



Supplementary material S13 A. Study Area. The blue lines represent the 15 km transect surveyed in 2021 survey (corresponding to the data presented in Supplementary Material S5), while striped lines represent the 3 km transects surveyed in the case study, along with the names of the specific roads where these transects were positioned, note that there wasn't any case study survey on A-432 road El Pedroso - Cantillana. The black straight lines illustrate the road network within the study area, and the bold black line marks the separation between the provinces of Seville and Huelva. The top section shows the location of the study area within the context of Spain.

Supplementary material S13 B: Detailed characteristics of the nine road transects monitored during the case study. The table provides the road identification and route, geographic coordinates, surrounding landscape context (habitat and dominant vegetation), legal speed limit (km/h), number of lanes, and estimated traffic intensity (average daily traffic volume).

Transect	Road name	Road location	Habitat	Vegetation	Speed limit	Nº lanes	Traffic volumen (nº cars/day)
1	SE-5405 road Castilblanco de los Arroyos to Almadén de la Plata	37°45'08.9"N, 6°02'38.7"W	Mountainous mediterranean dehesa	Holm oaks <i>Quercus ilex</i> , bushes and grasslands	60	2	300-400
2	SE-5405 road Castilblanco de los Arroyos - Almadén de la Plata	37°45'08.9"N, 6°02'38.7"W	Mountainous mediterranean dehesa	Holm oaks <i>Quercus ilex</i> , bushes and grasslands	60	2	300-400
3	SE-5405 road Castilblanco de los Arroyos - Almadén de la Plata	37°45'08.9"N, 6°02'38.7"W	Mountainous mediterranean dehesa	Holm oaks <i>Quercus ilex</i> , bushes and grasslands	60	2	300-400
4	A-456 from La Campana to Lora del Río,	37°36'31.0"N, 5°28'46.7"W	Plain farmland	Sunflower, wheat and olive tree plantations	90	2	1000-1500

5	A-457 from Lora del Rio to Carmona	37° 38' 27.51"N, 5° 31' 46.657"W	Plain farmland	Sunflower, wheat and olive tree plantations	90	2	5000-6000
6	SE-6103 from Carmona to La Campana	37°31'41.5"N, 5°29'37.5"W	Plain farmland	Sunflower, wheat and olive tree plantations	90	2	1000-1500
7	A-481 road from Hinojos to Villamanrique de la Condesa	37°14'01.7"N, 6°19'38.0"W	Flat agroforestry matrix surrounding Doñana National Park	Pine trees, interspersed orchards, fruit trees and other minor crops	60	2	2000-2500
8	A-494 road from Mazagón to Matalascañas	37°07'05.9"N 6°46'06.5"W	Flat agroforestry matrix surrounding Doñana National Park	Pine trees, interspersed orchards, fruit trees and other minor crops	90	2	3000-4000
9	A-494 road from Mazagón to Matalascañas	37°07'05.9"N 6°46'06.5"W	Flat agroforestry matrix surrounding Doñana National Park	Pine trees, interspersed orchards, fruit trees and other minor crops	90	2	3000-4000