

Large EM anomalies highlight potential at Mt Carlon project in WA

One anomaly considered highly prospective for nickel while the other suggests strong potential for gold; Both coincide with geological and geochemical features

Great Boulder Resources Limited [ASX: GBR] is pleased to announce that an aerial electromagnetic (AEM) survey has highlighted two strong, large anomalies at its Mt Carlon project in WA.

Mr Carlon is 60km south of Great Boulder's Mt Venn copper-nickel-cobalt project. Great Boulder completed its acquisition of the project from Gold Road Resources (ASX: GOR) in August and has moved quickly to establish its exploration potential.

The two priority anomalies are:

1. The "Eastern Zone" anomaly is a 3.5km-long linear zone of IP (induced polarization) effect coincident with ultramafic rocks and a zone of elevated nickel identified in previous aircore drilling by Gold Road. The IP effect can be a characteristic response from bodies of disseminated sulphides or clays such as montmorillonite.
2. The "Western Zone" anomaly is a 3.7km linear conductive zone coincident with a mapped banded iron (BIF) unit. As BIF is not usually conductive, the coincident EM anomalism may be caused by sulphide minerals, suggesting potential for gold mineralization.

Eastern Zone anomaly

Although EM surveys are primarily used to detect buried conductive minerals such as massive sulphide, high-quality EM data can also be used to detect minerals that exhibit a capacitive effect similar to that achieved by an IP survey. This effect may be caused by disseminated sulphides, or as a weathering effect due to the presence of chargeable clays such as montmorillonite.

The Eastern Zone anomaly is significant because it is coincident with a zone of elevated nickel in aircore drilling within ultramafic rocks. This was one of the reasons for the Company's initial interest in the Mt Carlon project. Secondly, the aircore drilling is mainly in sub-crop to shallow residual soils with moderate weathering, and hence the presence of montmorillonite in this weathering profile is considered unlikely. The Eastern Zone also sits on the western edge of a large gravity anomaly thought to be caused by mafic rocks at depth.

With coincident positive indicators for geology, nickel geochemistry and geophysics, this is a high priority target to test for the presence of disseminated nickel sulphides over an area of significant size.

Western Zone anomaly

The western anomaly is a conductive feature approximately 3.7km long, coincident with a sub-cropping to outcropping BIF unit. This area has previously had some drill coverage, with RAB drilling in 1995 which was unlikely to effectively test the outcropping BIF. Because the BIF itself is not a conductive unit, the anomaly may be caused by sulphide minerals within the BIF unit in a fault-bound dilational setting. This environment is prospective for gold mineralization.

Great Boulder Managing Director Andrew Paterson said both anomalies were highly promising.

"Finding two anomalies, both more than 3km long and coincident with known geological features is very encouraging," Mr Paterson said.

"The Eastern Zone in particular is an exciting target given it sits over elevated nickel within mapped ultramafics and on the edge of a big gravity response.

"We think this has the potential to be a big disseminated nickel target.

"The Western Zone anomaly is also a strong target. The thickening of the greenstone belt in that area with juxtaposed regional faults on either side is characteristic of a dilational structural setting, which makes it highly prospective for gold."

Great Boulder intends to conduct further field reconnaissance of the anomalies, followed by soil and rock chip sampling over both areas to further refine the targets before proceeding with surface geophysical surveys.

Other IP Anomalies

There are a number of other small chargeable anomalies in the northern half of the survey area (Figure 2). The distribution of these features does not correspond to underlying geology, but it shows some correlation to drainage patterns and hence these smaller areas are considered more likely to represent chargeable clays. An image of the modelled chargeability or IP response is shown in Figure 3 below.



FIGURE 1: MT CARLON LOCATION MAP.

