



Amphibian and Reptile Conservation

RESEARCH REPORT 18/01

Jersey multi-species distribution, habitat suitability & connectivity modelling

Appendix F

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ARC Science Team

States 
of Jersey

**amphibian and reptile
conservation**



Appendix F – Least-cost paths and corridors

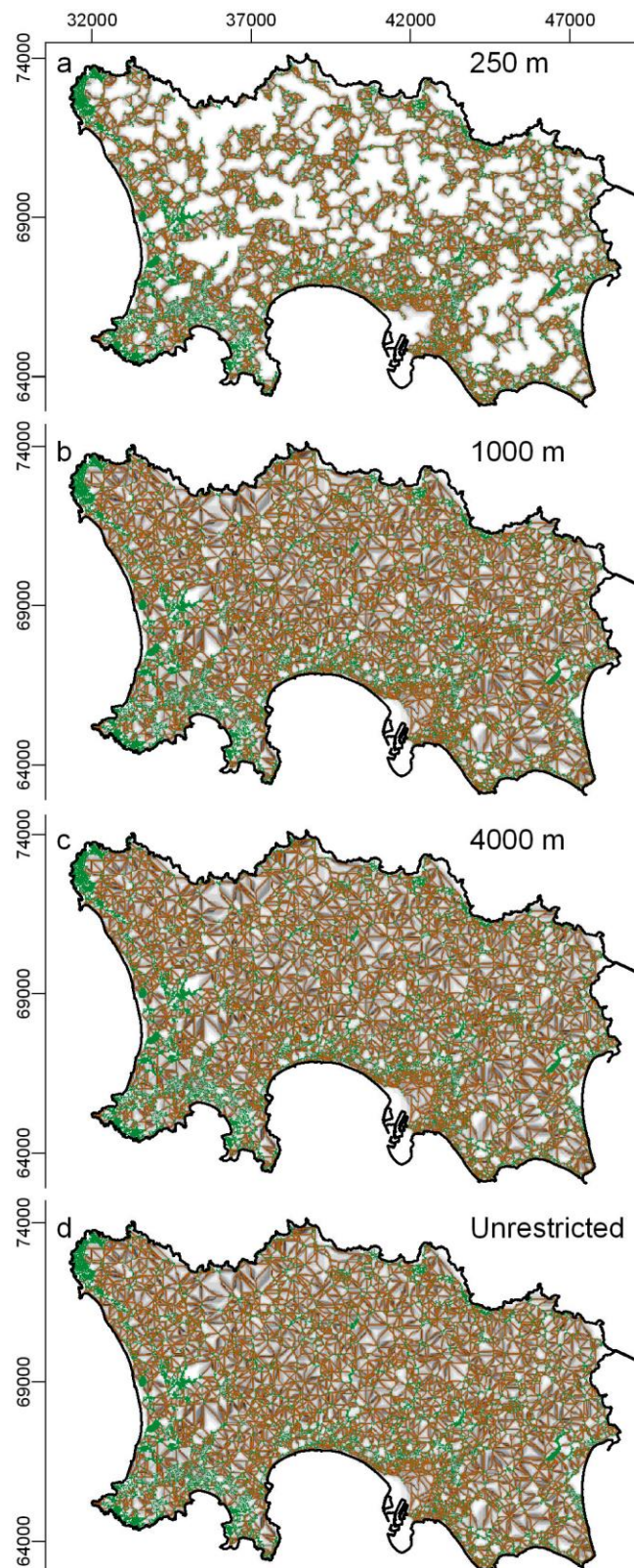
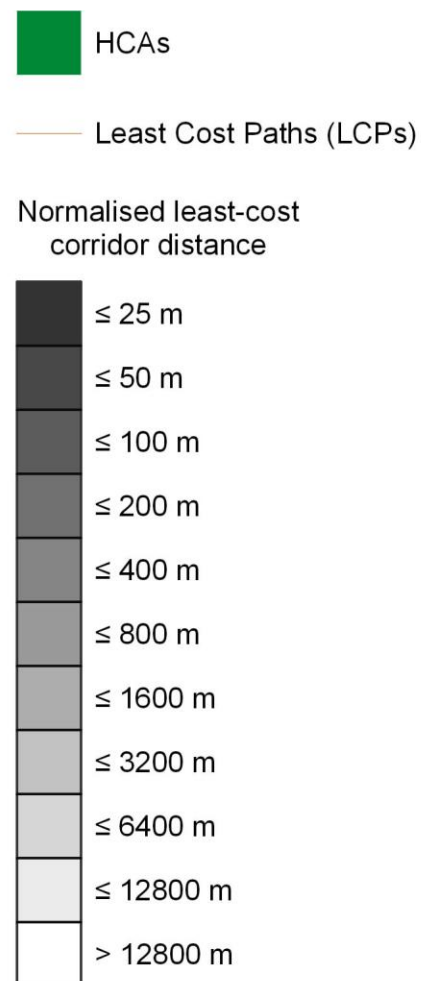


Figure F1 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) including built-up areas (shown in green) for the Western toad (*Bufo spinosus*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



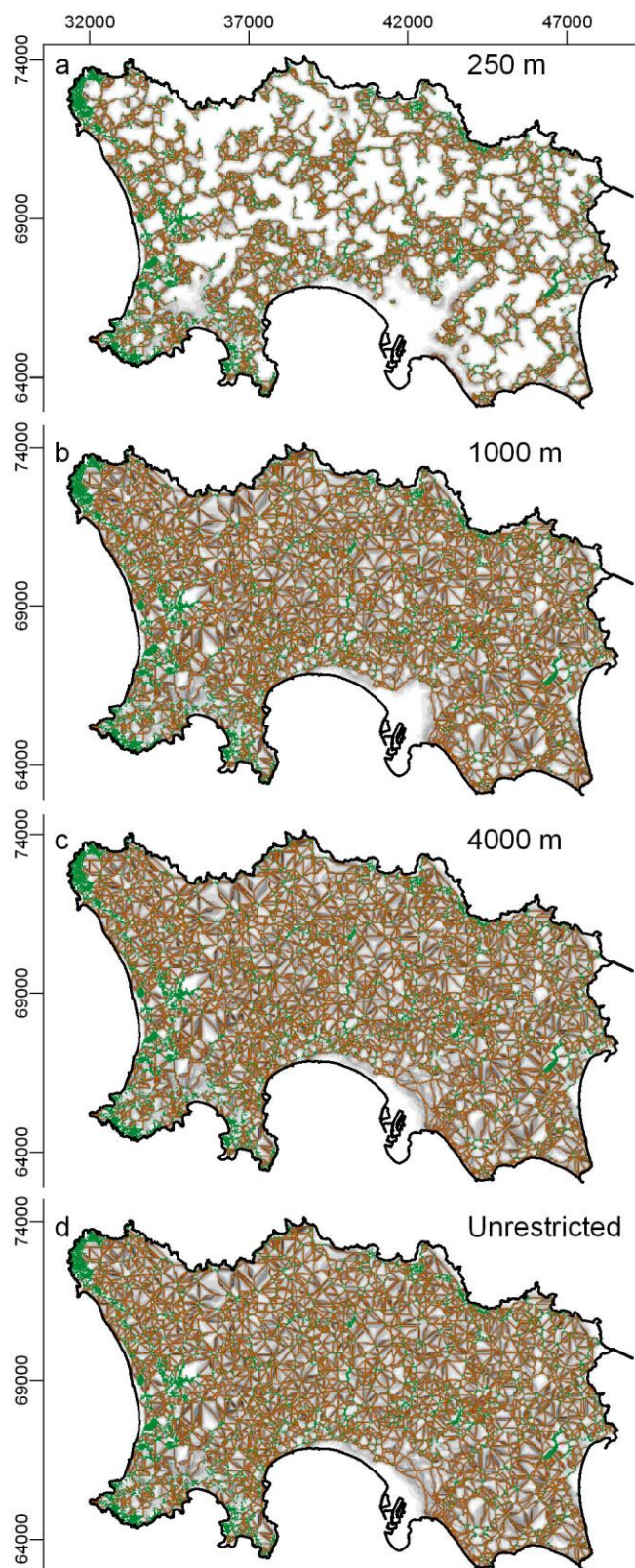
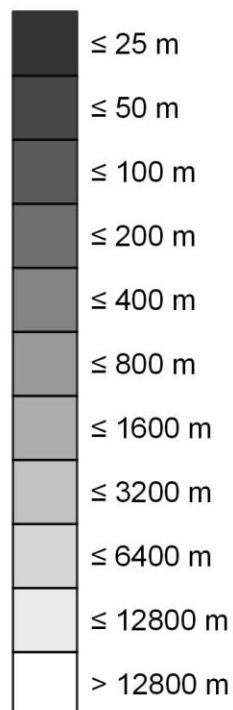


Figure F2 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for the Western toad (*Bufo spinosus*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.

HCAs

Least Cost Paths (LCPs)

Normalised least-cost corridor distance



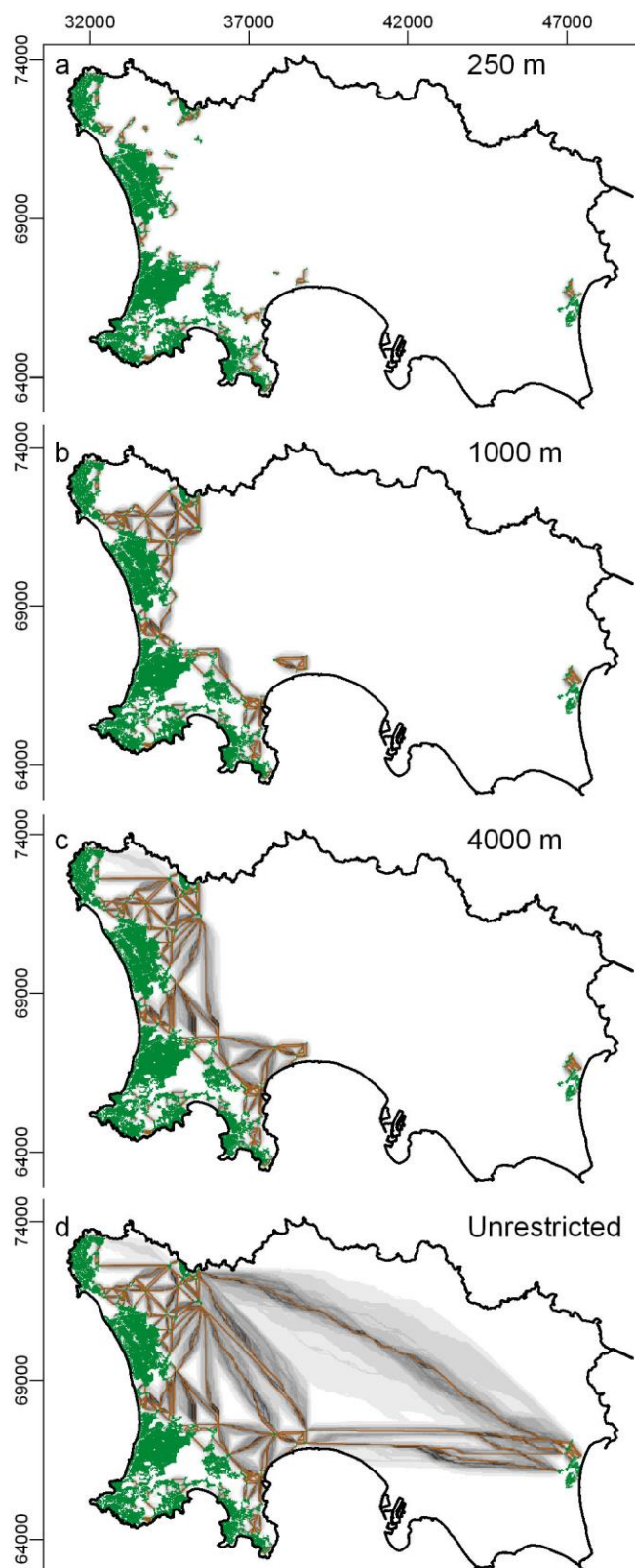
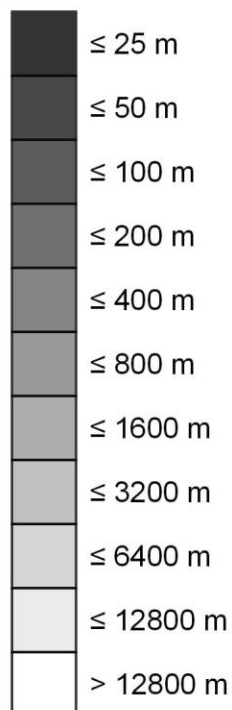


Figure F3 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for the grass snake (*Natrix helvetica*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.

