

methodology and results of the survey and how the data may be used by the Trust and others.

SURVEY METHOD

The principal data collected during the survey were of the different types of stone used in the external walls and dressings of buildings and in boundary walls. For the purposes of this survey, dressings were taken to be any stonework not forming part of the main walls of buildings. Stonework surrounding openings for windows and doors was recorded as dressings. Cut stone used at the corners of buildings (quoins) was recorded as part of the walls. At the request of Somerset Historic Environment Service, data were also collected on the use of other materials for the walls of buildings and roof coverings, such as brick, render and cob, and slates, stone and clay tiles and thatch.

Surveys were carried out on a parish by parish basis within the limits of each town, village and hamlet. All buildings built before the First World

War that could be seen from a public road or footpath were included in the survey. Data were collected in the field using the form shown in Figure 1. Except for all churches and significant civic, administrative, educational and historic buildings in Taunton, records were not kept of the building stones used in individual buildings. To reduce the time required for the survey, only stone buildings were recorded in Taunton, Wellington and Wiveliscombe. Building stones were identified based on their colour, composition, grain size and sedimentary features. Photographs were taken of good examples of building stones and stone buildings. Samples of building stones were also collected. A total of 63 towns and villages and 2,050 stone buildings and boundary walls were surveyed.

The method of surveying described in the paragraph above was used for two main reasons. The Somerset Historic Environment Service requirement to identify character, appearance and local distinctiveness was best met by data collected on a settlement by settlement basis, rather than

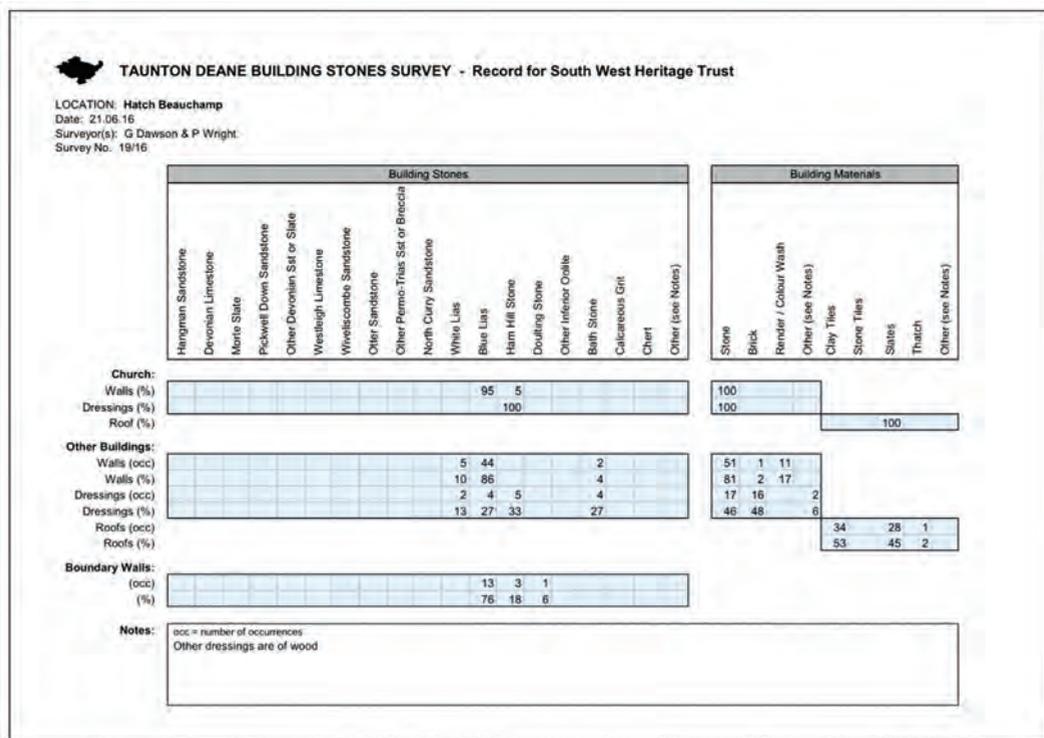


Fig. 2. Data supplied to South West Heritage Trust

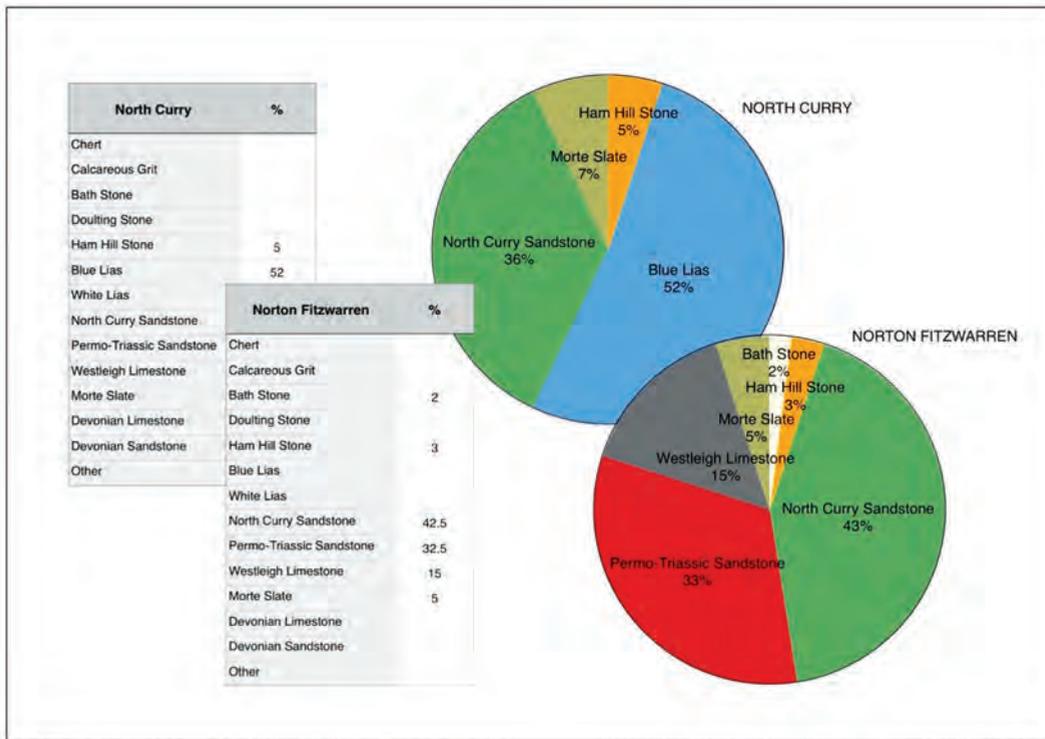


Fig. 3 Use of building stones for buildings, boundary walls and dressings in North Curry and Norton Fitzwarren

