



ENVS3439

Geomorphic Analysis of Rivers and Wetlands for Conservation and Management

Session 3, Intensive attendance, North Ryde 2021

Archive (Pre-2022) - Department of Earth and Environmental Sciences

Contents

<u>General Information</u>	3
<u>Learning Outcomes</u>	4
<u>General Assessment Information</u>	4
<u>Assessment Tasks</u>	5
<u>Delivery and Resources</u>	7
<u>Unit Schedule</u>	9
<u>Policies and Procedures</u>	10
<u>General fieldtrip and fieldwork information</u>	12
<u>Staying COVIDSafe - during on-campus days and on the fieldtrips</u>	14
<u>Changes since First Published</u>	19

Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of [units with mandatory on-campus classes/teaching activities](#).



Visit the [MQ COVID-19 information page](#) for more detail.

General Information

Unit convenor and teaching staff

Unit convenor

Professor Kirstie Fryirs

kirstie.fryirs@mq.edu.au

Contact via iLearn email and discussion board, or direct email

Lecturer

Dr Tim Ralph

tim.ralph@mq.edu.au

Contact via iLearn email and discussion board, or direct email

Credit points

10

Prerequisites

130cp at 1000 level or above including ENVE266 or ENV5266 or ENV52266 or GEOS266 or ENV267 or ENV52467 or ENVE237 or ENV52237

Corequisites

Co-badged status

Unit description

This unit is offered as an intensive, block-mode unit in February every year. It is offered at both advanced undergraduate level and as a professional development course. Pre-course private study and assessment is followed by four days on-campus focussed on developing knowledge for the geomorphic analysis of rivers. Topics include interactions of river forms and processes, assessment of river behaviour and change, river evolution, impacts of human disturbance to rivers, and sediment budgets. Students then apply their skills and knowledge to geomorphic analysis of rivers in a real-world setting during a 4-day off-campus fieldtrip, as well as explore pressing challenges for their conservation and management. This is followed by 4 days on-campus focussed on principles and strategies for river and wetland conservation, management and rehabilitation within an Australian context. Graduates are employed in a range of local, state and federal agencies, catchment management authorities, consultancies, and industry. For further information about the professional development micro-credential option, please contact the unit convenor.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: apply your knowledge and skills to the geomorphic characterisation and interpretation of rivers

ULO2: evaluate geomorphic impacts of human disturbance and modification on rivers.

ULO3: identify and utilise appropriate field techniques for the measurement, analysis and interpretation of river morphology, behaviour and evolution.

ULO4: develop an understanding of the pressing challenges faced in river and wetland conservation and management in Australia.

ULO5: apply geomorphic river science to the solution of river conservation, management and rehabilitation issues.

ULO6: communicate scientific information and concepts through oral, visual and written formats

General Assessment Information

Assignment grades and feedback

Assignment grades will be based on the Macquarie University scale High Distinction (HD), Distinction (D), Credit (Cr), Pass (P) and Fail (Fail). The markers may choose to further refine these grades by use of a “+” or “-” to indicate work towards the top or the bottom of each grade’s band. These grades will be available in Gradebook on iLearn.

For written assignments, feedback will come in the form of detailed rubrics for each assignment in TurnItIn. The rubrics will be provided before the assignment is due on iLearn.

For quizzes, questionnaires and in-class activities and assessments, feedback will come in the form of verbal feedback, in-class, from the unit convenor and lecturers.

Late penalties on assignments

Please note that a 10% per day penalty applies for all assignments, including weekend days.

Assignment deadlines and penalties will be imposed. Allowing some students to hand assignments in late is unfair to those who meet the deadlines. Please take careful note of the days and times at which work is due. Let us know of problems in advance or as soon as possible, not after the event: we are likely to be much more sympathetic and flexible in our requirements if you follow this advice. Only a medical certificate or a letter with appropriate supporting documents outlining other serious, extenuating circumstances can be used to submit an assignment after the due date. Work commitments are not accepted under any circumstances. You are required to manage your time effectively. If you have commitments that take you away from study you must plan for this in advance as part of an effective individual study plan. You should use the formal disruption process through ASK to receive extensions or

apply for special considerations etc.

Turn around time on written assignment marking and feedback

Staff will endeavour to return your assignments within two teaching weeks of the submission date. However, please keep in mind that with large assignments and reports it can take significant time to provide feedback. For example, the written reports for this unit can take up to one hour each to mark.

