

Council

UNIVERSITY OF WESTERN AUSTRALIA
RESEARCH AGREEMENT – SALEYARDS WASTE
WATER TREATMENT SYSTEM

Sponsored Research Agreement
UWA Project Brief

Meeting Date: 27 January 2021

Number of Pages : 10

SPONSORED RESEARCH AGREEMENT

AGREEMENT DETAILS

UWA	Sponsor
The University of Western Australia, of 35 Stirling Highway, CRAWLEY, WA, 6009	Shire of Plantagenet, of 22-24 Lowood Road (PO Box 48), MOUNT BARKER, WA, 6324
Contact: Liah Coggins School of Engineering 35 Stirling Highway, M051, Crawley WA 6009 (08) 6488 3416 liah.coggins@uwa.edu.au	Contact: John Fathers Shire of Plantagenet PO Box 48, Mount Barker WA 6324 (08) 9892 1124 dceo@sop.wa.gov.au
ABN:37 882 817 280	ABN 29 084 782 574

1. RESEARCH TERMS

This Agreement sets out our terms of conducting the research described in the attached Schedule. Our General Conditions are attached and also form part of this Agreement. If there are any inconsistencies between the parts of the Agreement, the order of priority is:

- these Agreement Details;
- any approved Special Conditions in the Schedule;
- the General Conditions; and
- the Schedule.

By signing below where indicated, you agree to be bound by this Agreement.

2. PROJECT DESCRIPTION

TITLE – Options for improvement of the wastewater treatment system at Mount Barker Regional Saleyards

This project aims to determine the best upgrade options for the Mount Barker Regional Saleyards wastewater treatment system

3. COMMENCEMENT DATE AND TERM

Commencement Date: 15 February 2021

Completion Date: 14 February 2022

4. PAYMENT SUMMARY

Total project value: AUD \$4,455 (ex-GST)

Item	Estimated date	% of total	AUD\$
Signing of agreement	15 Feb 2021	50	2227.50
Final report	1 Dec 2021	50	2227.50



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

SIGNED FOR UWA BY ITS AUTHORISED REPRESENTATIVE:		SIGNED FOR SPONSOR BY ITS AUTHORISED REPRESENTATIVE:	
NAME:(in capitals)		NAME:(in capitals)	
TITLE:		TITLE:	
DATE:		DATE:	

SCHEDULE – SCOPE OF WORK, BUDGET AND SPECIAL CONDITIONS

ITEM A: RESEARCH PROJECT DESCRIPTION AND REPORTING/DELIVERABLES

1. Background

The Shire of Plantagenet operates a wastewater treatment plant associated with the operations of the Mount Barker Regional Saleyards (MBRS). There are two parallel facultative waste stabilisation ponds (WSPs) followed by one maturation pond. The WSPs receive a moderate amount of solids from wash down of the saleyard pens and an onsite truck wash. Efforts to remove a large amount of solids before entering the ponds has been largely unsuccessful, and the performance of the ponds is deteriorating as sludge continues to accumulate in ponds. The Shire has been presented with several options for improving treatment, but would like to explore this further before committing to expensive capital works, and would also like to explore more reuse options for the treated water.

2. Deliverables

This project will deliver the following:

Task/Outcome/Deliverable	Description
Full site investigation	Site investigation used to determine the current state of the system. This will include the use of a remote control boat developed at UWA to determine sludge infill in the WSPs.
Explore waste stabilisation pond reconfiguration options	Based upon the data collected by the Shire and the investigations conducted by UWA, possible reconfiguration options will be explored. This will include the use of computational fluid mechanics (CFD) modelling of ponds.
Explore alternative pre- and post-treatment options	Options for pre- and/or post- treatment solutions will be explored to determine if they could improve treatment performance
Explore treatment options to facilitate the reuse of treated water	A desirable outcome would be to be use treated water for wash down of the saleyards. Options for treatment to facilitate this will be explored.
Final report	All findings will be summarised in a final report for the Shire.