HCAs

Least Cost Paths (LCPs)

Normalised least-cost corridor distance



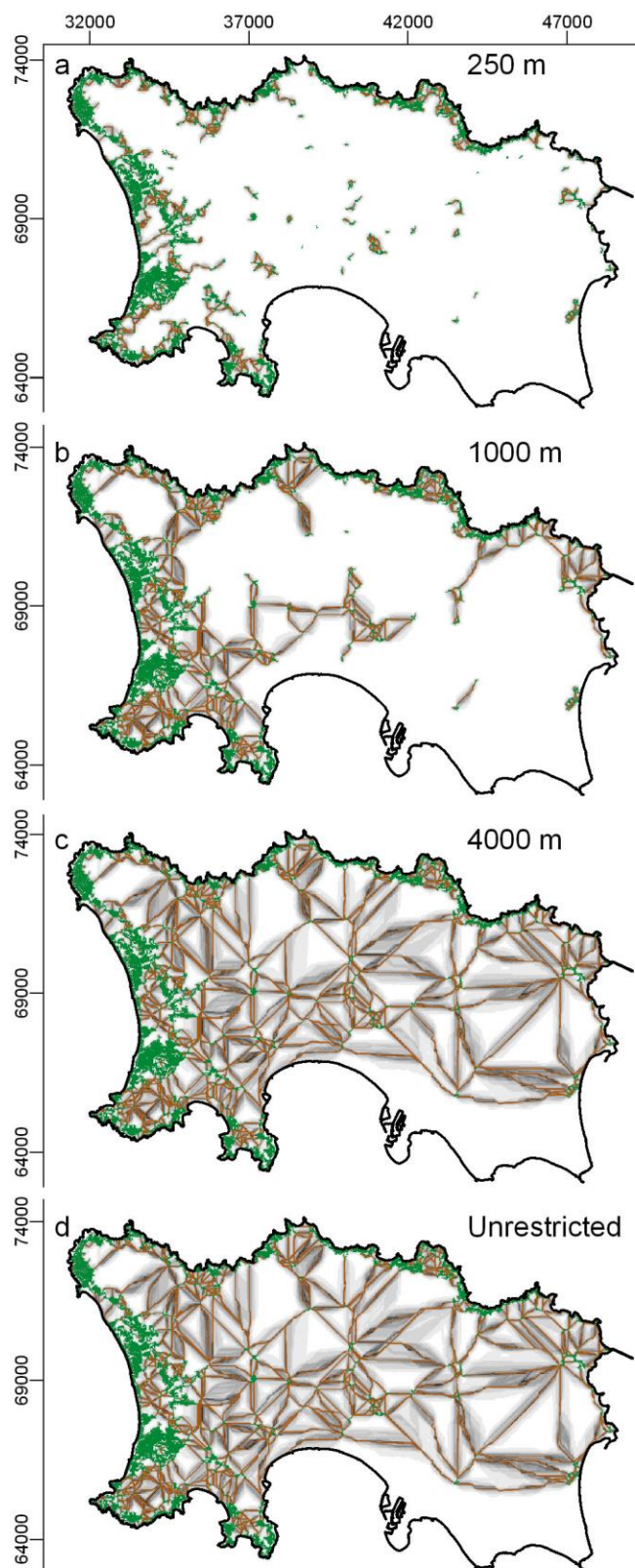
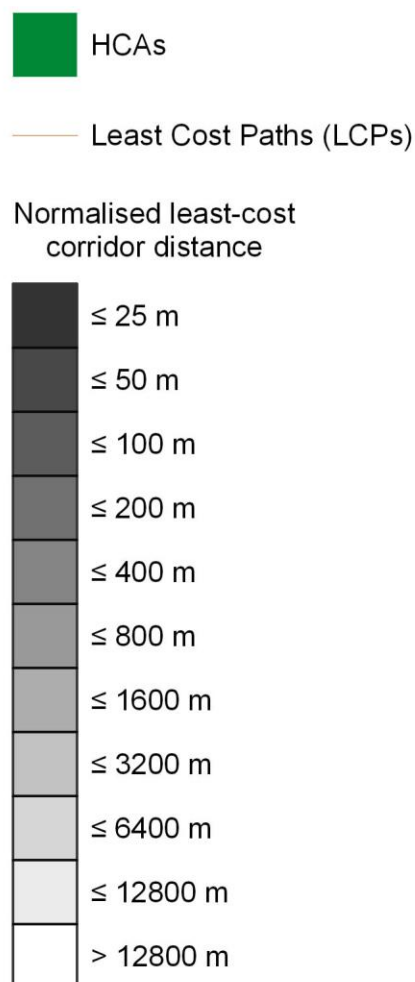


Figure F4 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for the bank vole (*Myodes glareolus*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



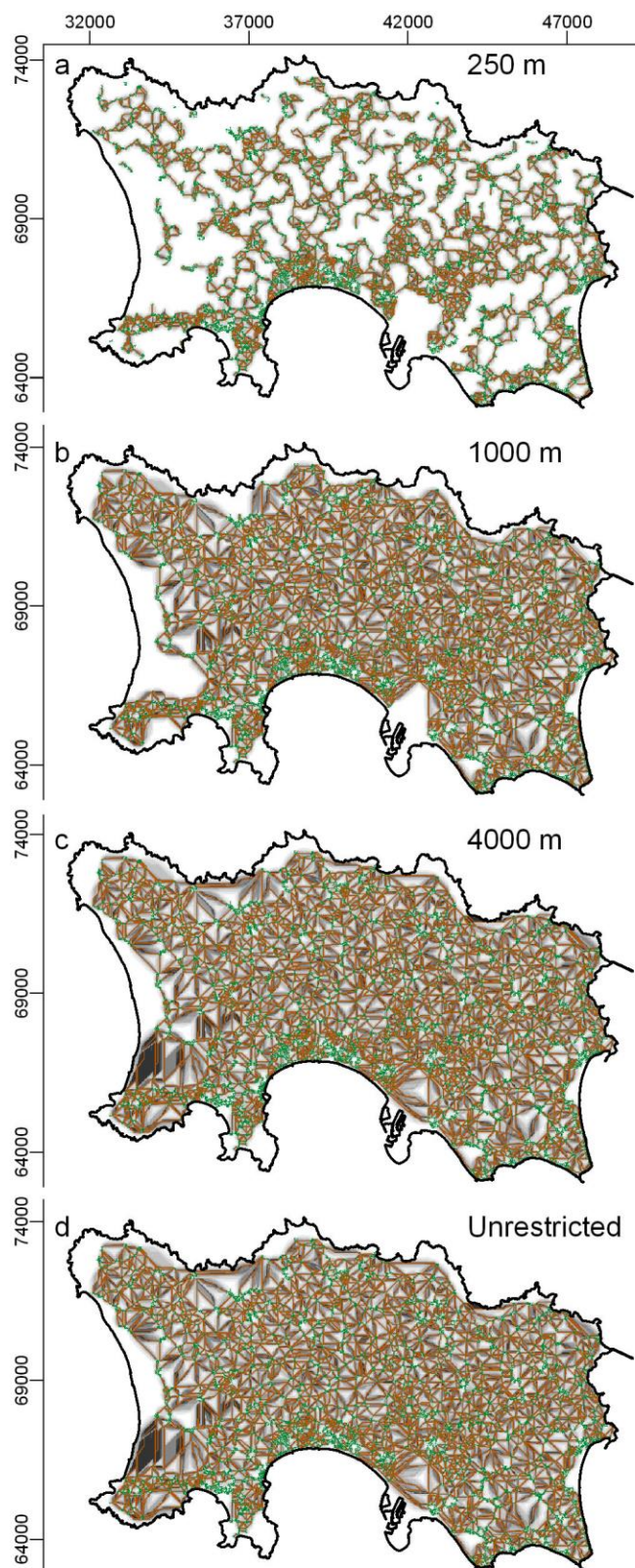
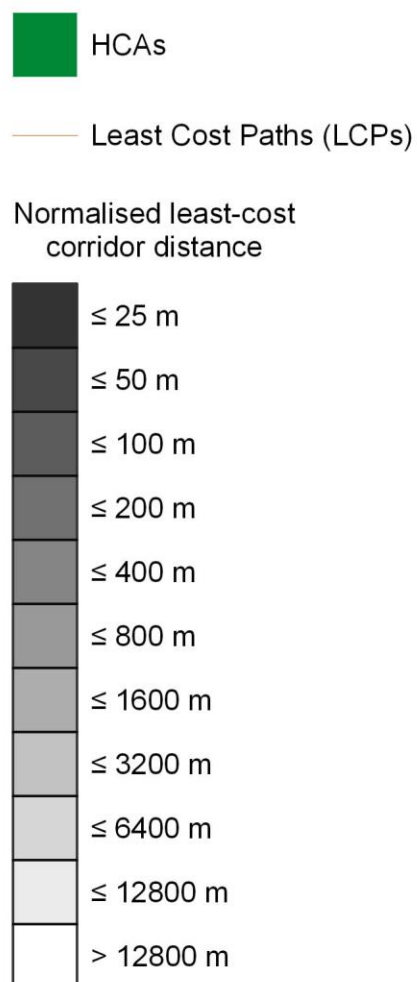


Figure F5 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) including built-up areas (shown in green) for the common pipistrelle bat (*Pipistrellus pipistrellus*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



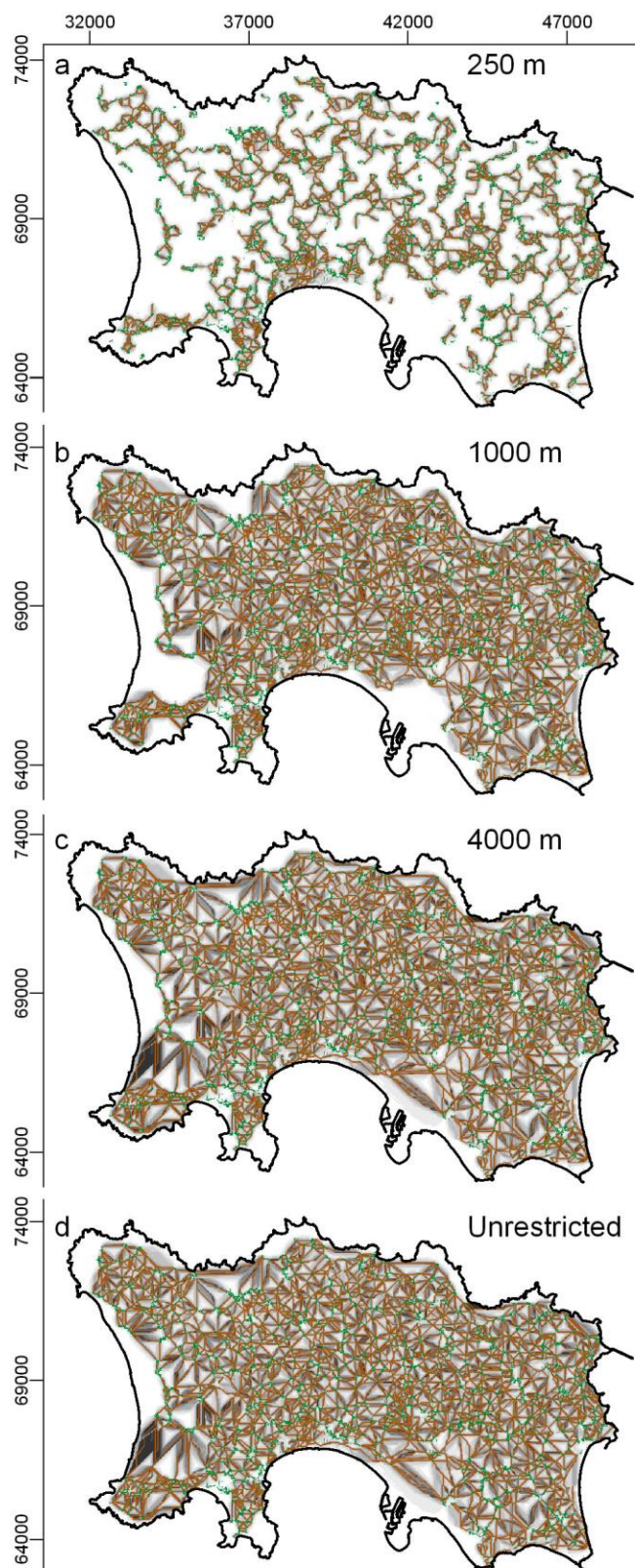
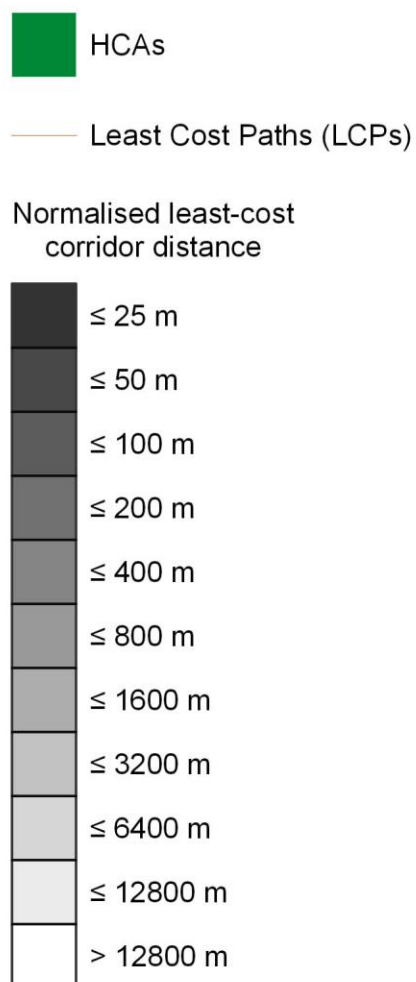


