

Non-invasive surveys will continue to be at the forefront of the BSR fieldwork programme in 2022; however, with the decreasing effects of the COVID pandemic it is expected that a number of excavations will recommence in the summer and subsequently be reported in future editions of PBSR.

References

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ROME TRANSFORMED: FIELDWORK IN SOUTH-EAST ROME

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Previous reports (Haynes *et al.*, 2020; 2021) have summarised progress on ROMETRANS, the ERC-funded research project ‘Rome Transformed: interdisciplinary analysis of political, military, and religious regenerations of the city’s forgotten quarter C1-C8 CE’ (<https://cordis.europa.eu/project/id/835271>). The period 2021–22, which falls half-way through the current five-year project, has been of the utmost importance to the overall fieldwork programme. To meet ROMETRANS’s internal deadline for primary data capture (May 2022) while recovering time lost as a result of COVID restrictions required a tremendous effort from team members and our many generous collaborators, stakeholders and facilitators.

ROMETRANS work in Rome takes four main forms: structural analysis, geophysical survey, a programme of borehole drilling and ongoing archival analysis. Data derived has been, or is in the process of being, documented in the project’s internal interim reports, and where applicable fed into the RT 3D, a system developed by the ROMETRANS team at the University of Florence by Margherita Azzari and colleagues. RT 3D is designed to enable the project team to generate Digital Terrain Models (DTMs) for buried land surfaces of each major transformation phase examined by the project.

Structural analysis work, coordinated by Thea Ravasi, integrated with Laser Scanning survey, overseen by Alex Turner, took place over five separate study seasons each of two to three weeks’ duration. All together, the work oversaw the detailed recording, including provisional phasing, of all areas of exposed archaeological fabric pre-dating the ninth century AD within the project’s 68 hectare research area not studied in previous seasons. Work ranged from the substantial building complex now partially preserved under the INPS building on Via Amba Aradam, at the western extremity of the project’s research area, through to a collaborative reappraisal of the buildings of the S. Croce archaeological area at the east. It was a special privilege to study in the Oratorio dell’Arciconfraternita del SS. Sacramento and under the Scala Santa alongside Fausto Cacchi, and as the project team set about the challenging task of disaggregating multiple complex elements of the complex’s structural history. To the east, work in the S. Croce archaeological area ranged from the subterranean elements of the

Amphitheatrum Castrense, via the remains of the huge but short-lived Varian Circus, to the towering superstructure of the Basilica Civile. Here the project's Francesca Carboni led ROMETRANS colleagues working alongside the well-established team who have already studied the area so successfully to date, notably Anna De Santis, Laura Bottiglieri, Donato Colli, and Marco Solvi, while Dr Thea Ravasi facilitated the complex survey of the Basilica S. Croce itself. In all of this, as across the project area, detailed imaging was undertaken, where possible through Laser Scanning, but in some cases this was further supplemented by SFM (Marco Solvi), and in the case of the elaborate *Porticus* of the Sessorian complex, sadly obscured by sports court netting, photogrammetric survey (Stephen Kay and Elena Pomar). Other key areas explored included in the survey were the tanks of the *Thermae Helenianae*, and the *Domus Acea*, together with the long sweep of the Claudio-Neronian aqueduct across the research area. The single-largest archaeological complex documented was the Aurelian Wall, and its survey, overseen by Francesca Carboni greatly aided by Marianna Franco (Comune di Roma), was completed. Laser scanning of the interior of the galleries and towers of the Wall, including the *Porta Asinaria*, by teams led by Jon Allison and Beatrice Fochetti, now complements the important work undertaken for ROMETRANS by colleagues from the University of Siena in 2020 and 2021 in generating an SFM model of the exterior through specially commissioned UAV feed. 2021–2022 fieldwork also included the reappraisal of some areas explored in ROMETRANS's predecessor projects, the Lateran Project courtesy of colleagues in the Vatican Museums (in this case involving a reappraisal of the Baths-Baptistery area) and SGL2, courtesy of Maria-Luisa Velardi at the site of the Ospedale San Giovanni — Addolorata. The latter involved a reappraisal with Valentina Pescari of the remains of a *fullonica* on the property of Domitia Lucilla, access to a new section of that complex, and the recording of a pozzolan quarry under the Corsia Manzoni. Quarries such as this, while often post-dating the research focus of ROMETRANS by many centuries, are nonetheless of the greatest interest, for they expose archaeological evidence from earlier periods. Safe access to the quarry site, and indeed to several locations during this fieldwork period, was assured through our friends at Roma Sotterranea facilitated by ROMETRANS PhD candidate Elettra Santucci. A much larger and (relatively) more accessible subsurface area on hospital property was also documented by the team on the north side of the Piazza San Giovanni Paolo II, allowing amongst other things access to the footings of the Claudio-Neronian aqueduct at that point.

