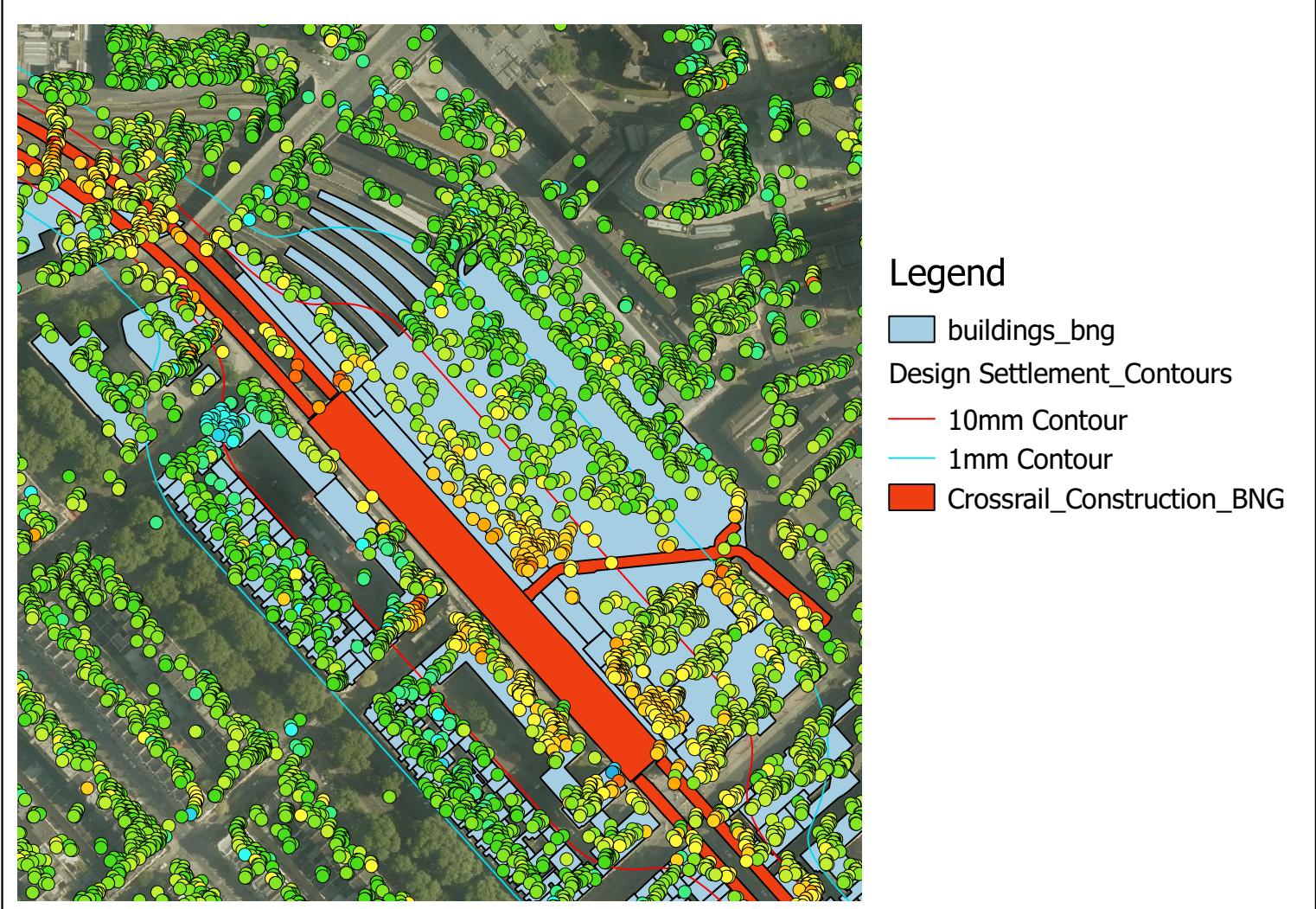


Property Specific - InSAR data Report

| | |
|---------|--------------------------|
| Address | Chilworth Street, London |
|---------|--------------------------|

Location plan



Some Notes on InSAR and its use on Crossrail:

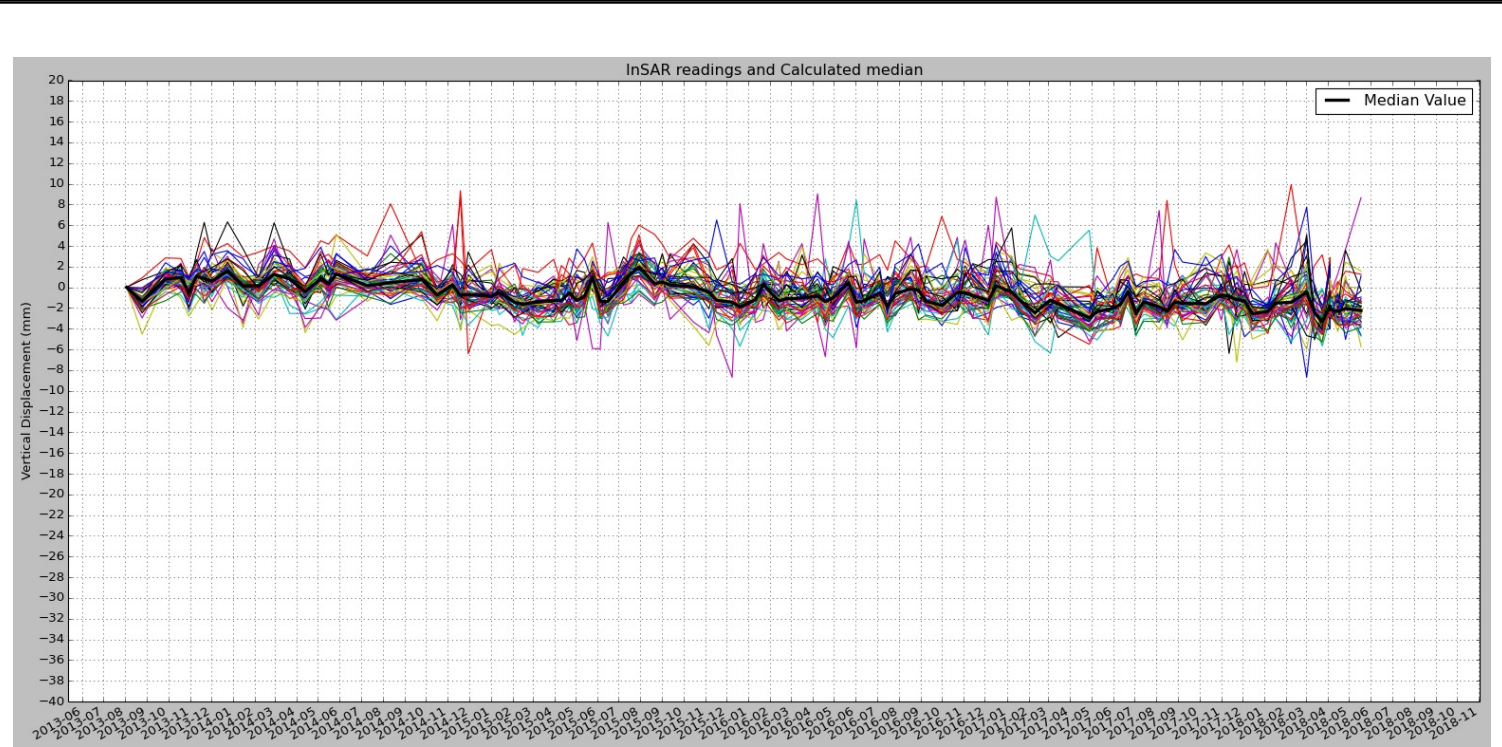
- InSAR can have some processing limitations in detecting movements greater than +/-10mm between two InSAR images and cannot detect movements greater +/-15mm (between two epochs).
- The purpose of the InSAR monitoring on Crossrail is to detect long-term, post-construction trends. As such the contract began in March 2015 but has used archive images from August 2013 to May 2015 in order to gather the amount of baseline images required.
- From May 2015 onwards the contract was able to nominate the desired frequency of images (every 16 days), prior to this Crossrail has had to rely on whatever was available in the archive (approximately every 32 days, but gaps of 45 days exist).
- There are instances in the data prior to May 2015 where due to construction work the ground movement has exceeded +/-10mm in the period between consecutive archive images and as such an erroneous jump can be seen in the data.
- The processed InSAR data is accurate to +/- 1mm in height and 3m in x-y position
- InSAR data is captured on a descending, west facing orbit
- From June to September 2015 InSAR has recorded a regional heave trend followed by gradual settlement until December 2015 which has affected areas from Paddington to Canary Wharf