Figure F6 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for the common pipistrelle bat (*Pipistrellus pipistrellus*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



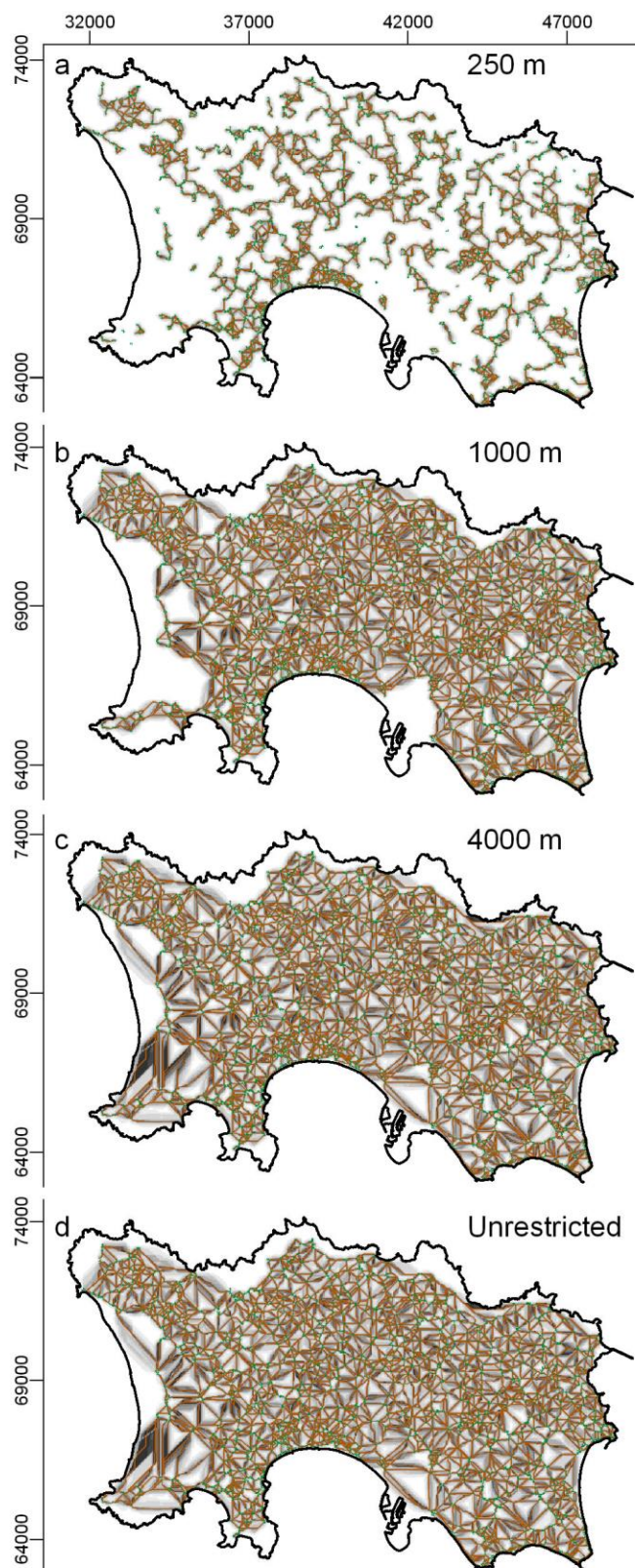
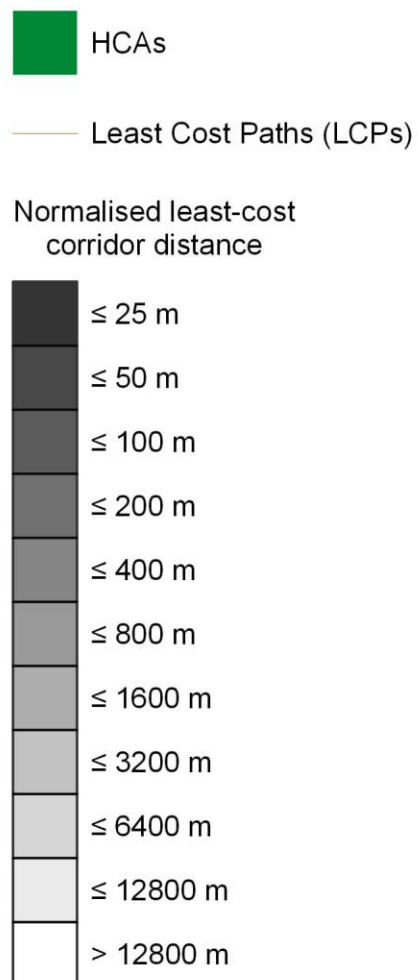


Figure F7 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) including built-up areas (shown in green) for long-eared bats (*Plecotus* spp.) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



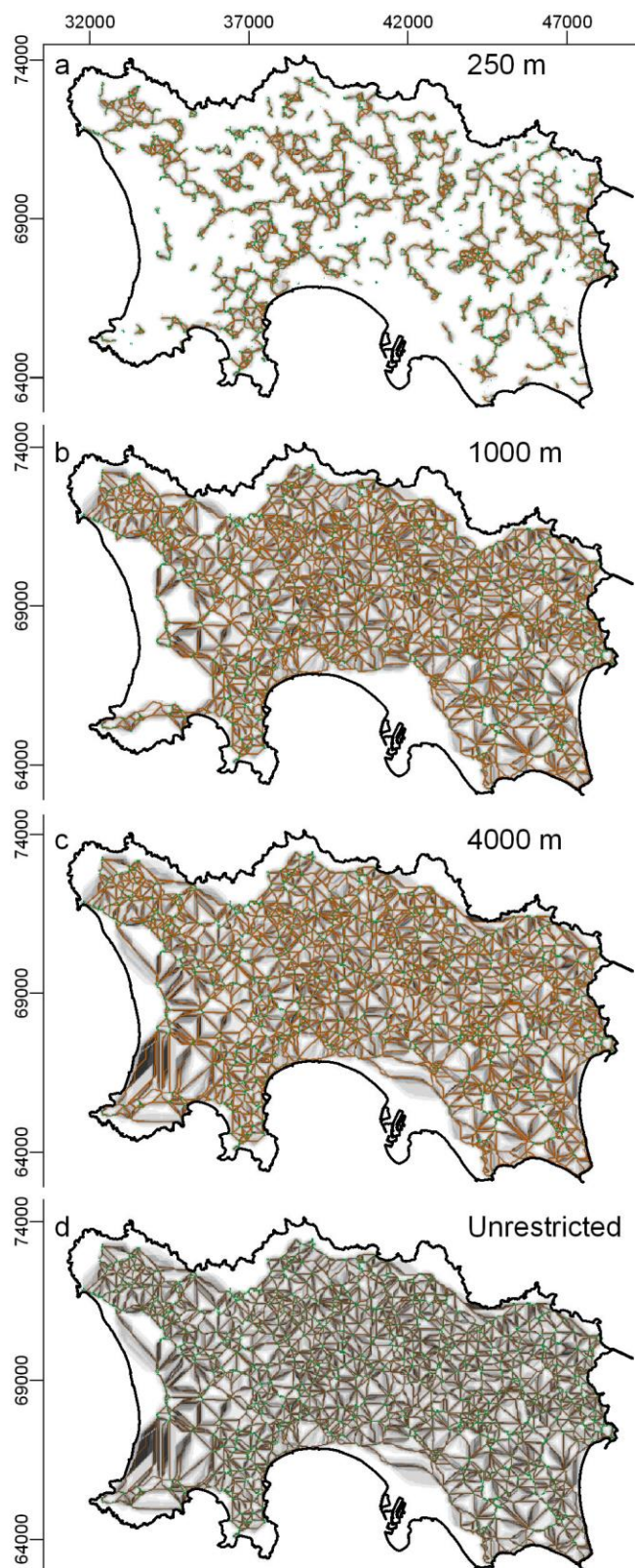
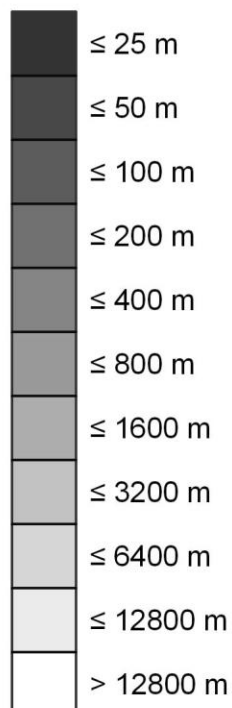


Figure F8 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for long-eared bats (*Plecotus* spp.) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.

HCAs

Least Cost Paths (LCPs)

