

Case Study

Queensland Museum Enforceable Undertaking Year 1 Outcomes

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An Enforceable Undertaking (EU) is a legally enforceable agreement that involves a duty holder promising to take agreed actions. Queensland Museum (QM) entered into an EU agreement with the Office of Industrial Relations (OIR) after two QM workers were diagnosed with Q Fever. QM agreed to complete a series of actions over a three (3) year period, which deliver benefits to QM workers, the Museum industry, and the Queensland community. The outcomes of the first year of the EU project have been explained and reviewed.

1. Background

The Queensland Museum is custodian of Queensland's natural and cultural heritage, caring for more than 15.2 million items and specimens in collections that tell the changing story of Queensland. For 160 years, QM's researchers and curators have preserved and shared stories of Queensland across earth and sea. QM delivers museum services across the state through four public museums, a collection and research centre and many outreach services.

A key part of QM's work involves gathering and preparing biological material for the museum. The museum environment presents serious and complex hazards and risks often unseen by visitors and the public. QM has two distinct portfolios: the first, where most people see and visit the museum, is called Museums and Engagement; and the second is the often unseen Collections, Research and Exhibitions.

Museum technicians prepare biological specimens for collection or taxidermy. Collection involves preserving specimens for academic research, while taxidermy is for public display. Some specimens, particularly birds and mammals, present significant zoonotic risk to the people who prepare biological specimens.

2. Challenging situation

In 2019, two QM workers were diagnosed with Q Fever, triggering a review of Work Health and Safety (WHS) at QM, with a focus on the zoonotic risks from preparing biological specimens. All activities that may present zoonotic risk were suspended until audits confirmed that the risk was adequately controlled. This action caused significant concern among the collection and research personnel regarding an interruption to QM's ongoing duty to prepare and collect biological specimens. The incidents also highlighted the need for key improvements in the way WHS was managed at QM.

In June 2023, OIR accepted QM's application for an Enforceable Undertaking to improve WHS at QM. This case study explores the outcomes of the Enforceable Undertaking and the benefits realised in the first 12 months of the Enforceable Undertaking to June 2024.

The Enforceable Undertaking included the following deliverables in the first 12 months:

1. Reopen and commission the Biological Specimen Preparation (BSP) laboratory:
 - a. Refurbish the BSP laboratory facilities.
 - b. Procure BSP laboratory equipment.
 - c. Redevelop the BSP Standard Operating Procedures (SOP).
 - d. Develop a BSP Laboratory Operations Manual.
 - e. Audit the Q Fever Risk and SOP and Laboratory Operations Manual.

2. WHS Leadership and Culture Survey to establish a baseline from which to assess improvements in the WHS management system.
3. Procure an integrated WHS management system digital solution:
 - a. Audit the WHS management system.
 - b. Update the existing WHS policy and procedures.
 - c. Procure a digital solution for forms and records.
4. Develop a Museums Biological Specimen Preparation (BSP) Toolkit to provide benefits to Industry.
5. Pursue a partnership with a university to develop an industry placement program for tertiary student/s studying WHS Science.

3. Solution

Step 1 – Laboratory Refurbishment

Refurbish the space used to prepare biological specimens to meet laboratory standards. QM sought support and funding from government to refurbish the space used to prepare biological specimens. The work involved a \$500k investment to refurbish the laboratory, including changing the layout, upgrading wall and floor surfaces, and upgrading air-handling systems.

Step 2 – WHS Recruitment and Procurement

Recruit and appoint a team of three WHS professionals and a specialist in project management to manage the business-as-usual activities within the Museum, and initiate and manage a 3-year project to oversee the implementation of the Enforceable Undertaking.

- Appoint members of the Project Board to ensure project governance.
- Engage with managers from across QM to form the Project Team to review project activities.
- Engage with specialist QM employees to form Project Work Groups to deliver key components.
- Engage specialist WHS consultants to audit the WHS management systems and laboratory.
- Engage an external third-party provider to develop and install the WHS digital solution.
- Procure and engage suppliers to fabricate purpose-built BSP laboratory equipment and provide laboratory services.

Step 3 – WHS Monitoring and Reporting

- Establish a reporting framework to provide reports that align with WHS due diligence requirements. The reports include advice regarding regulator activities and new legislation.
- Establish online incident and hazard reporting, safety meeting and inspection records to gather data regarding hazards and risks.
- Develop a WHS Dashboard providing an analysis of leading and lagging trends, and the progress of the Enforceable Undertaking project and scheduled upgrades to WHS policies and procedures.

