack of short-term re-skilling potential due to structure of high-tech stem education to equip skills for the technological subsection of the industry.	Information and technology will gain a share of future jobs in the low-carbon services sector. The sector is estimated to create an extra 164,000 jobs by 2050.

Section K - Financial and insurance activities

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Financial and insurance activities (K)	-5	Minimal Impact	Minimal Impact	Minimal Impact	Minimal Impact

Impact Analysis

- Analysis suggests short-term financial and insurances activates have taken an expected hit, however the markets have stabilised thanks to the interventions of central banks.
 - The FTSE 100 index fell by a fifth since the start of the year so far, down from 7,604 points. The Bank of England's Term Funding Scheme with additional incentives for SMEs helped reassure investors in March.
- Recent signals in the financial markets demonstrate stocks rallying as a result of national lockdowns being lifted.
 - In the penultimate week of May, the FTSE enjoyed four consecutive days above 6,000 points for the first time since the UK went into lockdown.
- Financiers may be reluctant to commit to any further long-term investments and the long-term impact of the virus and any further lockdown could determine the response of the markets.
 - Further analysis of financial market trends should be developed as the virus is tracked and either resurges or is repressed.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
 Sector leaders may wish to integrate climate risk into their operations and transitioning from measurement to management. The sector may wish to emphasise cross-firm collaboration and engage governments with action on climate change. 	Skills in the sector are highly specialist, and it is not easy to up-skill labour quickly.	• Financial and insurance activities will gain a share of future jobs in the low-carbon services sector. The sector is estimated to create an extra 164,000 jobs by 2050.

Section L - Real estate activities

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Real estate activities (L)	-20	Significant Impact	N/A	Minimal Impact	Severe Impact

Impact Analysis

- Real estate activity may have been drastically impacted by the government lockdown and the closure of some construction sites, reducing supply of housing stock.
 - 74% of estate agents found that buyer enquires had fallen and 69% reported falls in sales (Residential Market Survey).
- There is evidence that, as the lockdown is lifted, the sector will not suffer 2008 financial crisis-style consequences.
 - Whereas house prices fell by 16% in 2008, economists are predicting only a 4% reduction in the figure in the wake of Covid-19 (Capital Economics) and suggest that consumers are postponing property purchases rather than cancelling them altogether.
- Long-term estimates could be dependant on the wider macroeconomic trends of the incoming recession, and whether consumer confidence is able to be maintained.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
 Real estate is predicted to be an extremely challenging sector to become environmentally sustainable, as it has little environmental output. Investment in environmentally sustainable real estate may be a potential innovation. 	 Skills in the sector are highly specialist, and are not easy to re-skill labour quickly. The sector is also not a large employer, despite its GVA output. 	The sector is a vital support sector for the wider economy, therefore is guaranteed to be sustained in the long-term and is dependant on wider macroeconomic trends.

Section M - Professional, scientific and technical activities

	Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
S	Professional, cientific and technical activities (M)	-40	Significant Impact	Significant Impact	Minimal Impact	Significant Impact

Impact Analysis

- As a highly productive sector, short-term indicators suggest the sector has lacked the capacity to maintain levels of exports and imports.
 - 74% of businesses are still able to export, but less than usual (BICS).
- There highly adaptable nature of the sector has allowed it to continue to trade, however certain subsectors that are dependant on primary/secondary industry may suffer, such as legal services.
 - Through the refocusing of all scientific activity to COVID-19 related work, most businesses have continued to trade.
- There is the possibility that the sector could be affected by a potential lack of long-term demand if consumers view services as non-essential.
 - Long-term demand is potentially a serious hindrance to its long-term economic prospects as both business and consumer finance worsens as profits narrow.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
• The sector may wish to adapt to the low-carbon services sector. Further information under economic sustainability.	• A highly specialised profession that requires high levels of educational and vocational training.	• The sector will gain the bulk share of future jobs in the low-carbon services sector. The sector is estimated to create an extra 164,000 jobs by
 Expansion of corporate social responsibility and other development methods may be a possible option. 	 Relative ease of adaptation to cope with changing and diverse socio-economic factors. 	2050.
	• Unsuitable for short-term re- skilling from other Covid-19 hit sectors.	