InSAR data map: Cumulative Settlement August 2013 to June 2018



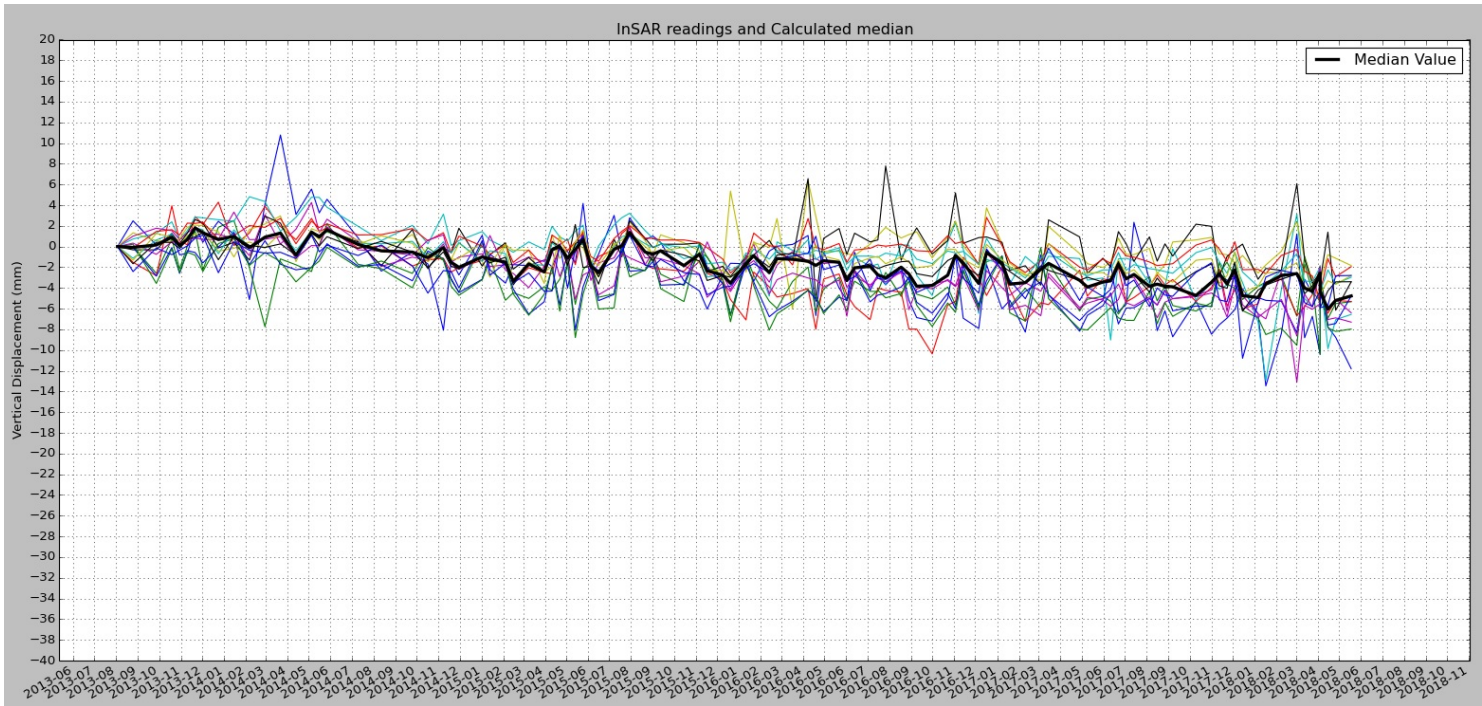
InSAR data time plots - Chilworth Street, London - 1

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.



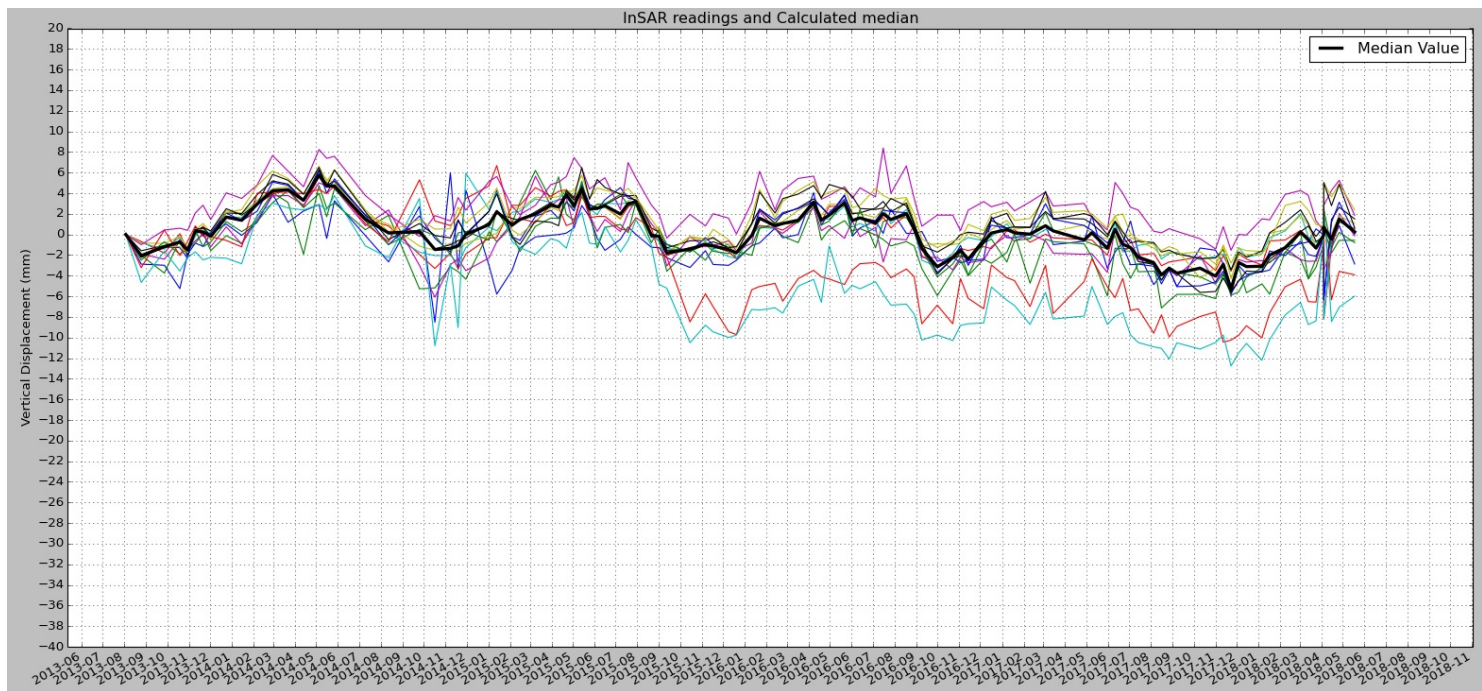
InSAR data time plots - Chilworth Street, London - 2

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.



