

Impact of flooding on key business sectors in Devon and Somerset 2012-13

Final report

16 July 2013



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1. Introduction

- 1.1 Between April 2012 and March 2013, Devon and Somerset faced some of the wettest weather experienced for years. The months of April and June 2012 were individually the wettest since records began in 1910, with the period from April through June also seeing unprecedented accumulations of rainfall for the UK. Further heavy rain in November led to more disruption with flooding events causing significant disruption to homes, businesses, and transport. This report was commissioned to investigate the extent of the costs to businesses.
- 1.2 The survey identifies the nature and scale of the impact of the floods on key business sectors within the worst hit areas of Devon and Somerset. With over 50,000 businesses across the two counties, and the need to provide analysis by county and sector, the survey had to focus on the key sectors that were likely to have suffered the greatest losses and on the areas that were *most seriously affected by the floods* over the last year (2012/13). The five sectors it covered are: agriculture, tourism (including food and drink), retail, distribution and construction.
- 1.3 The geographical focus was provided by Devon and Somerset County Councils which identified 77 wards where flooding caused the biggest problems. This comprised 57 in Devon (24% of the total of 236 wards in the county) and 20 in Somerset (15% of the total of 142 wards).
- 1.4 The impacts reported here represent estimates of the costs to the 2,535 businesses in these key sectors and worst hit wards. There will no doubt be further costs to businesses in other sectors and wards, but these are not likely to be as severe.
- 1.5 SQW worked with QA Research to carry out a telephone survey of 600 businesses (300 in each of Devon and Somerset counties). The interviews were carried out in May 2013 and asked businesses a set of questions about the positive and negative impacts of floods over the past 12 months.

How we measure impact

- 1.6 The performance of a business is measured by the difference between its costs and its income. The flood events impacted on both of these elements. The floods caused damage that requires expenditure on repairs and replacements (costs) and can also have an impact on the number of customers, output and sales (income). The analysis brings these together to show the overall effect on the businesses in these sectors
- 1.7 To collect the information businesses were asked, firstly, whether the floods have had any impact on their businesses, if so, what type of effect this was and to provide a broad estimate of how much it had cost them. Based on these results, the average values per business and for each sector were calculated for the two counties. The analysis also took into account the “multiplier” effects which capture the wider impact on suppliers to the businesses that lost trade.

Main results

- 1.8 Overall, the report reinforces the scale and nature of the impacts of the flooding on businesses in the worst hit areas. It estimates losses of £7.4 million for the businesses in five key sectors across the worst hit areas in Devon and Somerset, and £8.5 million taking into account the effects on suppliers to the businesses that lost trade. The biggest impacts were on a relatively small number of agriculture and tourism businesses that have been hit very hard.
- 1.9 It must be taken into account that this is the effect across the two counties in a limited number of sectors and communities that were surveyed. Additional effects would have been experienced by businesses not surveyed in Devon, Somerset and the wider South West.
- 1.10 The cause of the losses are divided between the damage to premises, land and equipment, and transport difficulties (which impact on staff and customer access as well as on deliveries and supplies). While the threat of businesses moving or closing as a result of past flooding appears small, a bigger issue is the potential impact on business *if the frequency of flooding events increases*. Businesses can often cope with, and expect to deal with, occasional events, but more regular floods would clearly have severe impacts on the business base and economy.
- 1.11 The publicity of the flooding was a concern for the tourism sector and for others interested in attracting new investment. Repeated flooding events and their coverage could eventually impact on perceptions of the area among potential visitors and investors.

2. The 2012/13 flood events

- 2.1 Between April 2012 and March 2013, Devon and Somerset faced some of the wettest weather experienced for years. The months of April and June 2012 were individually the wettest since records began in 1910, with the period from April through June also seeing unprecedented accumulations of rainfall for the UK.
- 2.2 The year was punctuated with flooding events in these counties causing significant disruption to homes, businesses, agriculture, tourism and transport. The following provides examples of the major flood events (although not all) and are based on news reports during the year. They provide a flavour of the damage that was caused.

29th April

- 2.3 In Somerset, the Environment Agency issued flood alerts for every river. In Devon, the Living Coasts wildlife park near Haldon Pier, in Torquay, was closed due to large waves making parts of the site unsafe for visitors. The rain caused Taunton Deane Cricket Club to flood and most of Vivary Park in Taunton was also left under water. Flooding in the Curry Moor area on the Somerset Levels affected farmers with livestock and high winds forced the National Trust to close its properties at Montacute, Barrington Court, Lytes Cary and Tintinhull Manor. Devon and Somerset Fire and Rescue were called out to a report of animals trapped in pens due to flooded river banks in Glastonbury. Fire crews dealt with fallen power lines near Wells and Highbridge, and a damaged roof in Burnham-on-Sea. Western Power reported 230 homes in the Midsomer Norton area and 96 homes in the Taunton area were without power.
- 2.4 First Great Western Service suspended services between Exeter St David's and Tiverton Parkway due to flooding. Devon County Council highway teams responded to around 175 incidents of fallen trees and branches across the county. In Old Village Willand, seven people had to be ferried to safety on a fire appliance after a vehicle was trapped in rising floodwater on Monday morning.

7th July

- 2.5 Severe flood warnings were issued in the South West region on the rivers Yealm, Bride and Axe. Flood alerts continued on the Stour and Exe rivers after the county had a month's worth of rain in 24 hours. Yealmpton was one of the places worst affected by the rain where more than 80mm (3.1in) fell in 24 hours.
- 2.6 Train services in the Axminster area were disrupted and South West Trains was unable to serve stations between Yeovil Junction and Honiton. Staff at Dartmoor Zoo spent much of the weekend repairing paths after a drainage system was "totally overwhelmed" by rain.
- 2.7 Traffic was disrupted across the county, with surface water flooding affecting roads across the region. The A396 Exeter Road in Tiverton closed due a collapsed manhole and subsequent flooding. The A35 in Charmouth closed following a landslip and flooding. Train services across Devon were disrupted following flooding on the tracks. Yeovil Junction Station was inaccessible to passengers and South West Trains advised passengers not to

travel between Exeter and Yeovil unless absolutely necessary. Fire crews responded to more than 100 flooding-related incidents. Working with police, the Environment Agency and other partners, fire crews have rescued people from vehicles stuck in floodwater and from flooded properties in extremely difficult conditions.

23 September 2012

- 2.8 Heavy rain caused major travel disruption in Devon and Cornwall on the 23rd with some London trains suspended. Flooding near Exeter and Tiverton affected services by South West Trains, Cross Country and First Great Western. Devon and Somerset Fire and Rescue Service said a few properties had been flooded in east Devon. More than half an average month's rainfall fell across parts of the region in a 24-hour period. Some areas recorded 58mm (2in) of rainfall in 24 hours.

11th October 2012

- 2.9 Heavy rain caused flash floods in Clovelly, a Devon coastal village, damaging homes and pulling up cobbles in the street. The worst of the flooding was said to be in the main part of the village - a popular tourist destination. Other parts of Devon were also affected by the heavy rain. The A39 at Parracombe in Devon was shut both ways in the late afternoon due to flooding at Broadoak Hill. Low-lying parts of Tiverton were flooded, with the river Lowman bursting its banks. The A388 outside Southcott Garage, Holsworthy, had flooded and the A3072 between Bude in north Cornwall and Holsworthy was blocked in places.

21st Nov 2012

- 2.10 Heavy rain and flooding in Devon "cut off" some villages, closed roads and disrupted trains. People were evacuated from their homes in a village near Tiverton after the canal breached its banks. Hundreds of First Great Western rail passengers were stranded in Exeter after services were cancelled because of problems on lines caused by rain between Exeter and Taunton. Between 20mm to 39mm (0.8in to 1.5in) fell in 12 hours overnight on saturated ground. Devon and Somerset Fire and Rescue Service reported that crews had been pumping flooded homes while attending more than 50 serious incidents in both counties after more than 310 weather-related calls.
- 2.11 The biggest ever pumping operation was undertaken on the flooded Somerset Moors and Levels. The Environment Agency brought in extra pumps to help disperse the water, at a rate of 10 tonnes per second. The pumping operation was centred on the areas of Curry Moor, Moorland and Langport. About 100 people were taken by boat and tractor to get food after floods trapped them in their Somerset village. Almost two weeks after the floods, the village of Muchelney near Langport in Somerset was still cut off by flood water.
- 2.12 The Grand Western Canal breached some of its banks at Halberton, near Tiverton, where some of the residents from 20 houses in the village were evacuated to the village hall. The bank of the canal between Swing Bridge and Rock Bridge collapsed after sustained heavy rainfall. Following rapid intervention, the canal was dammed on both sides of the breach. Rain also caused a landslip of five tonnes of earth, blocking the line between Exeter and Waterloo. First Great Western cancelled some trains between Exeter St Davids and Taunton, cutting services to London.

- 2.13 On Saturday the 24th of November, 2012 the lower part of Buckfastleigh flooded. More than two dozen properties in and around Station Road. In Kennford, a woman was trapped under a tree and 30 properties were flooded as the River Kenn, which is normally little more than a stream, burst its banks.

Case Example 1

Minnows Touring Park, Devon

Minnows Touring Park is located near Sampford Peverell alongside the Grand Western Canal, offering 59 all-weather pitches. Customers are attracted by its proximity to the canal and the amenity this provides for fishing, walking, cycling, canoeing and bird watching. The touring park offers self-catering facilities and has a shop selling basic provisions. It encourages customers to use services in the village e.g. public houses, post office, shops and leisure facilities. The business has five employees in high season. Services and goods are sourced locally where possible.

The prompt response by DCC and Mid Devon District Council to the breach in the canal was vital in preventing a significant loss of income. The majority of bookings are placed in spring and the announcement of £3m funding for the repair of the canal by DCC in the middle of January 2013 came before bookings started. This meant the business was able to inform customers that the canal will be repaired and that the two sections of the canal are open and safe to use. More than half of the people enquiring about staying at the touring park knew of the breach and the business owner suspects that some guests have booked to come and see it.

There were also concerns that the tow path diversion initially put in place was not safe to use for walkers and families. This was resolved, and a new shorter and safer diversion was put in place. The breach therefore has had little impact on guests wishing to walk or cycle along the canal and on anglers. However, it restricts the length of the canal that can be used by canoeists and boats and the business has noticed a significant decrease in bookings from canoeists and boaters. Canoe clubs that regularly stay at the touring park have cancelled their stay with a loss of around £1000 of income. Overall, bookings between March and June this year have been down by around 20% compared to the same period last year and so far bookings for July and August are also down. However, the business owner cannot be certain that this is down to the breach in the canal, as the recession and bad weather have also had an impact. Future negative impacts are not expected. The business owner is optimistic about next year and hopes that the increased publicity as a result of the breach and the completed repair will draw more guests to the canal.

23rd December 2012

- 2.14 In Devon, 25 people were led to safety by emergency services in Stoke Canon, Exeter, after the River Exe burst its banks and a number of properties were flooded in Branton. The main road through the village was under several feet of water.

- 2.15 A major impact at this time were the rail problems and particularly at the junction near Cowley Bridge, in Devon, which crumbled away under the force of flooding. The line is the link between London Paddington and Penzance as well as to the Midlands and the North. The flooding at Cowley Bridge also meant trains were unable to run between Tiverton and Exeter.
- 2.16 Network Rail said one of two plastic dams set up to protect the railway line at Exeter to minimise flood damage is itself now under water.
- 2.17 In Umberleigh, Devon, a woman was rescued from a river after she was swept away from her car in flood water. Devon and Somerset Fire and Rescue Service said it had attended 68 flooding-related incidents on Saturday and seven on Sunday.

21st March 2013

- 2.18 The worst affected areas were Newlyn, Penzance, Mevagissey, St Ives, in neighbouring Cornwall and Plymstock in Devon with the fire service taking 50 calls between 18:00 and 21:00. In Devon, a landslip closed a long stretch of the A379 road in Shaldon, from Ringmore Road to Deane Lane in Maidencombe.