Assessment Tasks

Name	Weighting	Hurdle	Due
Assignment 1	20%	No	Monday 31st January 2022, in-class
Assignment 2	30%	No	Saturday 5th February 2022 - on fieldtrip in TurnItIn by 9pm
Assignment 3	15%	No	Thursday 10th February 2022, in-class
Assignment 4	35%	No	Friday 11th February 2022 - in TurnItIn by 1pm

Assignment 1

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 5 hours

Due: **Monday 31st January 2022, in-class**

Weighting: **20%**

Series of in-class pop quizzes and other in-class activities to test your knowledge of the pre-unit webinars and readings

On successful completion you will be able to:

- apply your knowledge and skills to the geomorphic characterisation and interpretation of rivers
- evaluate geomorphic impacts of human disturbance and modification on rivers.
- communicate scientific information and concepts through oral, visual and written formats

Assignment 2

Assessment Type ¹: Report

Indicative Time on Task ²: 10 hours

Due: **Saturday 5th February 2022 - on fieldtrip in TurnItIn by 9pm**

Weighting: **30%**

River character, behaviour and evolution

On successful completion you will be able to:

- apply your knowledge and skills to the geomorphic characterisation and interpretation of rivers
- evaluate geomorphic impacts of human disturbance and modification on rivers.
- identify and utilise appropriate field techniques for the measurement, analysis and interpretation of river morphology, behaviour and evolution.
- communicate scientific information and concepts through oral, visual and written formats

Assignment 3

Assessment Type ¹: Debate

Indicative Time on Task ²: 3 hours

Due: **Thursday 10th February 2022, in-class**

Weighting: **15%**

Design and participate in a role play

On successful completion you will be able to:

- identify and utilise appropriate field techniques for the measurement, analysis and interpretation of river morphology, behaviour and evolution.
- develop an understanding of the pressing challenges faced in river and wetland conservation and management in Australia.
- communicate scientific information and concepts through oral, visual and written formats

Assignment 4

Assessment Type ¹: Report

Indicative Time on Task ²: 14 hours

Due: **Friday 11th February 2022 - in TurnItIn by 1pm**

Weighting: **35%**

River management design

On successful completion you will be able to:

- apply your knowledge and skills to the geomorphic characterisation and interpretation of rivers
- evaluate geomorphic impacts of human disturbance and modification on rivers.
- identify and utilise appropriate field techniques for the measurement, analysis and interpretation of river morphology, behaviour and evolution.
- develop an understanding of the pressing challenges faced in river and wetland conservation and management in Australia.
- apply geomorphic river science to the solution of river conservation, management and rehabilitation issues.
- communicate scientific information and concepts through oral, visual and written formats

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

INTENSIVE, BLOCK MODE STRUCTURE

This is a block mode intensive unit, meaning that it will start with a short Zoom introduction in November and then run for 12 days inclusive in late-January to early-February. Attendance is required for all 12 days of this unit and the online tutorial. Be prepared to work hard and eat, breath and sleep rivers for 12 days straight! This unit is designed to assist learning by encouraging your active participation in all activities.

TEXTBOOK AND COMPUTER RESOURCES

There is a textbook for this unit that you should purchase well in advance as you will need it for pre-course preparation and during all 12 days of the unit (see below for further details).

You will need your own personal laptop for each day of this course and wi-fi on the fieldtrip.

ONLINE ONTRODUCTION TUTORIAL AND QUESTIONNAIRE WITH INFORMAL FEEDBACK

There is a 3 hour Zoom introduction tutorial at the start of Session 3. A Zoom link will be located

in iLearn. In this tutorial students will be introduced to the unit, and the logistics and arrangements for groupwork and fieldtrip that need to be made before Christmas. Students will also have their COVID-19 vaccination certificate sighted by Student Services. Students will also undertake a questionnaire in iLearn. This is NOT an assessment task, rather it is a reflective exercise where students will be asked about their current knowledge or fluvial geomorphology and river management. Summary feedback for the class will be provided during the tutorial, and students will have access to a copy of their own individual answers for future reference. This questionnaire is designed so students can consider how much pre-course work they need to do and to reflect on their current knowledge base. It will also help the unit instructors tailor their teaching during the intensive mode classes and fieldtrip to the pedagogic needs of the class.