Normalised least-cost corridor distance



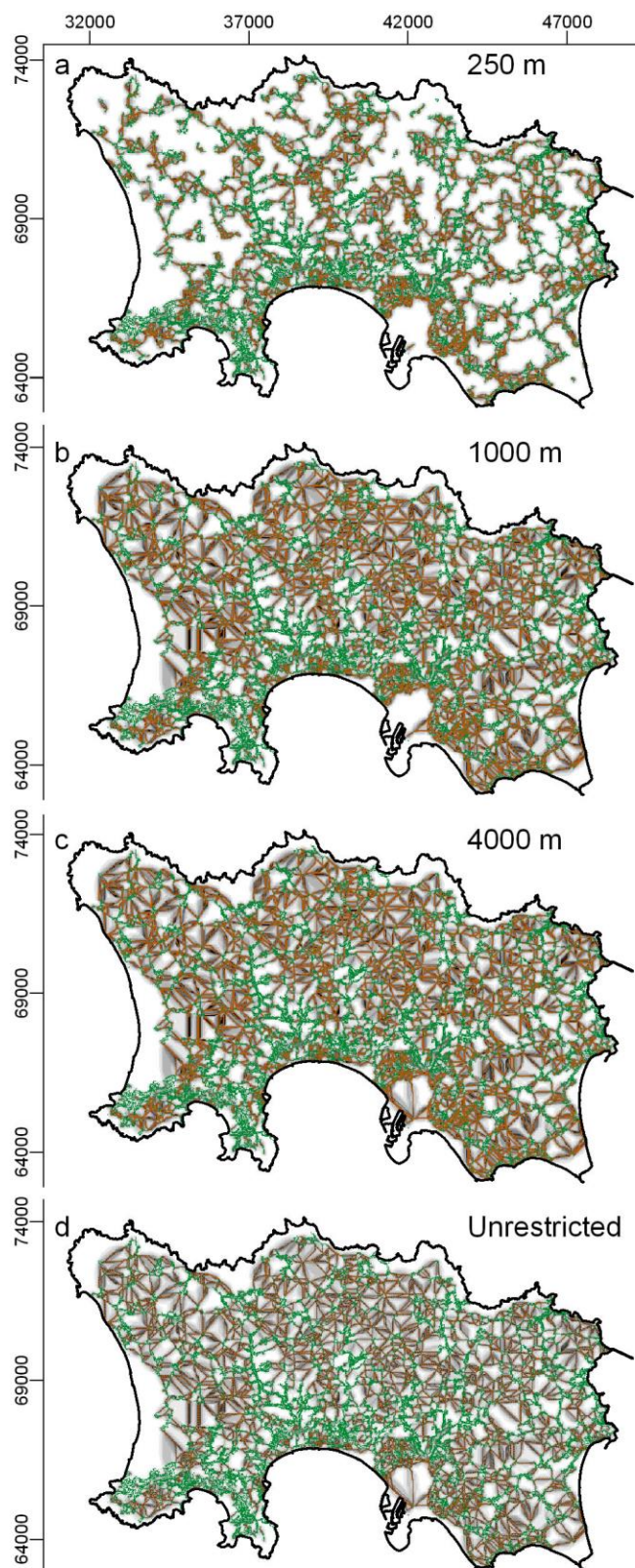
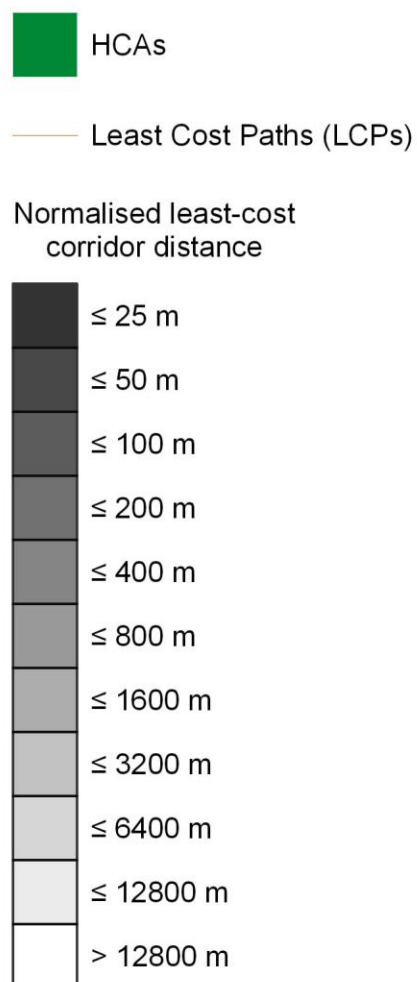


Figure F9 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) including built-up areas (shown in green) for red squirrels (*Sciurus vulgaris*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



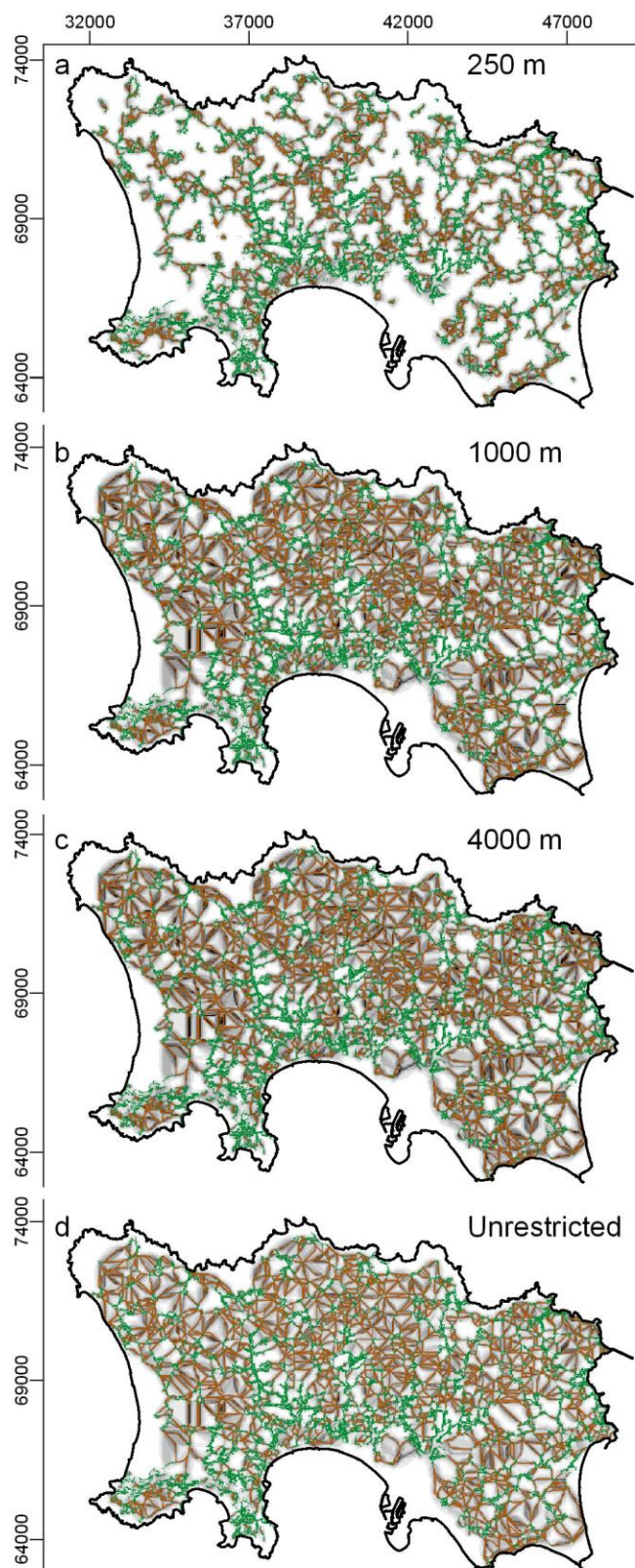
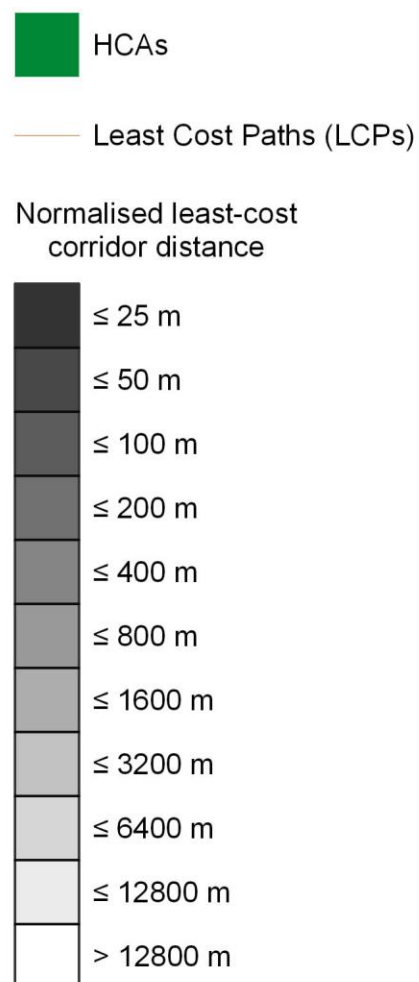


Figure F10 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for red squirrels (*Sciurus vulgaris*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



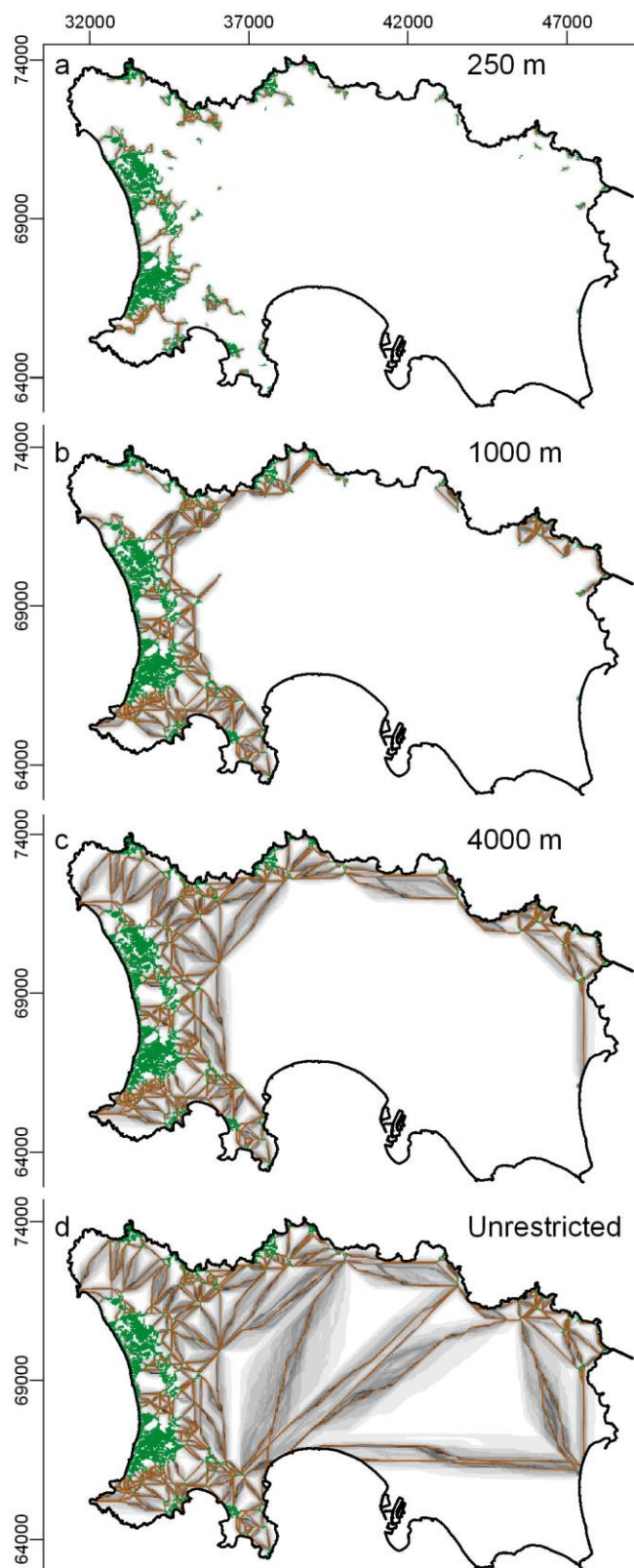
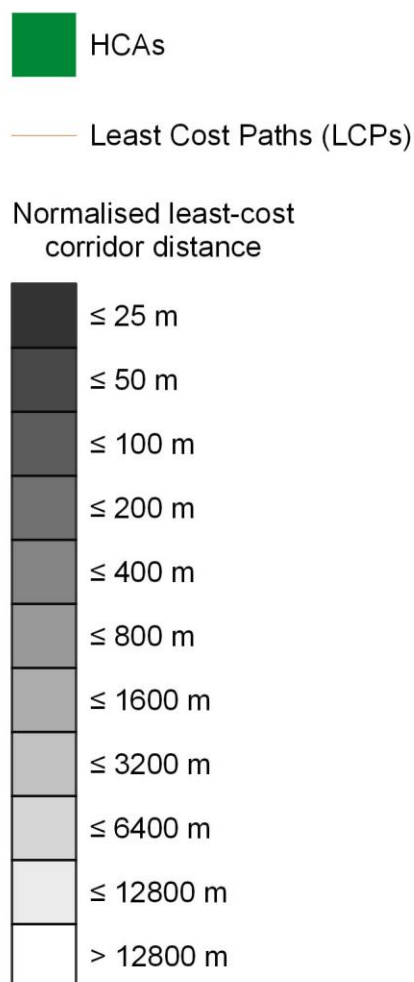


Figure F11 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for field crickets (*Gryllus campestris*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