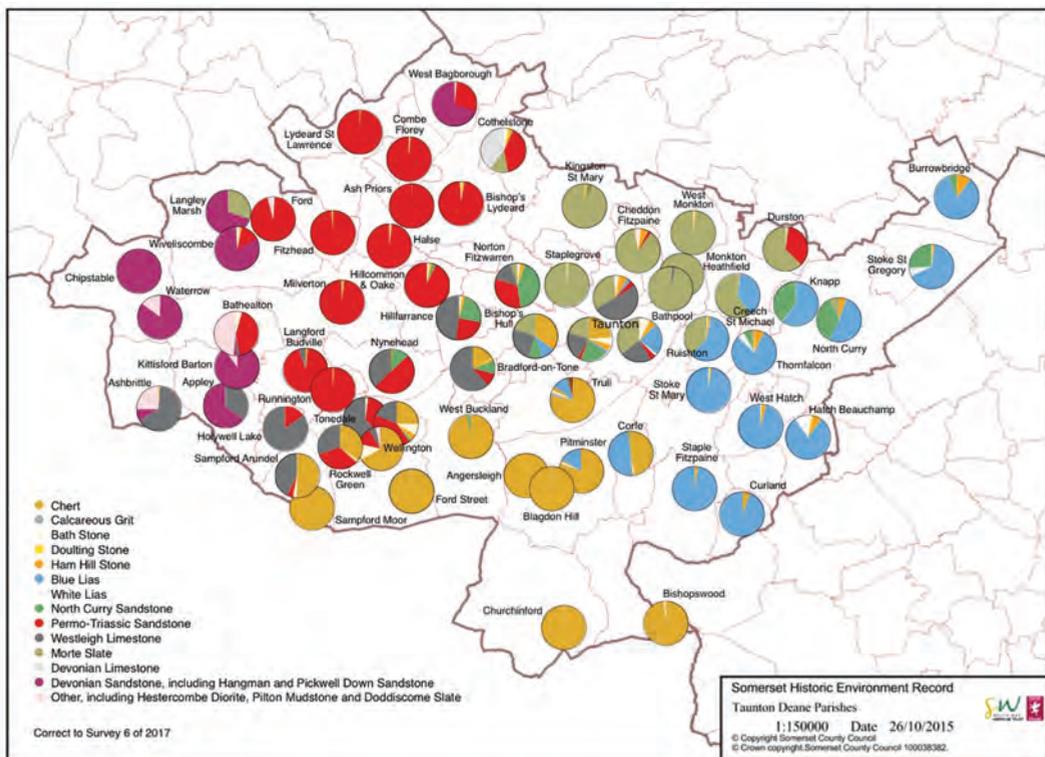


Fig. 4 Use of building stones for buildings, boundary walls and dressings in all the settlements surveyed in Taunton Deane

building by building. Recording stone types used building by building would have been much more time consuming and would have greatly increased the time required to complete the survey.

In the small number of cases where it was not possible to positively identify building stones in the field, their characteristics were noted and the observations cross-checked with data on building stones collected by previous workers: (Prudden, 2001, 2003, 2004 and Unpublished, Barr, Unpublished, and English Heritage, 2011), British Geological Survey, the Taunton Deane Borough Council and Historic England online databases of listed buildings (Taunton Deane Borough Council, 2016; Historic England, 2016) and Pevsner's guide to the buildings of South and West Somerset (Orbach and Pevsner, 2014). Large scale Ordnance Survey maps from the 1880s onwards (free to view on the National Library of Scotland website) were also consulted to identify local quarries.

Using the data collected during each survey, totals were calculated for the number of buildings, boundary walls and dressings made from each stone type. These were then converted to percentages.

These data were stored in a Microsoft Access database and exported as Excel spreadsheets for the South West Heritage Trust (Figure 2). The data were plotted as a series of large and small scale pie charts, as shown in the examples in Figures 3 and 4.¹ The data were also displayed in a Geographical Information System (Quantum GIS) overlaid on a background of Ordnance Survey or British Geological Survey mapping. By doing this it was possible to monitor the distribution of the data and to draw conclusions about the relationship between the use of building stones and the underlying geology.

THE TOPOGRAPHY AND GEOLOGY OF TAUNTON DEANE

Taunton Deane is diverse both topographically and geologically. The local authority area extends from West Bagborough on the lower slopes of the Quantock Hills in the north, to Churchstanton on the high plateau of the Blackdown Hills in the south, and from Chipstable in the Brendon Hills in

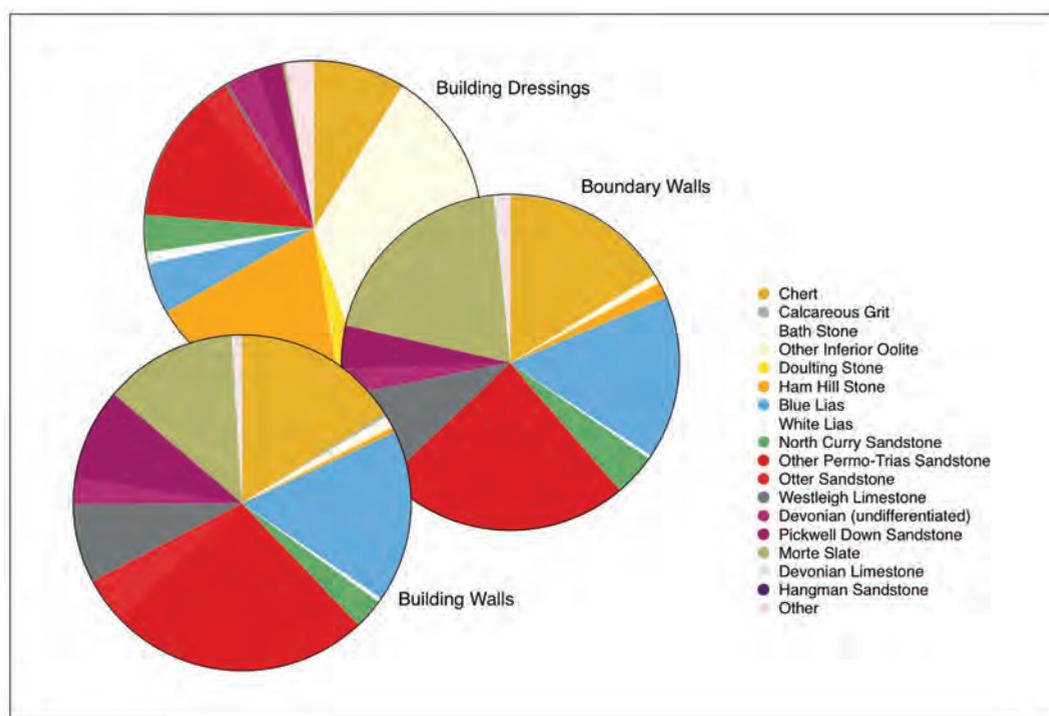


Fig. 5 Diversity of rock types used as building stones in Taunton Deane

the west, to Burrowbridge on the Somerset Levels in the east.