PRE-COURSE WORK AND ASSIGNMENT 1

Before the intensive course starts, students are required to complete pre-course work ready for Assignment 1. The pre-course preparation involves listening to 6 x short webinars and undertaking reading from the textbook. These webinars provide the content necessary to get students 'up to speed' and engaged in the key areas of geomorphic analysis of rivers so they are prepared to tackle the course. If students are new to fluvial geomorphology they should supplement them by reading, especially from the textbook. If students are not new to fluvial geomorphology these will be a refresher, but should still be supplemented by reading, especially from the textbook.

Assignment 1 will comprise a series of pop-quizzes and other in-class activities and be conducted on the morning of Day 1 of the course. It will test knowledge from the pre-course work.

DAYS 1-4 - ON-CAMPUS - GEOMORPHIC ANALYSIS OF RIVERS

Days 1-4 of the unit are based on-campus at Macquarie University. This part of the course focusses on the geomorphic analysis of rivers. A mix of interactive activities comprising short information sessions, practical exercises and other activities are undertaken. This is not your standard lecture and practical structure! All the materials are scaffolded and students will be working on building Assignment 2 during these 4 days.

Further information about these Days will be available on the iLearn site and in the COVID-19 section below.

DAYS 5-8 - FIELDTRIP

There is a compulsory fieldtrip for all students, to the Hunter Valley. We will be undertaking fieldwork activities including site assessments and mapping, surveying, sediment analysis, consideration of river management problems and river condition etc. Students will be using this information to complete Assignment 2 which is due in the evening of Day 2 of the fieldtrip. On the fieldtrip we will also start preparing and gathering field data for Assignments 3 and 4 which are framed around geomorphologically-informed river management.

Further information about the fieldtrip will be available on the iLearn site and at the COVID-19 section below.

DAYS 9-12 - ON-CAMPUS - RIVER CONSERVATION AND MANAGEMENT

Days 9-12 of the unit are based on-campus at Macquarie University. This part of the course focusses on the river management practice in an Australian context. The skills students learn in this part of the unit are best practice in the workplace. A mix of interactive activities comprising short information sessions, practical exercises, a role play and other activities are undertaken. This is not your standard lecture and practical structure! All the materials are scaffolded and students will be working on building Assignment 4 during these 4 days. Assignment 3 is a role play that will be peer-assessed.

Further information about these Days will be available on the iLearn site and at the COVID-19 section below.

TEXTBOOK

The textbook for this unit is:

Fryirs, K.A. and Brierley, G.J. 2013. ***Geomorphic Analysis of River Systems: An approach to Reading the Landscape***. John Wiley and Sons, Chichester, 345pp.

You can purchase a paperback copy of the book for ~\$70 or an e-book version for ~\$83 at Booktopia at:

<https://www.booktopia.com.au/geomorphic-analysis-of-river-systems-kirstie-a-fryirs/book/9781405192743.html>

OTHER READING

Students will never be discouraged from reading widely and including the most up-to-date science in you work. You are encouraged to use your database searching skills as well to source relevant information on geomorphology and river management.

ASSESSMENTS

There are four assessments overall with percentage weightings as described above.

Unit Schedule

DAY	Activity
Start of Session 3 - 3hrs	Online Zoom tutorial – Introduction to ENV53439, online questionnaire with live informal feedback, outline of pre-course work and logistics, COVID-19 vaccination certificate check
Pre-course	Self-directed webinars and readings in preparation for Assignment 1.
Day 1 - morning	Welcome, interactive activities and Assignment 1 quizzes, introduction to analyses of river character. ASSIGNMENT 1 conducted in-class
Day 1 - afternoon	Activity on river character, interweaved lectures and activities on river behaviour and change
Day 2 - morning	Lecture and practical on mapping river character (geomorphic mapping) using traditional and GIS methods
Day 2 - afternoon	Lecture on key concepts needed before we start modelling stream power, and practical on computer modelling using Geomorphic Assessor, starting Assignment 2.

Day 3 - morning	Lecture on undertaking river evolution analysis and practical on doing river evolution analysis, modelling further reaches and continuing Assignment 2.
Day 3 - afternoon	Free study time to continue working on Assignment 2.
Day 4 - morning	Lecture and practical on using sedimentology to interpret form-process associations of geomorphic units, river evolution.
Day 4 - afternoon	Free study time to continue working on Assignment 2 and prepare for fieldtrip.
Day 5 -	Fieldtrip
Day 6 -	Fieldtrip. ASSIGNMENT 2 due in evening
Day 7 -	Fieldtrip
Day 8 -	Fieldtrip
Day 9 - morning	Interweaved lectures and activities on river management practice in Australia and river rehabilitation techniques.
Day 9 - afternoon	Interweaved lectures and activities on the river management cycle.
Day 10 - morning	Complete the river management cycle.
Day 10 - afternoon	Interweaved lectures and activities on wetland geomorphology and management.
Day 11 - morning	Preparing and undertaking your role play! ASSIGNMENT 3 peer marked in-class
Day 11 - afternoon	Free study time to work on Assignment 4.
Day 12 - morning	Free study time to finish working on Assignment 4 and submit. ASSIGNMENT 4 due
Day 12 - afternoon	Panel discussion on river management in Australia with industry partners.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)

- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/support/study/policies\)](https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

General fieldtrip and fieldwork information

COVIDSafe Fieldwork – see next section

General fieldtrip and fieldwork information

A fieldtrip booklet is in preparation and will be distributed to you at the start of the unit.

Weather: We never cancel fieldtrips for bad weather! You must be prepared to work in the rain with the appropriate clothing. Likewise you should always protect yourself from the sun and dehydration.

Transport: You will be driving your own vehicles and carpooling.

Cost: You will pay for your own accommodation, food and other expenses (e.g. petrol).

Food: You will need to bring all food for the fieldtrip and cater for yourself.

Accommodation: You will book your own accommodation. A range of accommodation options from campsites to cabins to motel rooms are available.

Departure: We aim to meet you at the first field site in the Hunter Valley on Day 1. You will make your way and sign on to the fieldtrip.

Returning home: We will be meeting everyone at a pre-designated location to officially sign-off from the fieldtrip. After you have signed off you will be free to travel home.

Signing on and signing off from the fieldtrip and each day: We will have a QR code system in place. Each student will be required to sign on and sign off at the start of the fieldtrip, at the end of the fieldtrip and at the start and end of each fieldtrip day.

Behaviour and conduct: When you sign the Field Friendly trip plan, you are also required to acknowledge that you will abide by Macquarie University policies associated with conducting fieldwork, travel, and behaviour as Macquarie University citizens.

Personal field equipment

Each student should bring the following aids/comforts on each field trip:

- sturdy shoes - no sandals, thongs, or open shoes
- wet shoes – for walking over gravel in river channels
- swimmers and towel
- water bottle (full, of course!)
- wet weather gear - we go whatever the weather!!!
- hat and sunscreen
- field note book and pencils (see note below)
- calculator
- camera and download cable
- laptop, charger and wi-fi
- all your food
- a mini-first aid kit
- a day back pack to store it all in

FIELD NOTE BOOK: *Each student MUST purchase a small hardcover notebook for use in the field. It should be bound down the spine on the left side. Use only ball-point pen, felt tip pen will run in wet weather and pencil will smudge or rip wet paper. The best, and most expensive, option is a waterproof 'rite-in-the-rain' notebook. Write your personal details on the first page, and a table of contents inside the front cover. On each field day, write the date and project title, the site details, and all observations and measurements, including details of methodology.*

It is important that you get into the habit of writing thorough, accurate and legible notes at the outset - after all, if you are an expert witness for some environmental issue, your notebook can be tendered as evidence in legal proceedings, either in the Land and Environment court or at a Commission of Inquiry. Get into the practice of structuring your notebook at the start of each exercise and continually taking notes. Do not depend on others, unless prescribed roles are allocated and this is one of the designated tasks.

Safety in the field

Any student who has a disability or health condition that may limit their participation in field work or that could result in a medical emergency in the field should notify the unit convenor before fieldwork commences. You will be filling in Field Friendly participant forms and sign off on your participation prior to the fieldtrip.

Each student must ensure his/her own safety at all times during field excursions.

- Do not undertake fieldwork alone. You must work with at least one other person.
- You must be adequately equipped to undertake fieldwork, including wet weather clothing, warm clothing, hat and sun protection, protective footwear (closed toe boots or shoes).
- You should bring a first aid kit if you have one.

- Do not undertake any activity you feel to be unsafe. Discuss with the fieldtrip leader any concerns you have about particular tasks.
- Be watchful of the safety of your fellow students, if they become separated from the group or are at some other risk. Tell the fieldtrip leader as soon as you notice a potentially dangerous situation

Staying COVIDSafe - during on-campus days and on the fieldtrip

ON-CAMPUS CLASSES.

- All work groups will be arranged before the course starts. There will be no rotation between work groups during the entire 12 days of the course.
- Masks will be worn during class time when indoors.
- All tables, chairs and other surfaces, as well as equipment (e.g. computers, gear) will be wiped before and after use.