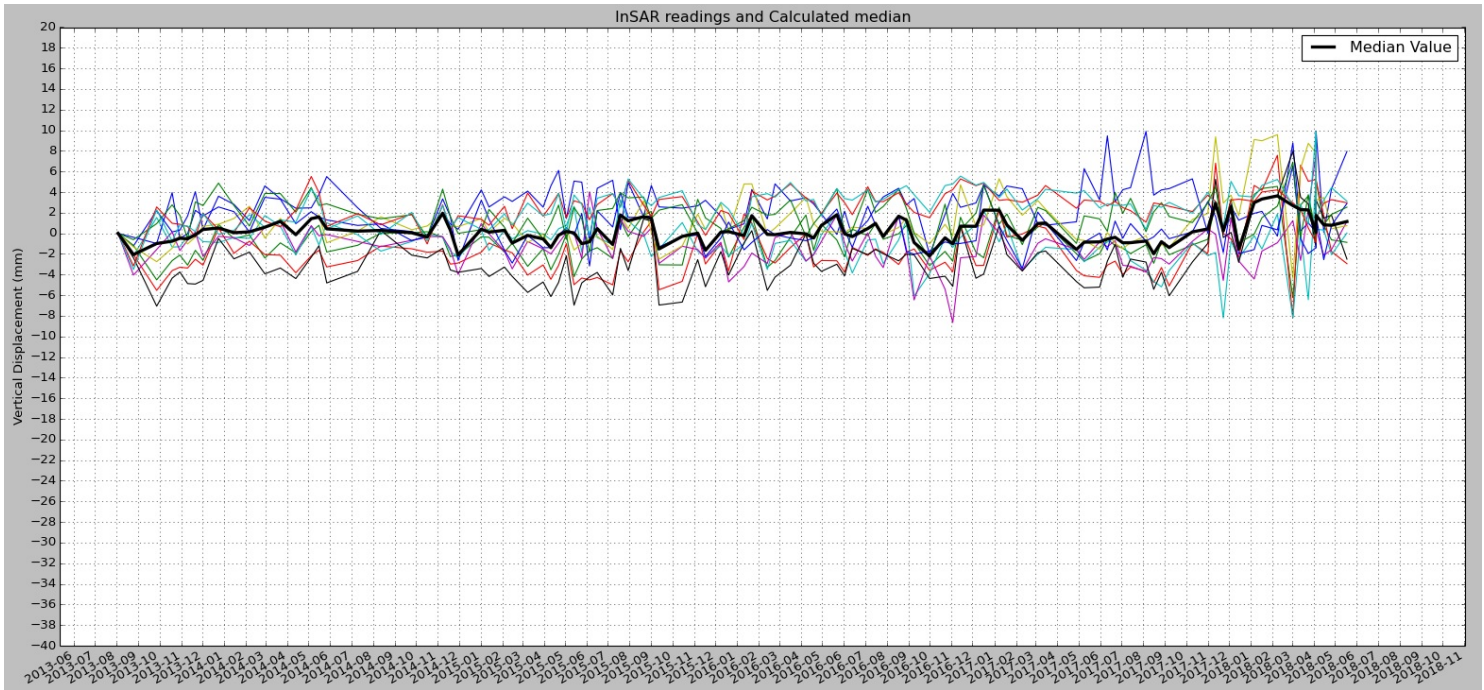
InSAR data time plots - Chilworth Street, London - 3

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.



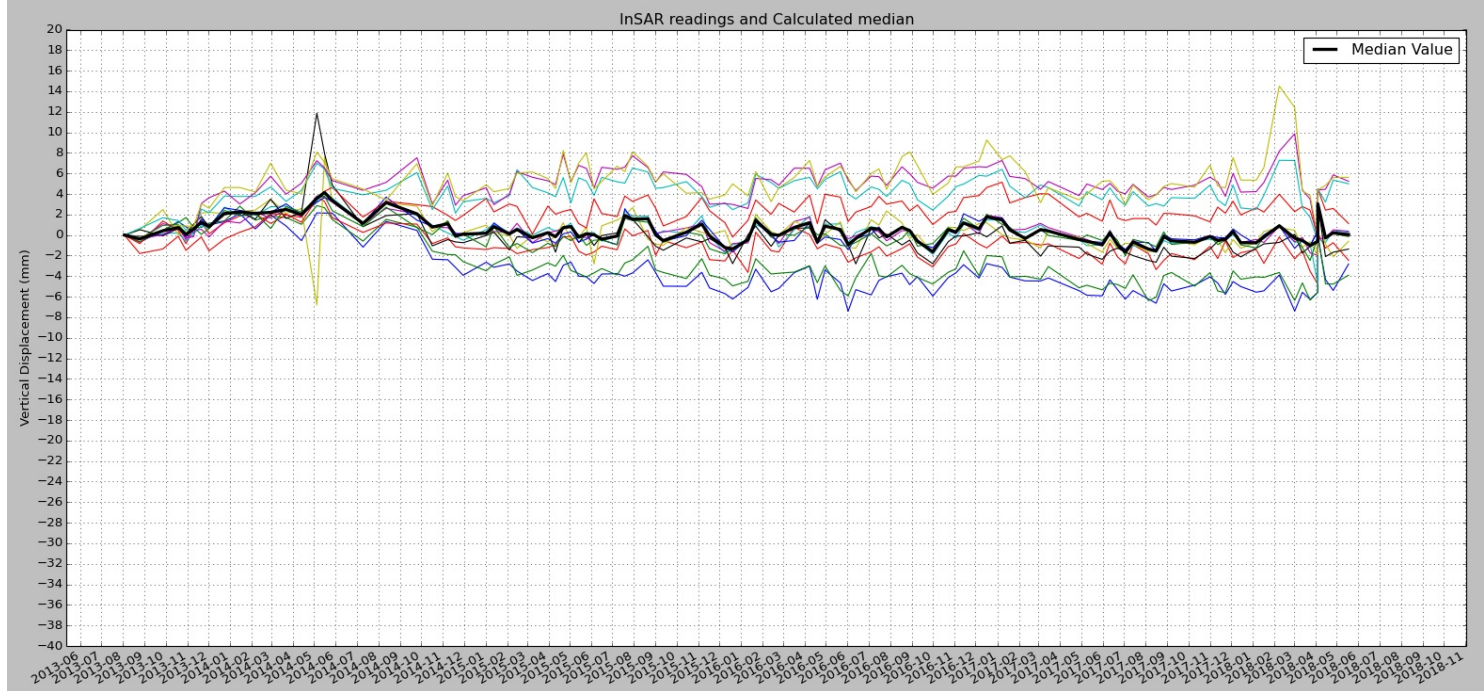
InSAR data time plots - Chilworth Street, London - 4

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.



