This lane is an ancient way up to the ridge behind Doverow Hill. In medieval times the ridge and slopes formed a large common field of Stonehouse manor called Great Doverow Field. This was divided into smaller parcels, and the lane was the easiest access to it for tenants from the village, their carts and livestock. In the manor court books between the 16th and 18th centuries the lane is simply called variants of 'the way into, or out of, Great Doverow Field'. It was also part of the local network of lanes leading in all directions, including to Westrip and Ebley.

The name 'Greenstreet' is recorded in the manor court books from at least 1497, when it is called the 'King's Road'. However, this entry seems to refer to the old high road to Ebley round the south side of Doverow Hill, now represented by Pearcroft Road, and approximately the line of the railway as far as Ebley. The 'King's Road' at Pearcroft is mentioned in 1492. This upper road had been largely supplanted by the 16th century by what is now Ebley Road and Westward Road. References to 'Greenstreet' in the 17th and early 18th centuries also point to this southern area. The name was apparently also being applied to the northern lane by 1810, if the gypsy story recorded by Fisher and C.L.Smith is to be trusted. Gypsies and Greenstreet come together in the poem 'Stroudwater' of 1843 by Jephtha Young, quoted by C.L.Smith. The name may have been in common use for this and other ancient lanes in the parish before then, but no further references have been found.

The name 'Woodcock' is found in the tithe award of 1839 and the census of 1841 applied to what is now The Glen. This property may have been called 'Woodcock Farm' by the Denton family when they acquired it from the manor in about 1790, although no direct evidence has been found for this. 'Woodcock' is still a specific place with only two households in the 1851 census, the lane itself not named but perhaps known as 'Greenstreet'. However, in 1861 'Woodcock Lane' is listed with 34 households between what is now called Greenstreet and the site of the Plough Inn at Blackwell Close.

In a case in 1925, about the right of way through to Westrip, the whole lane was said to be Woodcock Lane or Westrip Lane, formerly known as Greenstreet. The action for trespass was rejected on the grounds that it was a public highway. 'The Glen' was by then the name for the former Woodcock Farm, known to C.L.Smith.