

Justification for Anonymization

The anonymization approach preserves analytical utility while protecting individual privacy.

Spatial accuracy is generalized using H3 resolution level 8, which approximates ~460–500m edge length hexagons, enough to study service request patterns without pinpointing individual households.

Temporal accuracy is reduced to 6-hour windows, maintaining temporal trend analysis while eliminating exact timestamps that may be used to triangulate individual activity.

All potentially identifiable columns such as free-text descriptions, precise latitude/longitude, and notification-reference were removed to prevent re-identification.

This approach balances data usability with resident confidentiality in accordance with common data privacy standards such as GDPR and POPIA.