The higher ground of the Brendon and Quantock Hills to the west and north of the Deane is comprised of Devonian and Carboniferous rocks which are faulted against later Triassic strata. The latter, often softer and less resistant to erosion than the former, comprise the less elevated ground between the Quantock and Brendon Hills. Triassic Mercia Mudstone forms the lowest ground around Taunton. South of Taunton, the Blackdown Hills escarpment is comprised of Triassic, Jurassic and Cretaceous rocks capped by clay with flints (chert).

TYPES OF BUILDING STONE USED IN TAUNTON DEANE

From the data collected during the survey, Figure 5 shows the proportions of each of the main rock types used as building stones in Taunton Deane. Figure 6 shows the principal sources of these building stones where they occur in Taunton Deane.

In total twenty-one different building stones were recorded during the survey. These are described below. More detailed descriptions of these building stones are contained in the following references: English Heritage (2011) and Edmonds and Williams (1985).

Building stones of Devonian age

Hangman Sandstone – a formation that consists of reddish-purple to greenish-brown sandstones, siltstones and conglomerates, which form the northern part of the Quantock Hills. Although widely used for building in West Somerset and North Devon, they were only recorded in the present survey at West Bagborough.

Cockercombe Tuff – a distinctive, fine-grained, grey-greenish rock, which outcrops within the Ilfracombe Slates in Cockercombe and Keeper’s Combe on the eastern side of the Quantock Hills. It is formed of a volcanic dust. Within Taunton Deane it is only used for decorative purposes on buildings built of other stone, such as in Park Street, Taunton.

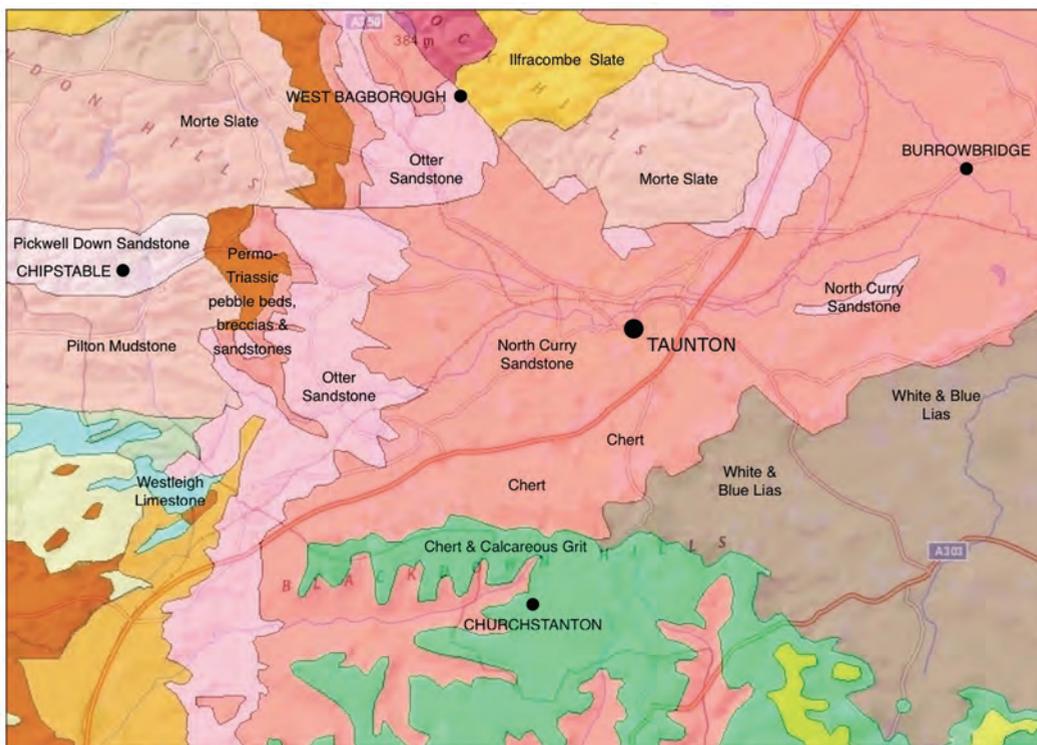


Fig. 6 Principal sources of building stones in Taunton Deane

Devonian Limestones – occur as four thin, and in places discontinuous, horizons of limestone in the central and eastern Quantocks. They are inter-bedded with, and often pass laterally into, calcareous Ilfracombe Slates² They were widely quarried for lime manufacture. Within the study area they were only recorded in buildings at Cotelstone.

Morte Slate – a formation which consists of grey-green to purple-red slates, siltstones and sandstones. The siltstones and sandstones have been widely used in Taunton and the southern Quantock Hills. The stone is not easily dressed and shaped and is often seen in walls as rubble stone. There are numerous old quarries, most of which are now inaccessible. The stone can still be seen at King's Cliff Wood quarry at North Petherton.

Pickwell Down Sandstone – a hard, red-purple sandstone which has been used widely for building around Wiveliscombe.

Pilton Mudstone – the sandstone beds, which form part of this mudstone horizon, can be difficult to distinguish from Pickwell Down Sandstone. It is highly likely that buildings in Waterrow are built of Pilton Mudstone since there are two disused quarries in the mudstone on the northern edge of the village. Bathealton Church is also built of Pilton Mudstone (Berthon, 2005).

Other Devonian Sandstones or Slates – this general category was used to record building stones when it was not possible to accurately identify which formation of the Devonian a sandstone or slate was from.

Building stones of Carboniferous age

Doddiscombe Slate – is a black to dark grey slate formerly quarried at Tracebridge west of Wellington. It has been used locally in Ashbrittle, Appley and Kittisford Barton for slates and walling.

Westleigh Limestone – a hard, grey, fine-grained limestone usually with dark chert banding. It is quarried in East Devon close to the border with Taunton Deane and has been a commonly used building stone in parts of Taunton Deane since the middle of the 19th century. The quarries are still active today, but only for aggregate.

Building stones of Permian age

Exeter Volcanics – are a series of Permian lavas which occur between Exeter and Tiverton. They

are widely used in buildings in the Exeter area but occur only rarely in buildings in Taunton Deane.

Hestercombe Diorite – an igneous rock which occurs in a few dykes at Hestercombe just north of Taunton. This is the only intrusive igneous rock in the area. There are two disused quarries within Hestercombe Gardens. The rock is hard, fine-grained and reddish in colour (Prudden and White, 2007). Its use as a building stone is limited largely to the Hestercombe Estate and the tower of St Mary Magdalene Church in Taunton.

Building stones of Permo-Triassic age

Permo-Trias Sandstone, Conglomerate and Breccia – although the lower beds of the Permo-Trias have been subdivided into Halberton Breccia, Budleigh Salterton Pebble Beds and Otter Sandstone, it is not usually possible to know which part of the succession red sandstones, conglomerates and breccias seen in buildings are from. Despite their composition (pebbles and angular fragments of rock in a matrix of red sandstone), the latter are surprisingly good building stones and are used widely for building both as ashlar and rubble stone to the west of Bishop's Lydeard.