3. Business survey

Introduction

- 3.1 The survey aimed to identify the nature and scale of the impact of the floods on key business sectors within the worst hit areas of Devon and Somerset. SQW worked with QA Research to carry out a telephone survey of 600 businesses (300 in each of Devon and Somerset counties). The interviews were carried out in May 2013 and asked businesses a set of questions about the positive and negative impacts of floods over the past 12 months.
- 3.2 It is important to note that with more than 50,000 businesses across the two counties, **the survey focussed on the impact on the businesses in five sectors and in the 77 wards that were most likely to suffer from the flooding.**

Sectors

- 3.3 The impact of the floods was much more likely to impact on some business sectors rather than others. At the start of the research Devon and Somerset County Council identified five sectors, which were most likely to be affected, and provided business details for use in the telephone survey, using their internal business database. The sectors were identified because of their importance to the local economy and also because their performance is most vulnerable to flooding. The sectors included were:
- Retail
 - Tourism (including Food & Drink)
 - Distribution
 - Agriculture
 - Construction.

Geographic coverage

- 3.4 Devon and Somerset Councils were able to identify 57 wards in Devon (24% of the total of 236 wards in the county) and 20 in Somerset (15% of the total of 142 wards), where flooding was most likely to have been a problem. **The results relate only to these sectors and these wards.** The towns and wards where the survey took place are set out in Annex A.

Population and quotas

- 3.5 The total number of businesses in each of the sectors *within the identified wards* is shown in Table 3-1. There are 2,535 in total; 1,831 in Devon and 704 in Somerset. These form the population of businesses for the analysis.

Table 3-1: Number of businesses in key sectors within identified Wards

Sectors	Devon	Somerset	Both
Retail	522	181	703
Tourism including Food & Drink	669	269	938
Distribution	160	61	221
Agriculture	66	35	101
Construction	414	158	572
Total	1,831	704	2,535

Source: Devon/Somerset County Council data

- 3.6 In order to ensure that the sample is representative of this population, quotas were set for each ward and sector. This avoids biasing the survey, if for example, some types of business are more likely to respond. The use of telephone interviews also provides a much more representative sample than a postal or email survey which is very likely to be biased toward businesses that were impacted by the floods.
- 3.7 A map showing the Wards covered and the location of the businesses included in the sample is shown in Figure 3-1. This shows the distribution of the 600 interviews across the Wards that were designated as the most severely affected by the flooding.
- 3.8 The wards and interviews are mostly around central Somerset and in the south east and north of Devon. These wards were hit at different times throughout the year by the floods.

Sample

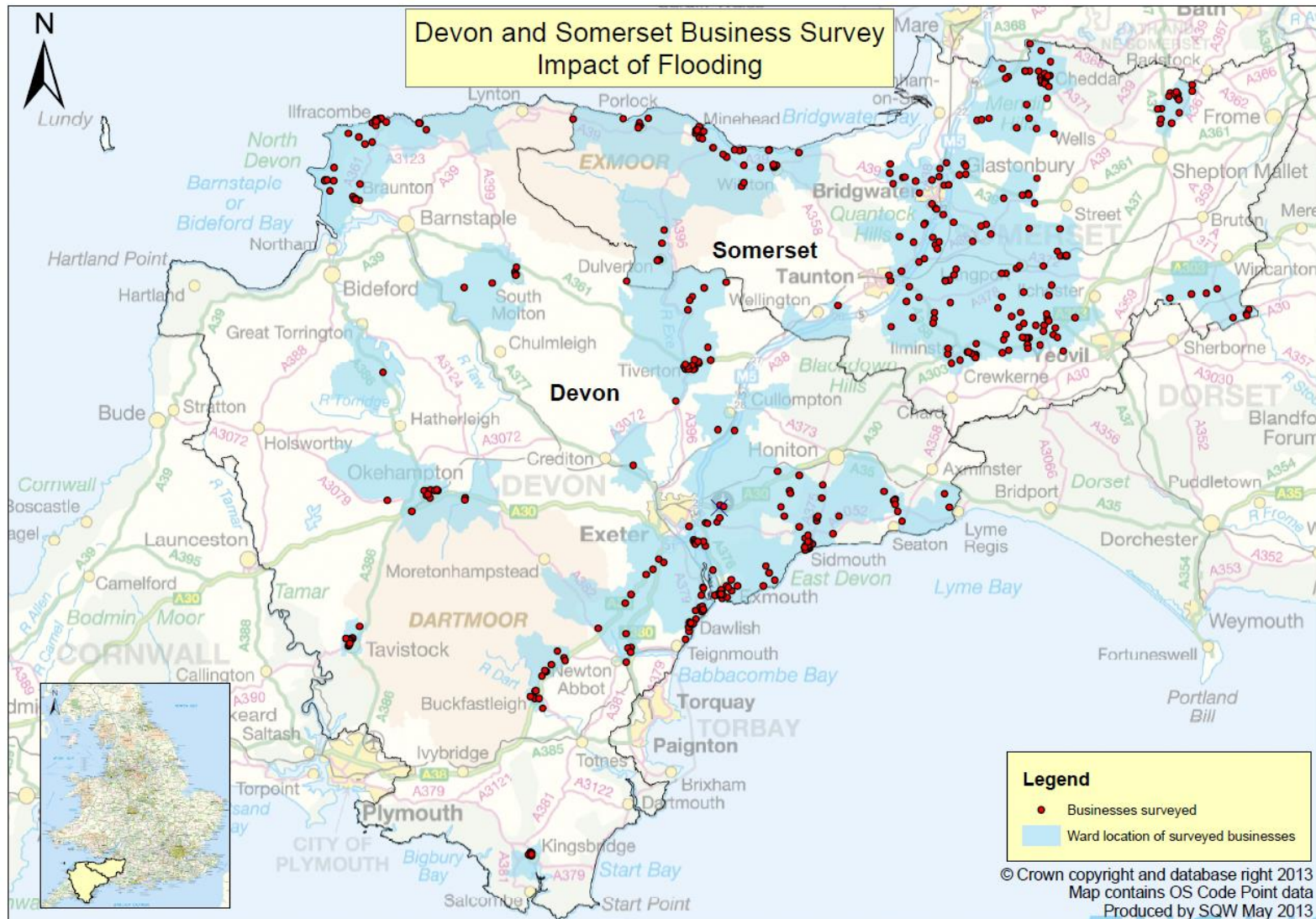
- 3.9 As an indication of how representative the sample is, Table 3-2 shows the proportion of interviews in each County, by sector. The sample of 600 is a generally representative of the population. The only exceptions are in Devon where construction is under-represented and tourism over-represented. In Somerset, the match is close, although retail is slightly under-represented.

Table 3-2: Sample and population by sector

	Sample		Population	
	Devon	Somerset	Devon	Somerset
Agriculture	3%	5%	4%	5%
Construction	13%	21%	23%	22%
Distribution	9%	5%	9%	9%
Retail	29%	28%	29%	26%
Tourism including Food & Drink	45%	40%	37%	38%

Source: Survey of 600 businesses in Devon and Somerset

Figure 3-1: Sample and population map



How many businesses in these wards and sectors were negatively affected?

- 3.10 Within the sample of 600 cases, around a third reported a negative effect. Eleven per cent of the businesses in these sectors reported a *significant* negative effect. In Somerset 40% reported some negative effect, and in Devon this was 29%. Overall 5% reported a positive effect (Table 3-3), in both Devon and Somerset.

Table 3-3: Proportion of businesses reporting negative and positive impacts of flooding by County

	Devon	Somerset	Grand Total
Significant negative effect	9%	12%	11%
Small negative effect	20%	28%	24%
No effect	65%	55%	60%
Small positive effect	5%	5%	5%
Significant positive effect	0%	0%	0%

Source: Survey of 600 businesses in Devon and Somerset

- 3.11 The sector that was most likely to report negative impacts was agriculture (60%) followed by tourism (41%) and retail (32%). In most sectors, businesses in Somerset were slightly more likely to report a negative impact than those in Devon. The proportion of construction, distribution and retail businesses that suffered a significant negative impact was relatively small, compared with agriculture.

Table 3-4: Proportion of businesses reporting negative and positive impacts of flooding by sector

Row Labels	Agriculture	Construction	Distribution	Retail	Tourism including Food & Drink
Significant negative effect	44%	0%	11%	6%	14%
Small negative effect	16%	22%	11%	26%	27%
No effect	40%	68%	73%	59%	57%
Small positive effect	0%	9%	5%	8%	2%
Significant positive effect	0%	1%	0%	1%	0%

Source: Survey of 600 businesses in Devon and Somerset

Table 3-5: Proportion of businesses reporting negative and positive impacts of flooding by County

Row Labels	Devon	Somerset
Significant negative effect	9%	12%
Small negative effect	20%	28%
No effect	65%	55%
Small positive effect	5%	5%
Significant positive effect	0%	0%

Source: Survey of 600 businesses in Devon and Somerset

Types of negative impact

- 3.12 For all businesses, **the most common negative impact was caused by customers unable to get to their premises or other locations (26%)**. In 15% of cases there were negative effects from staff unable to get to work or to meetings and in 12% of cases there were problems getting supplies. Businesses were asked to identify types of negative impacts from a list but also given the opportunity to add others.

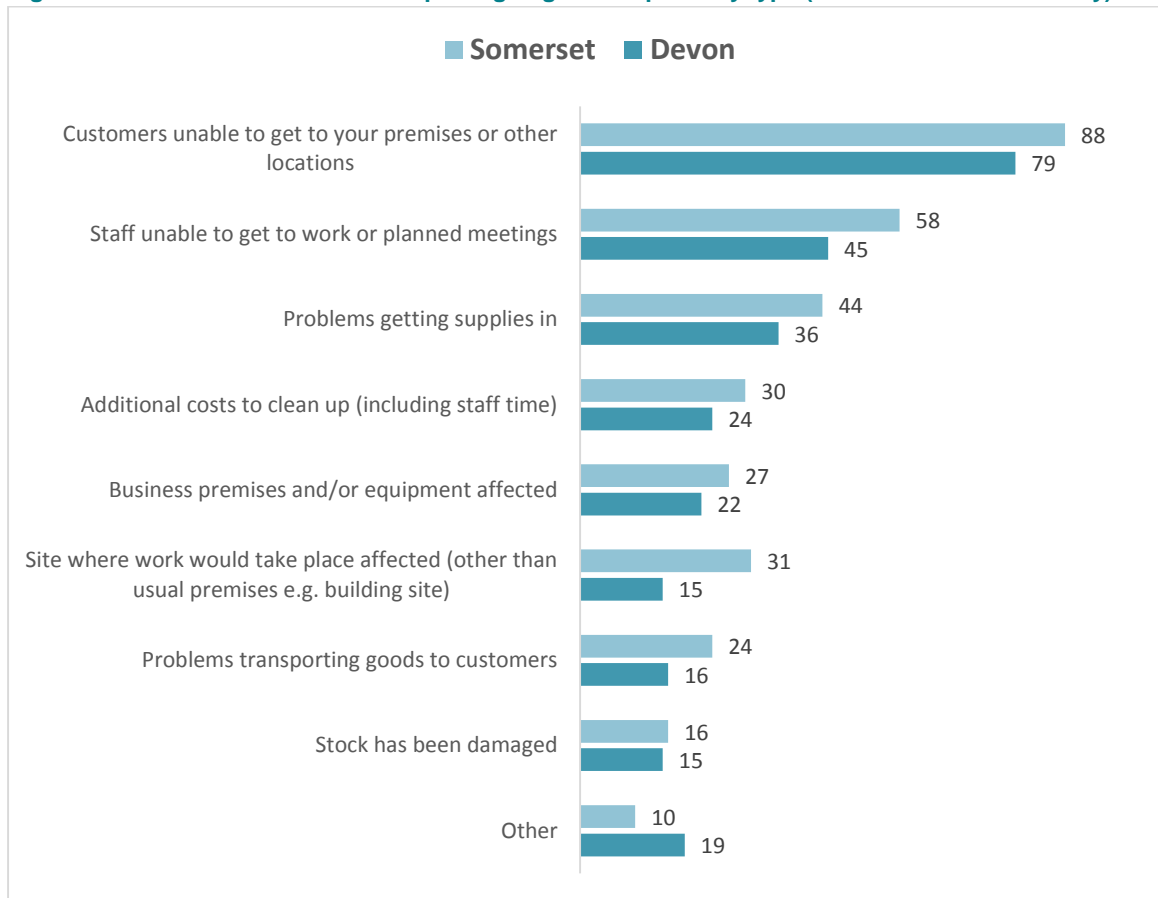
Table 3-6: Types of negative impact reported

Type of effect	Devon	Somerset	All
Customers unable to get to your premises or other locations	26%	29%	28%
Staff unable to get to work or planned meetings	15%	19%	17%
Problems getting supplies delivered	12%	15%	13%
Additional costs to clean up (including staff time)	8%	10%	9%
Business premises and/or equipment affected	7%	9%	8%
Site where work would take place affected (other than usual premises e.g. building site)	5%	10%	8%
Problems transporting goods to customers	5%	8%	7%
Stock has been damaged	5%	5%	5%
Other	6%	3%	5%
Base is all cases	300	300	600

Source: Survey of 600 businesses in Devon and Somerset

- 3.13 The results can be shown graphically (Figure 3-2) with the number of businesses. In almost all cases there are slightly more businesses in Somerset reporting negative effects than in Devon, although the pattern of “types” of impact is consistent across both.