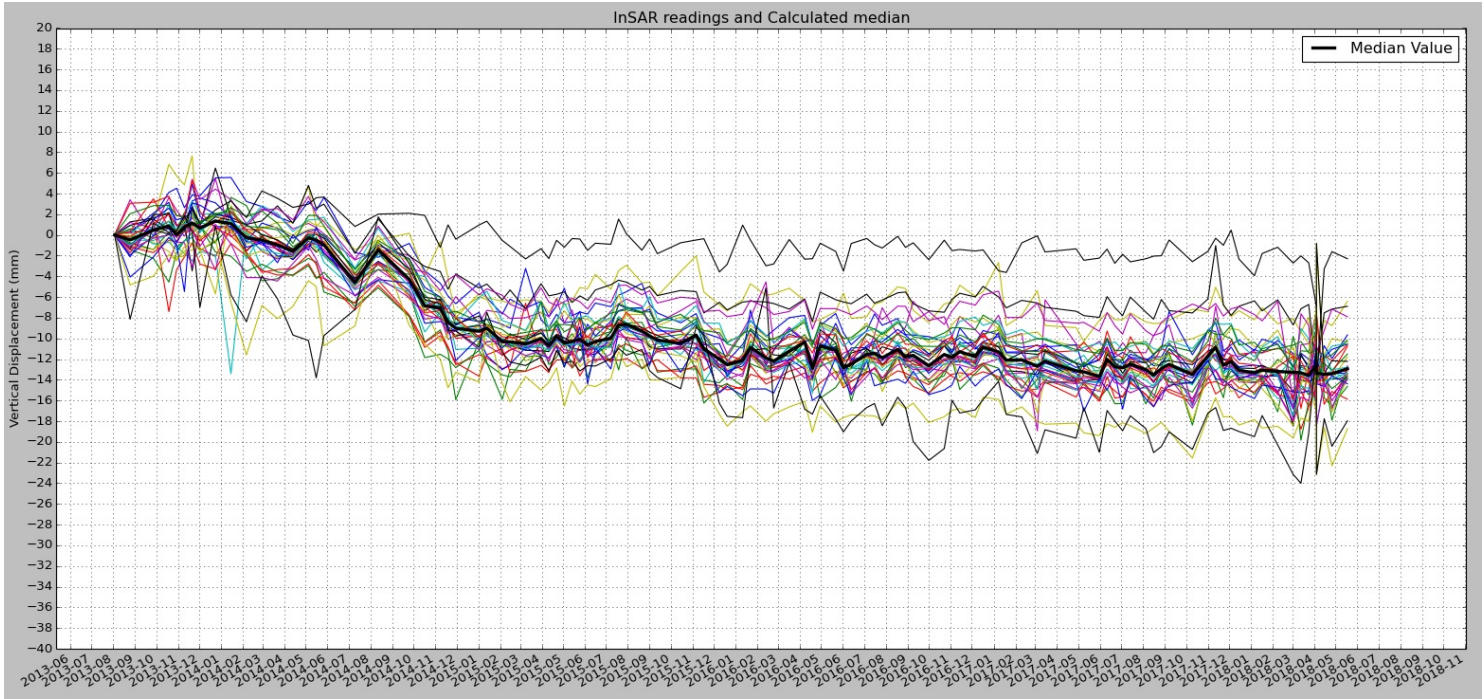
InSAR data time plots - Chilworth Street, London - 5a

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.



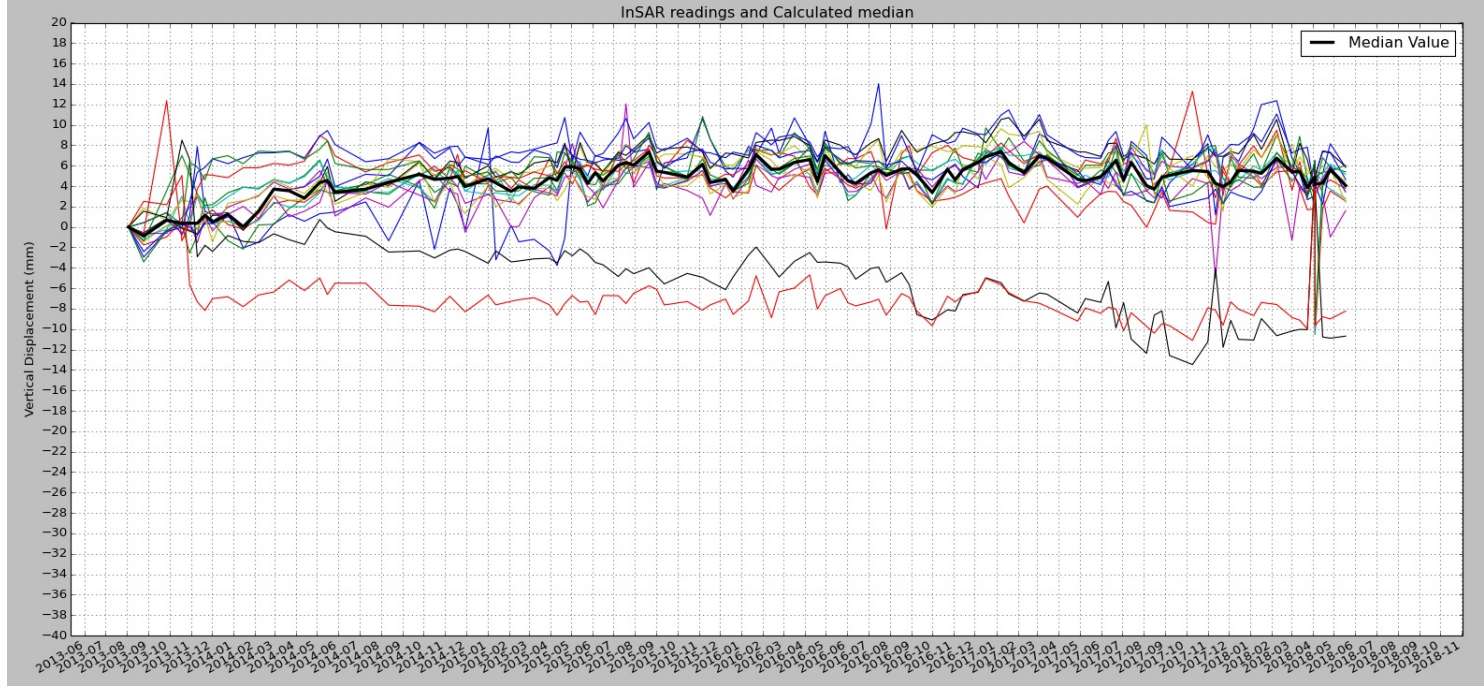
InSAR data time plots - Chilworth Street, London - 5b

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.



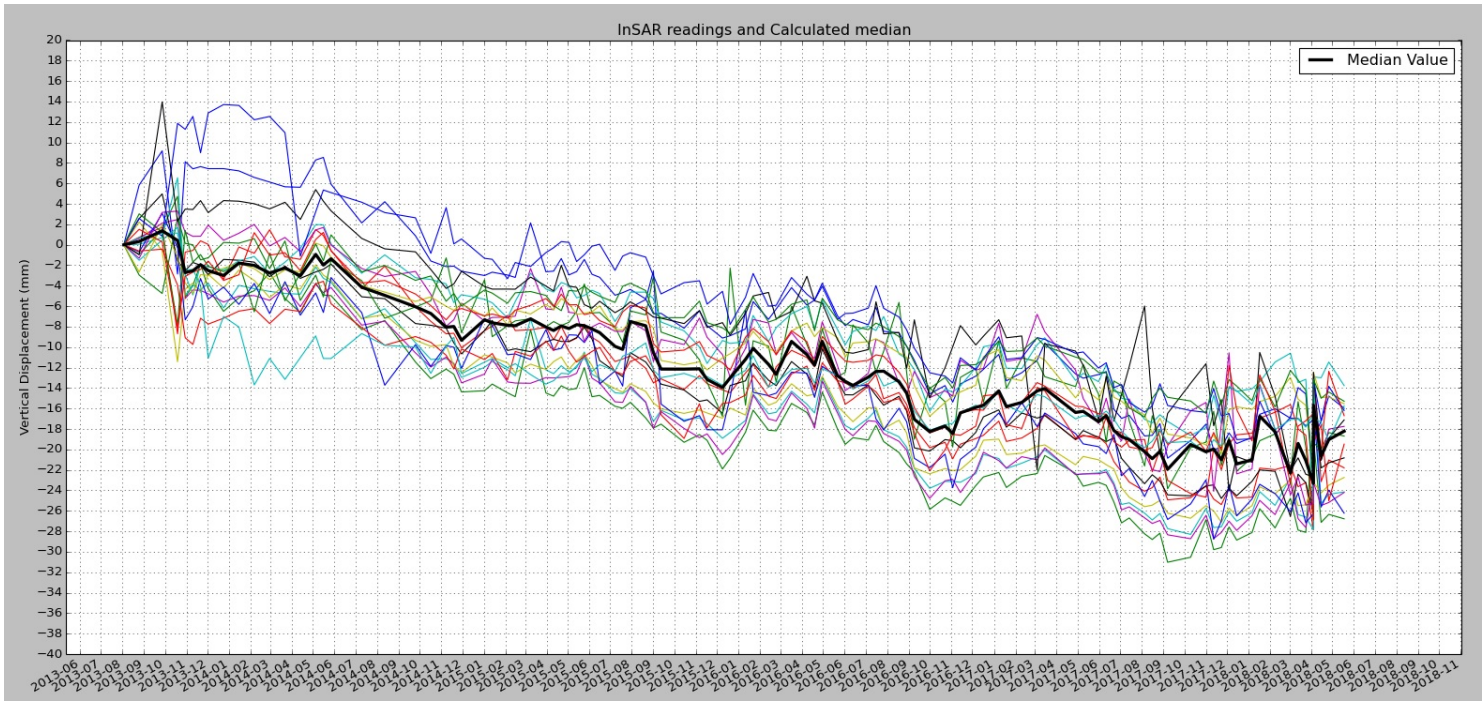
InSAR data time plots - Chilworth Street, London - 6a