Building stones of Triassic age

Otter Sandstone – a red, fine-grained sandstone, which is an excellent building stone. It can be seen used in Bishop's Lydeard, for example, in the church and Lydeard House, and was quarried just to the west of the village. There are many similar horizons of red sandstone within the Triassic outcrop but for the purposes of the survey, building stones were only identified as Otter Sandstone where they occurred near to a known outcrop.

North Curry Sandstone – a distinctive, medium to coarse grained, greenish, brown or grey-brown sandstone. It forms ridges within the Mercia Mudstone to the west and east of Taunton. It has been used in numerous buildings, such as the church at Norton Fitzwarren and Queen's College in Taunton and in the villages of Hele, Knapp and North Curry.

White Lias – a white limestone which can be found to the south and east of Taunton. Apart from Holy Trinity Church in Taunton, where its white colour is particularly distinctive, it is not used widely as a building stone in Taunton Deane.

Building stones of Jurassic age

Blue Lias – was quarried to the south and east of Taunton, where it forms a prominent ridge extending eastwards from Blagdon Hill to Hatch Beauchamp and beyond to Langport. The formation consists of inter-bedded, blue-grey mudstones and limestones. The limestones break naturally in pieces which are ideal for building. However they are of variable quality and can suffer from flakiness as they weather.

Ham Hill Stone – a golden brown limestone containing many broken shell fragments, which has been quarried west of Montacute since Roman times. Along with Bath Stone, it is the most widely used stone for dressings, particularly on churches and older, high status country houses.

Doulling Stone – a white to yellow-brown, crystalline limestone, often containing crinoids and oolites. It is a freestone quarried in the Shepton Mallet area. Without using a hand lens, it can be difficult to distinguish from Bath Stone. It is not widely used in the Taunton area.

Other Inferior Oolite – this was recorded once during the survey for an oolitic limestone that could not be identified as either Doulling or Bath Stone.

Bath Stone – a white, cream or pale yellow oolitic limestone which, after Ham Hill Stone, is the most widely used stone for dressings in Taunton Deane. It is a freestone with very few impurities, which can be easily cut and carved and is an ideal building and dressing stone.

Building stones of Cretaceous age

Calcareous Grit – a greenish grey, coarse-grained, calcareous sandstone which was quarried at several locations on the Blackdown Hills. It has been used in some buildings, particularly churches, south of Taunton. Wellington Monument is faced with Calcareous Grit.

Building stones of Miocene to Pleistocene age

Chert – a micro-crystalline form of quartz which, when formed of nodules in chalk rocks, is also described as flint. It is a hard and durable building stone but is difficult to cut and shape. It occurs across the top of the Blackdown Hills and below the north-facing, scarp slope of the hills in fields as far north as Taunton. It is widely used as a building stone in these areas and is the only stone used for most buildings in the parishes of Churchstanton and Otterford.

FACTORS AFFECTING THE CHOICE OF BUILDING STONE

From the data collected during the survey, five factors were identified as affecting the choice of building stone. These were: location, function and properties of the stone, and type and date of building. The building stones used in Taunton Deane on a settlement by settlement basis are listed in Table 1.

Location

The location of a building is usually the main and often the only reason for the choice of building stone. Prior to the 19th century it was difficult and expensive to transport stone by road, especially in rural areas where roads were often impassible for carts heavily laden with stone. Consequently local stone was used for most buildings. This is borne out by the data in Figure 7 which shows that the principal building stones used in most areas correspond very closely to the local geology.

This relationship is most convincingly illustrated by examining building stones that only outcrop in small areas. North Curry Sandstone, for example, outcrops in relatively small areas west and east of Taunton. It is only used as a building stone close to its source, around Hele to the west of Taunton, and between Knapp and Stoke St Gregory in the east.

Even more localized is the use of stones that have very limited outcrops such as Hestercombe Diorite that is used on the Hestercombe estate, and Devonian limestone that is used in the church and the Manor House at Cothelstone. The most likely sources for the diorite and the limestone are quarries that were less than 600m from the two localities.

Although some rock types, for example the Triassic sandstones and conglomerates, outcrop over much larger areas, the data collected during the survey suggests that the stone used for most buildings was sourced locally. By walking the ground and examining large scale Ordnance Survey maps from the 1880s, it is apparent that many villages and even farms had small quarries nearby or on their land.

All of the rock types, bar one, that outcrop in Taunton Deane were used as building stones. In areas of Mercia Mudstone, which is excellent for making bricks but too soft to be used as a building stone, the next nearest source of stone was used. For example on the Mercia Mudstone outcrop, north and north-east of Taunton, the principal building stone is Morte Slate. To the east and south-east it is

TABLE 1 – USE OF BUILDING STONES IN TAUNTON DEANE

Town or Village	Stone 1	%	Stone 2	%	Stone 3	%	Stone 4	%
Angersleigh	Chert	98	Ham Hill Stone	1	North Curry Sandstone	1		
Appley	Devonian Sandstone	65	Westleigh Limestone	35				
Ashbrittle	Westleigh Limestone	65	Pilton Mudstone	23	Devonian Sandstone	9	Others	3
Ash Priors	Permo-Trias Sandstone	99	Ham Hill Stone	1				
Bathealton	Pilton Mudstone	48	Permo-Trias Sandstone	43	Bath Stone	4	Others	5
Bathpool	Morte Slate	96	Westleigh Limestone	3	Bath Stone	1		
Bishop's Hull	Chert	30	Westleigh Limestone	25	Morte Slate	20	Others	25
Bishop's Lydeard	Permo-Trias Sandstone	96	Ham Hill Stone	2	Morte Slate	1	Bath Stone	1
Bishopswood	Chert	98	Ham Hill Stone	1	Bath Stone	1		
Blagdon Hill	Chert	97	Ham Hill Stone	2	Blue Lias	1		
Bradford-on-Tone	Westleigh Limestone	62	Chert	17	North Curry Sandstone	10	Others	11
Burrowbridge	Blue Lias	84	Ham Hill Stone	10	North Curry Sandstone	6		
Cheddon Fitzpaine	Morte Slate	87	Ham Hill Stone	5	Permo-Trias Sandstone	2	Others	6
Chipstable	Pickwell Down Sandstone	100						
Churchinford	Chert	99	Ham Hill Stone	1				
Cothelstone	Permo-Trias Sandstone	40	Devonian Limestone	40	Morte Slate	13	Others	7
Combe Florey	Permo-Trias Sandstone	98	Bath Stone	1	Ham Hill Stone	1		
Corfe	Blue Lias	48	Chert	47	Devonian Sandstone	3	Others	2
Creech St Michael	Morte Slate	60	Blue Lias	39	Ham Hill Stone	1		
Curland	Blue Lias	94	Chert	6				
Durston	Morte Slate	62	Permo-Trias Sandstone	35	Blue Lias	1	Others	2
Fitzhead	Permo-Trias Sandstone	98	Douling Stone	1	Ham Hill Stone	1		
Ford	Permo-Trias Sandstone	95	Other	4	Bath Stone	1		
Ford Street	Chert	99	Bath Stone	1				
Halse	Permo-Trias Sandstone	98	Ham Hill Stone	1	Bath Stone	1		
Hatch Beauchamp	Blue Lias	80	White Lias	10	Ham Hill Stone	6	Others	4
Hillcommon & Oake	Permo-Trias Sandstone	93	North Curry Sandstone	3	Bath Stone	2	Others	2
Hillfarrance	Westleigh Limestone	48	Permo-Trias Sandstone	24	North Curry Sandstone	24	Others	4
Holywell Lake	Westleigh Limestone	85	Permo-Trias Sandstone	15				
Kingston St Mary	Morte Slate	95	North Curry Sandstone	2	Ham Hill Stone	1	Others	2
Kittisford Barton	Devonian Sst	90	Doddiscombe Slate	10				
Knapp	Blue Lias	60	North Curry Sandstone	39	White Lias	1		