FIELDTRIP - S3 2021 Fieldtrips for coursework units are restricted to travel with NSW.

This form constitutes our COVID-safe travel and response plan.

Dates of activity

- 4th - 7th February 2022

Travel times

- All sites are within a ~2hr drive from Sydney/MQ.
- Newcastle is 2hrs from Sydney.
- Maitland is 30mins from Newcastle.
- Singleton is 30 min drive to Maitland.
- Singleton is a 2hrs 10mins drive from MQ.
- Wollombi township is a 1hr 40mins drive from MQ.
- Wollombi is a 45mins drive from Singleton or Maitland.

Staff transport

- The 2 x MQ staff will use two University 4WD to carry field gear.

Student transport

- All students will be required to drive themselves and can carpool with one other person. To maintain physical distancing, this will mean one person driving and one person in the back seat. There will be no rotation of students between vehicles for the duration of the trip.

Accommodation

- We will stay at the same accommodation for the two nights in Singleton on the Hunter River.
- All staff and students will be required to book their own single-motel room, a single tent site or a single cabin. The students will need to ensure they book accommodation with a COVIDSafe Plan and be aware of cancellation terms and conditions. A flexible cancellation policy is recommended. The accommodation providers must have COVID-19 have cleaning and disinfecting, physical distancing, safety and security, and food and drink safety protocols in place.
- Some accommodation recommendations will be provided to the students.

Nature of activity

- Staff will be supervising students and student groups at each field site - as per normal practice.
- Activities will vary from physically distanced field site visits, small group field activities that will be physically distanced– surveying, sediment analysis, mapping. We will be located centrally at one site spread over a large river frontage (up to several hundred metres).

Sign in and sign out

- We will have a QR code system in place. We will be meeting everyone at a pre-designated location and time to officially sign-on and sign-off from the fieldtrip. In addition, each student will be required to sign on and sign off at the start and end of each fieldtrip day.

Vaccination status

- All staff and students are to be fully vaccinated, or have a medical exemption. Vaccination status will have been checked by FSE Student Services.

DETAILED COVIDSAFE PLAN

Pre-fieldtrip briefing -

- All students will receive a briefing and trip pack about the COVIDSafe travel plan before the fieldtrip.
- All students are required to complete sign up to the planned field trip in Field Friendly as per the normal process. Additional to agreeing to abide by all university policies and codes of conduct, students will also be required to agree to abide by the MQ COVIDSafe plan for this fieldtrip.

Overall group size -

- At the time of writing (Nov 2021) outdoor gatherings can occur for >30 people. If this remains in place we will be able to take the full class to each site. If this changes, however, the class will be split in two and the field visits and activities staggered in time. With two staff on the trip we will be able to supervise a group of 30 people each. We will not mix the groups during the trip.

Group sizes at each site -

- On site working groups will be limited to 6 members and 3 cars ONLY. There will be no rotation between groups or cars during the trip.

During the small group activity at each site -

- All field sites will be in open paddocks, river bank parks and Crown land meaning physical distancing of 1.5 m can be maintained.
- If social distancing is not possible (e.g. while surveying), masks will be worn.

Interactions with the general public –

- In the field, there will be no interactions with the general public. The only interactions will be at travel or meal-stops, but these will be minimised.

Stopping locations – (see below for hygiene and cleaning at stops).

- Breaks will be taken every 2 hours when driving as per normal practice.

Every day in the field –meal and toilet stops

- Public toilet facilities are available at Hunter Wetlands Centre, Singleton Showground, Lorn Park Oval in north Maitland, Wollombi township and Broke McNamara Park. A supply of cleaning products, sanitisers and wipes will be available for staff and students to use.
- All meals will be pre-packaged and brought from home. There will be little or no need for meal-stops at food outlets and no need for supermarket shopping.
- If staff or students visit a food outlet they will get takeaway and follow the COVIDSafe guidelines of the establishment (including use of masks).
- **There will be NO visiting restaurants or pubs and clubs during this trip.**

Evenings of all 3 nights –check-in/out to accommodation, meals

- Staff and students will use contactless check-in and check-out.
- All meals will be self-catered and food brought from home.
- Staff will check on students in the evening via Zoom.

TRAVEL AND HYGEINE ARRANGEMENTS

Pre-fieldtrip –

- All students will receive a briefing and trip pack about the COVIDSafe cleaning practices before the fieldtrip.