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.



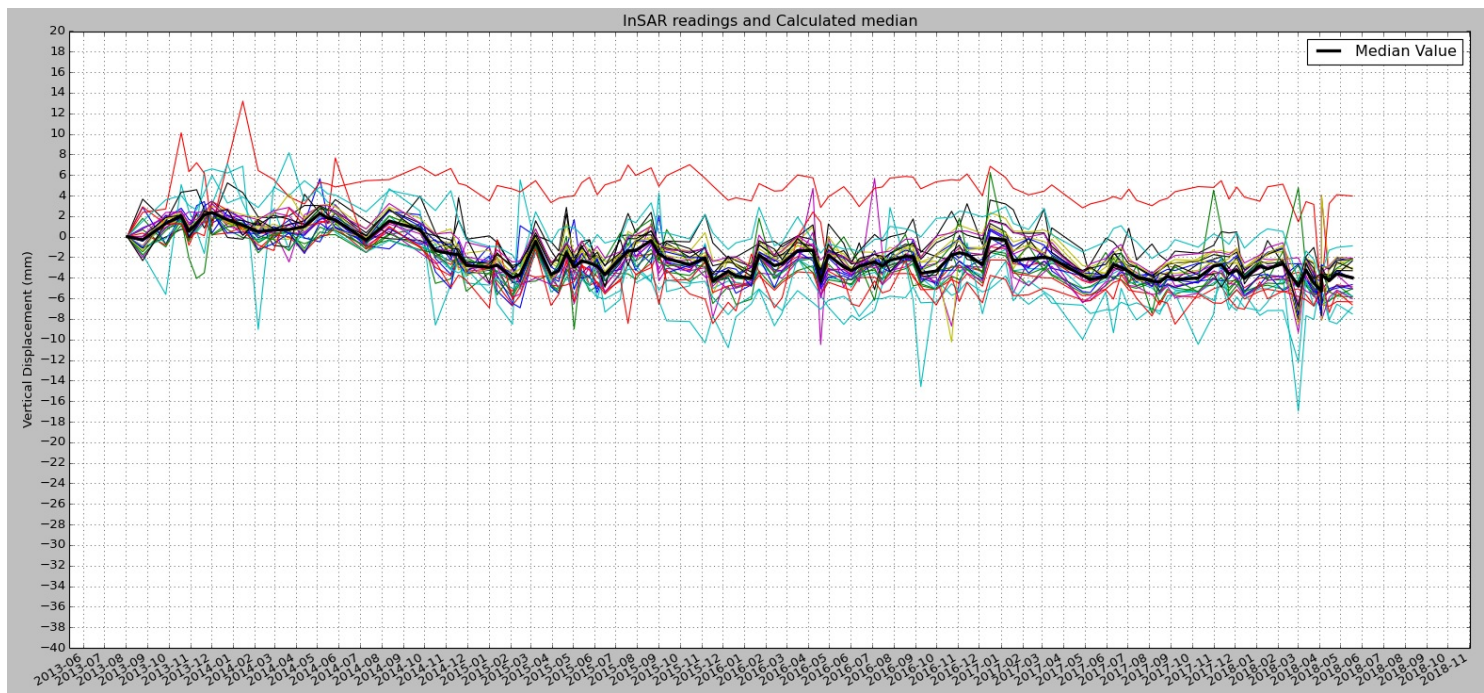
InSAR data time plots - Chilworth Street, London - 6b

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.

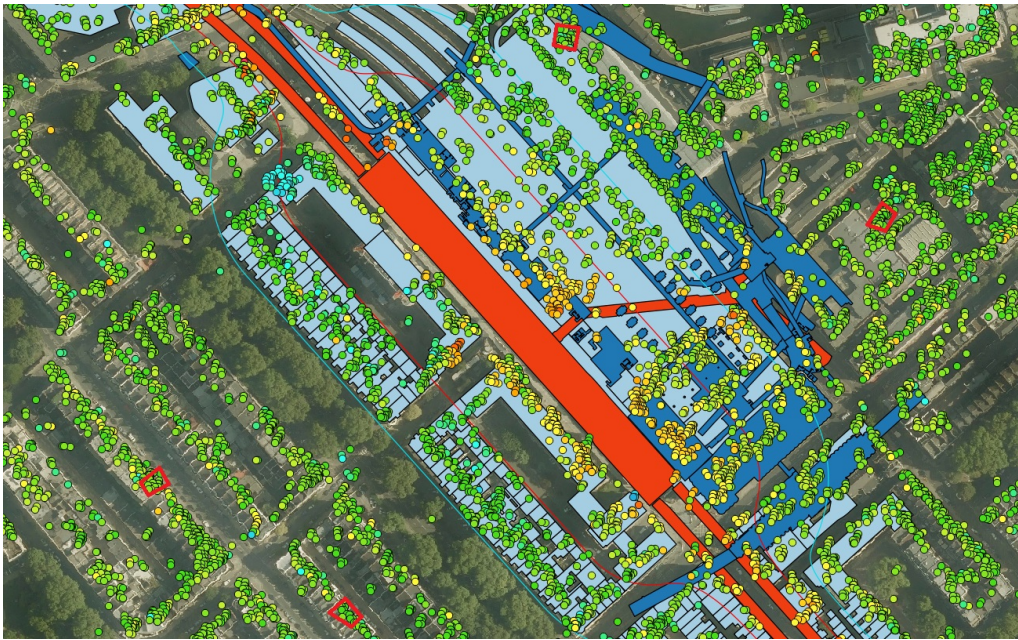


InSAR data time plots - Chilworth Street, London - 6c

The trends featured in the plot below contain both CRL works displacement and background regional/seasonal movement present in the area.