THE HISTORIC USE OF BUILDING STONES IN TAUNTON DEANE

Langford Budville	Permo-Trias Sandstone	93	Westleigh Limestone	4	Ham Hill Stone	2	North Curry Sandstone	1
Langley Marsh	Pickwell Down Sandstone	70	Morte Slate	30				
Lydeard St Lawrence	Permo-Trias Sandstone	98	Ham Hill Stone	1	North Curry Sandstone	1		
Milverton	Permo-Trias Sandstone	96	Ham Hill Stone	2	North Curry Sandstone	1	Bath Stone	1
Monkton Heathfield	Morte Slate	100						
North Curry	Blue Lias	52	North Curry Sandstone	36	Morte Slate	7	Ham Hill Stone	5
Norton Fitzwarren	North Curry Sandstone	43	Permo-Trias Sandstone	32	Westleigh Limestone	15	Others	10
Nynehead	Permo-Trias Sandstone	49	Westleigh Limestone	38	North Curry Sandstone	12	Ham Hill Stone	1
Pitminster	Chert	80	Blue Lias	16	Bath Stone	2	Others	2
Rockwell Green	Chert	35	Permo-Trias Sandstone	33	Westleigh Limestone	30	Others	2
Ruishton	Blue Lias	59	Morte Slate	38	Ham Hill Stone	2	Bath Stone	1
Runnington	Permo-Trias Sandstone	99	Ham Hill Stone	1				
Sampford Arundel	Chert	50	Westleigh Limestone	43	Permo-Trias Sandstone	4	Others	3
Sampford Moor	Chert	100						
Staple Fitzpaine	Blue Lias	98	Ham Hill Stone	2				
Staplegrove	Morte Slate	97	North Curry Sandstone	1	Ham Hill Stone	1	Bath Stone	1
Stoke St Gregory	Blue Lias	66	North Curry Sandstone	26	White Lias	5	Others	3
Stoke St Mary	Blue Lias	98	Ham Hill Stone	1	Bath Stone	1		
Taunton North	Westleigh Limestone	51	Morte Slate	32	Ham Hill Stone	6	Others	11
Taunton South-West	Chert	24	Westleigh Limestone	22	North Curry Sandstone	20	Others	34
Taunton South-East	Morte Slate	35	Westleigh Limestone	23	Blue Lias	23	Others	19
Thornfalcon	Blue Lias	80	Ham Hill Stone	7	White Lias	5	Others	8
Tonedale	Westleigh Limestone	62	Permo-Trias Sandstone	36	Bath Stone	1	Ham Hill Stone	1
Trull	Chert	78	Blue Lias	11	Ham Hill Stone	3	Others	8
Waterrow	Devonian Sandstone	85	Others	15				
Wellington North	Permo-Trias Sandstone	41	Chert	26	Westleigh Limestone	19	Permo-Trias Sandstone	14
Wellington South	Chert	67	Permo-Trias Sandstone	12	Bath Stone	12	Others	9
West Bagborough	Devonian Sandstone	70	Permo-Trias Sandstone	29	Bath Stone	1		
West Buckland	Chert	95	North Curry Sandstone	3	Ham Hill Stone	2		
West Hatch	Blue Lias	96	Ham Hill Stone	3	Bath Stone	1		
West Monkton	Morte Slate	98	Ham Hill Stone	1	Bath Stone	1		
Wiveliscombe	Pickwell Down Sandstone	82	Permo-Trias Sandstone	14	Bath Stone	2	Others	2

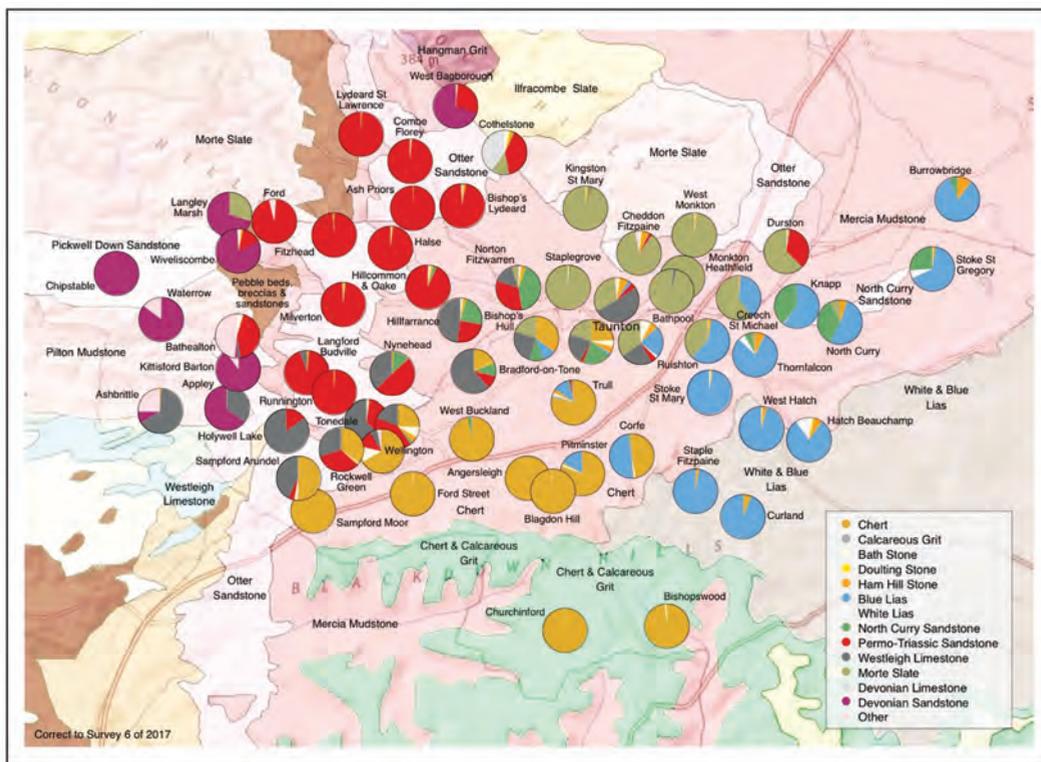


Fig. 7 Relationship between the use and sources of building stones in Taunton Deane

Blue Lias, to the south and south-west it is chert and to the west and north-west it is Triassic sandstone. Immediately east of Taunton, several buildings in Ruishton and Creech St Michael are built of alternating courses of Morte Slate and Blue Lias.

