











Appendix I: Identification of grassland water vole field signs

Water Vole Field Signs	Description/Identification
<div data-bbox="199 719 236 752">(1)</div>  <div data-bbox="199 1122 236 1155">(2)</div>  <div data-bbox="199 1525 236 1559">(3)</div>  <div data-bbox="199 1928 236 1962">(4)</div> 	<p data-bbox="1010 338 1233 371">Burrow Entrance</p> <ul data-bbox="962 412 1401 1682" style="list-style-type: none"> • Diameter 4-8cm. • Can be found on slopes or flat ground (Example 1) • Burrow wider than it is tall (Example 2). Can be dug out by other animals so may occasionally appear much larger at entrance. • Well-defined opening when in use. • Tends to be in the open away from buildings, trees, etc (water voles appear to favour garden decking and porta-cabins however). • Water voles favour grassland with tussock-forming grass species • Burrows can persist in the environment for years (water voles tend to be less active above ground during the winter months but may still be using the burrow) • Fan-shaped soil mound outside (occasional – tends to be when the burrow is freshly dug). • Clipped grass from feeding remains can be found around entrance (most common in springtime). (Example 3) • Droppings around entrance (most common during the breeding season from April to Sept). • Water voles can abandon a burrow system but return to it the following season/year(s). • Water voles frequently block up burrow entrances using a mixture of soil, shredded grass and moss. This tends to be in response to disturbance or periods of heavy rainfall. (Example 4)

Water Vole Field Signs	Description/Identification
<div data-bbox="188 645 231 678">(5)</div>  <div data-bbox="188 1070 231 1104">(6)</div> 	<p data-bbox="954 293 1334 360">Soil Mound (also known as a tumulus)</p> <ul data-bbox="962 405 1390 898" style="list-style-type: none"> • Flattened soil mound created as a by-product of burrowing (diameter of each mound is variable). (Example 5) • Similar in appearance to a molehill but not as tall or conical-shaped. • Often seen alongside a burrow entrance. • Tend to be found in clusters rather than singular. (Example 6) • Most frequently recorded during Spring and Autumn because they indicate periods of high activity associated with breeding then dispersal.
<div data-bbox="188 1507 231 1541">(7)</div>  <div data-bbox="188 1977 231 2011">(8)</div> 	<p data-bbox="1010 1144 1214 1178">Feeding Station</p> <ul data-bbox="962 1223 1390 1715" style="list-style-type: none"> • Water voles spend many hours foraging for plant material which they collect into piles. (Example 7 and 8) • Collected plant material can be of varying lengths depending on the amount eaten but it will always be cut at a 45° angle. • Piles can frequently be found at the base of a grass tussock or somewhere relatively covered. • Water voles eat a broad range of vegetation including grasses, sedges, rush, bark, seeds and berries.

Water Vole Field Signs	Description/Identification
<p>(9)</p> 	<p>Droppings</p> <ul style="list-style-type: none"> • The most definitive water vole field sign. (Example 9) • 8-12mm length. • Circular in diameter with blunt ends. • Green when fresh. • Dark to light brown when dried out. • Mostly odourless. • Can be found at any time of year but most frequently seen in springtime and the breeding season.
<p>(10)</p>  <p>(11)</p> 	<p>Latrine</p> <ul style="list-style-type: none"> • Piles of flattened droppings normally with fresh droppings on top. (Example 10 and 11) • Highly seasonal – occurs only during the breeding season. • Tend to be very conspicuous compared to feeding stations. • Latrines are used for scent communication between males and females for the purpose of breeding. They also mark the boundary of a female's territory.

Water Vole Field Signs	Description/Identification
<div data-bbox="188 667 247 705">(12)</div>  <div data-bbox="188 1149 247 1187">(13)</div>  <div data-bbox="188 1563 247 1601">(14)</div> 	<p data-bbox="1007 271 1222 309">Other field signs</p> <ul data-bbox="1007 344 1436 898" style="list-style-type: none"> • (12) – nest material • (13) – above-ground run • (14) – run and burrow revealed post-snow cover • (15) - soil mound showing digging underneath hard-standing • (16) – burrows underneath decking • (17) – dried out latrine because of hot summer weather • (18) – burrow system underneath plywood • (19) – close up of nest material shown in (18)

(15)



(16)



(17)



(18)



(19)