InSAR data map: Areas selected to calculate the average movement out of the ZOI



Legend

Design Settlement_Contours

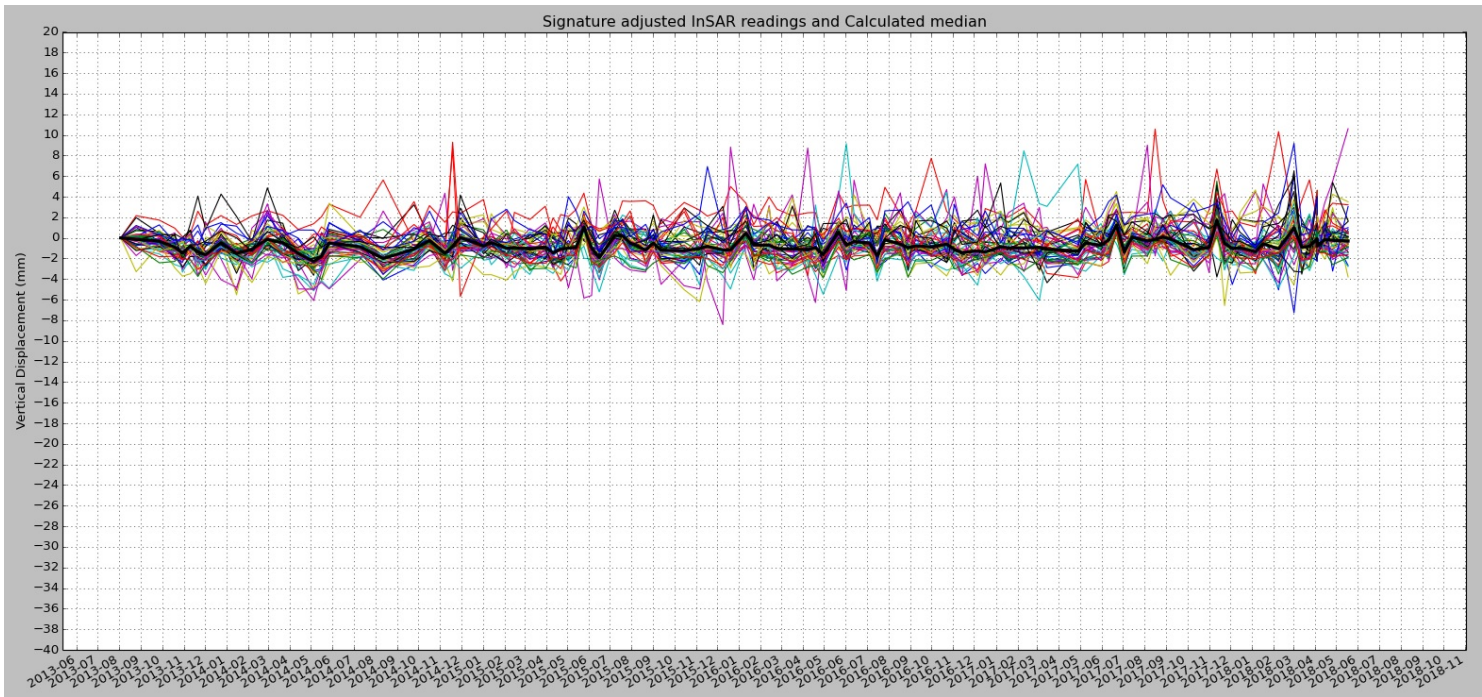
- 10mm Contour
- 1mm Contour

Crossrail_Construction_BNG

buildings_bng

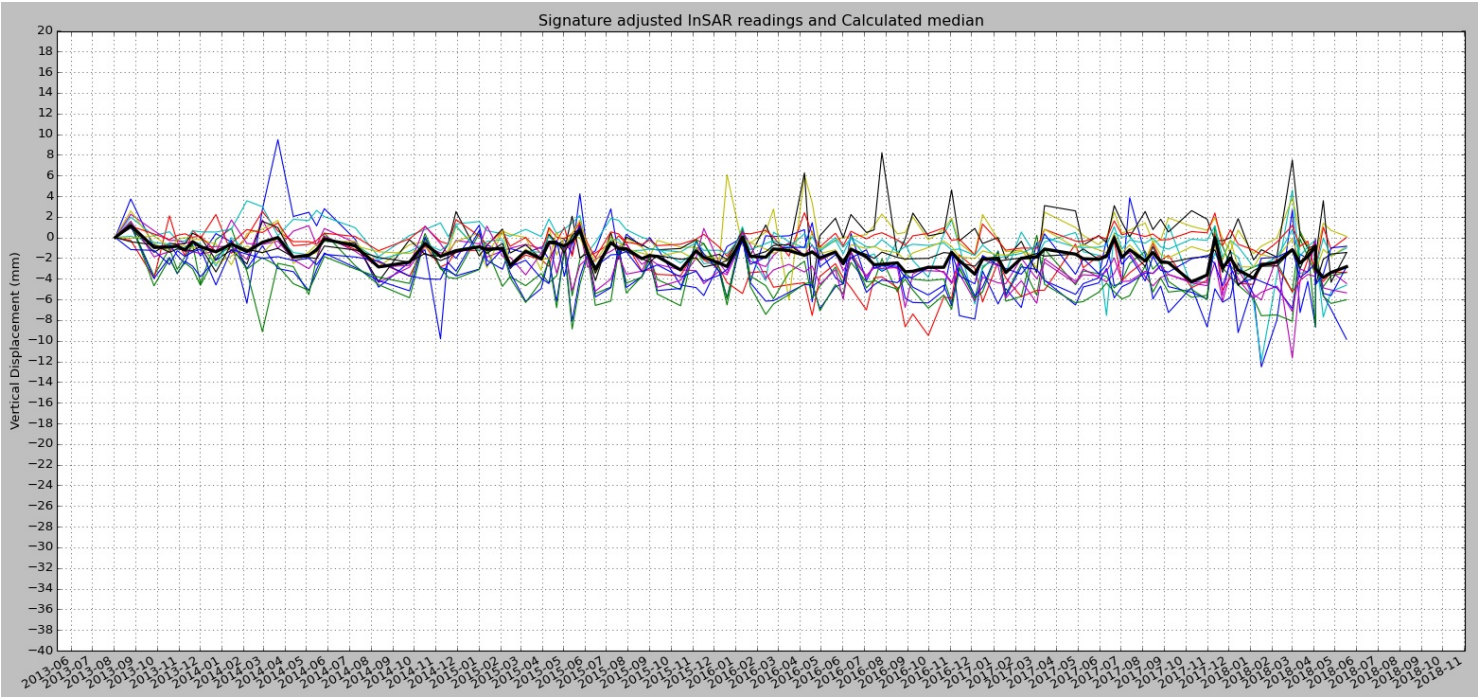
InSAR data time plots - Net Displacement - Chilworth Street, London - 1

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.



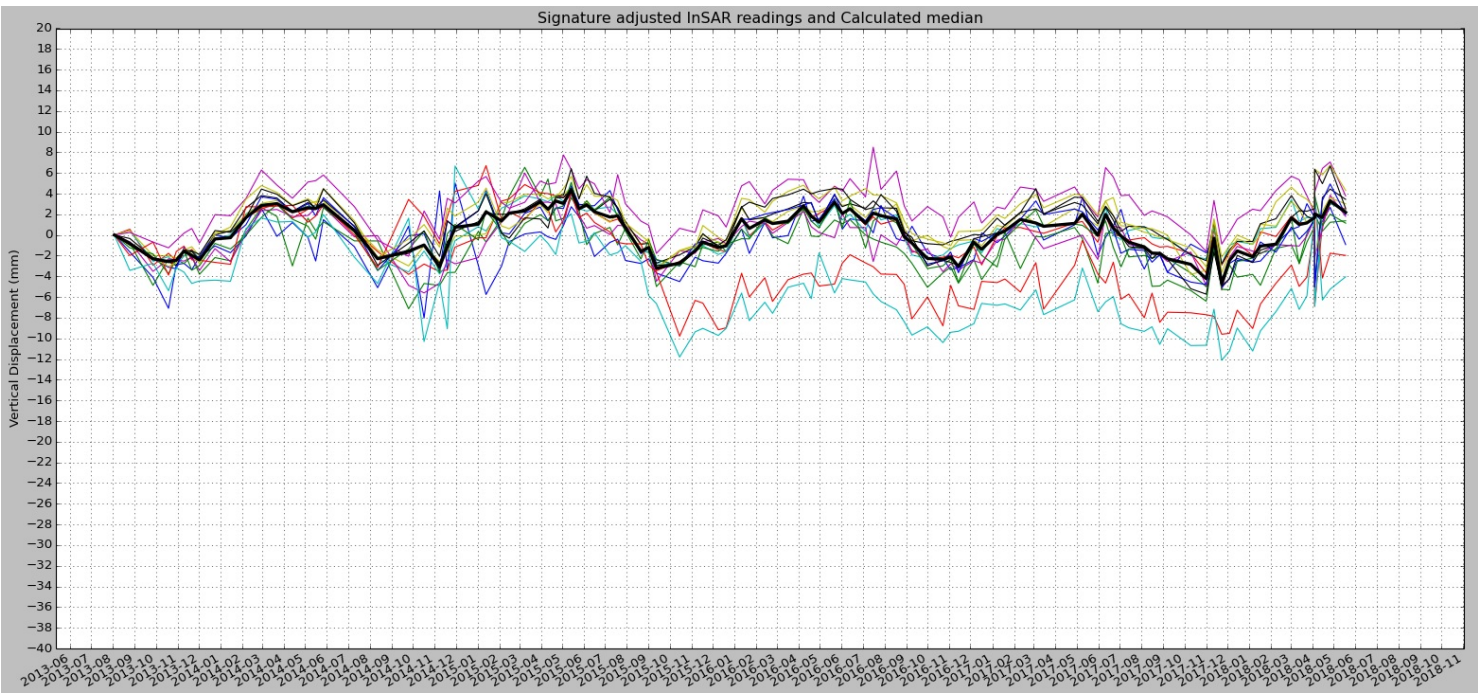
InSAR data time plots - Net Displacement - Chilworth Street, London - 2