Step 4 – Project Management

Initiate a project with a PRINCE2 Agile methodology to implement the requirements of the Enforceable Undertaking. The WHS Strategy is centred on the delivery of the Enforceable Undertaking project. Implement governance activities with the Project Board; develop a Project Initiation Document, product descriptions, risk and issues registers; hold regular project meetings and implement a stakeholder engagement and communication plan.

4. Outcomes

Outcome 1.a. Laboratory refurbishment

The refurbishment included a redesign of the area used for taxidermy, adjusting the layout and applying surface protection on the walls and floors to ensure the area can be cleaned and sanitised. Air-handling systems were upgraded to ensure a negative pressure is maintained, minimising the zoonotic risks.



The refurbished laboratory (Photos by Ronda Eastall)

Outcome 1.b. Procure laboratory equipment

Procurement of equipment to fit out the refurbished BSP laboratory started in April 2023 with the large soak tank and necropsy table. This paused while the project was initiated and recommenced from November 2023 with a budget of \$146k. The laboratory benches and drying racks were fabricated to fit the laboratory space. All items, including fridge, freezer, microscope, chemical cabinets, storage cabinets and trolleys, are designed for commercial use, most in stainless steel to facilitate cleaning and sanitising.

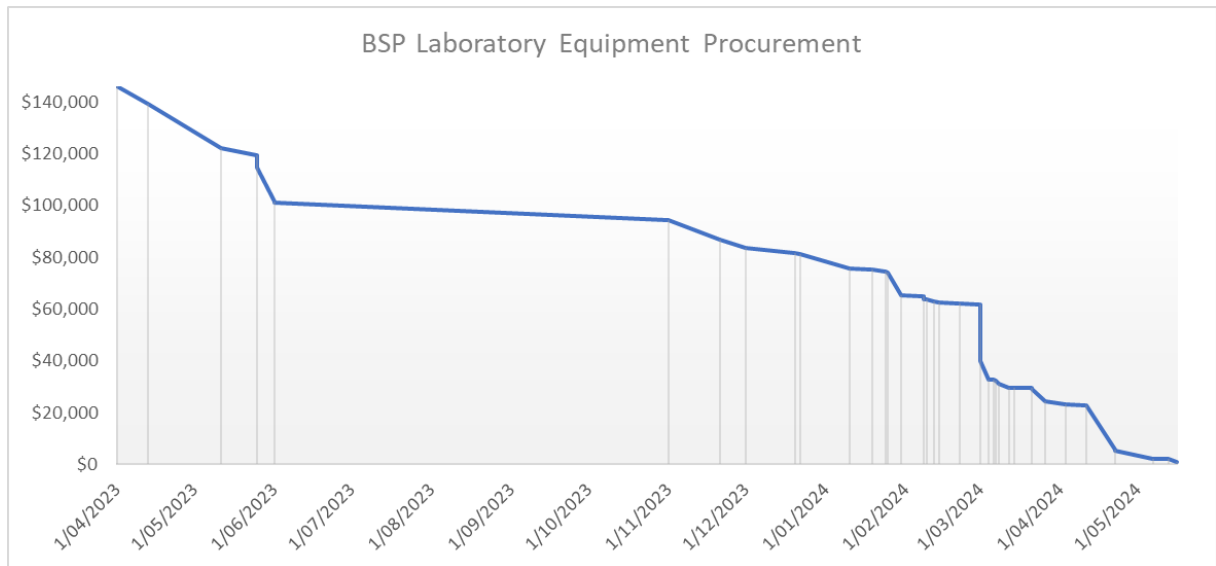


Image 1: Burndown graph of BSP laboratory procurement

Outcome 1.c. Redevelop Standard Operating Procedures

A template was developed to provide a register of Standard Operating Procedures (SOP) and a record of training. The template translates the detail in the register into a printable SOP, with a second page for the supervisor to record SOP training. The SOP and training template is an Excel spreadsheet that records:

- the SOP identifier from the site, and the work area or laboratory.
- the activity name and description.
- identified hazards and risk assessment along with corresponding control measures.
- the forbidden actions, and emergency response steps.

- the steps to take before, during and after the activity.
- the training required for each role, and the frequency of training required based on the risk.
- the people trained and date of training, providing the capacity to review a person's SOP training.

Outcome 1.d. Develop a Laboratory Operations Manual

In September 2023, the BSP Work Group was formed from representatives across QM research and collection laboratories to develop the BSP Laboratory Operations Manual. The scope of the document was expanded to standardise the safety across all QM laboratories. The new QM Laboratory Operations Manual was published in May 2024 following auditor feedback and adjustment. Three BSP safety protocols were expanded as standard across all QM laboratories:

- single-supplier contract for QM site clinical and sharps waste collection services.
- single-supplier contract for QM laboratory coat and linen supply and laundry services.
- supplier contract for prescription safety glasses.