Invoicing schedule:

50% upon signing of agreement: \$2,227.50 ex. GST

50% upon completion of project: \$2,227.50 ex. GST

ITEM B: PAYMENT SUMMARY

Item/Description	Cash (AUD)	UWA (AUD)	In-kind
Dr Liah Coggins (50 hours)		3,212	
Prof Anas Ghadouani (25 hours)		3,174	
Car hire – 4 days SUV hire @ ~\$100/day, 2 trips	900		
Accommodation - \$200/night for 3 people, 2 trips	1,200		
Two in-person meetings – personal car, ATO rate ¹ , Crawley to Mount Barker return (~800 km return)	1,200		
UWA 35% Infrastructure Charge	1,155		
Total cost of the project (excl. GST)	4,455	6,386	
Total project cost (Cash + UWA in-kind)	10,841		

ITEM C: SPECIFIED PERSONNEL

Dr Liah Coggins
Prof Anas Ghadouani

¹ ATO rate for car expenses from 1 July 2020 is \$0.72/km
Sponsored Research Agreement

Dr Coggins and Prof Ghadouani will provide supervision to final year engineering students at The University of Western Australia as part of their engineering degree.

ITEM D: SPECIAL CONDITIONS (if any)

N/A

RESEARCH – GENERAL CONDITIONS

1. RESEARCH TERMS

- (a) UWA will commence the Research Project upon the Commencement Date or as soon as reasonably possible thereafter and will complete the research on the Completion Date or as soon as practicable thereafter.
- (b) UWA will carry out the Research Project in the manner set out in the Schedule.
- (c) All research work shall be performed with due skill and diligence to UWA's professional standards.
- (d) All research work will be carried out by the specified personnel in Item C of the Schedule. If the specified personnel cease to be associated with UWA or otherwise become unavailable to direct this project, UWA will be entitled to replace the specified personnel with a qualified researcher acceptable to the Sponsor.

2. INTELLECTUAL PROPERTY RIGHTS

- (a) Pre-existing intellectual property supplied for use in the Research Project by a party will remain with that party. Sponsor grants UWA a royalty free, non-exclusive licence to use its pre-existing intellectual property solely for the purpose of performing the Research Project.
- (b) Unless otherwise specified in the Schedule:
 - i. Intellectual property generated by UWA in carrying out the Research Project will vest in UWA;
 - ii. UWA will provide the Sponsor with a royalty-free, non-exclusive, perpetual license to the intellectual property referred to in (i) above for its non-commercial use.
- (c) Each party warrants that its pre-existing intellectual property does not breach any third party rights in relation to the intellectual property.
- (d) Any student involved will own the copyright in their thesis. UWA will ensure that the student grants to the Sponsor a perpetual, royalty-free, worldwide licence to use and reproduce such copyright material as is necessary for the Sponsor's non-commercial use.

3. SUPPLY AND PAYMENT

- (a) The Sponsor will pay UWA the amounts, and in the manner set out in the Payment Summary.
- (b) Prices quoted are exclusive of GST and any taxes which will be charged at the rates ruling at the time of supply if applicable.
- (c) Payments shall be made upon presentation of tax invoices by UWA to Sponsor.
- (d) The Sponsor shall pay sums due to UWA by crediting its bank account (number and bank to be indicated in the invoice).
- (e) UWA may in its sole discretion, reschedule deliverable dates if critical data required from the Sponsor is delayed; however payments are still payable in accordance with the Payment Summary.
- (f) If any payment is overdue, UWA may suspend the Research Project, without prejudice to its other legal rights.
- (g) UWA will own all assets purchased with the funds.

- (h) Any samples provided by the Sponsor that are unused at the end of this project will be returned to the Sponsor within thirty (30) days of the Sponsor's request to do so.

4. DUTIES AND RESPONSIBILITIES

- (a) The Sponsor must on or before the Commencement Date or failing that, as soon as reasonably possible:
 - i. provide all information, documents and other particulars relating to the Sponsor's requirements for the Research Project;
 - ii. supply further information requested by UWA and relating to the Research Project.
- (b) The parties must co-operate with each other to enable the proper performance of the Research Project.
- (c) The Sponsor acknowledges that the Research Project's success is dependent upon the timing, quality and quantity of the information provided to UWA.
- (d) The Sponsor must pay the cost of all taxes, levies and duties of any nature whatsoever required in respect of this Agreement.