Section N & O - Administrative and support service activities

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Administrative and support service activities (N&O)	-40	Severe Impact	Significant Impact	Significant Impact	Severe Impact

Impact Analysis

- With the sector dependant on primary and secondary industry, analysis suggests the sector has suffered a serious decline in productivity and demand.
 - Swissport, an aviation support service provider has seen a 95% drop in income and 70% of their costs are on salaries, and 56% of businesses that responded stated that income had dropped by more than 20% since the start of the lockdown (BICS).
- As a sector reliant on supporting other industry, the extent to which the short-term impact can be negated may depend on wider macroeconomic factors.
 - 36% of business that responded had less than six months of cash reserves left (BICS). The sector includes tour guides and tourist services. With tourism seen to be severely hit by the crisis, this too may be an area that struggles in the medium to long-term until tourism returns to pre-COVID levels.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
The sector may wish to adapt to the low carbon infrastructure sector. Further information under economic sustainability.	Skills required for the sector are extremely varied , which may make the sector valuable to mitigate job losses, depending on long-term economic trends.	The sector will gain a share share of future jobs in the low carbon infrastructure and vehicle sector. The sector is estimated to create an extra 200,000 jobs by 2050.

Section P - Education

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Education (P)	-90	Severe Impact	Minimal Impact	Minimal Impact	Severe Impact

Impact Analysis

- State and private educational bodies have seen a closure of 'face to face' services, however the sector has adapted to using online technology to continue to provide limited services.
 - All universities in England and Wales had closed their physical spaces. Some schools are currently only allowing selected year groups.
- The government plans to reopen state education in the medium-term. Universities are planning to teach a greater proportion of classes via online methods.
 - A recent announcement by the University of Cambridge that all teaching is to take place online is set to be the norm for further education, as per anecdotal evidence from university staff.
- Long-term demand from overseas and domestic higher education applicants may be severely diminished the long-term, and output may be hugely reduced.
 - Universities UK announced that they are "looking at at least a five-year recovery period in terms of the global numbers of people who move between countries for education."

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
As per the 2019 Sustainability in Education Report, the sector will continue to integrate UN Development Goals within both public and private institutions. It is already relativity environmentally sustainable.	Skills in the sector are highly specialist, and it is not easy to re-skill labour quickly.	The sector is crucial in the development of the UK workforce , and is seen to be heavily reliant on government assistance.

Section Q - Human Health and social work activities

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Human health and social work (Q)	+50	Positive Impact	Significant Impact	Positive Impact	Minimal Impact

Impact Analysis

- Evidence suggests this sector has been one of the few that has seen a considerable increase in short-term demand and labour.
 - Despite businesses in the sector struggling with higher prices for goods and services, general demand has been extremely high due to the short-term pandemic conditions.
- As the lockdown eases, demand could remain high and may increase as consumer confidence to engage with health services improves.
 - Visits to A&E have been around 50% less that usual due to reservations about Covid-19 infection rates. As confidence in public health increases, human health and social work may see an increase in demand and brace itself for a productivity boom.
- Irregardless of the pandemic, demographic changes in the UK population may increase demand in the long-term.
 - With an increasingly ageing population, health and social care should be a crucial area for long-term.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
Research suggests little opportunity for further environmental sustainability, other than using technological solutions and blockchain to prevent wastage of resources.	Skills required for the sector are extremely varied , which may make the sector valuable to mitigate job losses, depending on long -term economic trends.	The sector is crucial in the health of the UK workforce, and is heavily reliant on government assistance. Its economic sustainability may be dependent on government policy and NHS leadership.

Section R - Arts, entertainment and recreation

Sector	GVA Output Change	Domestic Demand	Imports & Exports	Labour Market	Productivity
Arts, entertainment and recreation (R)	N/A	Severe Impact	Severe Impact	Significant Impact	Severe Impact

Impact Analysis

- Due to the face-to-face nature of the services provided by the sector, evidence suggests its output and productivity has been severely diminished due to the pandemic.
 - 80% of businesses were closed in May and 42.6% reported turnover has been reduced by greater than 50% (BICS).
- As the government lifts lockdown restrictions, it is possible that the sector will be one of the least able to adapt to social distancing regulations.
- Long-term economic prospects may be dependent on a return to usual trading conditions. As a result, any further disruption may be detrimental for many in the industry.
 - Many cultural venues and businesses rely on donations to remain viable. A deep recession may diminish the rate and size of donations. Cash flow and reserves are extremely low in the sector.

Environmental Sustainability	Adaptability and Skills	Economic Sustainability
Evidence suggests little opportunity for further environmental sustainability as the sector is already relatively sustainable.	Skills in the sector are highly specialist, and it is not easy to re-skill labour quickly.	The sector has possible issues of sustainability due to its dependance on face-to- face service provision. Its ability to operate in the post- Covid economy will depend on social distancing.