Figure 3-2: Number of businesses reporting negative impacts by type (out of 300 in each County)



Source: Survey of 600 businesses in Devon and Somerset

- 3.14 The types of impact by sector show a pattern. **Agriculture businesses were more likely to report damage to premises and equipment, stock, additional clean-up costs and the ability to get to the workplace. The biggest type of impact for both retailers and tourism businesses was customers unable to get to the premises** (Table 3-7).
- 3.15 For farmers, the figure reflects the significant damage done by the flooding and the resultant lost output. For tourist businesses and retailers the impacts are a result of fewer customers, either because they physically could not get to the area or facility, or decided not to try. **Thirty eight per cent of the tourism businesses and 35% of the retailers believe that the flooding prevented customers accessing their shops or premises and that this has impacted on sales.**

Table 3-7: Types of negative impact reported by sector

	Agriculture	Construction	Distribution	Retail	Tourism including Food & Drink
Customers unable to get to your premises or other locations	12%	2%	11%	35%	38%
Staff unable to get to work or planned meetings	28%	15%	9%	19%	17%
Problems getting supplies in	4%	12%	0%	17%	15%
Additional costs to clean up (including staff time)	28%	4%	2%	5%	13%
Business premises and/or equipment affected	16%	4%	5%	5%	12%
Site where work would take place affected (other than usual premises e.g. building site)	20%	17%	7%	4%	5%
Problems transporting goods to customers	4%	8%	16%	9%	3%
Stock has been damaged	32%	3%	2%	5%	4%
Other	16%	4%	9%	3%	5%
Total cases	25	103	44	173	255

Source: Survey of 600 businesses in Devon and Somerset

Geographical impacts

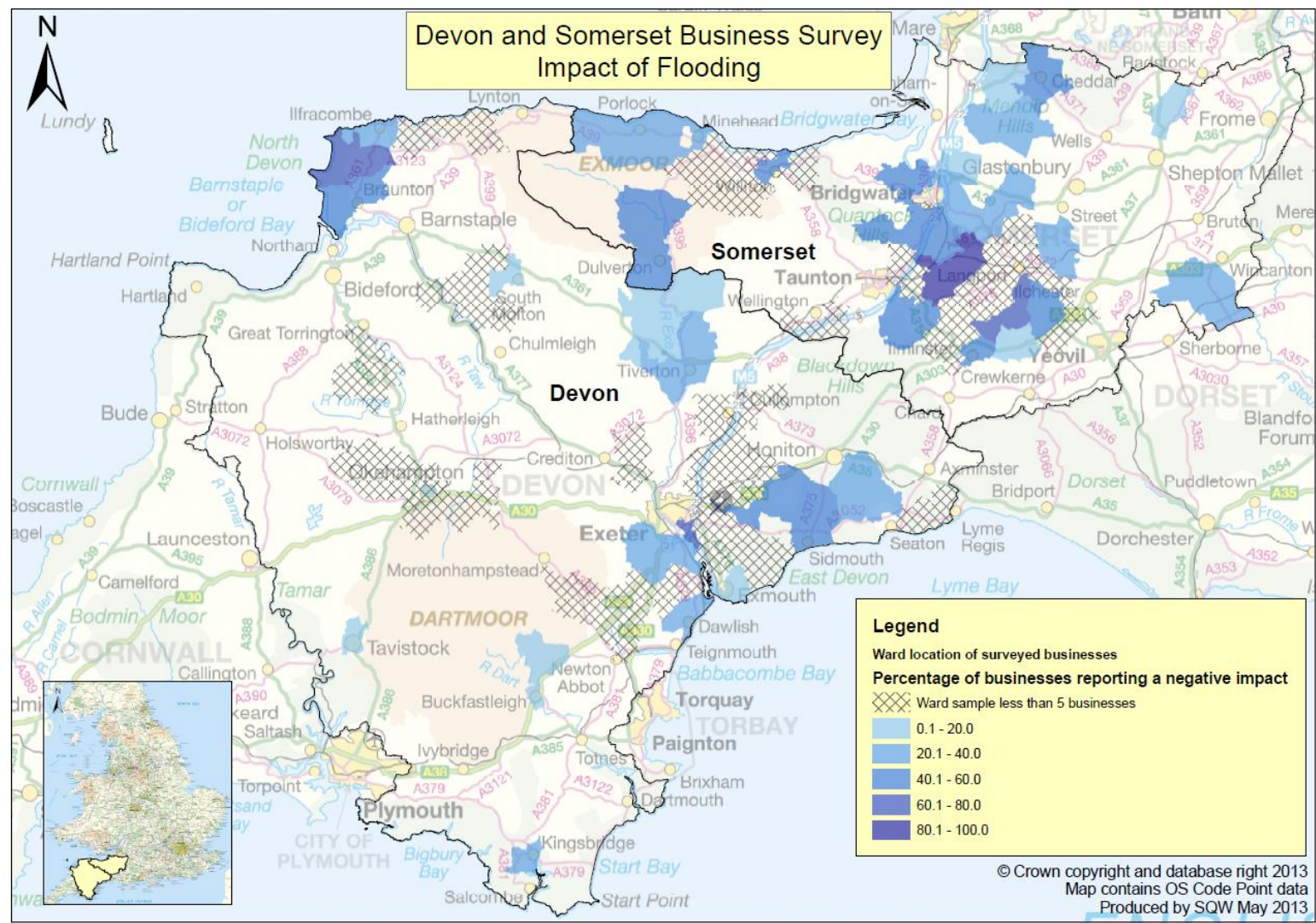
- 3.16 Figure 3-3 uses the responses to map where, across the two counties, businesses were more likely to report a negative impact. The areas where more than half of the businesses interviewed reported a negative impact are shown in Table 3-8. There are examples in both Devon and Somerset. In Devon, the proportion of businesses in Braunton, Ottery St Mary, Sidmouth and Georgeham that reported negative impacts was high, while North Curry, Dulverton, Williton and Cheddar had the highest proportions in Somerset.

Table 3-8: Wards with more than half the businesses in key sectors reporting a negative impact

County	Ward	Proportion indicating negative impact	Number in sample
Devon	Braunton West	88%	8
Somerset	North Curry and Stoke St Gregory Ward	88%	8
Devon	Braunton East	80%	5
Devon	Ottery St Mary Rural	80%	5
Somerset	Burrow Hill Ward	80%	5
Somerset	Dulverton	78%	9
Somerset	King's Isle	75%	8
Devon	Broadclyst	67%	6
Somerset	Neroche Ward TD	67%	6
Somerset	Porlock and District	67%	6
Somerset	Puriton and Woolalvington	67%	6
Devon	Sidmouth Town	65%	17
Somerset	Williton	64%	11
Devon	Kenn Valley	60%	5
Somerset	East Poldens	60%	5
Devon	Georgeham and Morteohoe	57%	7
Devon	Kingsbridge North	57%	14
Devon	Lowman	57%	7
Devon	Topsham	56%	9
Somerset	Cannington and Wembdon Ward	56%	9
Somerset	Cheddar and Shipham Ward	54%	28
Somerset	Ilminster Ward	53%	15

Source: Survey of 600 businesses in Devon and Somerset

Figure 3-3: Geographical impacts



Valuing the costs

Impacts on premises and equipment

- 3.17 **Four of the 600 businesses interviewed had been forced to move premises temporary.** These were businesses in Langport, Dawlish, Okehampton and in South Petherton.
- 3.18 **A larger number, eighteen (3%) of the businesses had to close for a period of time because of the flooding.** These business closed collectively for a total of 342 days. These figures include one pub that had to close for 130 days.
- 3.19 Forty nine businesses reported an impact on premises and equipment of which 36 provided a monetary estimate of the costs. The average cost of the damage in these cases was £23,700. The figure is skewed upwards by two large estimates of £250,000; one a camping/caravan park in Devon and the other a farm in Somerset.
- 3.20 The average value is applied to the 49 cases to provide an overall value for the impact on premises and equipment. **This gives a total for the sample of £1,161,000.**

Damaged stock

- 3.21 Thirty one businesses reported that stock had been damaged by flooding over the last year. Of these, 26 provided estimates of the cost. The average cost of this among those that were able to make an estimate was £6,800. **For the sample as a whole this gives £211,000 in damage to stock.**

Site where work would take place affected

- 3.22 There were 46 businesses in the sample of 600 that reported an impact on the site where they work (e.g. building sites and land). **In 26 cases this had led to staff downtime, with a total of almost 500 working days lost.** This includes one construction business that lost 100 working days as a result of flooding.

Staff unable to get to work or planned meetings

- 3.23 In 103 of the cases staff had been unable to get to work or attend meetings (one in six of all those interviewed). Fifteen of these had a home working policy, but the nature of the businesses (retail, agriculture, construction, food and drink, and distribution) means that most rely on staff working on site or directly with customers and home working is unlikely to be a viable option.
- 3.24 In total, **these businesses reported 954 lost working days and an average of 10 days per case. This is equivalent to one in six businesses losing 10 working days in the last year, as a result of the floods.**

Problems transporting goods to customers

- 3.25 Forty of the 600 businesses reported impacts on transporting goods to customers. Sixteen provided an estimate of these costs. The average as a result of using alternatives, fines etc. was just over £1,000 per case. In total this gives a £60,000 within the sample.

Problems receiving supplies

- 3.26 There were 80 businesses that reported problems getting supplies in and this can have a knock on effect on their business. In 44% it led to reduced stock, in 31% it delayed production and in a quarter of cases the business has had to find an alternative supplier.
- 3.27 The cost of these problems was estimated as an average of £260 business by those that able to provide a figure, giving a total of £21,000 for the sample as a whole.

Clean up costs

- 3.28 Fifty four of the sample of 600 faced additional costs to clean up after the floods. The average cost of cleaning up was reported as £3,600 per business by 45 cases, giving a total clean-up cost of £194,000 for the sample.
- 3.29 One sports facilities business reported clean-up costs of £50,000 and a camping/caravanning park reported £35,000 in costs.

Other costs

- 3.30 There are also a number of other costs that the survey did not try to categorise. In practice a number of these reflected lost sales rather than direct costs (comments about the impact on tourism and access which are covered under lost sales). The main source of other costs were estimates associated with poorer quality livestock resulting from a lack of grazing land, and from Liver Fluke in sheep.

Summary of total costs

- 3.31 The total costs are not necessarily the sum of the individual elements described in the previous sections. Businesses were asked to provide a single overall cost which brings together all the different elements. Table 3-9 sets out the number of cases in each sector and the average cost impact they reported.

Table 3-9: Number of cases and average cost per business

	Number of cases in the sample	Number of cases with negative impacts	Average costs per case in sample (£s)
Agriculture	25	16	19,907
Construction	103	37	340
Distribution	44	16	891
Retail	173	77	651
Tourism including Food & Drink	255	118	2,711
Total	600	264	2,276

Source: Survey of 600 businesses in Devon and Somerset

- 3.32 Because the sample is representative of the 2,535 businesses in the key sectors, the results can be used as a basis for an overall estimate of costs. We apply the average values in the sample to the population of businesses in the key sectors and wards.
- 3.33 Although the impact per business is fairly even across Devon and Somerset, the fact that Devon has more businesses means that the overall impact is slightly greater, making up £3.6 million of the £5.2 million total Table 3-10.