5. WARRANTIES AND REPRESENTATIONS

- (a) Use of the results shall be solely at the Sponsor's own discretion and risk and UWA shall not be liable for any damage resulting from any inaccuracy, incorrectness, unsoundness and/or unreliability in its use.
- (b) The results are provided without any representation or warranty of any kind, either express or implied, including but not limited to being of satisfactory quality or fitness for a particular purpose.

6. REPORTS

- (a) UWA will provide the Sponsor with reports or deliverables as described in Item A of the Schedule.

7. PUBLICATION AND CONFIDENTIALITY

Unless otherwise specified in the Schedule:

- (a) UWA hereby undertakes to consider all information (whether oral or written) provided by Sponsor as confidential, provided that such information is specified at the time to be confidential.
- (b) UWA (including its staff and students) may freely publish technical articles, make oral presentations, and publish theses concerning the Research Project, experimentation and data obtained in performing the Research Project.
- (c) UWA will not include the Sponsor's confidential information, or use the Sponsor's name in any publication referred to in 7(b) above without the Sponsor's consent.
- (d) The Sponsor acknowledges that UWA is legally obliged to ensure that any student involved in the project is able to complete the requirements of their candidature, and that this obligation extends to submitting the student's thesis for examination and depositing in the library a copy of the student's completed thesis or work submitted for a higher degree. The thesis may, upon request by the Sponsor, be placed on restricted access for a period of up to twelve (12) months.

8. PRIVACY

- (a) Each party acknowledges that it will comply with the Australian Privacy Principles with respect to any personal and/or health information collected or used during the project.
- (b) Each party acknowledges that, to the extent applicable, it will comply with the General Data Protection Regulations (GDPR) 2016/679.

9. INABILITY TO PERFORM AND LIABILITY

- (a) UWA will not be responsible for the consequences of failure to perform its obligations under this Agreement if this failure results from events beyond its reasonable control.
- (b) The liability of UWA to the Sponsor in respect of its negligent acts or omissions in performing the Research Project shall be limited to the cost of re-performing the Research Project or the sum of the funding, whichever is the lesser.
- (c) UWA's liability is as set out in this condition and UWA shall have no liability for any other loss or damage including (without limitation) loss of revenue, loss of profits, loss of use, and loss of contracts.
- (d) No statements or representations made or information supplied by UWA shall form part of this Agreement unless specifically incorporated.
- (e) UWA makes no representations or warranties regarding the research outcomes including merchantability or fitness for a particular purpose or that use of the research outcomes will not infringe any intellectual property rights or other rights of any person.

10. INSURANCE

- (a) Each party will maintain adequate insurances to cover its obligations under this Agreement.
- (b) Each party will be obliged to furnish to the other party a certificate of currency and renewals of such insurances if requested to do so.

11. OCCUPATIONAL HEALTH AND SAFETY

- (a) To the extent that the Sponsor's employees, agents, contractors or students (Personnel) use UWA's premises or facilities, the Sponsor must ensure that each such Personnel:
 - i. fully cooperates with UWA on all matters relating to occupational health and safety;
 - ii. complies with:
 - a. all applicable occupational or workplace health and safety laws and any regulations, guidelines or codes of practice made under or in connection with such laws (OHS Laws); and
 - b. all rules, directions and procedures relating to health and safety of which the Sponsor or Personnel is advised, except to the extent that they are inconsistent with OHS Laws; and
 - iii. promptly notifies UWA of any accident or injury that occurs when using UWA's premises or facilities.

12. TERMINATION AND NOTICE

- (a) If UWA is prevented or cannot perform the Research Project by reason of an event beyond its reasonable control for a period exceeding one month, either party may terminate this Agreement, by giving fifteen (15) days' notice to the other.
- (b) A party may terminate this Agreement immediately on written notice to the other, if the other party materially breaches this Agreement, goes insolvent or conducts itself in a manner which, in the party's opinion (acting reasonably) has or is likely to have a material adverse effect on the terminating party's name, reputation or business.
- (c) Any notice or other communication required to be given under this Agreement will be in writing to the facsimile, email or physical addresses set out on the front page of this Agreement.