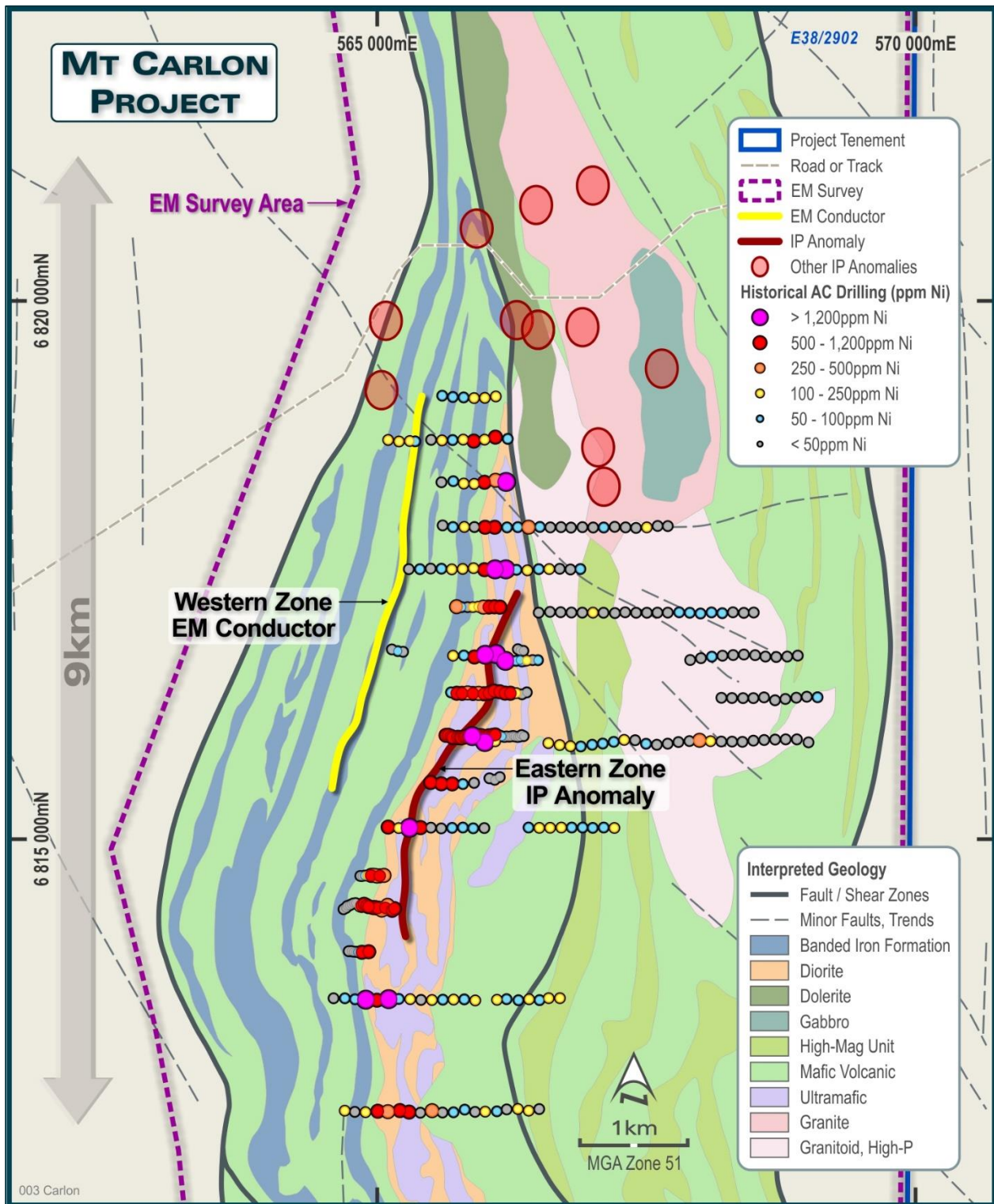


FIGURE 2: ANOMALY LOCATIONS IN RELATION TO GEOLOGY AND AIRCORE DRILLING

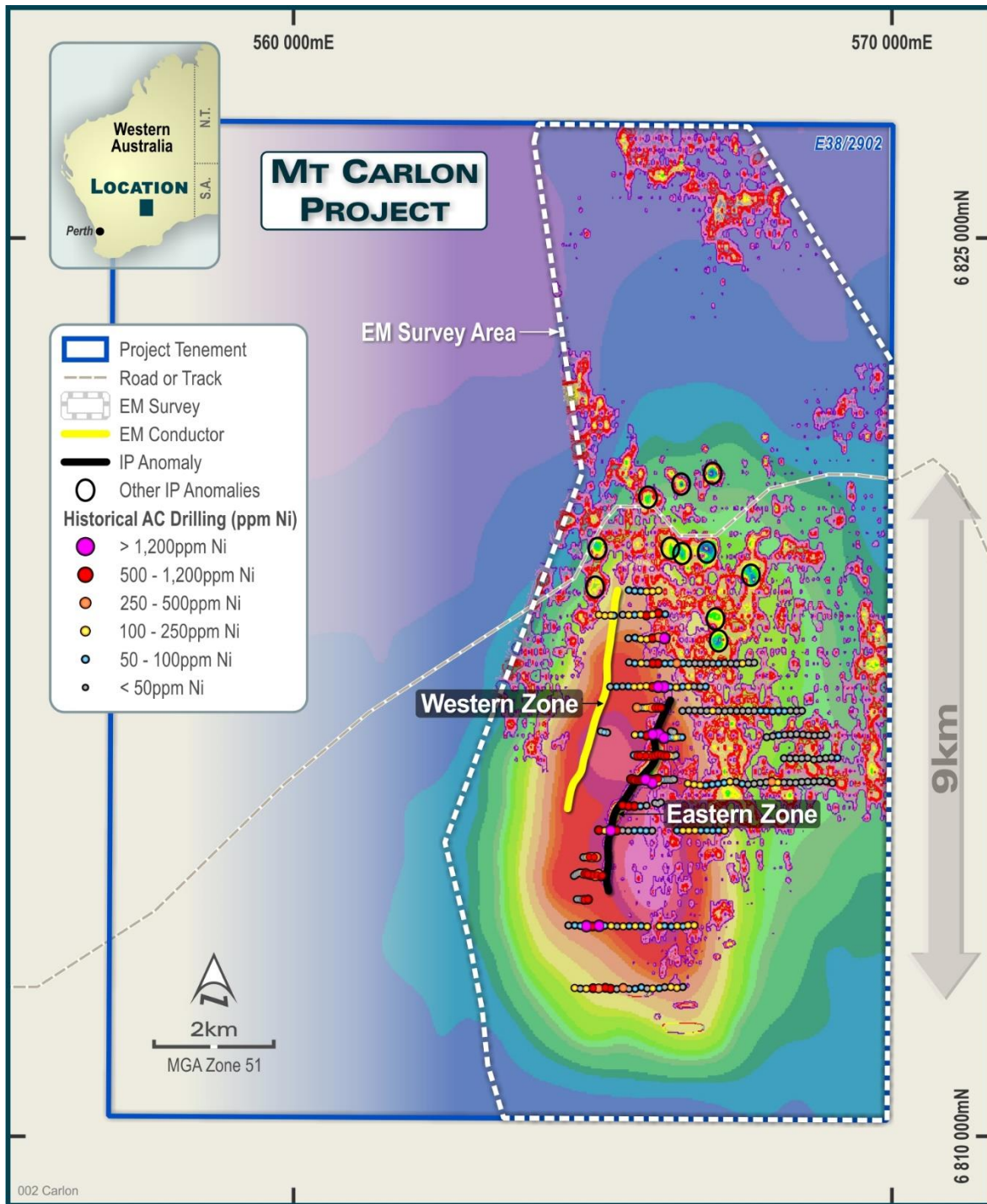


FIGURE 3: PLAN OF THE FULL SURVEY AREA SHOWING COLOURED CHARGEABLE IP RESPONSE OVER GRAVITY CONTOURS. THE WESTERN ANOMALY DOES NOT SHOW UP IN THIS IMAGE BECAUSE IT IS A CONDUCTIVE (EM) RESPONSE.

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About Great Boulder Resources

Great Boulder is a mineral exploration company with projects in the Eastern Goldfields region of Western Australia. With a focus on base metals and gold, the Company has a range of projects from greenfields through to advanced exploration. With advanced projects including the Mt Venn and Winchester copper-nickel-cobalt projects and the Whiteheads gold project and the backing of a strong technical team, the Company is well positioned for future success.