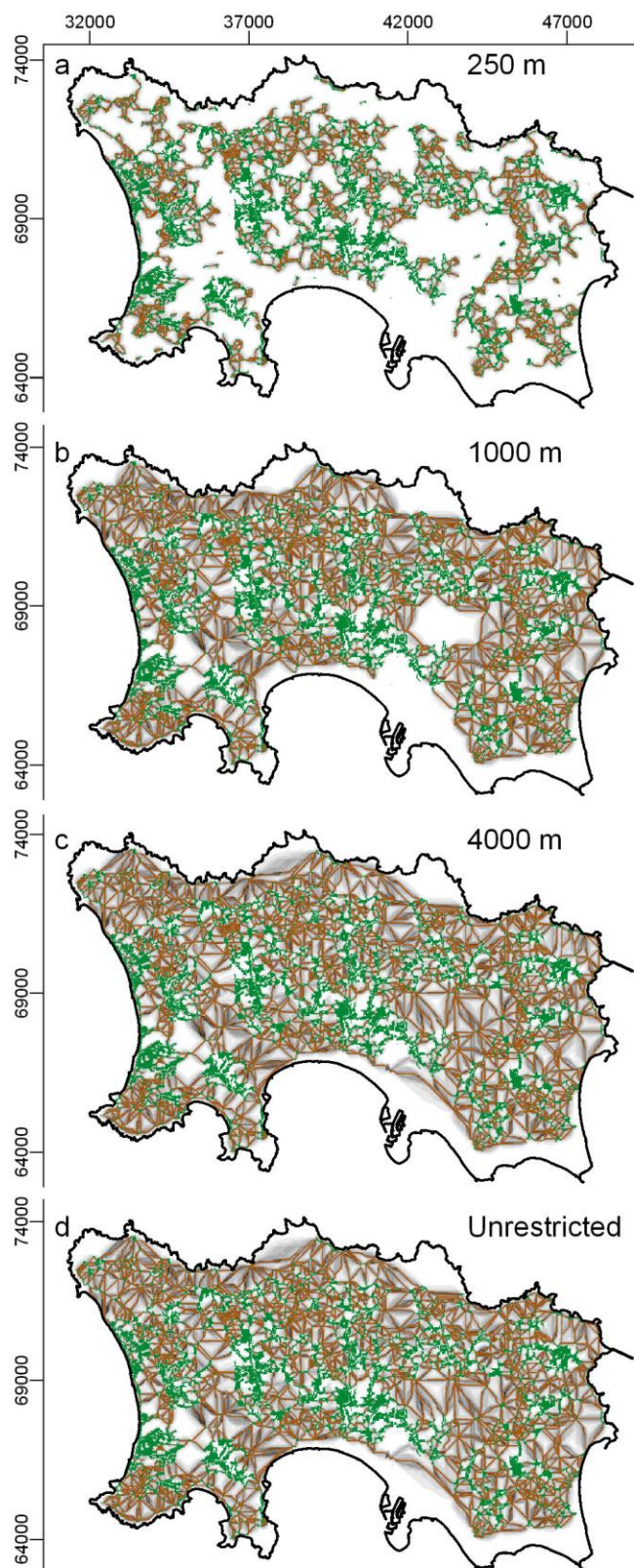
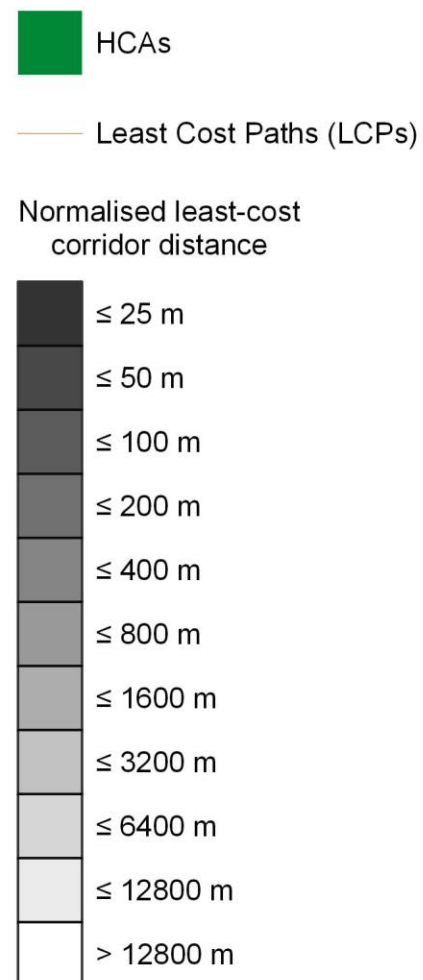


Figure F12 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for waxcap fungi (*Hygrocybe* spp.) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



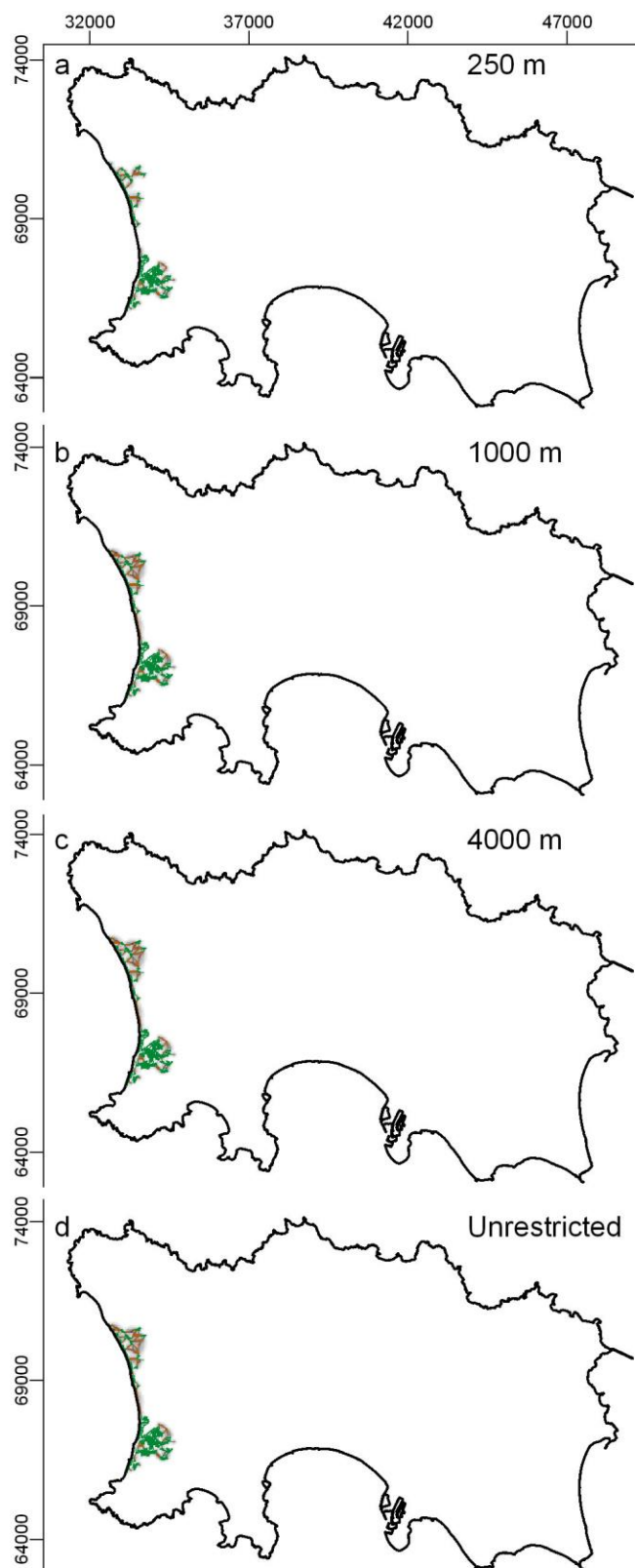
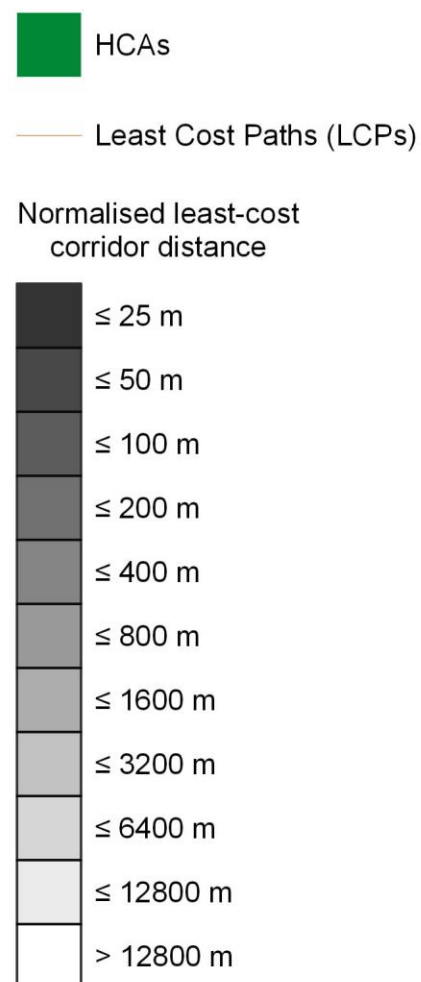


Figure F13 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for scaly stalkball fungi (*Tulostoma melanocyclum*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



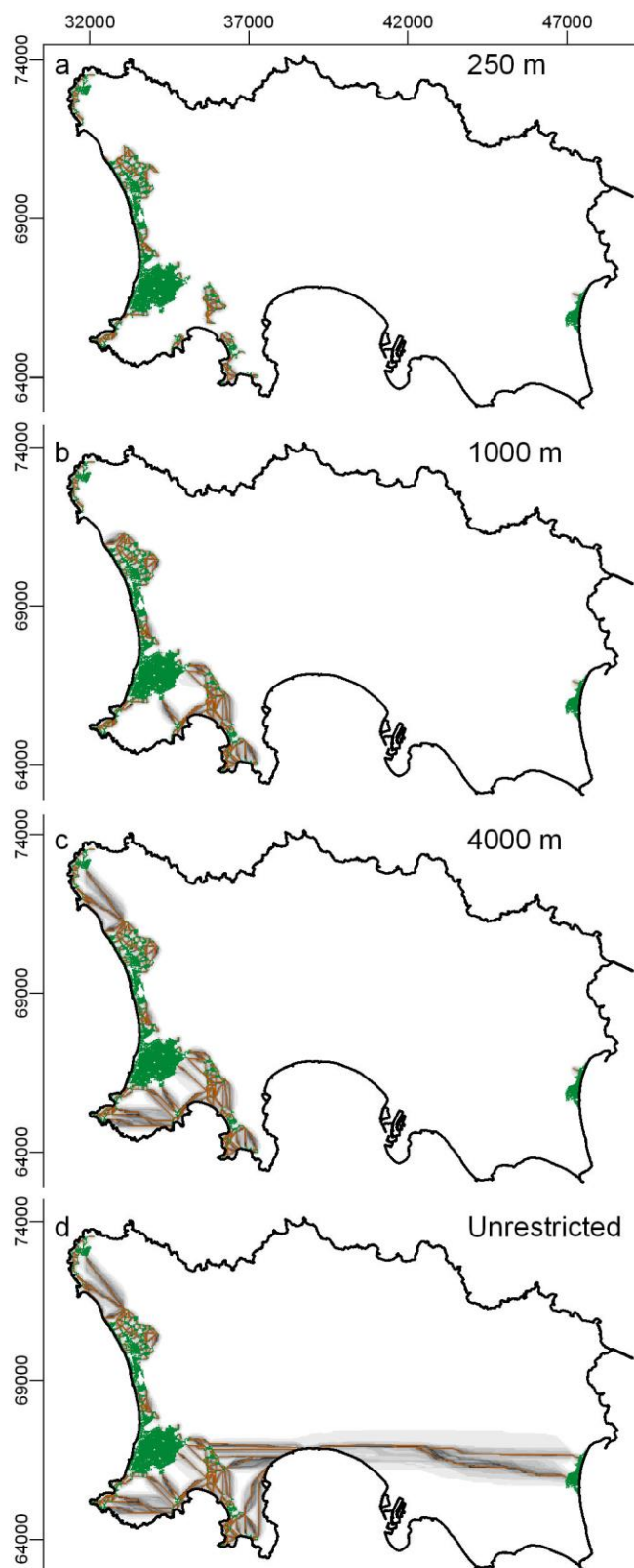
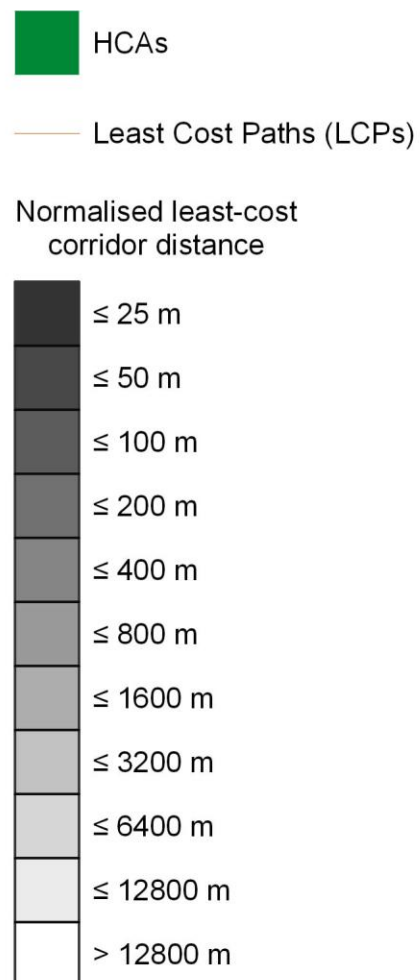


