Diagnostics

# 1. Statistics about shapes

The measurement unit for all reported numbers is: metre

There was a total of 13579163624 units area lost during the intersection, which constitutes 5.91% of the source shape area and 5.58% of the target shape area

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Smallest area | | | | Total shape area | Average shape area | Times the smallest shape area smaller than the average |
|  | ID column name | ID | Area | % total shape area |
| Source shape | RMSect | EC3M 2 | 2216 | 0.00000 | 229711211101 | 24882064 | 11227.13 |
| Target shape | AREA\_ID | S01002020 | 11991 | 0.00000 | 243290374725 | 16668291 | 1390.06 |
| Intersected shape\* | INTERSECT\_ID | SO19 8\_E02003579 | 3500 | 0.00000 | 228416677273 | 4534776 | 1295.52 |

**\* Note:** NB: The smallest area from either the source or the target shapes is 2216. The smallest possible area in the intersect is 158% of that, or 3500 units.

# 2. Tolerance value simulations

## 2.1. Area lost statistics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Tolerance percent | Tolerance units (in metre) | Intersected area lost | % lost of total intersected area | Times increase from previous tolerance threshold |
| 0.001 | 0 | 0 | 0.00000 | 0.00 |
| 0.010 | 0 | 2 | 0.00000 | 39.42 |
| 0.050 | 1 | 23 | 0.00000 | 14.75 |
| 0.100 | 2 | 56 | 0.00000 | 2.40 |
| 0.500 | 11 | 596 | 0.00000 | 10.67 |
| 1 | 22 | 1731 | 0.00000 | 2.91 |
| 5 | 111 | 20501 | 0.00000 | 11.84 |
| 10 | 222 | 58133 | 0.00000 | 2.84 |
| 20 | 443 | 166343 | 0.00000 | 2.86 |
| 50 | 1108 | 686465 | 0.00000 | 4.13 |
| 90 | 1995 | 1781336 | 0.00001 | 2.59 |
| 100 | 2216 | 2094287 | 0.00001 | 1.18 |
| 150 | 3324 | 3856040 | 0.00002 | 1.84 |
| 158 | 3500 | 4200120 | 0.00002 | 1.09 |

## 2.2. New intersected shape statistics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tolerance percent | Tolerance units (in metre) | Smallest area | | | Total shape area | Average shape area | Times the smallest shape area smaller than the average | Times change in the smallest to average shape area |
| ID | Area | % total shape area |
| 0.001 | 0 | EH6 5\_S01002273 | 0 | 0.00000 | 228420877392 | 4246925 | 121528267.33 | 0.00 |
| 0.010 | 0 | NE37 1\_E02001695 | 0 | 0.00000 | 228420877391 | 4247952 | 14254482.01 | 0.12 |
| 0.050 | 1 | N1 4\_E02000358 | 1 | 0.00000 | 228420877369 | 4250323 | 3769076.43 | 0.26 |
| 0.100 | 2 | N15 4\_E02000422 | 2 | 0.00000 | 228420877337 | 4251906 | 1838340.45 | 0.49 |
| 0.500 | 11 | G74 1\_S01005897 | 11 | 0.00000 | 228420876797 | 4259597 | 373865.33 | 0.20 |
| 1 | 22 | S61 1\_E02001628 | 22 | 0.00000 | 228420875661 | 4265005 | 192152.43 | 0.51 |
| 5 | 111 | DE15 0\_E02004119 | 111 | 0.00000 | 228420856892 | 4289674 | 38678.04 | 0.20 |
| 10 | 222 | EH10 4\_S01001993 | 222 | 0.00000 | 228420819260 | 4308201 | 19401.14 | 0.50 |
| 20 | 443 | G53 7\_S01003101 | 444 | 0.00000 | 228420711049 | 4335593 | 9764.49 | 0.50 |
| 50 | 1108 | RM3 7\_E02004469 | 1110 | 0.00000 | 228420190928 | 4394809 | 3958.66 | 0.41 |
| 90 | 1995 | EH1 1\_S01002117 | 1995 | 0.00000 | 228419096057 | 4456436 | 2233.69 | 0.56 |
| 100 | 2216 | CB5 8\_E02003722 | 2218 | 0.00000 | 228418783105 | 4469423 | 2015.51 | 0.90 |
| 150 | 3324 | PR7 7\_E02005193 | 3326 | 0.00000 | 228417021352 | 4525708 | 1360.90 | 0.68 |
| 158 | 3500 | SO19 8\_E02003579 | 3500 | 0.00000 | 228416677273 | 4534776 | 1295.52 | 0.95 |

## 3. Source and target shapes visualisation