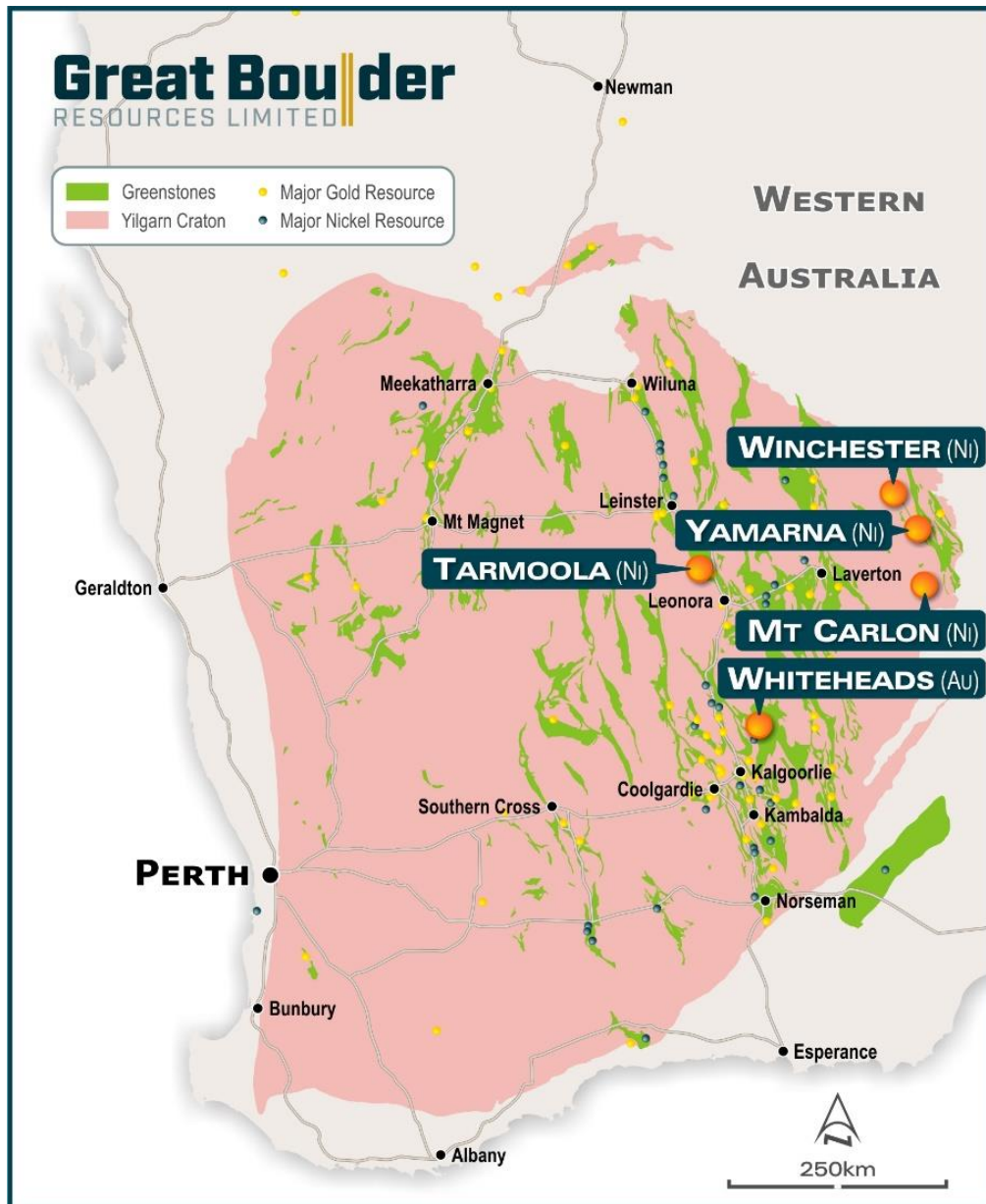


FIGURE 4: GREAT BOULDER PROJECTS

Competent Person's Statement

Exploration information in this Announcement is based upon work undertaken by Mr Andrew Paterson who is a Member of the Australasian Institute of Geoscientists (AIG). Mr Paterson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a 'Competent Person' as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Mr Paterson is an employee of Great Boulder Resources and consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Appendix 2 - JORC Code, 2012 Edition Table 1