Figure F14 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for green-winged orchids (*Anacamptis morio*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



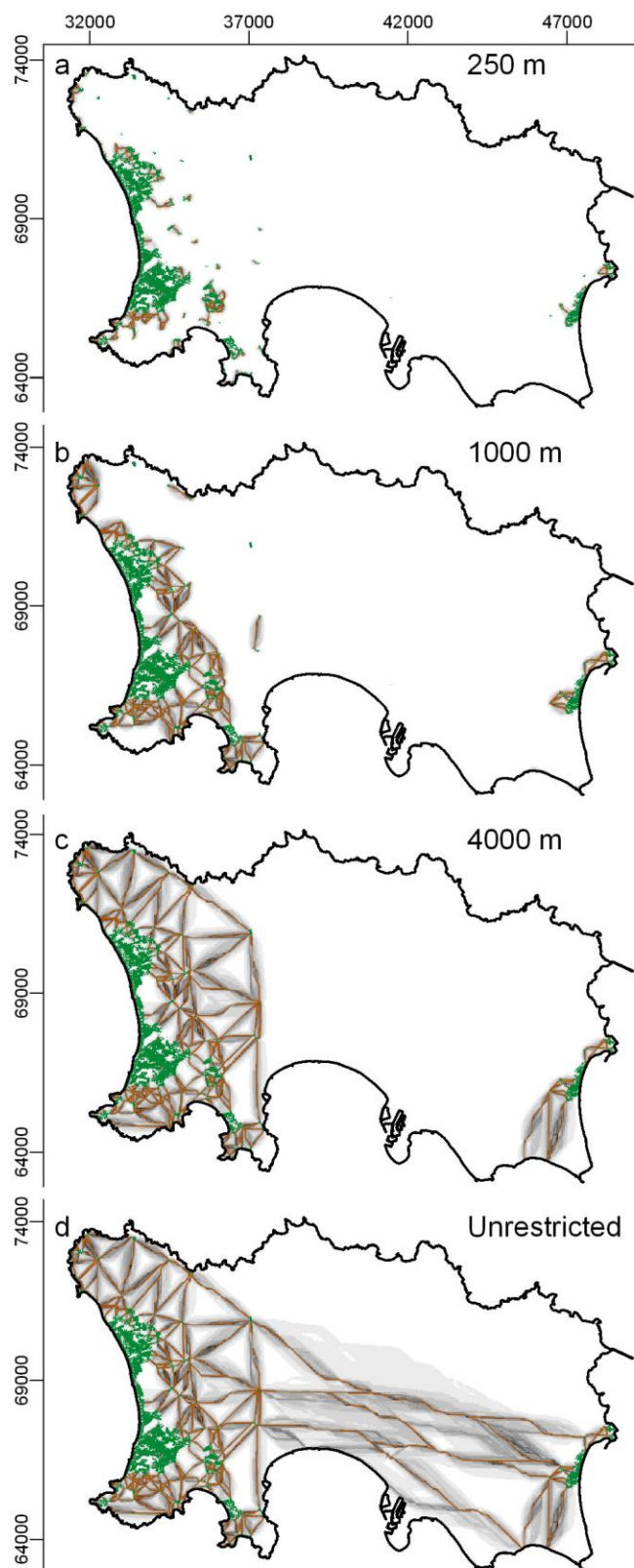
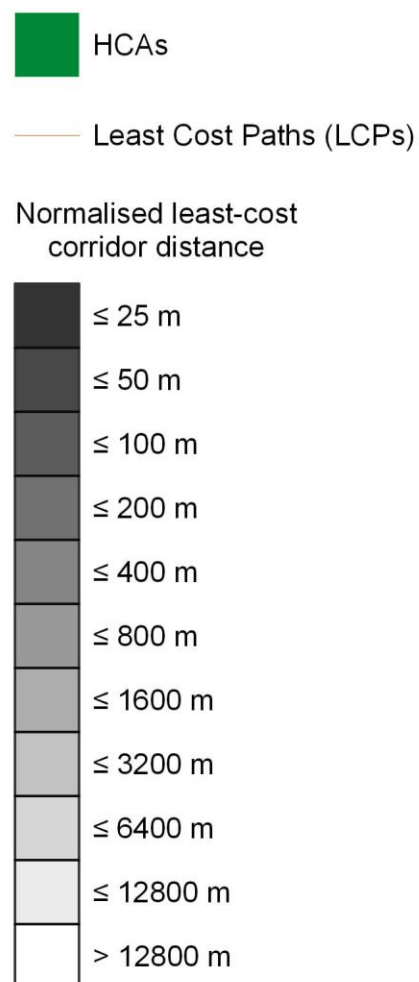


Figure F15 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for pyramidal orchids (*Anacamptis pyramidalis*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



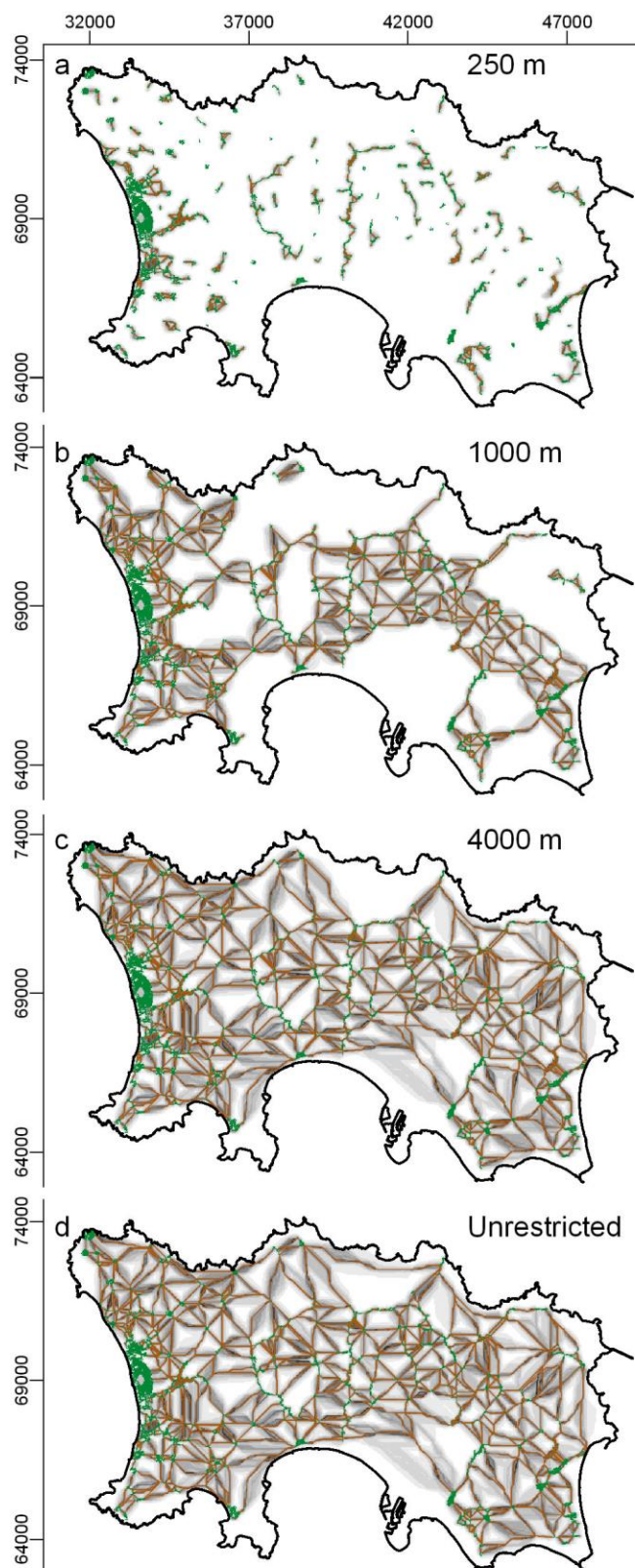
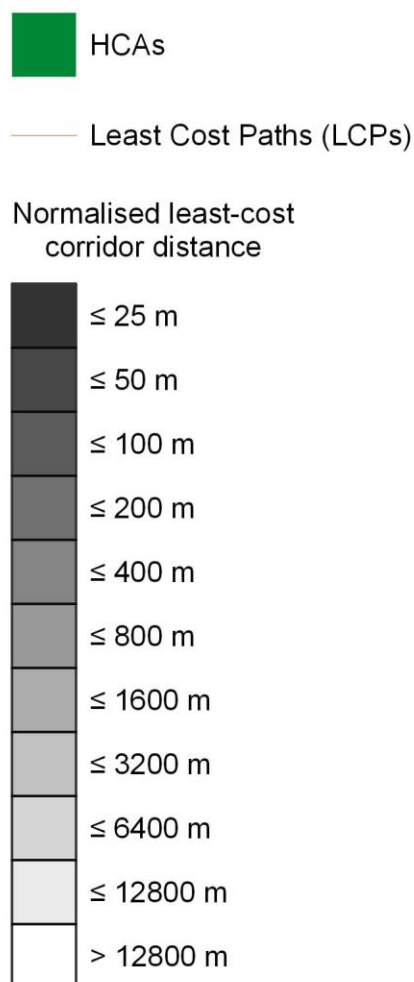


Figure F16 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for Southern marsh-orchids (*Dactylorhiza praetermissa*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



