



Dr Dale Putland
Chief Executive Officer
Shire of Boyup Brook

08 March 2022

Dear Dr Putland/Dale

RE: Request for support to fund RPA (drone) capabilities at ECU

ECU would like to invite the Shire of Boyup Brook/Rylington Park Institute for Agricultural Training and Research to partner with ECU on a major research initiative to co-fund a Remotely Piloted Aircraft (fixed wing drone) to assist with undertaking research projects of importance to the Shire.

Background

The geospatial laboratory within the School of Science, Edith Cowan University, provides spatial analyses capabilities for teaching and research both within the school, university and for industry and the broader community. RPA (remotely piloted aircraft) or drone technology is a key component of our capabilities. Our current RPA system consists of a fixed wing, survey grade drone with high-end RGB, multispectral and thermal sensors. This system is now a superseded model and as such, is no longer supported in terms of parts, repairs, etc. To continue current projects and engage in future research we need to update our RPA capabilities. Dr David Blake the nominated Chief Pilot, ECU, has been able to negotiate a replacement deal with the manufacturer/supplier which sees ECU retain our current system, which we can use until it is no longer serviceable, as well as updating to the most current technology. This cost-effective approach will provide improved accuracy and efficiency, making previously prohibitive research possible.

List of Research Projects and Collaborations

The geospatial lab collaborates with the ECU strategic Research Centre, the Centre for People, Place and Planet as well as school-based research centres including Conservation Biodiversity and Management Centre (CBMRC), Centre for Marine Ecosystem Management (CEMR), Centre for Artificial Intelligence and Machine Learning (CAIML), and the eAgriculture research group and aligns with the ECU Research Theme, Natural and Built Environments.

Our current RPA system has been used in research projects including:

- **Thermal detection of fauna** (for fauna species counts) at Matuwa;
- Vegetation health surveys at Kings Park, in conjunction with Department of Biodiversity, Conservation and Attractions (DBCA) – Kings Park;
- Pasture productivity associated with **Organic/Regenerative farm practices** in Katanning in conjunction with Certified Organic and Biodynamic Western Australia (COBWA) and Department of Primary Industries and Regional Development (DPIRD);
- Northern Jarrah Forest recovery rates following **bushfire**, in conjunction with Department of Fire and Emergency Services (DFES) and DBCA; and,

- Peatland mapping in southern Western Australia in conjunction with Department of Agriculture, Water and Environment (DAWE) and Walpole Nornalup National Park Association (WNNP).
- Current proposed projects include Blue Carbon accounting in tidal marshes of Western Australia (CMER), soil health in sandy agricultural soils of South-West WA (BCMRC & CPPP), and landscape fragmentation following fire (BCMRC), and machine learning for peatland identification.

Benefits for Shire of Boyup Brook

A return on investment could be realised through an extension of current research activities bringing research strengths in **regenerative agriculture**, to include Rylington Park, measuring vegetation productivity and soil health. Research strengths in **bushfire impacts and modelling** could also be adapted to Rylington Park examining burn severity and landscape fragmentation associated with paddock and stubble fires. Further extension of current eAgriculture projects at Rylington Park would be facilitated by updated RPA capabilities. These projects could take a variety of forms including new grant proposals as well as post-graduate research projects, either Masters or PhD.

Furthermore, Rylington Park Farm could be used as a demonstration site to run workshops of the use of RPA technology in Agriculture.

Funding Breakdown and Request

The total upgrade value is \$33,000. ECU has secured co-funding of \$23,000 and we would like to invite the Shire of Boyup Brook/Rylington Park Institute for Agricultural Training and Research to partner with ECU on this major initiative with a funding contribution of \$10,000.

Agency	Amount Requested
ECU	\$13,000
DBCA – Kings Park	\$10,000
Shire of Boyup Brook	\$10,000
Total	\$33,000

Research Team: Dr David Blake, Dr Leisa Armstrong, Dr David Cook, School of Science, ECU.

Regards,



Professor Kerry Brown

Contact: Professor Kerry Brown, Research Theme Leader, ECU.

E: k.brown@ecu.edu.au M: 0407731939



Shire of Boyup Brook

Professor Kerry Brown
Research Theme Leader
Edith Cowan University
585 Robertson Drive
BUNBURY WA 6230

Email: k.brown@ecu.edu.au

Dear Kerry

Re: Request for support to fund RPA (drone) capabilities at ECU

Council dealt with your request at its Ordinary Council meeting held on 28th April 2022.

"That Council approve funding of \$10,000 from the Rylington Park account for a co-contribution to purchase a fixed wing drone in partnership with Edith Cowan University."

Regards

Dale Putland
Chief Executive Officer

9 May 2022

*country
choice*



country choice

Abel Street
PO Box 2
BOYUP BROOK
WA 6244

Phone:
08 9765 1200

Facsimile:
08 9765 1592

E-mail:
shire@boyupbrook.wa.gov.au

www.boyupbrook.wa.com.au

ABN: 95 583 688 034



Letter for Scholarship

To:

Mon, 29 Jan at 08:00

Thanks

Below letter regarding scholarships.

To Chairman & Committe,

We are writing to ask that you consider our Son Charlie Goerling who is attending Harvey Ag College as a Year 11 Student in 2024 for the Scholarships you have available, unfortunately we missed the cut off date before Christmas. Charlie has already completed Year 10 at Harvey Ag College, he is a upstanding student who enjoys all aspects of the agriculture industry and looking forward to studying further this year.

Regards

Paul & Jen Goerling