Table 3-10: Total flood costs for key sectors

Sector	Devon	Somerset	Grand Total
Agriculture	278,000	1,050,000	1,328,000
Construction	83,000	67,000	150,000
Distribution	32,000	128,000	160,000
Retail	532,000	41,000	573,000
Tourism including Food & Drink	2,645,000	344,000	2,989,000
Grand Total	3,570,000	1,630,000	5,200,000

Source: Survey of 600 businesses in Devon and Somerset

- 3.34 By sector, although the total for the tourism (and food and drink) businesses represents the source of the largest overall cost, *per business*, the impact on agriculture is much higher, almost £20,000 in comparison with £2,700 per tourism business. There is also a big sector difference between Devon and Somerset where **the agriculture sector has a much higher cost per business.**

Case example 2

Finefarm Ltd, Bridgewater

Located near Bridgewater, Somerset Finefarm Ltd was affected by the substantial rain and floods in summer 2012. The wet weather from June onwards led to damage to the ground and crop. The crop was of lower quality and yield, due to the saturated ground there were also problems getting onto the fields for harvest. The income from the 2012 crop was about 20% lower than expected. Fortunately for the business, the drop in income was limited by the relatively high food prices caused by damaged crops across the UK.

In November the further rain on the already saturated ground made it difficult to get the new crop into the ground. Only a quarter of the land could be planted, animal feed had to be planted instead of cereals on some fields. The loss of income from cereals is estimated at around £0.5 million. The manager of the business is concerned that many farmers have grown animal feed, increasing supply and driving prices down for animal feed.

As a result of the damage cause to the ground by erosion the business is having to concentrate on different crops in future years. The farm's main produce were cereals, animal feed will be the main produce for the next few years until the ground is restored. The farm's pastures are also affected, livestock caused a lot of damage to the soft ground and the grass has not grown well this year.

In addition to the loss in income from damaged and lower value crops the business carried out repair works and invested flood prevention. The September rains caused damage to equipment, a pump and a vehicle were damaged and had to be repaired for a total cost of around £4,000. Around £3,000 was spent on clearing drains and ditches.

Source: SQW consultation with business owner

4. Lost output and sales as a result of flooding

- 4.1 The previous section considered the costs, or money that businesses have had to pay out to repair premises, equipment, replenish stock or make alternative transport arrangements. The floods can also impact on the level of output and sales that businesses make. The most obvious example is where flooding prevents tourists accessing services, or where residents are unable to get to the shops they usually visit.
- 4.2 The values presented here are based on the estimates of the businesses themselves. They may individually be over or underestimates, but across the piece they should provide a fair reflection of the amount of trade that these businesses have lost.
- 4.3 The figures are then adjusted for:
- **Gross Value Added (GVA)¹** – this is a better measure of the value that is lost to the business than turnover or sales.
- 4.4 And to take into account the wider effects in the economy:
- **Displacement** – how much of any lost sales would have been taken by other local competitors
 - **Multiplier effects** – a loss of sales will have knock on effects for suppliers
- 4.5 Each of these adjustments is described below to give a net GVA impact.

Number of businesses that lost sales and value

- 4.6 There were 155 businesses that reported that the floods had either reduced output or prevented sales. Among those that were reported lost output/sales, the average business valued the loss at over £9,600. In practice, this is skewed by a small number of very large costs, including an estimate of £400,000 in one case. The median value of the lost output/sales was £2,000.
- 4.7 Applying the average values from the survey to the population of businesses in these wards and sectors, **gives a total gross value of lost/output of just over £6.2 million.** In some cases these sales will have taken place elsewhere.

GVA estimate

- 4.8 The impact of “lost output” or sales, is not a straightforward reflection of the economic costs of the flooding. Because the value of a business’s sales includes the value of all the inputs a better measure of the potential loss is Gross Value Added (GVA). For example, a retailer may sell a book for £10 that he bought from a supplier for £8, so his loss, in not selling the book, is £2 (the value added). In order to estimate the GVA from the estimates of the lost sales, the analysis uses industry ratios of sales to Gross Value Added.

¹ Gross Value Added is broadly defined as the value of output less the value of intermediate consumption

- 4.9 These are derived from the Annual Business Survey and published by the Office for National Statistics. The ratios for the key sectors are shown in Table 4-1. For example, the ratio of sales to GVA for retailers in the South West is 21%. For every £100 of sales made, £21 is added value for the business.

Table 4-1: GVA as a % of turnover for study sectors

Sector	GVA as a % of turnover
Agriculture	56%
Construction	39%
Tourism	45%
Distribution	50%
Retail	21%

Source: ONS (2012) Annual Business Survey 2010, released 7/12 for South West

- 4.10 These ratios have been applied to each of the estimates of lost sales to get a figure for the lost GVA for these businesses. The average "lost" GVA per case is shown in Table 4-3. The figure is skewed upwards by one agriculture business in Somerset. **In total, the GVA loss is £2.7 million of which £1.2 million in Devon and £1.5 million in Somerset.**

Displacement

- 4.11 Not all these lost sales and GVA will be lost permanently. Customers may have gone to other businesses which were more accessible, and were open, or they have delayed their purchases until after the flooding. So only a proportion of this will be permanently lost to the area. However, this is not much consolation for the businesses that suffered the losses.
- 4.12 The survey asked businesses for the proportion of lost sales that they think would have been taken by competitors within the county or in the rest of the south west. The average value of the proportions reported by businesses that lost sales are shown in Table 4-2. Twenty one per cent thought their lost sales had gone to competitors in Devon or Somerset. Seventy one per cent of businesses thought that their sales were not lost to competitors at all.

Table 4-2: Where businesses think the lost sales went

Geography	%
Competitors in Devon/Somerset	21
Elsewhere in the South West	2
Elsewhere in the UK	4
Competitors elsewhere in the world	1
Not lost to competitors	71

Source: SQW/QA survey 600 businesses

- 4.13 The responses have been applied case by case to calculate the value of lost GVA to the two counties. This reduces the total value of lost sales from £2.7 million to £2.2 million.

Table 4-3: Lost GVA reported in each county by sector (£'000s) after allowing for displacement

	Devon	Somerset	Total
Agriculture	184,000	658,000	842,000
Construction	121,000	32,000	153,000
Distribution	17,000	125,000	142,000
Retail	198,000	63,000	261,000
Tourism including Food & Drink	375,000	386,000	761,000
Grand Total	895,000	1,264,000	2,159,000

Source: Survey of 600 businesses in Devon and Somerset

Impact on wider economy: multiplier effects

- 4.14 Finally, the lost sales and GVA also have knock-on effects for suppliers (and in reduced profit and income that would otherwise be spent locally). Estimating these multiplier effects requires a detailed analysis of the local economy in order to understand the flow of purchases within and outside the local economies. The best source of multiplier values at a county level is the Econ|i model developed by Economic Systems Consultancy & Research and the South West Regional Development Agency². These are ratios which show the scale of the impact on the economy including the supply chain. For these relatively small economies these are fairly high multipliers and reflect the relatively peripheral location of the counties. The multiplier values for the key sectors are shown in Annex A.
- 4.15 Applying these multipliers to the net lost GVA figures for the population of 2,535 businesses as a whole gives the results in Table 4-4. The large loss of sales for the agriculture business in Somerset and the generally higher average values reported by Somerset businesses means that the overall figure is higher in Somerset (£1.9 million) than in Devon (£1.4 million). There is a total “lost” GVA of £3.3 million.

Table 4-4: Lost GVA after allowing for displacement and multiplier effects

	Devon	Somerset	Total
Agriculture	283,000	1,006,000	1,289,000
Construction	210,000	54,000	264,000
Distribution	27,000	190,000	217,000
Retail	305,000	99,000	404,000
Tourism including Food & Drink	552,000	564,000	1,116,000
Grand Total	1,377,000	1,913,000	3,290,000

Source: Survey of 600 businesses in Devon and Somerset

² <http://www.economicsystems.co.uk/south-west/about.php>

Case example 3

Thorney Farm Holiday Cottages, Somerset

Thorney Farm Holiday Cottages near Taunton is a family run business that was affected by the floods in November and December 2012. All of the businesses four holiday cottages were booked out over the Christmas and New Year period, bookings ranged from a few days to a week. Due to the heavy rain at that time some of the main access roads were closed, the guests would have had difficulties getting to the farm and the heavy rain would have limited guests' opportunities to visit attractions in the local area. The business therefore decided to cancel the bookings and refund any payments, this meant a loss of income of around £3,500. The guests that were turned away did not rebook and the business owner is concerned that they will not consider a holiday on the farm in the future.

As a result of the heavy rain over that period the homes of a number of local residents were flooded. To help local families severely affected by the floods the businesses took in four families, ensuring they had a suitable place to stay until they could return to their own home. It was agreed with the families that they would pay what they were able to give, some were subsequently able to cover the cost through their insurance payments. Two of the families stayed in the cottages for a considerable period of time, the first family for around six weeks and the second family for around five weeks. The two other families stayed for around a week.

The property was within the access route for the emergency services and some of the property was damaged by the heavy emergency vehicles. Debris left behind from the floods was also left on the property. As the emergency services and the council were focusing on the repair of homes, the business owner did not receive any help to clean up the property and had to clean the property himself over three or four days. The council and emergency never followed up on his enquiry for help. The business is still suffering from the effects of the floods, further damage was caused in the repair of a drain that was damaged in the floods, requiring further work to be done.

Source: SQW consultation

Positive impacts

- 4.16 A reasonably large proportion of business had increased their sales as a result of the floods. The survey identified 72 (12%) that, overall reported a positive effect. On average the size of this positive effect as £16,000, including one large case in the construction sector of £250,000 of additional orders. The positive impacts are mostly among construction businesses and some of the retailers.
- 4.17 Some examples of the comments to support the positive impacts provided were:
- *Visitors came to the area to look at the floods*
 - *Floods created more construction/repair work for the company*
 - *Customers who were cut off from home or flooded out, came to the pub*
 - *Increased sales of wet weather gear.*

- 4.18 The reported increase in sales as a result of flooding represents an additional GVA of £1.3 million for the businesses in these sectors and wards.
- 4.19 This is not subtracted from the overall loss. While it represents some of the additional GVA that is supported through carrying out repair and maintenance work for households and businesses, it does not reflect the “opportunity cost” of spending money to repair and replace assets rather than investing in other things. For example, the money spent on repairing a building is at the expense of, say, buying new machinery.
- 4.20 In simple GVA terms, the repair work broadly means a transfer of money from one set of businesses to another. In practice, there is still a very real loss for the economy as the resources that are used to carry out the repair could (in the absence of the floods) have been used for investment. GVA does not capture the value of assets or the damage to them. Subtracting the additional GVA of some of these businesses would therefore be misleading.

5. Summary of costs and lost GVA.

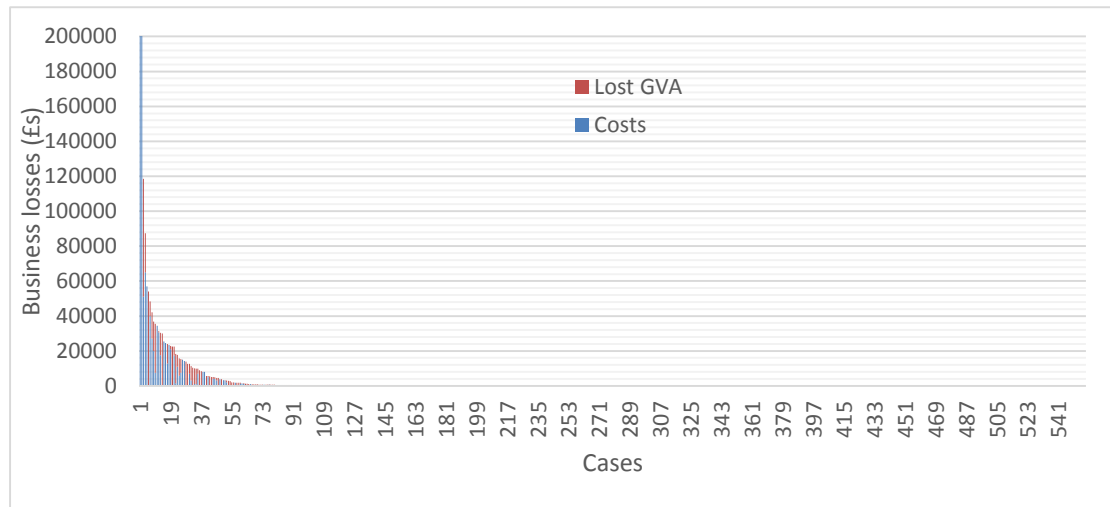
5.1 The performance of a business depends both on its costs and its income. The business survey has considered the impact of the floods on both, as they can impact on different types of business in different ways.