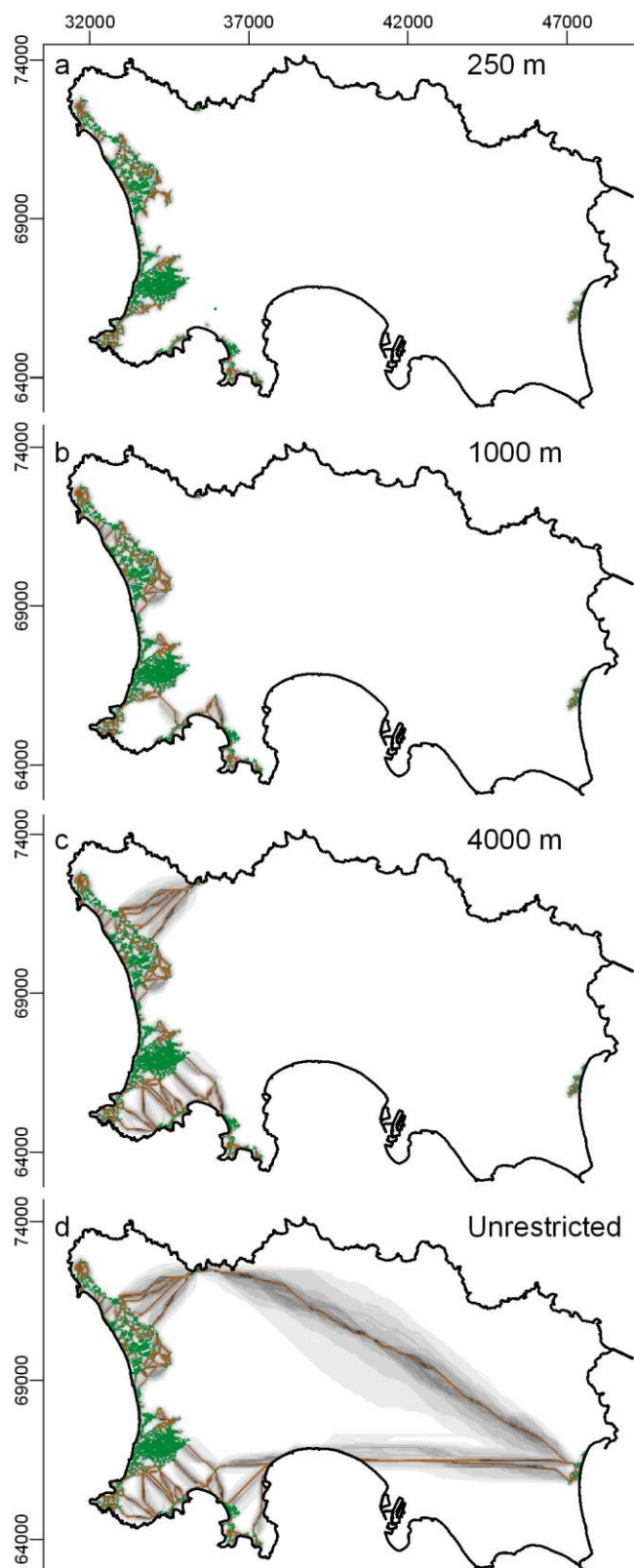
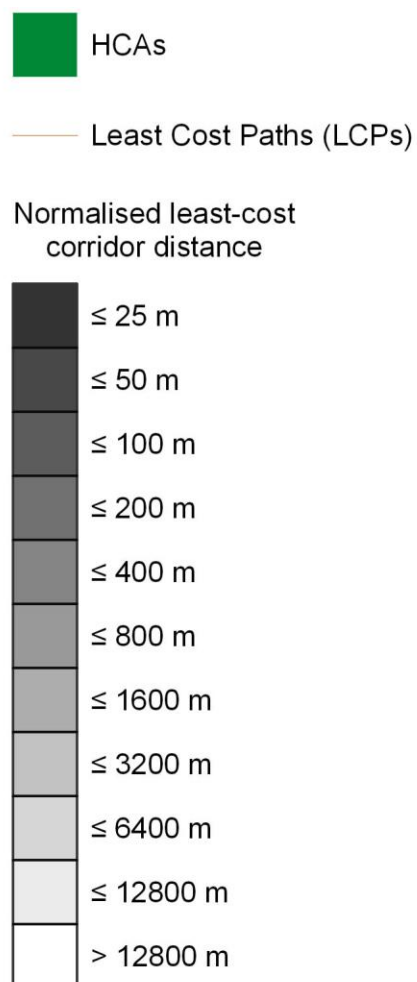


Figure F17 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for lizard orchids (*Himantoglossum hircinum*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



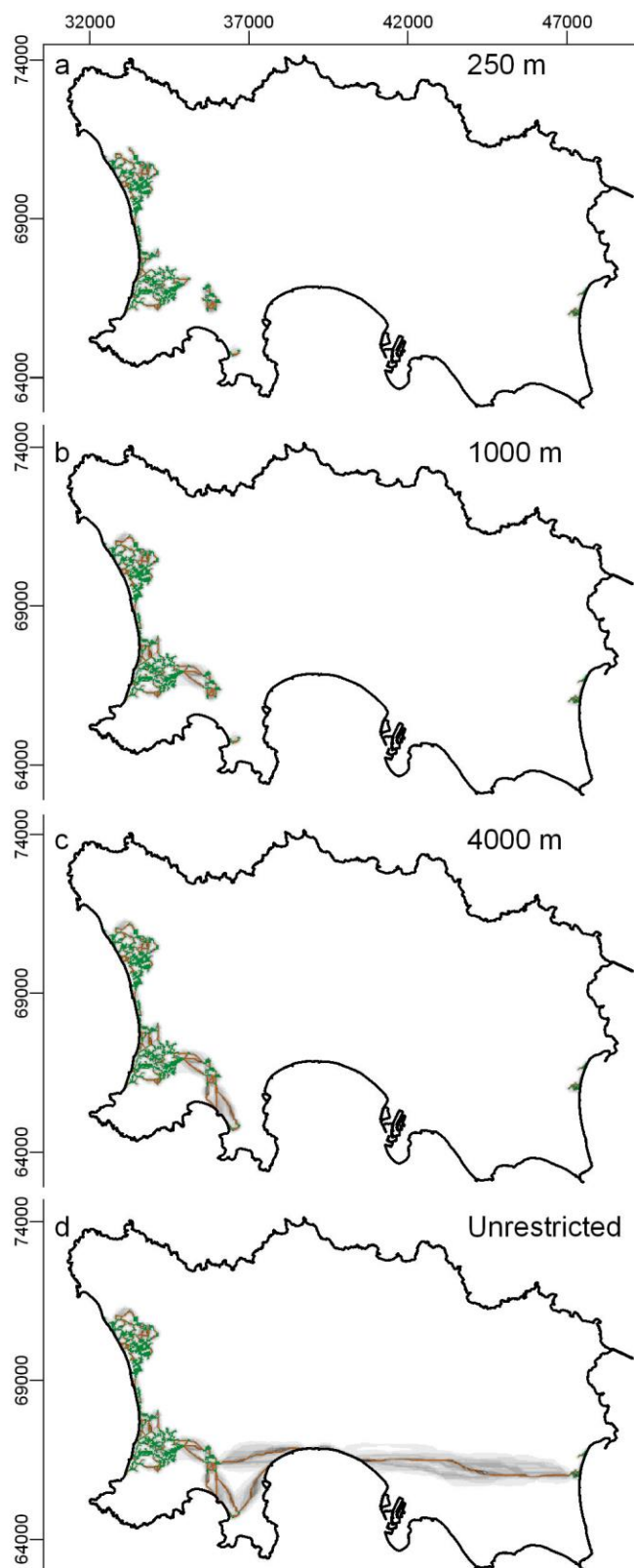
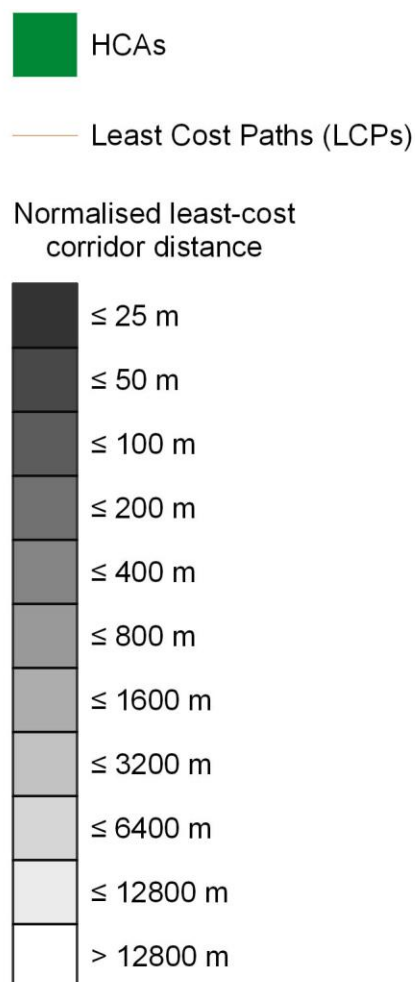


Figure F18 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for early-purple orchids (*Orchis mascula*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



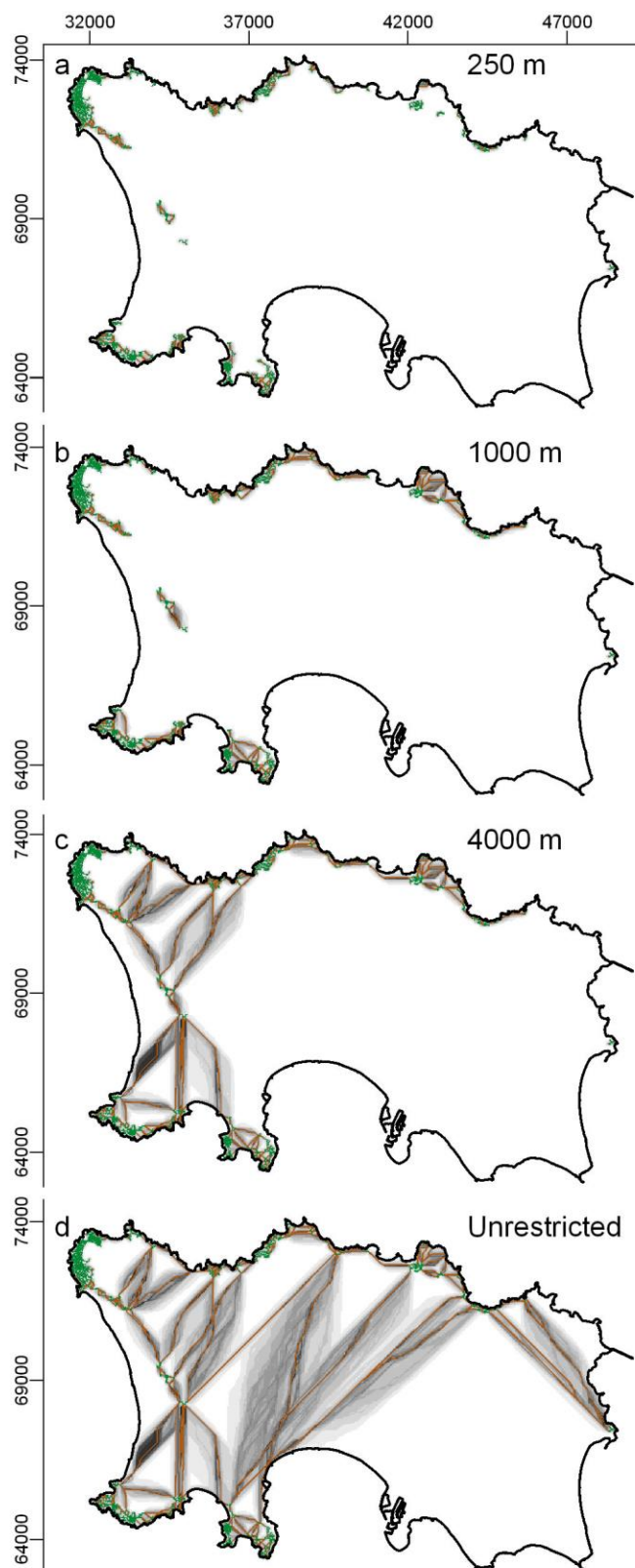
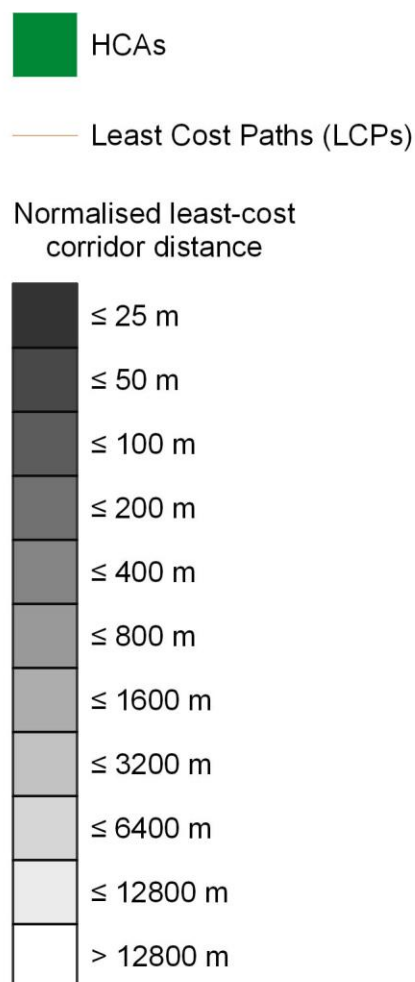


Figure F19 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for Jersey buttercups (*Ranunculus paludosus*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