Cleaning packages –

- Cleaning packages will be distributed to each small group field group for their own use and for cleaning equipment.
- Cleaning packages will also be available for each MQ vehicle.
- A supply of masks will be carried by the staff and distributed if needed.
- Students will bring their own cleaning packages for cleaning their own vehicles, personal effects etc.

MQ vehicle cleaning and refuelling –

- The MQ vehicle will be regularly wiped down with disinfectant between driving blocks and at the start, during and end of each day. Car interior will be sprayed and wiped with disinfectant each time. Exterior surfaces where people are likely to touch will also be disinfected.
- During refuelling, masks and gloves will be used by staff.

Student cars cleaning and refuelling –

- It will be the responsibility of each student to wipe down with disinfectant their own vehicles at the start, during and end of each day. Car interior will be sprayed and wiped with disinfectant each time. Exterior surfaces where people are likely to touch will also be disinfected.
- During refuelling, we will encourage students to wear masks.

Equipment use and cleaning -

- Equipment will be cleaned at MQ before the fieldtrip.
- Equipment bundles will be assigned to each small field work group at the start of the trip.
- Cleaning and use of equipment will be managed by those small groups under the supervision of staff.
- There will be no rotation of field equipment between groups.
- Each small group will be responsible for the wiping down with disinfectant their assigned gear at the start, during and end of each day, and at the end of the trip when returning it to the staff/MQ.

At each field site or at travel/meal stops -

- Regular use of hand sanitiser will occur at the start, during and end of each site visit, and before getting into vehicles.

At accommodation –

- Staff and students will be responsible for cleaning their own personal effects on top of following the COVIDSafe practices of the establishment.
- At accommodation, staff and students will be encouraged to clean high touch surfaces and practice regular hand hygiene.

COVID-19 EMERGENCY RESPONSE PLAN

Mobile phone coverage:

- Coverage is available throughout the trip. There is only one site at the upstream part of the Wollombi catchment where there is no phone coverage. Staff will be carrying satellite phones as per normal practice in case of emergency.

Pre-fieldtrip briefing -

- All students will receive a briefing and trip pack about the COVIDSafe emergency response plan before the fieldtrip.
- All students are required to complete and sign up to the planned field trip in Field Friendly as per the normal process. Additional to agreeing to abide by all university policies and codes of conduct, students will also be required to agree to abide by the MQ COVIDSafe plan for learning and teaching.

Daily updates and briefings -

- Staff will stay up to date with daily developments on the NSW COVID situation via the NSW Health website and any MQ announcements.
- A staff daily call back is required via Field Friendly (to campus security). Any updates can additionally be sought when call back is made.
- A start-of-day briefing will be provided to all staff and students, as part of normal fieldwork WH&S briefings.

In the event that any participant (staff or student) exhibits symptoms of COVID-19.

- All fieldwork will cease immediately.
- Affected staff and students (close contact group members) will drive in their own vehicles to the nearest COVID-19 testing clinic. There are three available drive-thru testing clinics

within the field area. All are within a short drive of field sites. If needed, the entire class will be tested. All these hospitals have the facilities that could support a team member with COVID symptoms.

Singleton Hospital (Dangar Rd, Singleton) - (02) 6571 9248

Cessnock Hospital (24 View Street) - (02) 4991 0436

Maitland Hospital (560 High St, Maitland NSW 2320) - (02) 4939 2000.

- To reduce the risk of transmission to other team members, the remainder of class to adopt wearing of masks, self-isolate in their accommodation, and be alert for symptoms until updated on next steps by staff. Throughout, the staff and students would maintain social distancing and vehicle hygiene protocols.
- All equipment and vehicles used by any potentially affected team members to be isolated.
- The Department Fieldwork Manager (Sean Murray) or Department Manager (Sarah Henry) will be contacted and the staff will await direction from the University about next stages (with the option to self-isolate in place until test results are received, then return to Sydney).

In the event that a cluster is identified in the field area, the area declared a hotspot or travel restrictions change.

- All fieldwork will cease immediately.
- The Department Fieldwork Manager (Sean Murray) or Department Manager (Sarah Henry) will be contacted and the staff will await direction from the University about next stages. If a return to Sydney is ordered, this will occur immediately. Travel time to Sydney from any of the field sites is around 2 hrs.

Changes since First Published

Date	Description
09/11/2021	Additional information provided on assignment late penalties, feedback and marking timeframes.