- For the population of **2,535 businesses in the key sectors and wards identified**, the analysis estimated total *costs* of £5.2 million, effectively money paid out for repairs, moving premises, replacing equipment, transport costs etc.
- The floods also have an impact on sales. The analysis used the “value added” of these lost sales so as to get a more accurate reflection of the impact on the overall loss of income. It estimates that these businesses lost £2.2 million of GVA as a result of reduced output and sales.
- The total cost to these businesses is therefore GVA among these businesses was therefore £7.4 million.
- In the wider economy, the loss of output and sales also has a knock –on effect for the suppliers of these businesses. Including this gives an **aggregate figure cost of £8.5 million that represents the combined loss that these businesses and their suppliers have made.**
- Of this £5 million is from Devon and £3.5 million from Somerset. These figures relate to the sectors that suffered the most damage in the floods.

Distribution of results

5.2 One of the most noticeable findings is the concentration of losses in a small number of businesses. Figure 5-1 shows the extent of this concentration. The pattern is of a relatively small number of cases (on the left) suffering very large losses and a long tail of businesses that are unaffected. **Of the 600 cases interviewed, six businesses represent more than half the overall impact and 10 of the cases generate 70% of the impact.**

Figure 5-1: Profile of flood impact (losses) on each business in the sample of 600



Source: Survey of 600 businesses in Devon and Somerset

- 5.3 Agriculture and tourism are understandably the sectors reporting the biggest losses. The average loss per business is considerably higher in agriculture than other sectors.

Agriculture

- 5.4 The report, on the Impact of Seasonal Flooding on Agriculture: The Spring 2012 Floods in Somerset (Morris & Brewin, 2012) also provided estimates of the costs and lost income of farmers in Currymoor, and then more widely in Somerset. Their analysis is based on detailed interviews and analysis of the damage to land, livestock and equipment, as well producing estimates for agri-environmental damage. In total it concluded that the costs of the spring events within Currymoor were around £700,000 and “across the 5,000 ha subject to spring flooding in Somerset are likely to be approaching £2 million (+/-£0.5 million)”. While our estimate is based on a much simpler survey, it produces a comparable figure for agriculture, in the flood affected wards in Somerset, of £2 million (including multiplier effects).

Case example 4

Housewares Sidmouth Ltd.

Housewares Sidmouth Ltd is situated in the town centre of Sidmouth, Devon. The store was mainly affected by the July 2012 floods. Heavy rain at the beginning of July closed two of three roads into Sidmouth with both the rivers Sid and Otter bursting their banks and flooding homes. The river Sid runs through the centre of the town, parts of the park along the river were submerged under several feet of water.

For three days residents and visitors were unable to drive into Sidmouth, some abandoned their cars and waded through the water to get into town. The floods caused no damage to the store but meant that customers and staff could not get to the store. The store was open as usual but only about half the number of customers visited the store during the three days, only those already in town came to the shop. Three of the six staff live around Sidmouth and were also unable to get to work on those three days.

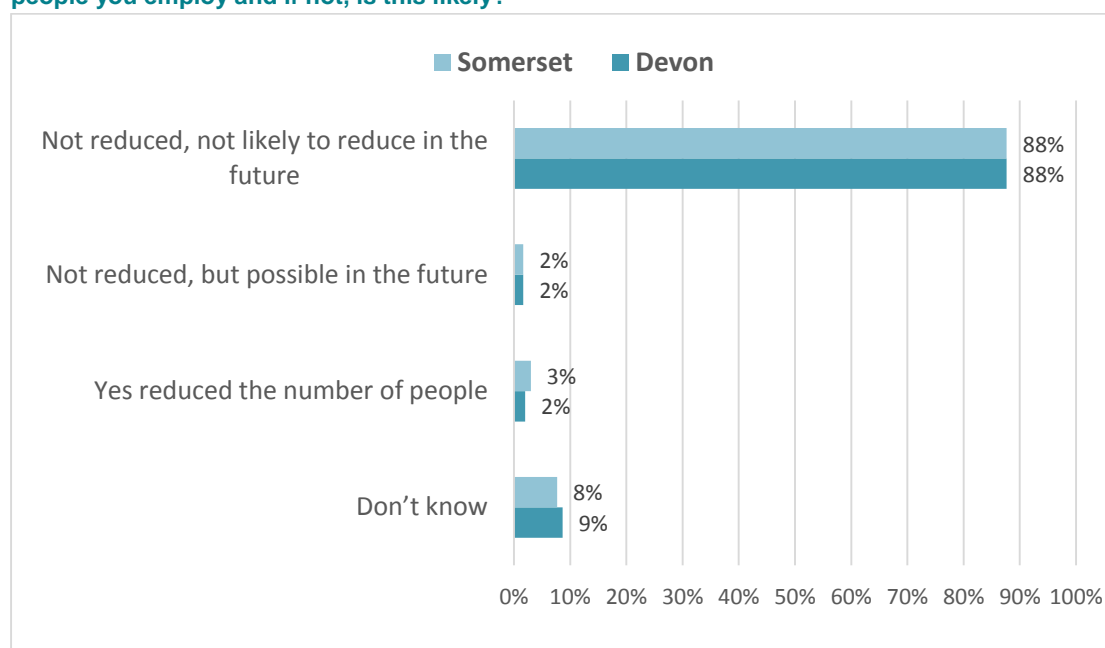
Furthermore the heavy rain caused leaks that had to be repaired and the roof was replaced at a cost of a few thousand pounds. Luckily no stock was damaged. The business owner is realistic about flooding, Sidmouth is within an area regularly affected by flooding and has to depend on the Council to prepare a robust contingency plan.

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6. Longer term sustainability

- 6.1 The survey asked businesses to consider whether the flooding over the past year had changed the outlook for their business and its employees. Were the flooding events threatening to put operations out of business? The results in Figure 6-1 show that for almost 90% it has made no difference in both Devon and Somerset. Two or three per cent had reduced the number of people they employ already and a further 2% considered it a possibility.

Figure 6-1: As a result of the flooding in the last few years have you reduced the number of people you employ and if not, is this likely?



Source: Survey of 600 businesses in Devon and Somerset

Are businesses considering moving or closing in response to the floods of the last few years?

- 6.2 For a very large proportion of the businesses there seems to be little consideration of closing or moving the business because of the floods. In total the survey suggests that 10 of the 600 businesses have considered closing or moving out of Devon and Somerset.

Table 6-1: As a result of the flooding in the last few years have you considered?

	Number of businesses
Closing the business permanently	7 (1%)
Moving the business to new premises somewhere else in Devon or Somerset	8 (1%)
Moving the business elsewhere in the UK	3 (1%)
None of the above	585 (97%)

Source: Survey of 600 businesses in Devon and Somerset

- 6.3 These results seem to reinforce the wider impression that flooding hit a relatively small number of businesses very hard. These businesses have suffered financially and are considering closing or moving. Extrapolating across the 2,500 businesses in these sectors in Devon and Somerset, this would indicate that there would be around 40 of the businesses that are considering closing or moving outside the two counties as a result of the floods.

Investment in prevention

- 6.4 Around 44 of the businesses in the sample (7%) had undertaken additional investments to mitigate against flood damage. The majority (92%) in both Devon and Somerset had not made any investment.

Table 6-2: As a result of flooding in your area, have you made any additional investments for this site to mitigate against future floods?

Row Labels	No	Yes	Don't know
Devon	92%	7%	1%
Somerset	92%	7%	0%
Grand Total	92%	7%	1%

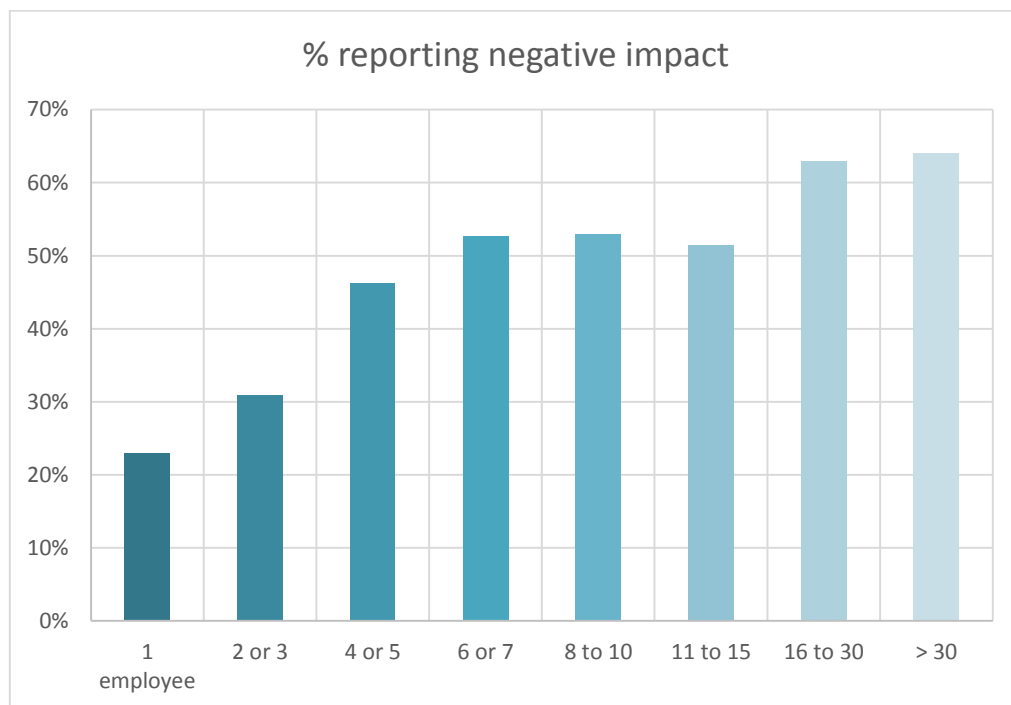
Source: Survey of 600 businesses in Devon and Somerset

- 6.5 The investment that has been made has been substantial, ranging up to £200,000 in one case. The average investment in the survey as a whole across the 44 cases has been £18,100. The figure was slightly higher (£25,000) among businesses in Devon than in Somerset (£10,100).

Distribution of impacts by size of business

- 6.6 There is an interesting correlation between the size of the businesses and the likelihood of reporting a negative impact (Figure 6-2). Across all the one person businesses, just over 20% reported an impact. In businesses with 4 or 5 employees, this rose to 45% and among businesses with more than 15 employees, the proportion reporting a negative impact was over 60%.
- 6.7 An explanation is that there is more chance that staff will be affected where there are more of them. Only a tenth of "one person" businesses thought the floods had impacted on staff getting to work, compared with 30% of those over 15 employees.
- 6.8 It would be fair to conclude that the impacts were more likely to be felt by businesses with slightly more employees. The impacts are seem to be amplified for these businesses compared to single person operations.

Figure 6-2: Distribution of impacts by size of business



Source: Source: Survey of 600 businesses in Devon and Somerset

Case example 5

Darts Farm in Topsham, near Exeter has evolved from a small farm shop into a nationally regarded food hub, with an emphasis on locally sourced high quality produce. There is an on-site butcher, fishmonger, baker, deli, cider maker and restaurant. The site also has specialist retailers, such as AGA, Fired Earth and Cotswold Outdoor, a number of small independent boutiques and bike and outdoor activities.