Outcome 1.e. BSP Laboratory Auditing

In March 2024, an accredited external auditor conducted the Q Fever Risk Audit, assessing laboratory facilities, equipment and processes. Also in March 2024, an accredited external auditor conducted the audit of the BSP laboratories SOP and laboratory manual, providing recommendations that were implemented in the following documents:

- QM Zoonoses Management Procedure.
- QM BSP Standard Operating Procedures and Training Tool.
- QM Laboratory Operations Manual.
- BSP Toolkit Example BSP Standard Operating Procedures and Training Tool.
- BSP Toolkit Example Laboratory Operations Manual.

Outcome 2. WHS Leadership and Culture Survey

In September 2023, QM registered with the [WorkSafe Safety Capability Survey](#), promoting the survey in October 2023 and conducting the survey in November 2023. The response rate for the survey was 36%.

The survey is designed by OIR to determine the maturity of the WHS and safety culture, subsequent surveys will monitor the benefits of the improved WHS management system and safety culture at QM.

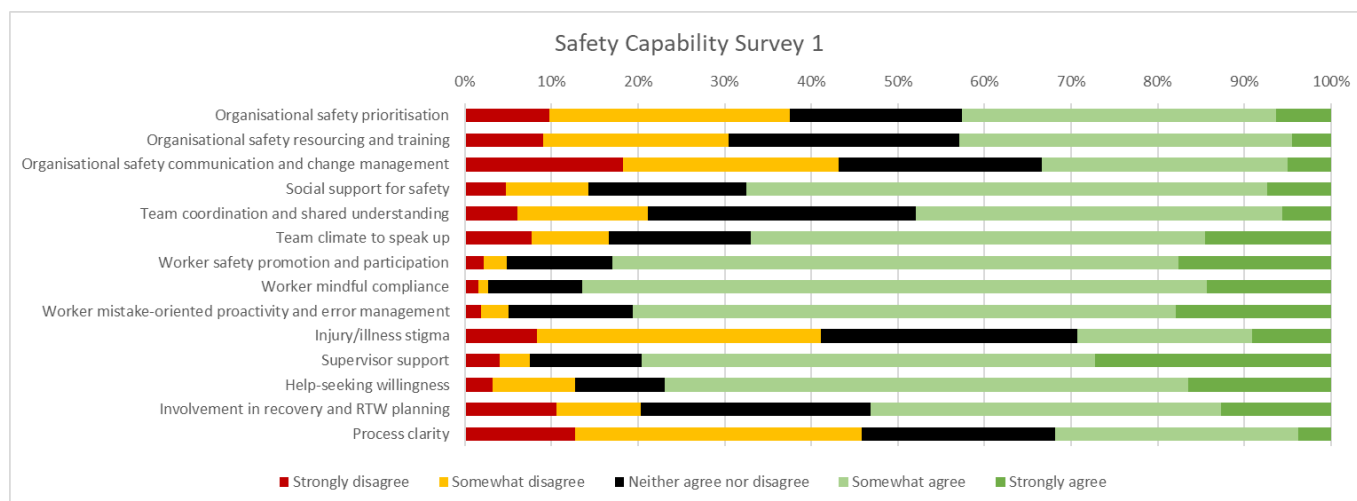


Image 2: Safety Capability Survey 1 Results

Outcome 3.a. Audit of the WHS Management System

In November 2023, an accredited external auditor conducted a desktop audit of the QM WHS management systems as a gap analysis between the current WHS management systems and ISO 45001 Occupational Health

and Safety Management Systems. The audit recommendations were used to develop a schedule of WHS improvement, which was monitored within the WHS Dashboard.