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.



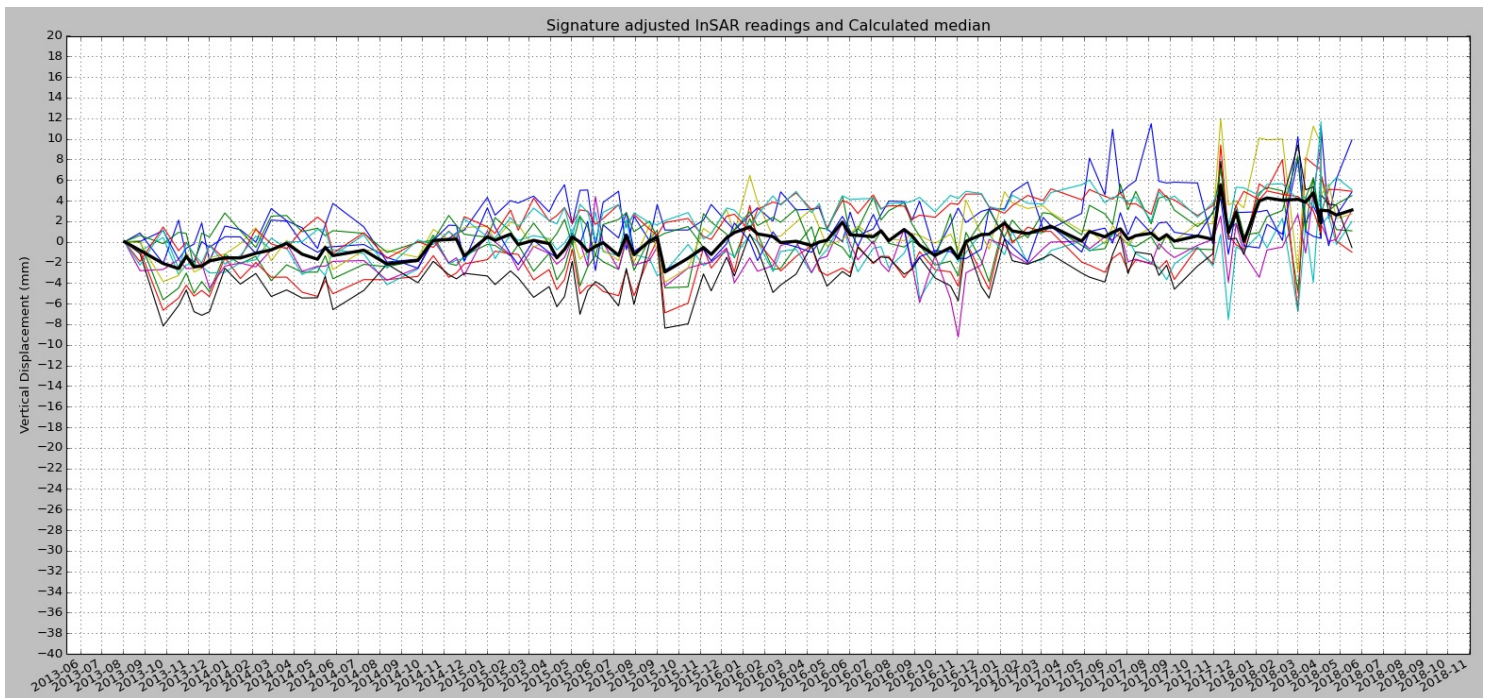
InSAR data time plots - Net Displacement - Chilworth Street, London - 3

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.



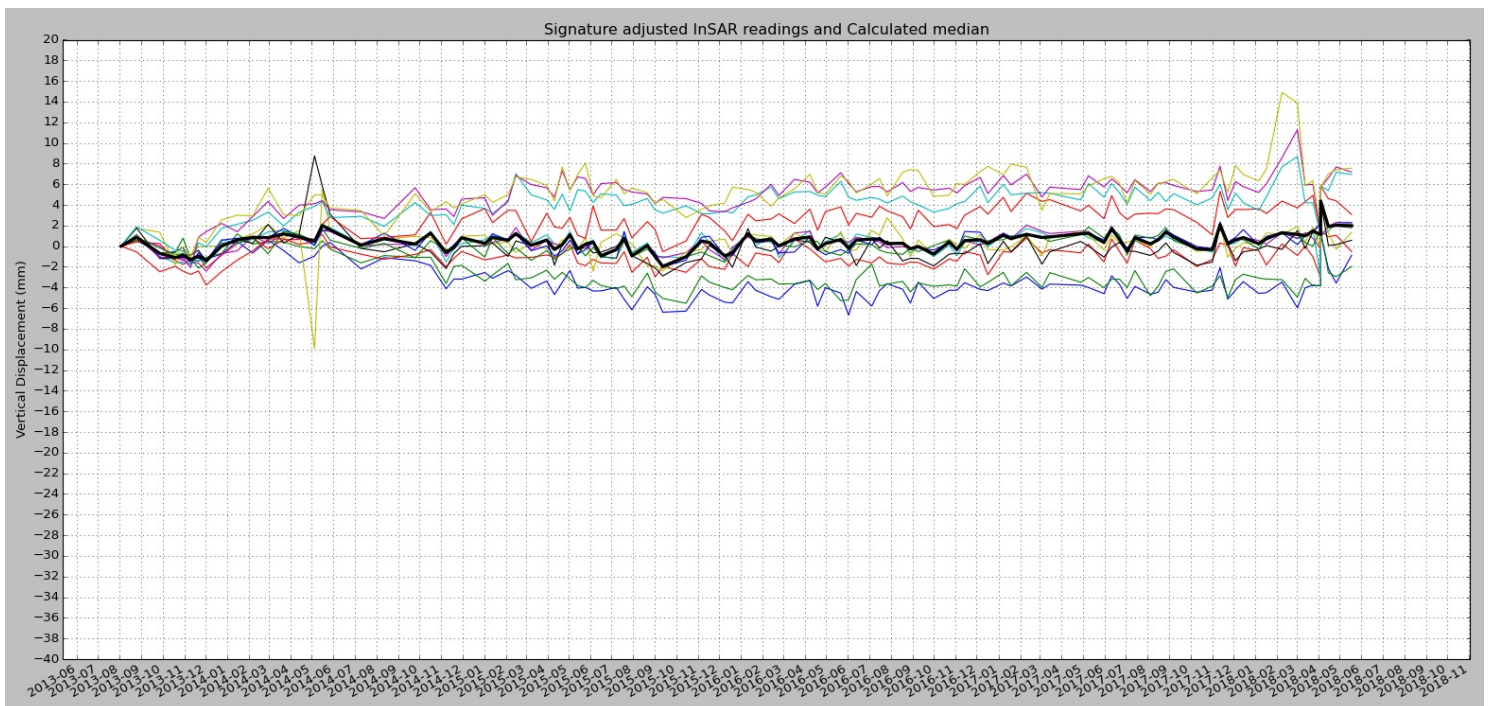
InSAR data time plots - Net Displacement - Chilworth Street, London - 4

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.