The flooding and, in particular the closure of the road that links Darts Farm with the A376 (and into Exeter), has had a significant impact on the businesses that are based on the site. Darts Farm estimates that a one day closure of the road results in lost sales of around £50,000 across the eight businesses on the site. Over the past year this road has been closed three times. While the businesses have been able to survive occasional floods, a bigger concern is that more frequent flooding in the future will have increasingly severe effects.

In addition to the sales that they lost, Darts Farm sells a high proportion of locally produced food and drink, estimating that every £1 spent with them generates £2.30 for the local economy. When they lose sales, there will be a knock on effect to their suppliers. They also provide employment and income for other local tradesmen and services.

From the perspective of the Farm, preventative action is needed to deal with the increasing number of flooding events and to reduce the damage this is causing to businesses and the economy.

7. Wider costs and impacts

- 7.1 This section reviews some of the material that has already been collected to estimate their own flooding costs. Most of the figures have been drawn from the South West Extreme Weather Resilience Draft report. The aim is to set this alongside the business impacts to provide a rounded picture of the impacts.
- 7.2 Table 7-1 sets out some of known costs. It is important to recognise that these are generally in addition to already large volumes of maintenance and upgrading work required. Some of these costs are transfers between organisations (Network Rail compensation), while other elements are used to purchase replacement goods and repair services from private businesses.

Table 7-1: Identified public sector costs

Agency	Estimate of costs
Devon County Council Highways	£12.2 million
Grand Western Canal	£3 million (Devon County Council budget)
Network Rail South West	£12.5 million compensation and £15 million in repairs
South West Coast Path	£600,000 of repair work (various funders)
Somerset County Council Highways	November and December flooding £1.8 million

Source: The South West: Extreme weather resilience report (draft) 2013

Devon County Council

- 7.3 The South West Extreme weather resilience report (2013) describes the floods in more detail and reviews some of the public sector impacts in relation to highways, railways, property and green infrastructure. This is not repeated here, but as context it is useful to summarise some of the material.
- 7.4 The crucial A361 link road to North Devon was closed on numerous occasions in December, due to flooding and in January due to snow. Three bridges have been severely damaged or lost; Alma Bridge (Sidmouth), Collards Bridge (Barnstaple) and Waterstave (Bradinch). Across the SW, there were 15 closures across a three month period totalling nearly 66 hours. Noteworthy days include 25th November and 25th January on which three roads were closed.
- 7.5 Devon County Council has spent approximately £12.2 million on emergency highway reaction in relation to storm damage since April 2012, with November and December causing £3.6 million and £3.7 million of damage respectively. These storms were classified as Bellwin events and the County received payments of £3.1 million. The costs should be seen in context of a backlog of £687 million of highway maintenance.
- 7.6 The County Council also received a large increase in the number enquiries received in relation highways issues. In total there were 927 enquiries between November 2012 and January 2013, compared with 242 in the previous year.

- 7.7 The Council estimates that 1000 properties were flooded in Devon during July, November and December. It has conducted a number of flood investigation reports for these events analysing the impacts and actions resulting from the severe weather. Initial estimates for the costs of these actions have been estimated as in excess of £31.5m. DCC has also agreed to provide funding to the Exeter Coastal defence scheme

Somerset

- 7.8 The South West Extreme Weather Resilience Draft Report describes some of the costs faced in Somerset. All five districts in Somerset were affected by flooding. Connectivity impacts were an issue at several points through 2012/13. The A358, linking the M5 at Taunton and the A303 at Ilminster was closed. In addition the M5 diversion route between Taunton and Wellington on the A38 was closed for a number of days, meaning there was no access beyond Taunton to the South West on the M5 at some times.
- 7.9 The A361 was closed on a number of occasions, in total lasting 60 days (not consecutively) and the A39 was also closed at Bilbrook and Carhampton affecting access to Minehead. On the Somerset levels Muchelney was cut off completely for 12 days and residents left stranded. In total there were 463 properties affected by flooding.
- 7.10 In total Somerset County Council has identified 78 maintenance schemes required as a result of November and December flooding that cost £1.8 million (of which £1.5 million would be in South Somerset). There were 927 enquiries relating to highway issues between November 2012 and January 2013, compared with 242 in the previous year.

Green Infrastructure

Breach of embankment at Grand Western Canal

- 7.11 The Grand Western Canal (GWC) is around 11 miles long and runs from Tiverton to Lowdells. The canal is within a County Park and Local Nature Reserve, it is jointly managed by DCC and Mid Devon District Council. After extreme rainfall on the previous days the bank of the canal collapsed on 21st November 2012, leaving a gap of approximately 30 meters near Halberton. The navigable waterway was split into two sections, the Tiverton section of about 4 miles and the Lowdells section of about 6 miles. A mile-long towpath diversion was arranged, the remainder of the canal remained open and safe to use.
- 7.12 DCC has budgeted £3m in total to repair the breached embankment, for initial costs, to upgrade the canal's water management systems, for a study and further capital improvement works as recommended in the study. The cost of the immediate response, clean up and compensation payments are estimated at around £250,000. A contractor has now been appointed to repair the breach at a cost of just under £1m, work to rebuild the embankment is due to start imminently and is scheduled to be completed by the end of 2013. The breach also led to an increase in expenditure linked to the maintenance of two separate sections of the canal.

- 7.13 One of the main concerns for local businesses was the impact on tourism. Generally, compared to the other districts in Devon, Mid Devon has a relatively small tourism sector³. In 2010, Mid Devon accounted for 5% of both day visits and spend within Devon. However, GWC (alongside the County Park and Nature Reserve) is locally important MDDC's Economic Development Strategy includes growing the tourism sector, thereby contributing to a wider "gateway to Devon" venture. GWC is part of this approach. In addition, it is important to note that in economic terms, the canal may have wider spill-over effects, drawing people into Tiverton with positive effects in relation to its retail and related service sector.

Case Example 6

Tiverton Canal Company

Tiverton Canal Company in Tiverton, Devon operates the last horse-drawn barge in the West Country (there are three other horse-drawn barge operators in the UK). The company aims to keep the historic attraction alive and sees the horse-drawn barge as a valuable attraction in Devon. The Ducks Ditty Café Bar and Tiverton Canal Gift Shop are also part of the family run company. Overall, activities are highly seasonal: the barge trips, café bar and boat hire facilities operate between Easter and the end of October; only the boat maintenance service operates over the winter months. The business employs 10 full time staff in the summer months and 8 staff in the winter months. All gifts, food, and drink are sourced from suppliers in the south west.

Since the breach in the Grand Western Canal was reported in the news in November, the business was contacted by coach companies with bookings for 2013 asking for refund of their deposit. These customers thought – mistakenly – that the Grand Western Canal was without water. After reassurance from Tiverton Canal Company that the trips will run, none of these bookings were cancelled. The business started a marketing campaign to contact past customers and those that have previously enquired about trips to make known that Tiverton Canal Company is operating and to soften the impact of the negative press. The business owner estimates that some 100s of hours were spent on the campaign, sadly with only limited success. The small business with its very limited marketing budget feels unable to compete against the media, internet searches for the Grand Western Canal still bring up news of the breach within the first few results.

However, it appears that a number of coach companies did not include trips to the canal in their brochures because they thought the canal has no water. This became obvious through calls the business received from coach companies in spring and summer regretting that they are not able to visit this year due to the canal apparently having no water. The barge trips are enjoyed mainly by those visiting with an organised coach trip and independent visitors from outside the local area. In June visitor numbers for the horse-drawn barge trips were down by 50% on the previous years. As a result of the reduced income the business was not able to renew the contract of a full time member of staff, one other job is in danger.

³ The *Value of Tourism, 2010* report indicates that for staying visitors, the number of domestic and overseas nights was the lowest in the county (by some margin) while the number of day visitors and their spend were both very similar to those of other under-performing areas (i.e. West Devon and Torridge)

The weather in June was relatively good and the business owner is certain that the drop in income is down to the misconception that the canal has no water. The Ducks Ditty Café Bar is mainly frequented by locals and has not experienced a drop in guests. The announcement by DCC of the £3m investment for the repair of the canal has not made a difference to the business. The business owner feels that not enough was done to communicate that the canal is open, the message that had got around is that the canal will be repaired by 2014. The owner is very concerned about the prospects for his business.

Source: SQW consultation with business owner

South West Coast Path

- 7.14 The record breaking rainfall of 2012 has resulted in an unprecedented number of cliff falls during the winter of 2012-13. Severe weather has resulted in 36 significant route closures or diversions along the whole SW Coast Path National Trail. Twenty two of these were in Cornwall, eight in Devon and six in Dorset. In addition there were diversions, and numerous instances of surface damage.
- 7.15 Some repair work has already commenced but future work is subject to additional funding being secured. Overall the bill for the damage in Devon has been estimated to be in excess of £675,000. This should be seen in the context of an annual maintenance budget for the SWCP which has been reduced by 30% since 2010. The maintenance budget for the entire South West Coast Path for 2013/14 is £463,000⁴.
- 7.16 There are also impacts on the offering of the route as a tourist attraction. Though it not possible to directly quantify these effects it is estimated that the SW Coast Path annually attracts 6.2 million users (excluding local non-tourism use such as by dog walkers) who contribute £389 million to the local economy⁵. As outlined above the damage to the path meant that sections were diverted away from coast, which is the main draw for visitors using the path. The subsequent loss to the local economy will therefore continue as long as significant diversions exist, particularly where these are along roads.

Rail Network

- 7.17 The main rail line connecting the South West with the rest of the UK runs through Devon and Somerset. As Figure 7-1 shows, there is one main line from Exeter to Penzance that all connections across the far South West and with the rest of the UK rely on.
- 7.18 The flooding in November/December 2012 caused severe disruption to rail lines in the South West. The Great Western Mainline (London Paddington to Bristol, connecting to Exeter), the West of England Mainline (Exeter to Basingstoke, connecting to London), the Exeter to Barnstaple branchline and the Exeter to Exmouth branchline were closed for several days. Network Rail recorded the following closures of the rail network in the South West:

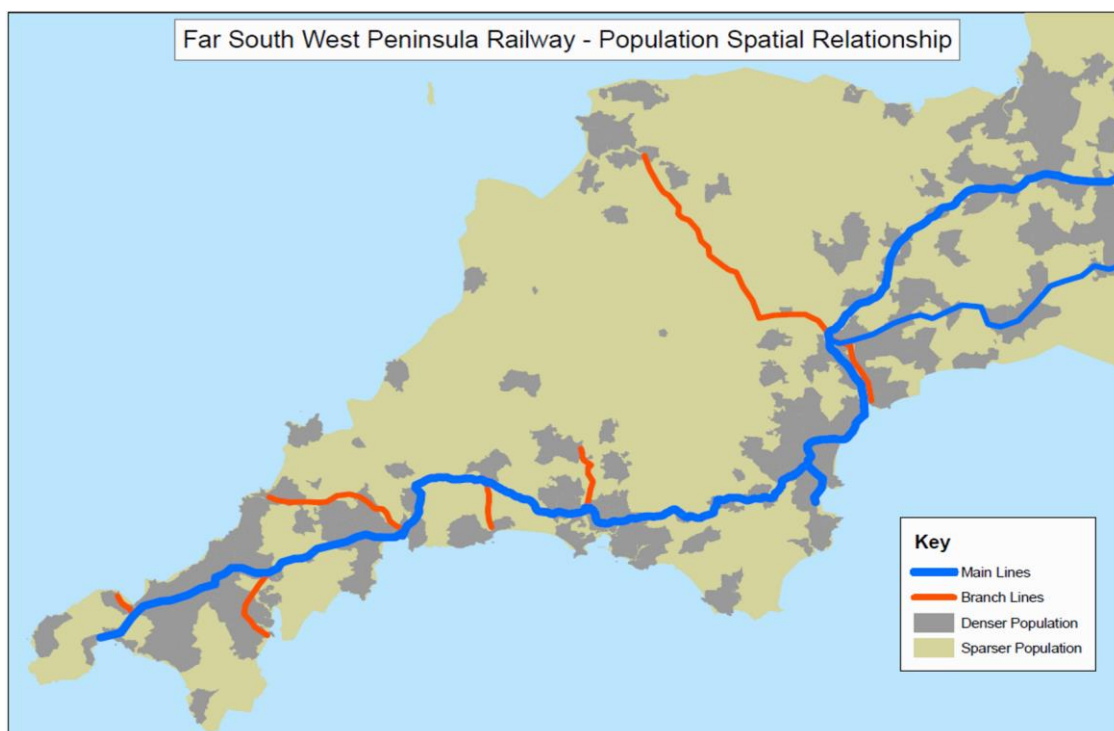
- Cowley Bridge: 15 days

⁴ Estimates from Cornwall Council (2013)

⁵ Estimates from Cornwall Council (2013)

- Dawlish/Teignmouth seawall: 6 days
- Honiton (Exeter – Waterloo Line): 5 days
- Exeter - Barnstaple: 22 days (including during planned closure for maintenance work which were not completed)
- Exeter - Exmouth: 2 days.