The following table relates to airborne geophysical survey activities undertaken at Great Boulder's Mt Carlon project.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
<i>Sampling techniques</i>	The airborne EM survey was carried out at a 200m line spacing East-West orientated using the New Resolution Geophysics' Excite™ system. The survey was flown with an average ground clearance of 30-40m to the transmitter/receiver loop and 60-70k to the helicopter. Db/dt and integrated B-field, along with magnetometer measurements were obtained using a Single Sensor Scintrex CS3. The transmitter had an 18.4m diameter utilizing a 235A current with a base frequency of 25Hz. A 0.613m x 1m diameter receiver located concentric to the transmitter was used. The sampling techniques used are deemed appropriate for the style of exploration.
<i>Drilling techniques</i>	Not applicable.
<i>Drill sample recovery</i>	Not applicable.
<i>Logging</i>	Not applicable.
<i>Sub-sampling techniques and sample preparation</i>	Not applicable.
<i>Quality of assay data and laboratory tests</i>	Not applicable.
<i>Verification of sampling and assaying</i>	Not applicable.
<i>Location of data points</i>	The MGA94 UTM zone 51 coordinate system was used for all data.
<i>Data spacing and distribution</i>	Not applicable.
<i>Orientation of data in relation to geological structure</i>	Survey lines were designed East-West, perpendicular to the orientation of stratigraphy.
<i>Sample security</i>	Not applicable.
<i>Audits or reviews</i>	None completed.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	The Mt Carlon project consists of a single exploration licence, E38/2902. As of August 2019 the tenement is 100%-owned by Great Boulder Resources Ltd.
Exploration done by other parties	Initial exploration of the Mt Carlon Block was undertaken by Western Mining Company which undertook limited soils sampling. This work resulted in an anomalous sample of 420ppb Au in soil. Kilkenny Gold and Helix Resources utilised various soil sampling and RAB drilling campaigns targeting gold mineralisation however no significant anomalous zones were intersected. Limited soil sampling and shallow aircore drilling was completed by Gold Road Resources Ltd along with a detailed ground gravity survey. Multi-element geochemistry identified prospective lithologies however no gold anomalism was intersected. No previous Ni-Cu mineralisation specific exploration activities have been completed.
Geology	The Mt Carlon Project is dominated by an isolated, north-south trending greenstone block surrounded by foliated quartzo-feldspathic gneiss, meta granite and monzogranites. This greenstone block is located approximately 20km to the west of the regional Yamarna Shear within the Burtville Terrane. Stratigraphically, this block lies in similar location to the Mt Venn Greenstone Belt and may represent the southern continuation of these rock units or a related sub-basin. The greenstone complex at Mt Carlon is comprised of banded iron formation (BIF), coarse grained amphibolite, pyroxenites, komatiites, basalts and mafic hornfels. Granodiorite, tonalite and monzogranite intrusions occur throughout the sequence with large bodies dominating the north and east of the project. Quartzo-feldspathic gneiss forms the western footwall to the mafic-ultramafic package. Low rising BIF and basaltic ridges form the best developed bedrock exposures along this western contact. GSWA mapping and geophysical inversion work indicates that the mafic-ultramafic stratigraphy is folded into an upright south-south westerly plunging anticline-syncline system with dislocation of some fold limbs due to contact parallel thrusts. The northern extent of the block is bound by a monzogranite intrusion and the southern extent is terminated by a late (D4) fault. Several contact parallel structures along with NE trending accommodation structures have been interpreted by previous workers. Transported cover varies from less than 1m to greater than 50m. In general, cover gets deeper to the south and east. Well-bedded upward facing Permian sediments of the Paterson Formation overlie large areas of the bedrock in the north and east. These Permian sediments form moderately high hills with steep breakaways to the valley floors and have significant depositional detritus associated. Low aeolian dunes of 1-8m are developed to the south and north with around 1-2m of transported sand in other areas. Residual regolith has been stripped to predominantly lower saprolite and weathered fresh rock beneath transported cover.
Drill hole Information	Not applicable.
Data aggregation methods	Not applicable.
Relationship between mineralisation widths and intercept lengths	Not applicable.

Diagrams	Refer to figures in announcement.
Balanced reporting	Not applicable.
Other substantive exploration data	A ground gravity survey was completed by Gold Road Resources in 2014 over the entire project area. The survey was completed on a roughly 500m x 1200m station spacing with measurements obtained using a Scintrex CG-5. This survey highlighted high gravity responses interpreted to relate to the mafic packages within the tenement.
Further work	Further work is discussed in the document in relation to the exploration results.