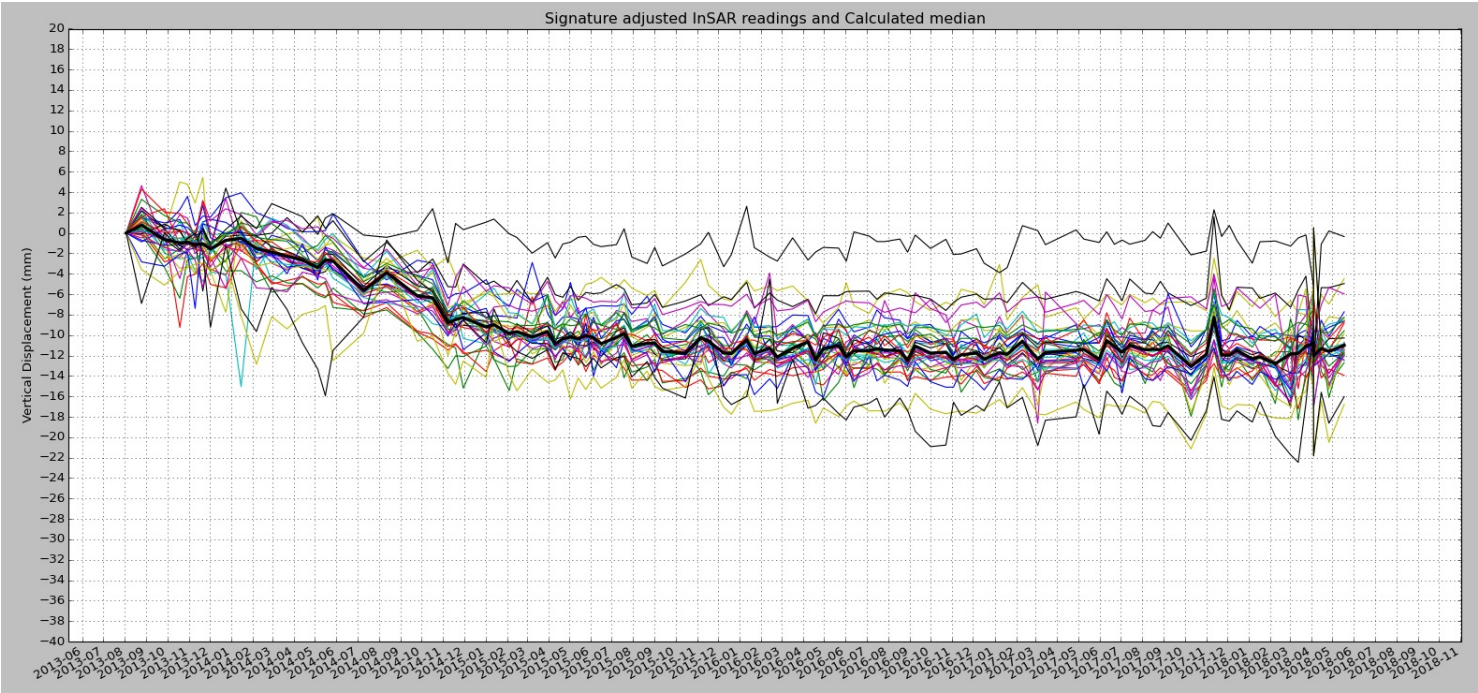
InSAR data time plots - Net Displacement - Chilworth Street, London - 5a

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.



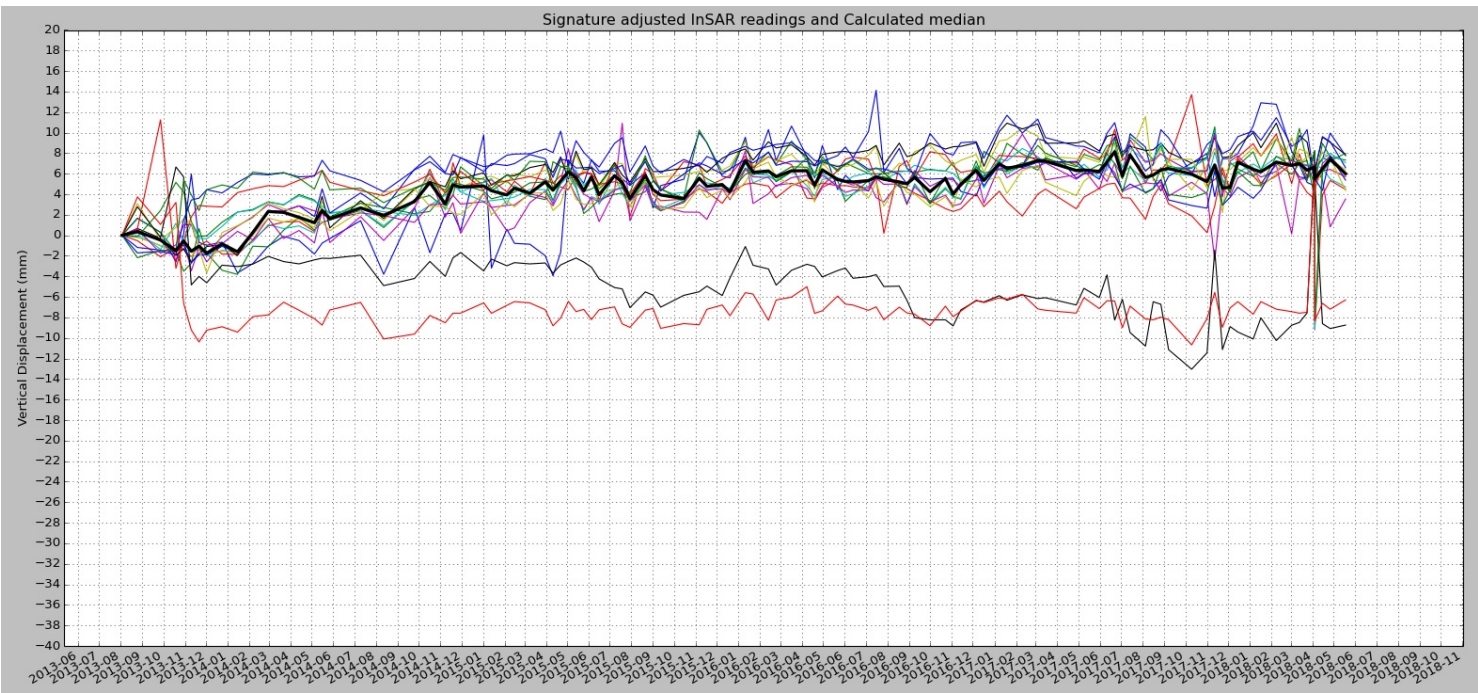
InSAR data time plots - Net Displacement - Chilworth Street, London - 5b

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.



InSAR data time plots - Net Displacement - Chilworth Street, London - 6a

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.



InSAR data time plots - Net Displacement - Chilworth Street, London - 6b

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.



InSAR data time plots - Net Displacement - Chilworth Street, London - 6c

The trends featured in the plot below have been filtered to remove the background regional movement in order to present net displacement.