Figure 7-1: South West rail network and population density



Source: Cornwall Council, Devon County Council, Plymouth City Council, Somerset County Council, Torbay Council, 2013, *The South West Spine. The Case for Greater Investment across the South West Peninsula Railway Network.*

- 7.19 These disruptions caused cancellations and delays services. In total around 1,900 services between Taunton and Penzance were delayed or cancelled in November and December 2012 (1,336 First Great Western services between 21st and 28th November and 22nd and 28th December 2012 and an estimated 560 Cross County trains).⁶
- 7.20 The total cost of these disruptions to the rail industry are not yet clear. There are a number of aspects to be considered, including the cost of restoring the line, ballast and signalling equipment, rail replacement bus services as well as revenue loss and compensation payments.
- 7.21 Network Rail estimates the costs of flooding in the South West to their business as:
- £12.5 million which has been paid in compensation (to the train operators)
 - £15 million in repair and maintenance costs.

⁶ Devon County Council, 2013, *Devon: Extreme weather resilience, Briefing Note February 2013*

7.22 Around 43% of the delay minutes were caused by flooding and landslides on the Western route in Devon (equating to approximately £5.3m in delay costs in Devon).⁷

7.23 Some of the works required to restore the line are:

- Improvements at Cowley Bridge on the Great Western Mainline
- Provision of additional passing loops on the West of England Mainline to provide an alternative diversionary route to the South West
- Improvements to the Dawlish/Teignmouth seawall
- Improvements to other sites of potential repeated disruption on the Berks & Hants (Reading to Cogload Junction near Taunton) line including the Somerset Levels.⁸

⁷ Cornwall Council, Devon County Council, Plymouth City Council, Somerset County Council, Torbay Council, 2013, *The South West Spine. The Case for Greater Investment across the South West Peninsula Railway Network*.

⁸ Devon County Council, 2013, *Devon: Extreme weather resilience, Briefing Note February 2013*

8. Summary and conclusions

- 8.1 The agricultural and tourism sectors are vital for the economies of Devon and Somerset, particularly in some of the many peripheral communities throughout the counties. These locations and sectors are disproportionately affected by the severe weather and the impacts that it has on the transport network.
- 8.2 To examine the effects, the business survey focussed on the areas where the impact would be greatest; the five key sectors (agriculture, tourism, retail, construction and distribution) and in the worst hit wards. This covers a total of 2,535 businesses. Across other sectors (and areas that were not hit as badly) the impacts would be expected to be weaker.

Findings

- 8.3 Within the sample of 600 cases:
- 60% reported no impact
 - 11% a significant negative impact
 - 24% a small negative impact
 - 5% reported a positive impact.
- 8.4 **Agriculture businesses were most likely to report negative impact; 60% reported a negative impact including 44% the flooding to have had a significant negative impact.** This compares with tourism businesses of which 14% considered the flooding to have had a significant negative impact (and 6% of retailers).
- 8.5 In most sectors, businesses in Somerset were slightly more likely to report a negative impact than those in Devon, while the proportion of construction, distribution and retail businesses that suffered a significant negative impact was relatively small, compared with agriculture.
- 8.6 The most common negative impact was caused by customers unable to get to their premises or other locations (26%). In 15% of cases there were negative effects from staff unable to get to work or to meetings and in 12% of cases there were problems getting supplies.

Costs of the flooding

- 8.7 The survey was used to produce estimates of the *costs and lost income* caused by the flooding for businesses in these key sectors and wards. The main findings are:
- **The analysis estimates a total cost to businesses of £5.2 million** (for the the population of 2,535 businesses). This is effectively money paid out for repairs, moving premises, replacing equipment, transport costs etc.
 - **The floods also have an impact on sales for these businesses. The GVA lost as a result of reduced sales and output is £2.2 million.** The analysis used the “value added” of these lost sales so as to get a more accurate reflection of the impact on the overall loss of income.

- In the wider economy, the loss of output and sales also has a knock –on effect for the suppliers of these businesses. This adds a further £1.1 million.
- Taking the costs and lost GVA together gives an **aggregate figure of £8.5 million. This represents the combined loss for these businesses and their suppliers.**
- Of this, **£5 million is from businesses in Devon and £3.5 million in Somerset**
- **The impact is concentrated heavily on a small number of businesses.** In the sample of 600 cases interviewed **six businesses represented more than half the overall impact** and 10 of the cases generate 70% of the impact
- **The impact, per business, is much higher in agriculture than in other sectors.** However, the impact on the tourism (and food and drink) sector is greater overall because there are more of these types of business.
- **Businesses with more than 15 people were more likely to report negative impacts than very small ones** (one to five people), as they have more staff, premises and stock that could be affected
- **There is some impact of flooding on retaining staff.** Two or three per cent claimed to have reduced the number of people they employ already (as a result of floods) and a further 2% considered it a possibility
- **The survey suggested that 2% (10 of the 600 businesses) have considered closing or moving out of Devon and Somerset because of the flooding.**

Further conclusions and context

- 8.8 These figures relate to the key sectors and wards where the impact is likely to have been greatest. There will also be some (weaker) impacts in other sectors and wards in the two counties.
- 8.9 A proportion of these costs will be offset by insurance compensation. The responses that were provided on the damage to premises and equipment indicated that around half of the total would be covered by insurance, although this included few businesses in the agriculture sector. The findings from a report last year into the costs of the Spring floods in Currymoor (Morris & Brewin, 2012)⁹ found that “*virtually all (the farmers interviewed) reported that agricultural losses were not insured*”.
- 8.10 A proportion of the loss of sales will be displaced to other businesses that were not affected by the floods. It is not possible for these businesses to know who will have benefitted from these “lost” sales. In some cases sales will be displaced “temporarily” and will be made after the flooding instead (particularly larger items).
- 8.11 Within the sample there were 12% of businesses that experienced some positive effects, with an average of £16,000 additional sales each. These tended to be construction businesses and retailers.

⁹ Morris, J., & Brewin, P. (2012). The Impact of Seasonal Flooding on Agriculture: The Spring 2012 2 Floods in Somerset, England. 42.

- 8.12 One of the most important points is that the “costs” to businesses in the sample also represent income and GVA to those that provide the repair or replacement services. **While it represents additional GVA, it does not reflect the “opportunity cost” of spending money to repair and replace assets rather than investing in other things.** For example, the money spent on repairing a building is at the expense of, say, buying new machinery. GVA does not capture the value of assets or the damage to them. Subtracting the additional GVA of some of these businesses would therefore be misleading.

Tourism impacts

- 8.13 One of the themes from the business survey was a concern that the publicity had played a role in reducing visitor numbers. Several comments were made about the impact of the coverage:

House sales were affected, the media spent too much time sensationalising the events, people were really put off buying homes in the area.

Negative coverage put customers off travelling, and led to a loss of trade

Publicity about floods put visitors off coming to the area and made them more cautious about travelling in or to the area. We had cancelled bookings.

Negative publicity due to the collapse of a bridge in Ashburton gave the impression that the town was blocked off and therefore customers had the impression they could not access our business. Sales suffered as a result over a three day period.

- 8.14 There is a fine balance between highlighting the challenges of the flooding and ensuring that visitors and even residents are not deterred from visiting parts of the area. Dealing with the flooding has significant direct costs in itself, but this can be compounded if it also impacts on the volume of customers and sales.
- 8.15 Although the flooding is likely to have an immediate impact on trips and sales, in the longer term, with more positive promotion, visitor numbers should continue to grow. There is a risk that if there continue to be frequent major flood events, it could become a more significant issue for visitors.

Reputation

- 8.16 The floods may reinforce the perception that the South West can be cut off, particularly from London. Although there is no evidence from within the business survey, this vulnerability may be a consideration for potential investors or others planning to set up a business.
- 8.17 While literature focuses on the speed of access to larger population centres being a contributor to productivity and economic growth, so too is reliability. Perceptions of increased risks of flooding or its impact on transport are related to reliability rather than speed. Within the survey 13% of the full sample had problems receiving supplies and 7% had difficulties sending goods out to customers.
- 8.18 The issues here are similar to the tourism sector; there is a fine line between presenting the problems caused by flooding in order to make the case for public sector investment, without

unduly emphasising the additional costs that businesses might face. Occasional flooding events are not likely to make much difference to wider perceptions, but an increasing frequency may do, particularly if the damage that flooding causes continues to be on the same scale as the past year.

Conclusions

- 8.19 Overall, the report reinforces the scale and nature of the impacts of the flooding on businesses in the worst hit areas. Of the total estimated losses of £8.5 million in the key sectors, the biggest impacts are on a relatively small number of agriculture and tourism businesses that have been hit very hard.
- 8.20 The causes of these losses are divided between transport difficulties (which impact on staff and customer access as well as on deliveries and supplies) and the damage to premises and equipment, which was extensive in some cases. The pattern of investment to mitigate future flood effects is similar, with a relatively small number (7%) making large investments. The threat of businesses moving or closing as a result of the past flooding appears fairly small.
- 8.21 A bigger issue is the potential impact on business *if the frequency of flooding events increases*. Businesses can often cope with, and expect to deal with, occasional events, but more regular floods would clearly have severe impacts on the business base and economy.
- 8.22 Finally, the publicity of the flooding was a concern for the tourism sector and for others interesting in attracting new investment. Repeated flooding events and their coverage could eventually impact on the perceptions of potential visitors and investors.

Annex A: Survey details

- A.1 The survey was designed and overseen by SQW and carried out by market research company, QA Research. QA is registered to ISO 20252. ISO 20252 is the international standard for organisations and professionals conducting market, opinion and social research. All staff abide by the Market Research Society's Code of Conduct and QA is a MRS Company Partner.
- A.2 With over 50,000 businesses across the two Counties, it was agreed that resources and the survey would be best focused on the areas where flooding was considered to have caused the biggest problems (rather than using the resources in areas where there were few impacts) and on business sectors that were likely to have been affected.
- A.3 The target population of businesses was provided by Devon and Somerset County Councils. They identified 77 wards w. This comprised 57 in Devon (24% of the total of 236 wards in the county) and 20 in Somerset (15% of the total of 142 wards). A list of wards covered by survey is shown in Table A-1.
- A.4 Five key sectors were also identified by the county Council. These were: agriculture, tourism (including food and drink), retail, distribution and construction. The SIC codes used for these sectors are shown in Annex B.
- A.5 The County Councils used their own internal business databases to provide lists of the businesses in these sectors and wards. There were 2,535 in total (Table A-1).
- A.6 The survey covered 300 businesses in Devon and 300 in Somerset. A sampling framework was designed to make sure that the interviews covered a proportionate number of cases in each ward and sector.