Before the middle of the 19th century, very little stone was used from outside Taunton Deane. The principal exceptions to this were Ham Hill, Bath and Douling Stone that were used in small quantities for dressings and windows, particularly of churches and for the facades of some finer buildings. After the middle of the 19th century, Westleigh Limestone from East Devon was imported in quite large quantities for use in buildings and other construction projects along a corridor following the canal and railway from the Devon border through Wellington to Taunton.

Function and Properties of the Stone

These two factors are intrinsically linked. This is most noticeable in the choice of stone for dressings, i.e. stone that has to be cut or carved to create

ashlar blocks or mouldings for windows and doors. The best stones for this purpose are freestones, which by their nature are easy to work and of uniform composition and texture. Of the local building stones, ashlar blocks have been cut most extensively from Otter and North Curry Sandstone. The old library in Taunton and the church in Bishop's Lydeard are good examples of buildings built of the former, and Queen's College in Taunton and the church in Norton Fitzwarren are good examples of buildings built of the latter. Both stones have also been used for the mouldings of windows and doors, especially of churches to the west and north-west of Taunton (see Figure 8). Neither stone is particularly well suited for this purpose as over centuries both have suffered considerable damage due to weathering. Calcareous Grit has also been used for ashlar and dressings in buildings on the Blackdown Hills, most notably in the churches at Churchstanton and Otterford.

It is evident from the survey that most of the remaining rock types that outcrop in Taunton Deane

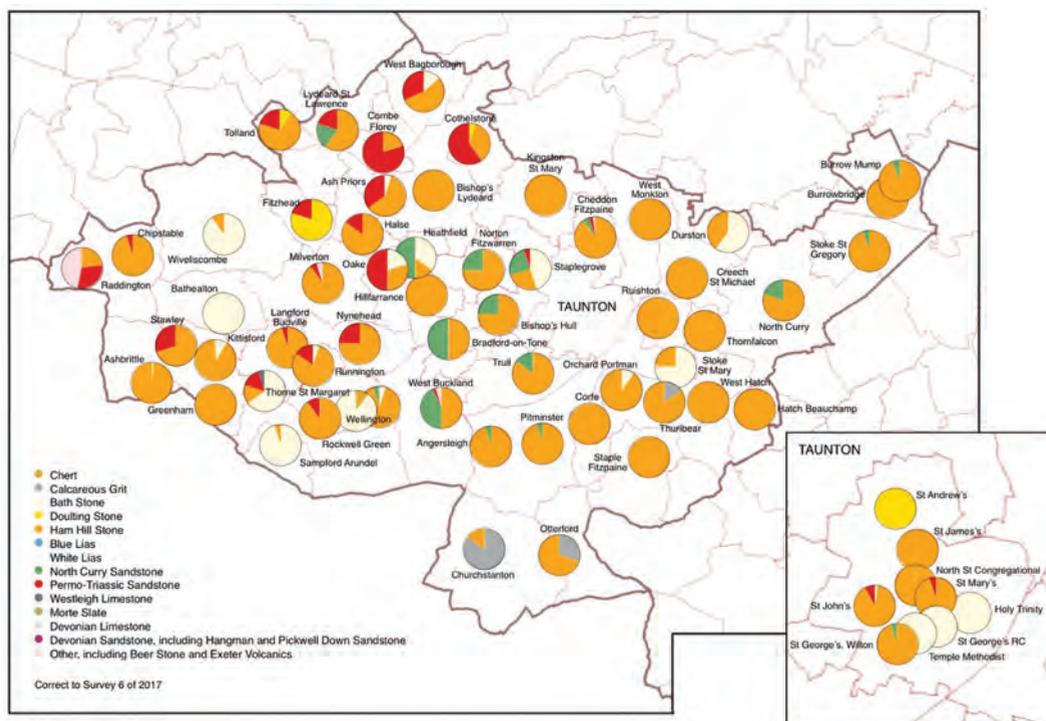


Fig. 8 Use of stone for the external dressings of churches

have been worked into ashlar blocks at one time or another, although by no means as extensively as Otter and North Curry Sandstone. Blue Lias has been widely used for flagstones and to a lesser extent for quoins. All Saints Church in Rockwell Green is made of squared blocks of Permo-Triassic conglomerate, and chert has been fashioned into small blocks for use as dripstones above the windows of cottages in Churchinford. These rocks have been used as ashlar, but none are suitable for carving. Higher quality stones, most notably Ham Hill Stone, Bath Stone and Douling Stone have been imported for this purpose and these stones predominate in the dressings of churches (Figure 8) and other prestigious buildings.

Although in most cases not a reason for the choice of building stone, it is the properties of the stone used for the walls of buildings that give the villages in Taunton Deane their distinctive appearance. Visually by far and away the most important property is the colour of the stone. This ranges from the grey-green and dark purple of the slates and sandstones of villages like Kingston St Mary and West Monkton at the southern end of the

Quantocks, to the brown, grey and white of chert in villages like Churchinford and Blagdon Hill above and below the Blackdown Hills. Elsewhere colours range from the purple and dark red sandstones of Wiveliscombe and Chipstable in the Brendon Hills to the blue and buff limestones of the villages bordering the Somerset Levels. Sandwiched between the high ground of the Brendon and Quantock Hills are the red sandstones characteristic of buildings in Bishop's Lydeard, Combe Florey and Milverton.

Type of Building

The type of building does not so much affect the choice of building stone as it does the way in which the stone was used.

Because the local stones are difficult to work, most vernacular buildings in Taunton Deane are built of rubble stone, i.e. rough, undressed stone. Generally the stone is not laid in courses. There is one exception to this and that is for houses built of Blue Lias limestone. Unlike other stones, the limestone occurs in thin beds of uniform thickness which can be split into blocks of similar height, that