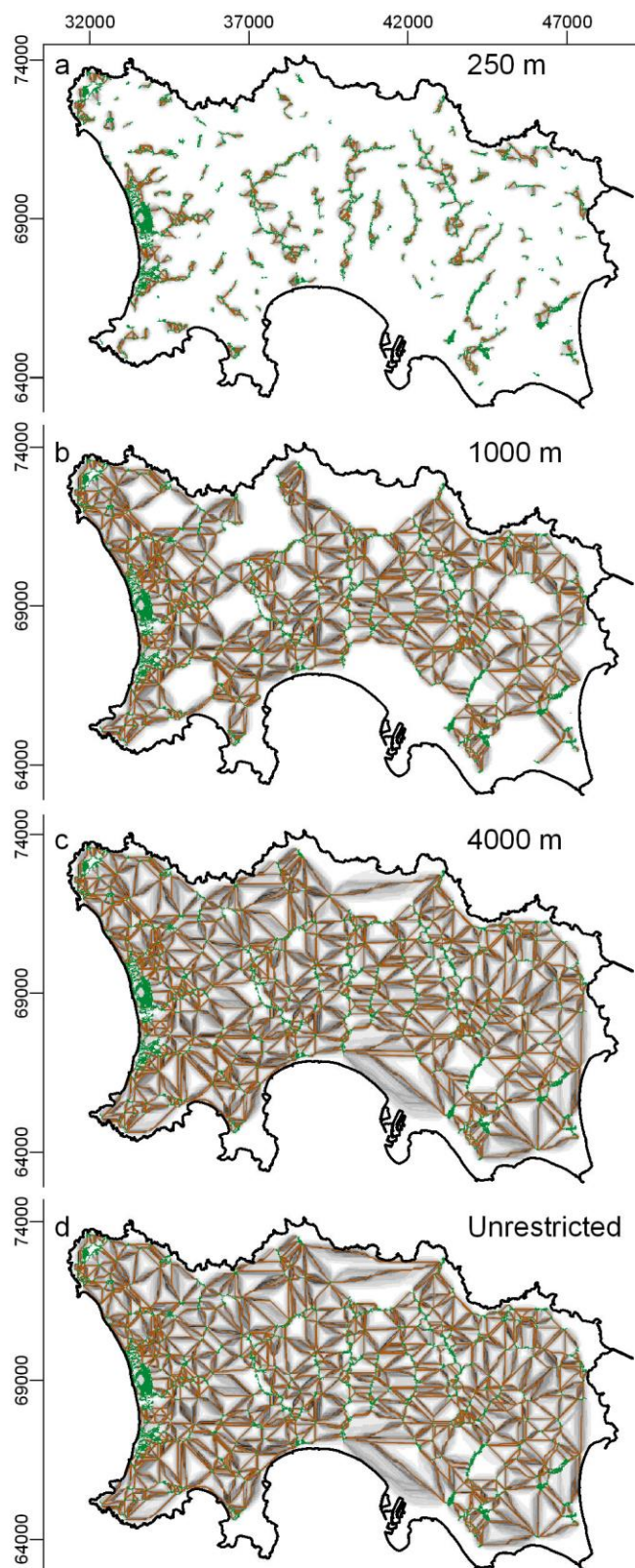
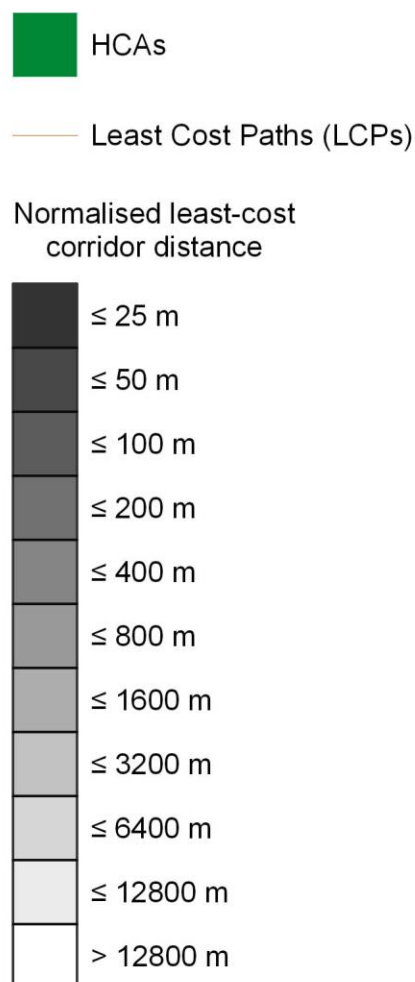


Figure F20 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for ragged robin (*Silene flos-cuculi*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



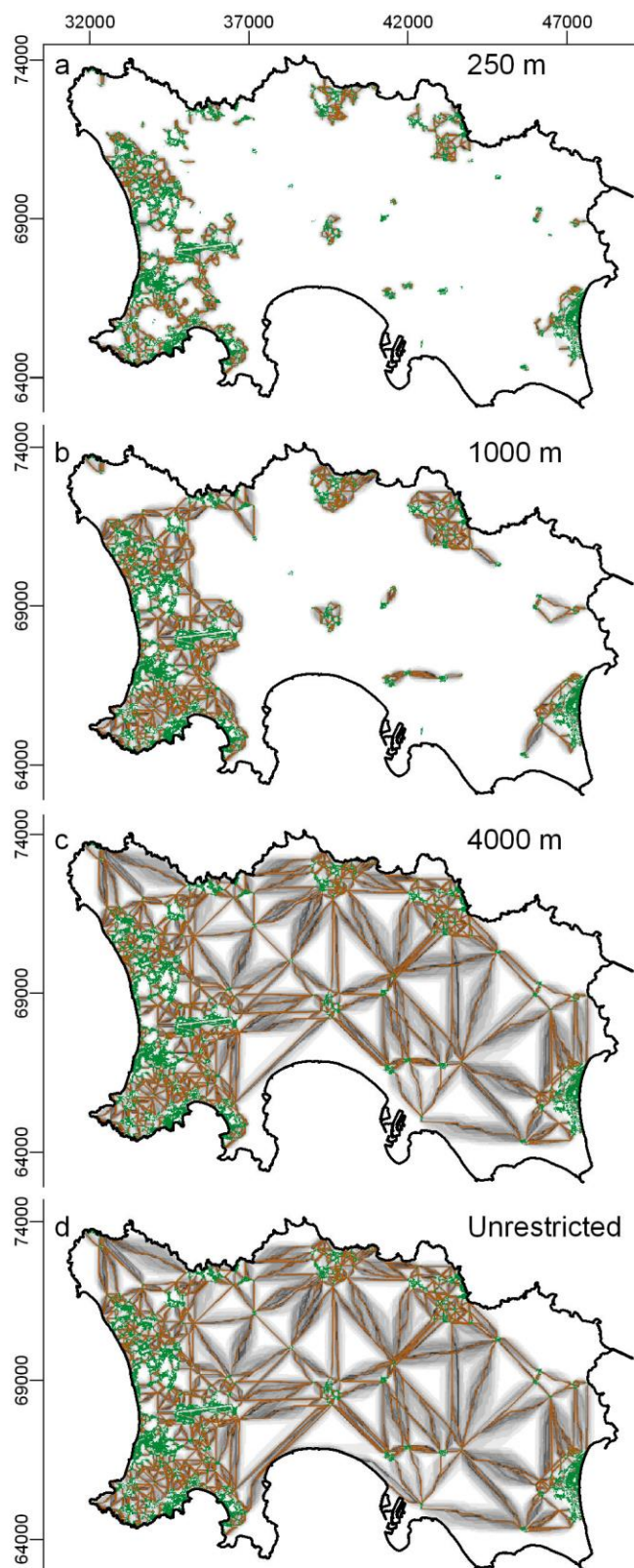
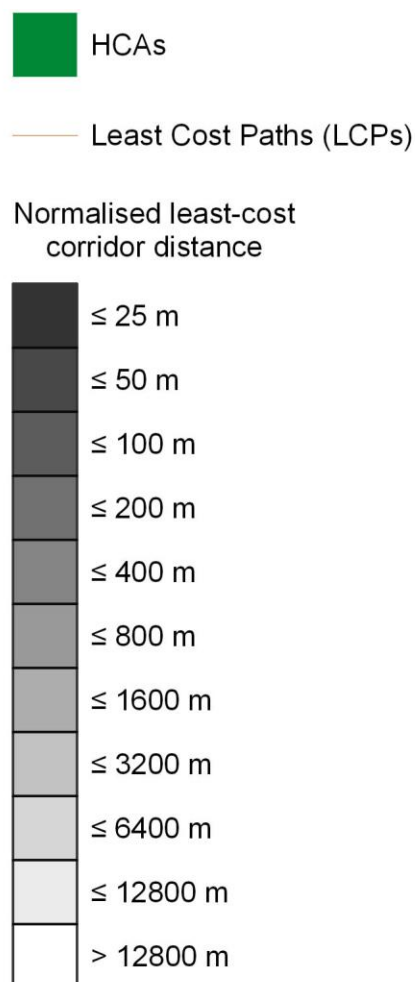


Figure F21 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) including built-up areas (shown in green) for Autumn lady's-tresses (*Spiranthes spiralis*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.



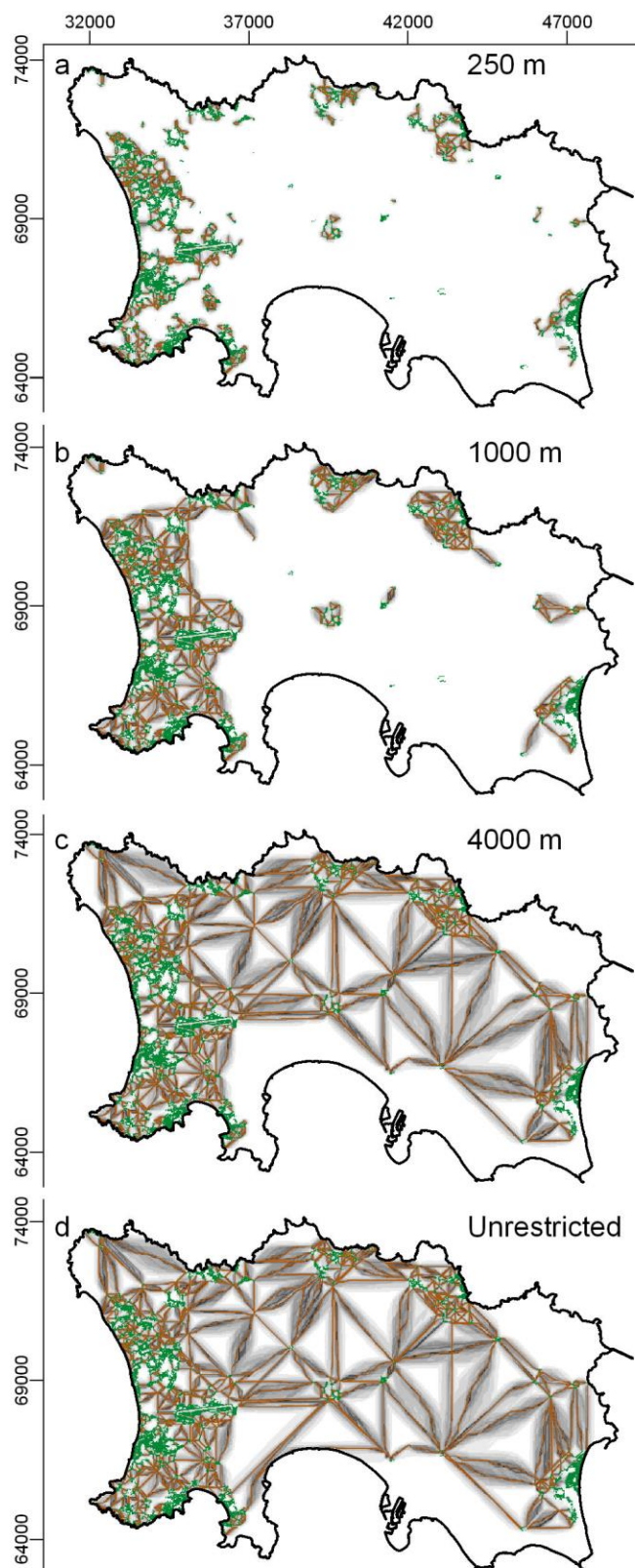


Figure F22 Least-cost paths (LCPs) (orange lines) and least-cost corridors (LCCs) between Habitat Concentration Areas (HCAs) excluding built-up areas (shown in green) for Autumn lady's tresses (*Spiranthes spiralis*) restricted to maximum Euclidean distances of (a) 250 m, (b) 1000 m, (c) 4000 m or (d) unrestricted by Euclidean distance. Normalised least-cost corridor distance values range from 0 (the least-cost path) upwards, with cost distance values representing the additional path cost of each cell relative to the least-cost path connecting a pair of HCAs.

