



School of Earth Sciences Seminar Series

Helen McFarlane

CET, School of Earth Sciences, UWA; Earth, Atmosphere and Environment,
Monash University; GET, University Paul Sabatier, Toulouse III

Episodic Collisional Orogenesis in the West African Craton: Secrets of the Sefwi Greenstone Belt

The School of Earth Sciences is pleased to invite you to a Lecture in the SES Seminar Series given by Helen McFarlane entitled “Episodic collisional orogenesis in the West African Craton: Secrets of the Sefwi Greenstone Belt”.

This seminar neatly follows on from the final SES seminar of 2017 presented by Dr Andreas Petersson on the crustal evolution of the West African Craton.

Controversy continues to surround the geodynamic and tectonic evolution of the Palaeoproterozoic greenstone–granite–gneiss terranes of the West African Craton. The tectono-metamorphic history of the low-grade volcanic belts and meta-sedimentary domains and areas of high-grade paragneisses and orthogneisses has drawn a number of interpretations ranging from Archean-like “dome and basin” geometries of diapirically emplaced TTG granitoids and sagducted greenstone belts to weak, hot orogens or accretion of arc terranes associated with thrust tectonism. This study looks into the deformation and metamorphic history of the Sefwi Greenstone Belt in order to better understand the crustal architecture of SW Ghana. We highlight evidence for transtension-related deformation and lower crust exhumation, and its control on the geometries of the Sefwi Belt. The results provide new insights into the orogenic processes and tectonic regime responsible for the assembly of the West African Craton.

Helen McFarlane studied Geology through a joint-supervision (Cotutelle) between the School of Earth, Atmosphere and Environment at Monash University, Melbourne Australia Université Paul Sabatier – Toulouse III, located in SW France. Her thesis was entitled “The geodynamic and tectonic evolution of the Palaeoproterozoic Sefwi Greenstone Belt, West African Craton.” Having finished her PhD at the end of 2017, Helen commenced a post-doctoral position as a Research Associate at the Centre for Exploration Targeting, UWA in February this year, working with Prof. Mark Jessell and Dr Mark Lindsay.

VENUE Robert Street Building Lecture Theatre (G.16), Ground Floor Robert Street Building
University of Western Australia, 35 Stirling Hwy, Crawley 6009

TIME **4:00 - 4:45pm Thursday 8 March, 2018**

You are invited to join us afterwards for refreshments provided for sale by our local SEG Student Chapter in the Resource Room, Robert Street Building.