Table A-1: Number of businesses in key sectors within identified Wards

Sectors	Devon	Somerset	Both
Retail	522	181	703
Tourism including Food & Drink	669	269	938
Distribution	160	61	221
Agriculture	66	35	101
Construction	414	158	572
Total	1,831	704	2,535

Source: Devon/Somerset County Council data

Table A-2: Wards covered by the business survey

Devon wards		Somerset wards
Ashburton and Buckfastleigh	Ipplepen	Alcombe Ward
Bovey	Kenn Valley	Ashwick, Chilcompton and Stratton Ward
Bradninch	Kenton with Starcross	Burrow Hill Ward
Braunton East	Kerswell-with-Combe	Cannington and Wembdon Ward
Braunton West	Kingsbridge East	Carhampton and Withycombe Ward
Broadclyst	Kingsbridge North	Cheddar and Shipham Ward
Buckland and Milber	Kingsteignton East	Curry Rivel Ward
Budleigh	Kingsteignton West	Dulverton and District Ward
Castle	Lew Valley	Ilminster Ward
Chittlehampton	Lowman	Langport and Huish Ward
Chudleigh	Newbrooke	Martock Ward
Clare and Shuttern	Okehampton East	Minehead Central Ward
Clyst Valley	Okehampton West	Minehead North Ward
Coly Valley	Ottery St Mary Rural	Minehead South Ward
Combe Martin	Ottery St Mary Town	North Curry and Stoke St Gregory Ward
Cranmore	Raleigh	North Petherton Ward
Cullompton Outer	Sidmouth Rural	Old Cleeve Ward
Dawlish Central and North Ea	Sidmouth Sidford	South Petherton Ward
Dawlish South West	Sidmouth Town	West Monkton Ward
Exe Valley	South Molton	Williton Ward
Exmouth Brixington	South Tawton	
Exmouth Halsdon	Tavistock North	
Exmouth Littleham	Tavistock South	
Exmouth Town	Tavistock South West	
Exmouth Withycombe Raleigh	Topsham	
Georgeham and Mortehoe	Trinity	
Ilfracombe Central	Westexe	
Ilfracombe East	Westville and Alvington	
Ilfracombe West	Woodbury and Lympstone	

Source: Devon/Somerset County Council data

- A.7 A questionnaire was developed by SQW and reviewed and agreed by the County Councils. It was set up by QA on their CATI systems. The questions covered are summarised in Table A-3.

Table A-3: Business questions used

	Which of the following categories best describes your business or organisation
	Has this site of your business experienced any positive impacts as a result of the flooding in the past 12 months?
	If the flooding has had a positive impact on this site of your business, can you say why?
	Can you estimate the value of the additional services delivered or sales that have been created for this site of the businesses as a result of the flooding in the past 12 months.
5.	In which of the following ways has the flooding had a negative effect on this site of your business?
6.	As a result of flooding have you
7.	You said that your business closed for a period of time, how long was this for in total
8.	If premises or equipment has been damaged or you moved into temporary premises
	a.- in total how much was or will this cost to repair or replace.
	b - What percentage of this full cost was or will be met by your insurance?
9.	a - How much will it cost to repair or replace stock?
10.	Has this resulted in staff downtime?
11.	Can you estimate how many "employee days" of output have been lost as a result (number of lost working days x number of staff affected).
12.	Do you have a "home working" policy, allowing staff affected by flooding to work from home
13.	Excluding those that are able to work from home, how many employee days have been lost because of flooding in the past year (number of lost working days x number of staff affected)
14.	As a result of the difficulties customers had getting to your business what value of sales do you estimate you have lost because of this
15.	Have these delays resulted in any of the following costs for your business
16.	a - As a result of problems transporting goods to customers what additional transport costs have been incurred
17.	Have these delays resulted in any of the following
18.	As a result of problems getting supplies in what additional transport costs have been incurred
19.	a - How much has been spent to clean up the premises from flood damage
20.	And, how much staff time has been used to clean up the premises from flood damage
21.	A - If the flooding had any other negative effects on your business can you provide some examples of these costs.
	Overall has the performance of your business/organisation been affected either positively or negatively by flooding over the past 12 months?
1.	If the site was closed enter the total number of working days it was closed for
2.	If there are further working days lost not covered by the business closure e.g.
1.	Some employees could not get to work or meetings or work from home
2.	Some employees could not access a site
3.	Some employees had spent time cleaning up
4.	Or other reasons
	Number of days lost because business was closed
5.	Where you have lost sales or output, what proportion do you think this has been lost to..... (interviewer note: if respondent provides proportions, check these add up to 100%)
6.	What has been the turnover of this business site in the last financial year, this will help us

- to assess the scale of the effects of the flooding.
7. You said your turnover is £--- but less than £---, what exactly was the turnover of this business site in the last financial year?
 8. What proportion of this turnover has been made in the following markets (interviewer note: if respondent provides proportions, check these add up to 100%)
 9. In total how many people are employed at this site
 1. Would you be able to tell us within a range how many people are employed at this site
 2. As a result of flooding in your area, have you made any additional investments for this site to mitigate against future floods (e.g. sealing floors, raise door thresholds, fit non-return valves to drains).
 1. How much has been spent on these measures.
 2. In the longer term has the flooding had and/or do you anticipated the flooding to result in any of the following effects on your customer base?
 3. As a result of the flooding in the last few years have you considered
 4. As a result of the flooding in the last few years have you reduced the number of people you employ and if not, is this likely

Source: SQW survey design

- A.8 QA Research called businesses across the wards, and in the key business sectors, during April and May 2013, speaking to the contacts identified in the County Councils' databases.
- A.9 In achieving the 600 cases, 1,401 contacts were used; a response rate of 43%. Reasons for the unsuccessful calls were recorded, and are shown in the outcome matrix (Table A-4). Just over 500 did not want to participate, while other contact details were incorrect, a small number of businesses had ceased trading or were duplicates on the database.

Table A-4: Telephone outcome matrix

Outcome	number	%
Successfully completed	600	43%
Incorrect contact details (contact not made)	193	14%
Did not want to participate (various reasons)	522	37%
Ceased trading	29	2%
Not in business sector quota	26	2%
Duplicate excluded	31	2%
Total	1,401	100%

Source: QA Research

- A.10 The results of the survey were provided in a spreadsheet. For each sector and ward the proportion of businesses that reported a negative impact was calculated.
- A.11 The estimates of the costs and lost sales provided by businesses were used to calculate an *average cost for the businesses in each sector*. In cases where the values reported were unusually high, QA research were able to refer to recordings of the interviews to check the responses.

- A.12 Of the 600 interviews, 208 reported a negative impact from flooding. Of these 136 provided an estimate of either the costs they incurred or the lost sales. This provided the basis for calculating the averages in the sample.
- A.13 The averages were applied, weighted by sector and county, to the population of 2,535 businesses in these sectors and wards in Devon and Somerset to give the total estimates of the direct costs of the floods.

Multiplier values

- A.14 The multipliers applied to the lost sales values are based on the Econ|I model, developed by Economic Systems Consultancy & Research and the South West Regional Development Agency¹⁰. This provides multipliers for each sector for Devon and Somerset. These are ratios which show the scale of the impact on the economy including the supply chain (Table A-5).

Table A-5: Multiplier values derived from South West Econ|I model.

Sector	Devon	Somerset
Agriculture	1.54	1.53
Construction	1.74	1.71
Distribution	1.54	1.52
Retail	1.54	1.52
Tourism including Food & Drink	1.47	1.46

Source: Economic Systems Consultancy & Research and the South West Regional Development Agency 2011

¹⁰ <http://www.economicsystems.co.uk/south-west/about.php>

Annex B: SIC codes and key sectors used

B.1 **Standard Industrial Classifications (SIC)** is a system for classifying industries by a four-digit code. It is used by government agencies to classify industry areas, and in research to define different sectors.

SIC codes and key sectors used	
Agriculture	
01110	Growing of cereals (except rice), leguminous crops and oil seeds
01130	Growing of grapes
01210	Growing of other perennial crops
01290	Growing of vegetables and melons, roots and tubers
01410	Hunting, trapping and related service activities
01420	Logging
01430	Mixed farming
01450	Raising of dairy cattle
01460	Raising of horses and other equines
01470	Raising of other animals
01490	Raising of other cattle and buffaloes
01500	Raising of poultry
01700	Raising of sheep and goats
02100	Raising of swine/pigs
02200	Silviculture and other forestry activities
Construction	
41100	Construction of commercial buildings
41200	Construction of domestic buildings
41201	Construction of other civil engineering projects n.e.c.
41202	Construction of residential and non-residential buildings
42110	Construction of roads and motorways
42210	Construction of utility projects for fluids
42990	Development of building projects
43120	Roofing activities
43910	Scaffold erection
43991	Site preparation
Distribution	
49100	Cargo handling

SIC codes and key sectors used	
4931	Freight transport by road
49319	Operation of warehousing and storage facilities for land transport activities of division 49
49320	Operation of warehousing and storage facilities for water transport activities of division 50
49390	Other passenger land transport n.e.c.
49410	Other service activities incidental to land transportation, n.e.c. (not including operation of rail freight terminals, passenger facilities at railway stations or passenger facilities at bus and coach
49420	Other transportation support activities
5210	Passenger rail transport, interurban
52101	Removal services
52103	Service activities incidental to air transportation
5221	Service activities incidental to land transportation
52219	Service activities incidental to water transportation
52220	Taxi operation
52230	Urban and suburban passenger land transport
5224	Urban, suburban or metropolitan area passenger land transport other than railway transportation by underground, metro and similar systems
52290	Warehousing and storage
Retail	
45320	Retail sale in commercial art galleries
47110	Retail sale in non-specialised stores with food, beverages or tobacco predominating
47210	Retail sale of antiques including antique books, in stores
47220	Retail sale of audio and video equipment in specialised stores
47230	Retail sale of automotive fuel in specialised stores
47240	Retail sale of beverages in specialised stores
47250	Retail sale of books in specialised stores
47260	Retail sale of bread, cakes, flour confectionery and sugar confectionery in specialised stores
47300	Retail sale of carpets, rugs, wall and floor coverings in specialised stores
47410	Retail sale of clothing in specialised stores
47430	Retail sale of computers, peripheral units and software in specialised stores
47510	Retail sale of cosmetic and toilet articles in specialised stores
47520	Retail sale of electrical household appliances in specialised stores
47530	Retail sale of fish, crustaceans and molluscs in specialised stores
47540	Retail sale of flowers, plants, seeds, fertilisers, pet animals and pet food in specialised stores

SIC codes and key sectors used

4759	Retail sale of footwear and leather goods in specialised stores
47591	Retail sale of footwear in specialised stores
47599	Retail sale of fruit and vegetables in specialised stores
47610	Retail sale of furniture, lighting equipment and other household articles (other than musical instruments) n.e.c., in specialised stores
47620	Retail sale of furniture, lighting equipment and other household articles in specialised stores
47630	Retail sale of games and toys in specialised stores
47640	Retail sale of hardware, paints and glass in specialised stores
47650	Retail sale of hearing aids in specialised stores
47710	Retail sale of leather goods in specialised stores
4772	Retail sale of meat and meat products in specialised stores
47721	Retail sale of medical and orthopaedic goods (other than hearing aids) n.e.c., in specialised stores
47722	Retail sale of medical and orthopaedic goods in specialised stores
4774	Retail sale of music and video recordings in specialised stores
47741	Retail sale of musical instruments and scores in specialised stores
47749	Retail sale of newspapers and stationery in specialised stores
47750	Retail sale of second-hand goods (other than antiques and antique books) in stores
47760	Retail sale of second-hand goods in stores
47770	Retail sale of sporting equipment in specialised stores
47781	Retail sale of textiles in specialised stores
4779	Retail sale of tobacco products in specialised stores
47791	Retail sale of watches and jewellery in specialised stores
47799	Retail sale via mail order houses or via Internet
47810	Retail sale via stalls and markets of food, beverages and tobacco products
47890	Retail sale via stalls and markets of other goods
47910	Retail trade of motor vehicle parts and accessories

Tourism

03120	Accommodation
5500	Beverage serving activities
55100	Botanical and zoological gardens and nature reserve activities
55201	Camping grounds, recreational vehicle parks and trailer parks
55202	Event catering activities
55209	Freshwater fishing
55300	Holiday centres and villages
5610	Hotels and similar accommodation

SIC codes and key sectors used

56101	Licensed restaurants
56102	Operation of sports facilities
56103	Other holiday and other short-stay accommodation (not including holiday centres and villages or youth hostels) n.e.c.
56210	Public houses and bars
5630	Restaurants and mobile food service activities
56302	Take away food shops and mobile food stands
91040	Unlicensed restaurants and cafes
93110	Youth hostels

Source: ONS – UK Standard Industrial Classification of Economic Activities 2007