13. GENERAL

- (a) This Agreement shall be governed by the laws of Western Australia and the parties agree to submit to the non-exclusive jurisdiction of the courts of that jurisdiction.
- (b) This Agreement, together with the Schedules, constitutes the entire agreement between the parties.
- (c) Any invalid part of this Agreement will not affect the validity of the remaining parts of the Agreement.
- (d) This Agreement may be varied, amended or extended only by the written agreement of the parties.
- (e) Only waivers in writing and signed by the party against whom the waiver is claimed will be valid.
- (f) Neither party will, without the prior written consent of the other party, transfer or assign any obligations under this Agreement.
- (g) A Party may only subcontract any part of its performance of the Project with the prior written consent of the other Party, which consent shall not be unreasonably withheld.
- (h) This Agreement may be signed in any number of counterparts which when taken together constitute one document.
- (i) Nothing in this Agreement will establish, be deemed, construed or interpreted to make the parties agents, partners, joint venturers or representatives of the other.



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

Department of Civil, Environmental and Mining Engineering

Mount Barker Regional Saleyards Wastewater Treatment System

Shire of Plantagenet



Options of improvement of the wastewater treatment system at Mount Barker Regional Saleyards

1. Background

The Shire of Plantagenet operates a wastewater treatment plant associated with the operations of the MBRS. There are two parallel facultative waste stabilisation ponds (WSPs) followed by one maturation pond. The WSPs receive a moderate amount of solids from wash down of the saleyard pens and an onsite truck wash. Efforts to remove a large amount of solids before entering the ponds has been largely unsuccessful, and the performance of the ponds is deteriorating as sludge continues to accumulate in ponds. The Shire has been presented with several options for improving treatment, but would like to explore this further before committing to expensive capital works, and would also like to explore more reuse options for the treated water.

2. Deliverables

This project will deliver the following:

Task/Outcome/Deliverable	Description
Full site investigation	<p>Site investigation used to determine the current state of the system.</p> <p>This will include the use of a remote control boat developed at UWA to determine sludge infill in the WSPs.</p>
Explore waste stabilisation pond reconfiguration options	<p>Based upon the data collected by the Shire and the investigations conducted by UWA, possible reconfiguration options will be explored.</p> <p>This will include the use of computational fluid mechanics (CFD) modelling of ponds.</p>
Explore alternative pre- and post- treatment options	Options for pre- and/or post- treatment solutions will be explored to determine if they could improve treatment performance
Explore treatment options to facilitate the reuse of treated water	A desirable outcome would be to be use treated water for wash down of the saleyards. Options for treatment to facilitate this will be explored.
Final report	All findings will be summarised in a final report for the Shire.

3. Project/Research Team

The planning and execution of project will be based at UWA. The project will be led by Prof Anas Ghadouani and Dr Liah Coggins. The project will be mainly conducted by final year engineering students at The University of Western Australia as part of their engineering degree.

4. Budget

This budget is calculated for a 12-month agreement. Please note that this is an indicative budget only. Any additional water testing, or trips to site required will attract additional costs.

Item/Description	Cash (AUD)	UWA In-kind (AUD)
Prof Anas Ghadouani (25 hours)		3,174
Dr Liah Coggins (50 hours)		3,212
Car hire – 4 days SUV hire @ ~\$100/day, 2 trips	900	
Accommodation - \$200/night for 3 people, 2 trips	1,200	
Two in-person meetings – personal car, ATO rate ¹ , Crawley to Mount Barker return (~800 km return)	1,200	
UWA 35% Infrastructure Charge	1,155	
Total cost to Shire of Plantagenet (excl. GST)	4,455	
In-kind cost UWA		6,386
Total project cost (Cash + UWA in-kind)	10,841	

5. Payment schedule

50% upon signing of agreement: \$2,227.50 ex. GST

50% upon completion of project: \$2,227.50 ex. GST

Company Name	The University of Western Australia
ABN	37 882 817 280
Company Address	35 Stirling Highway (M051), Crawley 6009, Western Australia
Contact Details (including for enquiries)	Professor Anas Ghadouani +61 8 6488 2687 / +61 400 011 739 anas.ghadouani@uwa.edu.au

¹ ATO rate for car expenses from 1 July 2020 is \$0.72/km