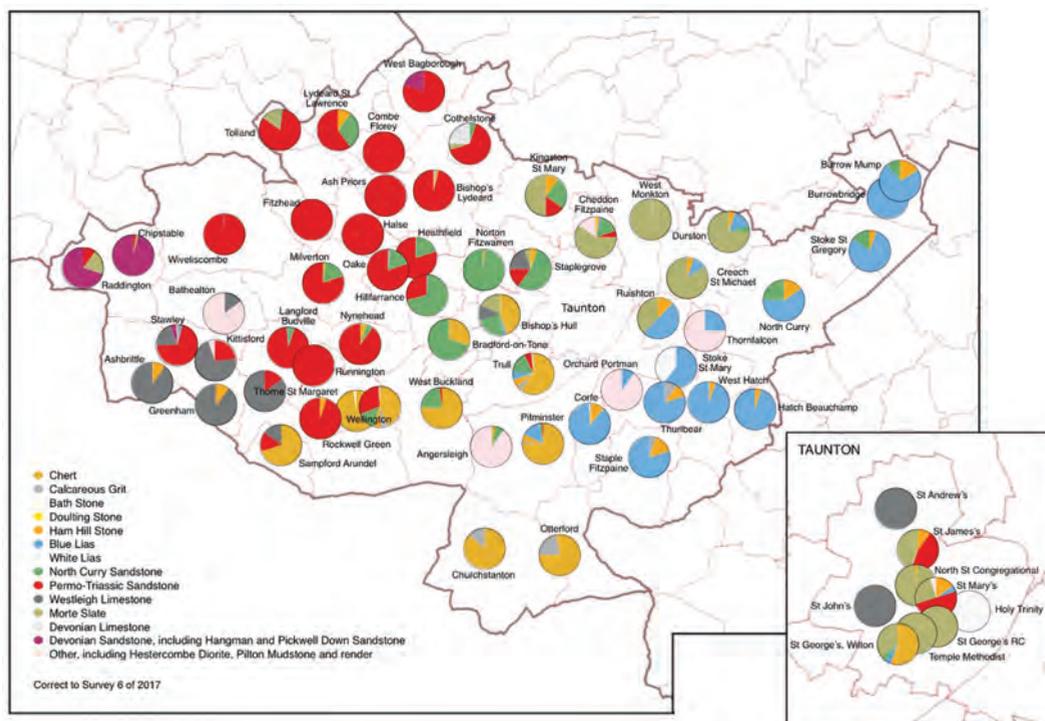


Fig. 9 Use of stone for the external walls of churches

are well suited for laying in courses. Where the local stone could be cut into ashlar blocks it was also used for quoins and the surrounds for windows and doors. If this was not possible, brick was often used instead of stone. This applies particularly to farmhouses, cottages and barns built of Morte slates and sandstones, Blue Lias limestone and chert.

Most churches (see Figure 9) are also built of locally sourced rubble stone. But where suitable stone existed (for example in areas of Otter and North Curry Sandstone), large ashlar blocks were often used to give extra strength to church towers.

Local stone was also used for many large, country houses and other high status buildings, including for example in Taunton the Municipal Hall (Morte Slate), the old library (Otter Sandstone), Queen's College (North Curry Sandstone) and King's College (sandstone from the Morte Slate formation). These buildings were often built of ashlar blocks rather than rubble stone and the quoins, dressings and windows were most frequently made of Ham Hill Stone, and later Bath Stone, rather than local stone. Before the First World War only a very few commercial buildings (most notably banks) and

large country and town houses were constructed of stone sourced from outside Taunton Deane. This was mostly Bath Stone, but because of the high cost of transport this was often only used for the front elevations of these buildings.

Date of Building

It is evident from the survey data that date of construction was an important factor that affected the choice of building stone.

Prior to the opening of canals and railways in the 19th century, almost the only stone imported from outside of the Deane was Ham Hill Stone. It was transported from as early as the 13th century from its source at Ham Hill, near Montacute, to Taunton Deane along the rivers Parrett and Tone (Prudden, 2001). As mentioned previously, it was used extensively throughout the Deane for the dressings and windows of churches and other high status buildings.

It was not until the opening of the canals (Bridgwater to Taunton in 1827 and Taunton to Tiverton in 1839) and the Taunton to Exeter railway in 1844 that other stones began to be used for