Integral to the project's vision is the development of the next generation of researchers, and several PhD/graduate theses are linked to work discussed above. Elettra Santucci's holistic approach to examining Roman hydraulic engineering in the study area continues to benefit our overall analysis, and of course links powerfully to work elsewhere, leading amongst other avenues to sampling work (with Francesca Carboni) at Vigna Barberini. The advanced study of calcium carbonate deposits here and across our study area owes much to the ground-breaking work of Duncan Keenan-Jones and Davide Motta. Roxana Montazerian's thesis focuses on cost analysis and the construction of the Aurelian Wall, while the work of Phyllida Bailey on environmental studies is discussed further below. Alongside these three colleagues undertaking PhDs within the framework of the ROMETRANS project, we have also benefited from the opportunity to work with Sofia Vagnuzzi, a doctoral student at the University of Pisa, undertaking a topographical analysis of the relationship between the Caelian 'fringe belt' and the south-eastern *suburbium* of Rome, and Valentina Pescari whose dissertation focuses on a *fullonica* in the research area.

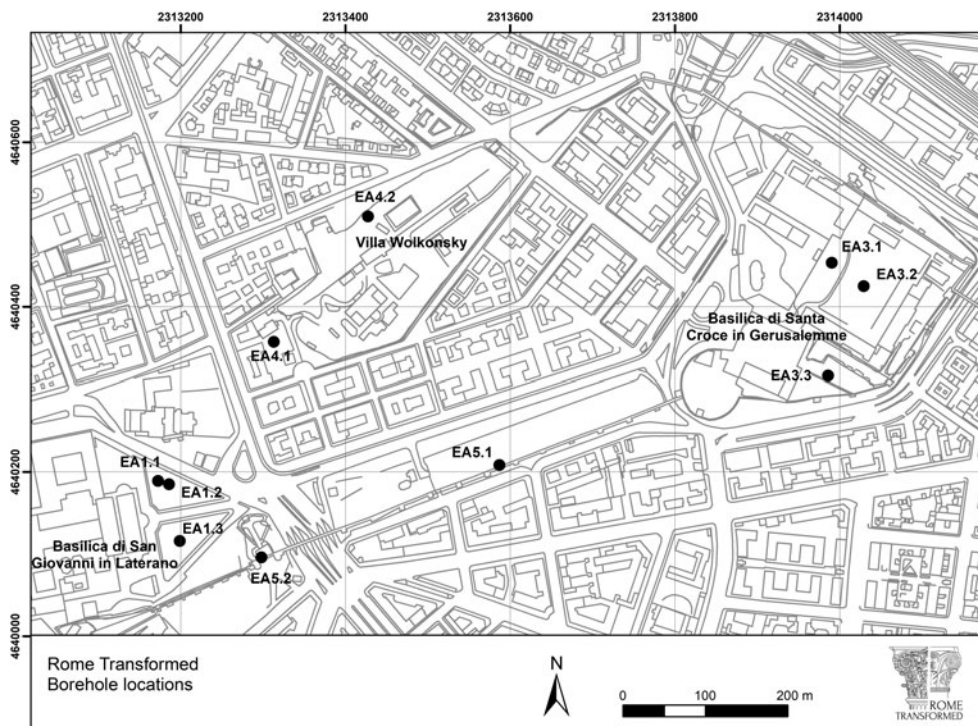
Innovative approaches to Structural Analysis have also been incorporated alongside the project's non-intrusive survey methodology. Working with Prof. Mauro Francesco La Russa and Dr Luciana Randazzo of the University of Calabria, Thea Ravasi has also launched an exciting programme of mortar sampling that concentrates in the study area, but also reaches beyond, incorporating sampling from the structures of the Baths of Caracalla, of via Ipponio and of the Baths of Cellomaius at Albano Laziale, thanks to the generous collaboration of Mirella Serlorenzi, Simona Morretta and Maria Teresa Moroni.