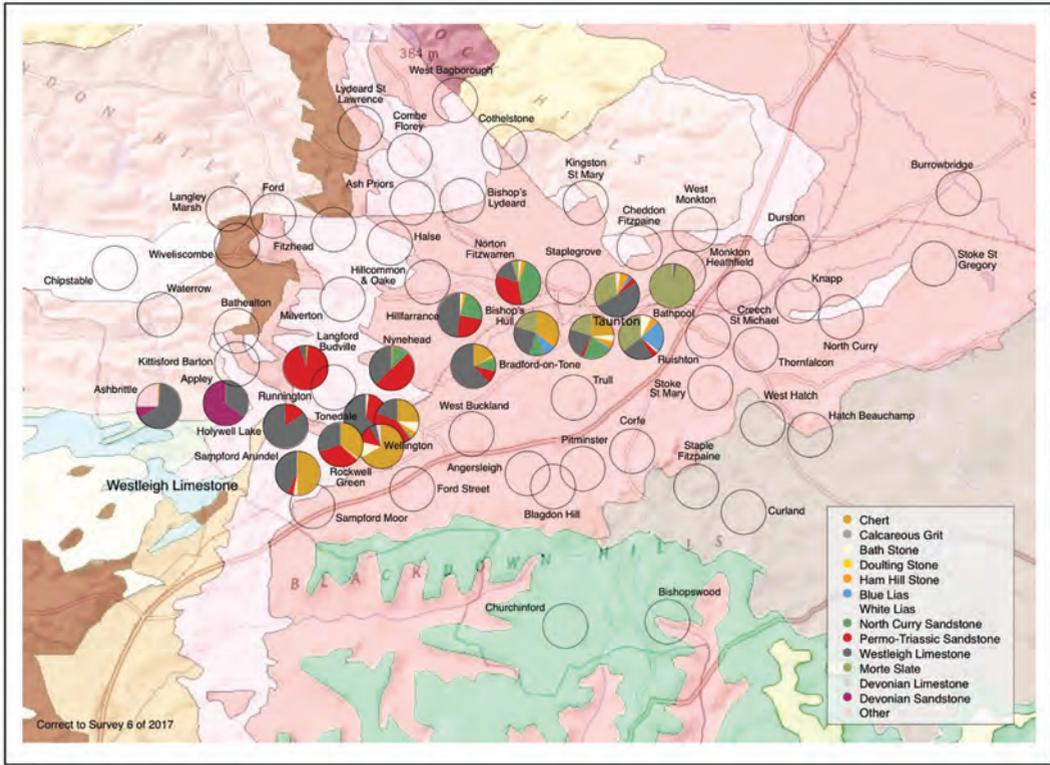


Fig. 10 Use of Westleigh Limestone as a building stone in Taunton Deane

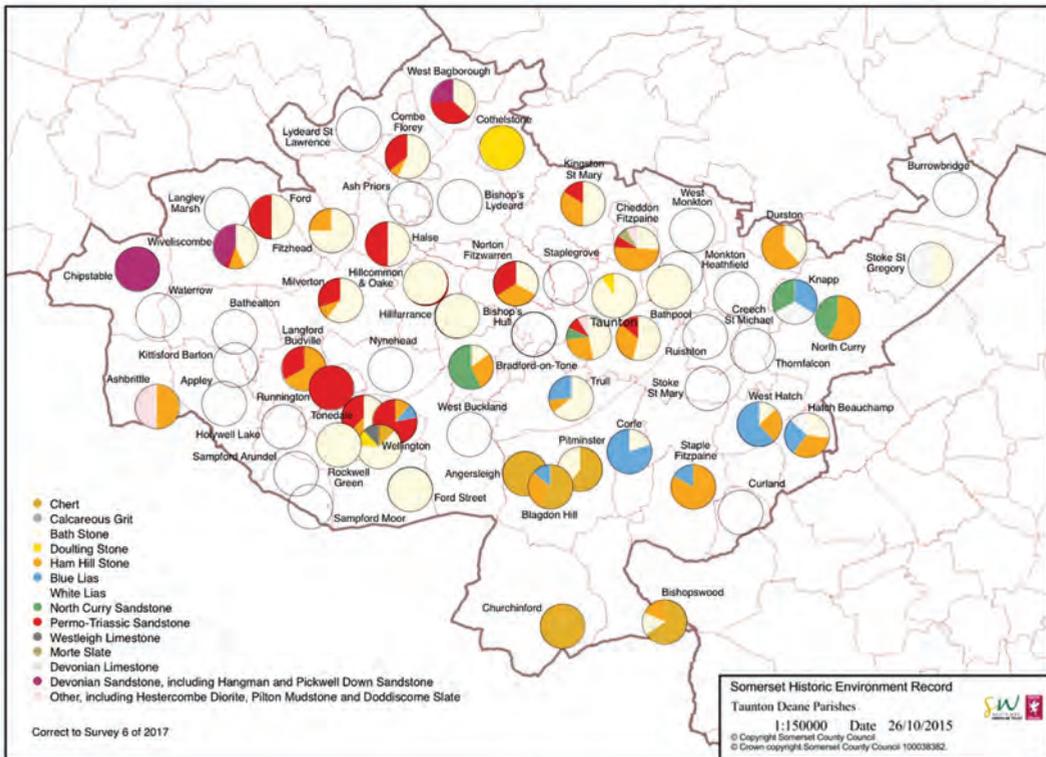


Fig. 11. Use of stone for the dressings of buildings, not including churches

buildings in Taunton Deane. The most striking of example of this was the use of Westleigh Limestone quarried across the border in Devon, just to the west of Taunton Deane. Stone was first transported along a tramway from the quarry at Westleigh to a wharf on the Taunton to Tiverton canal (the Grand Western Canal) and later to a siding on the Great Western Railway at Burlescombe. Figure 10 shows how this stone was then used in buildings along a distinct corridor following the route of the canal and the railway from the Devon border to Taunton. The stone was used in many prestigious buildings in Taunton, including Shire Hall, St John's Church, Taunton School and the former Technical Institute in Corporation Street. All were built after 1850.

Around the same time Bath Stone began to replace Ham Hill Stone as the stone of choice for dressings, as shown in Figure 11. It was at this time that Bath Stone also became the stone of choice for a number of villas, large town and country houses and banks that sought to copy the grandeur and elegance of the architecture of Bath.

CONCLUSIONS

This study has shown a very close correlation between the types of building stone used in Taunton Deane and the local geology. This is especially true for vernacular buildings and for most churches from the time of the oldest surviving stone buildings until the spread of canals and railways in the 19th century. Where there has been a variation from the local sourcing of stone, it has been either because the local stone is totally unsuitable, for example Mercia Mudstone in the Taunton area, or because the person or persons commissioning a building could afford to acquire stone from further afield. Until later times, when Bath Stone became more widely available, this was usually Ham Hill Stone.

The survey method developed during this work has proved to be a practical way to collect quantitative data on the use of building stones over a large area. The use of these data in a GIS (Geographical Information System) has the potential to provide conservation officers, developers, planners and others with a powerful tool for managing Conservation Areas, Areas of Outstanding Natural Beauty, National Parks and Landscape Character Areas. Using this technology, building stones can be mapped against other landscape features and characteristics, to assist

with preserving the distinctiveness of local towns and villages.

ACKNOWLEDGEMENTS

The published and unpublished works of the late Hugh Prudden have been an invaluable source of inspiration and reference for this work. The authors would like to thank the Somerset Heritage Centre, to whom Hugh donated his unpublished archive of geological material, for agreeing to the use of this material. Thanks are also given to Dr Mike Barr for his valuable help and encouragement and especially for access to his unpublished data on Somerset building stones. Dr Andy King is thanked for his advice from the start of the survey, as are the staff of the South West Heritage Trust, particularly Nic Wall and Bob Croft, for their support and encouragement throughout the survey. Steve Crabtree is thanked for his helpful comments on the draft of this paper and the British Geological Survey (BGS) kindly gave permission for use of their digital data in the maps.

NOTES

- ¹ Percentages for pie charts that combine data on the use of building stones for building and boundary walls and dressings were calculated using the following formula: $(8a+4b+c) / (8A+4B+C) \times 100$ where for each survey A = total number of stone buildings, B = total number of stone boundary walls, and C = total number of buildings with stone dressings; and a = number of buildings of a particular stone type, and b and c = numbers of boundary walls and buildings with dressings of the same stone. Weightings were applied to the number of stone buildings and boundary walls so as not to over represent the importance of the small amount of stone used in dressings.
- ² Sandstones, siltstones and slates from the Ilfracombe Slate formation were not recorded as having been used as building stones in Taunton Deane.

REFERENCES

- Barr, M. W. C. (Unpublished) 'Building stone data for Devon and Somerset'.
- Berthon, G. (2005) 'Guide to St Bartholomew's Church, Bathealton, Somerset', unpublished church guide.
- British Geological Survey (2016) 'Strategic Stone Study online database of Building and Quarry

- Stones', at <http://mapapps.bgs.ac.uk/buildingStone/BuildingStone.html>.
- Edmonds, E. A. and Williams, B. J. (1985) 'Geology of the Country around Taunton and the Quantock Hills'. Memoir of the British Geological Survey (Sheet 295), HMSO.
- English Heritage (2011) 'Strategic Stone Study. A Building Stone Atlas of Somerset and Exmoor', at http://www.bgs.ac.uk/mineralsuk/buildingStones/StrategicStoneStudy/EH_atlases.html.
- Historic England (2016) 'Online database of Listed Buildings', at <https://historicengland.org.uk/listing/the-list/>.
- Orbach, J. and Pevsner, N. (2014) *The Buildings of England. Somerset: South and West*, Yale University Press.
- Prudden, H. C. (2001) 'Geology and Landscape of Taunton Deane', Taunton Deane Borough Council.
- Prudden, H. C. (2003) 'Somerset Building Stones – A Guide', Proceedings of the Somerset Archaeological and Natural History Society, 146, pp. 27-36.
- Prudden, H. C. (2004) 'Somerset Geology – A Good Rock Guide', at people.bath.ac.uk/exxbgs/Somerset_Good_Rock_Guide.pdf.
- Prudden, H.C. (Unpublished) 'Table of Building Stones in Somerset Churches.
- Prudden, H. C. and White, P., (2007) 'The Stones of Hestercombe: A Geological Tour of the Rocks and Stonework of Hestercombe Gardens', Hestercombe Gardens Trust.
- Somerset Historic Environment Service (2015) 'Taunton Deane Building Stone Survey', unpublished project brief.
- Taunton Deane Borough Council (2016) 'Online database of Listed Buildings' at <http://www2.tauntondeane.gov.uk/webpages/listedbuildings/>.