Despite the many difficulties of 2020–2021, a huge amount of the area planned for the project's geophysical survey programme was covered but some areas remained to be covered in 2021–2022. In some cases, as with a stimulating collaboration in the S. Croce area between Salvatore Piro (CNR) and Maurizio Porcu (Codevintec Italiana Srl (Milano)) and his stepped frequency system 3D GPR, we have set up opportunities that not only add data, but also allow for steadily more nuanced comparison of different equipment capabilities. More generally, however, our tried and tested systems have been deployed to new targets. Highlights included Salvatore Piro's nocturnal GPR survey of the bus bay adjoining Corsia Manzoni, and his mid-day survey of the floor of the Basilica of S. Croce in Gerusalemme, the latter generously made possible by the Basilica authorities. Work by Stephen Kay and Elena Pomar immediately south and east of the same Basilica was another highlight. Of particular interest was the discovery of a substantial structure 2.5 m below the modern ground surface which appears to have forced a small diversion in the course of the Aurelian Wall at that point. And our long-term collaborators Geostudi Astier continued with GPR work in the roads of the modern city, a complex operation that involved depriving many of the residents of the Via Tasso of parking spaces overnight, as the team worked in and around this crucial area. With such large data sets to work through, the interpretation of the geophysics remains a challenging, stimulating and ongoing opportunity for all team members, geophysicists and non-geophysicists alike.

In all areas of the project, the generous support and insight of our friends and colleagues in the Soprintendenza Speciale Archeologia Belle Arti e Paesaggio di Roma, Comune di Roma – Sovrintendenza Capitolina ai Beni Culturali, and Musei Vaticani, has been essential for success. This applies with particular force to the challenge of undertaking our programme of borehole survey. This plays a key role in environmental analysis, topic of Phyllida Bailey's project PhD, the building of DTMs through RT 3D, and in turn engages with the geophysical survey process. Special thanks are due to Dr Carlo Rosa and the team at TecnoGeo, for the delivery of our first programme of targeted drilling. This programme was also coordinated by Dr Francesca Carboni, so that it was both informed by, and informed her work on archival and legacy data underpinning Rome Transformed. Extracted cores are analysed geologically and archaeologically, and where possible subjected to radiocarbon dating. A plan of this year's borehole locations is shown as [Fig 1](#).

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The Falerii Novi Project: the 2021 Season

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A two-week campaign in June 2021 marked the beginning of a planned multi-year project at the Roman city of Falerii Novi, located in the Comune of Fabrica di Roma (Viterbo, Lazio), in the middle Tiber Valley. The project takes place under the authorization of the Soprintendenza Archeologia, Belle Arti e Paesaggio per la Provincia di Viterbo e per l'Etruria Meridionale and is a collaboration between the British School at Rome (BSR) and the Universities of Harvard and Toronto, along with researchers from the Universities of Ghent and Florence.¹

According to historical sources, Falerii Novi was founded after Rome's destruction of the nearby Faliscan centre of Falerii Veteres in 241 BC (Polyb. 1.65; Liv. *Epit.* 20; Zon.

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