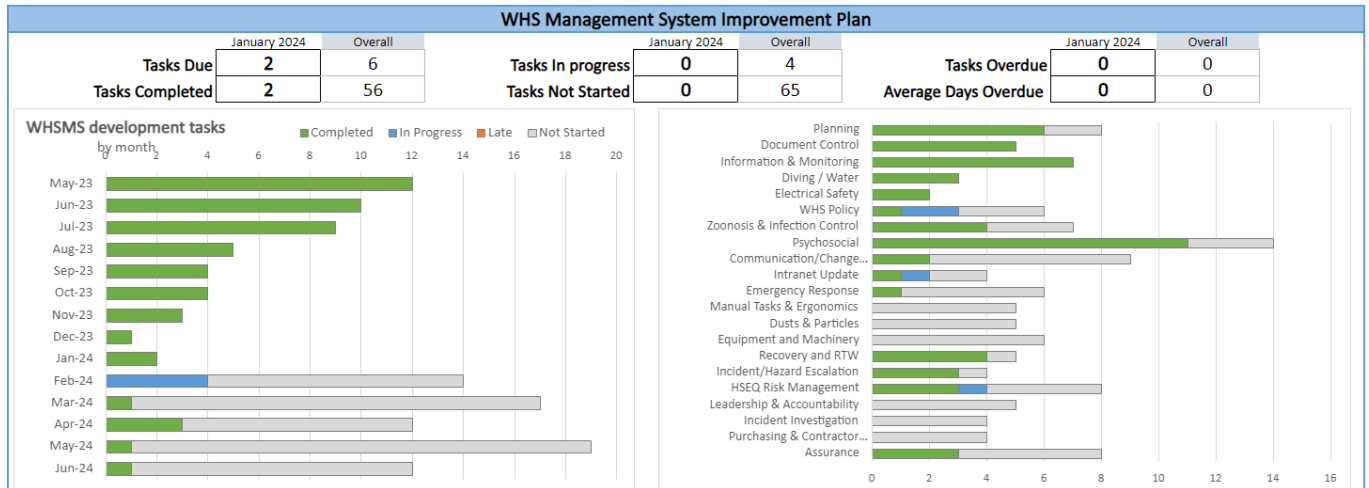


Image 3: WHS management system improvement plan from WHS Dashboard, January 2024

Outcome 3.b. Development of WHS policies and procedures

The WHS Policy and the Risk Management Policy were updated. The WHS Policy was adjusted to move beyond a focus on compliance to align with the ‘Plan, Do, Check, Act’ method contained within ISO 45001 Occupational Health and Safety Management Systems.

Additionally, the Recovery and Return to Work procedure and the Zoonoses Management Procedure were redeveloped. The BSP Toolkit contains an example Zoonoses Management Procedure. The Zoonoses Management Procedure established the following requirements:

- A vaccination register identifying roles that require vaccination against Q Fever, including personnel involved in compliance monitoring and clinical waste or laundry pick-up (see Q Fever Immunisation for Staff image 4 below).
- Security pass access to the BSP laboratory was restricted to only QM employees with a record of immunity either through confirmed test results (serology or skin) or immunisation.
- Development of an induction and approval process for all BSP visitors and contractors to ensure that there is a business need to enter the laboratory and that controls and supervision are in place.

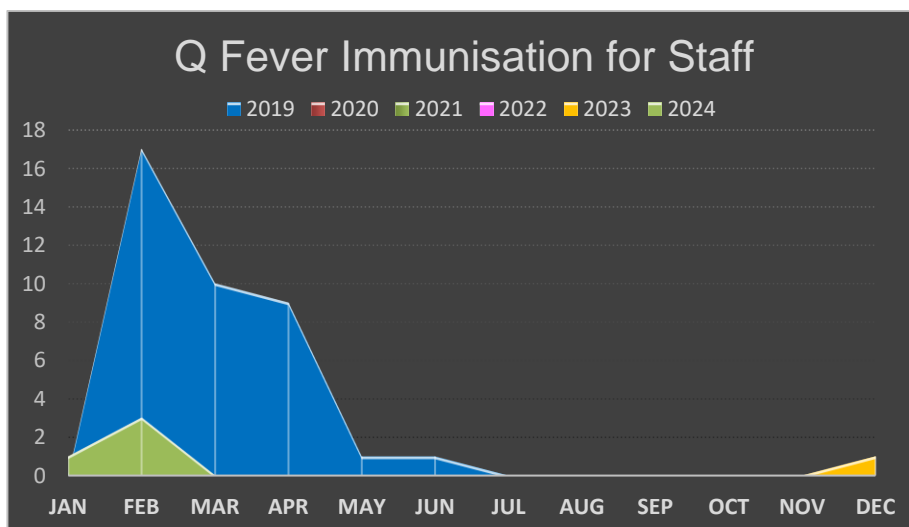


Image 4: Q Fever Immunisation 2019–2024

Outcome 3.c. WHS management system digital solution

In December 2023, QM selected the product integrum supplied by Mitrattech as the provider for the WHS digital solution. Customisation started in January 2024, and testing of the customised program concluded in June 2024. Reporting processes are being finalised ahead of the WHS digital solution launch in July 2024.

To support the roll out of the Whole of Qld Government WHS Solution (integrum), QM has accepted an invitation to join the WHS Oversight and Change Committee (OCC). This body will play a vital role in advising on WHS system improvements, sharing lessons learned across the agencies and promoting best practices within our agencies.

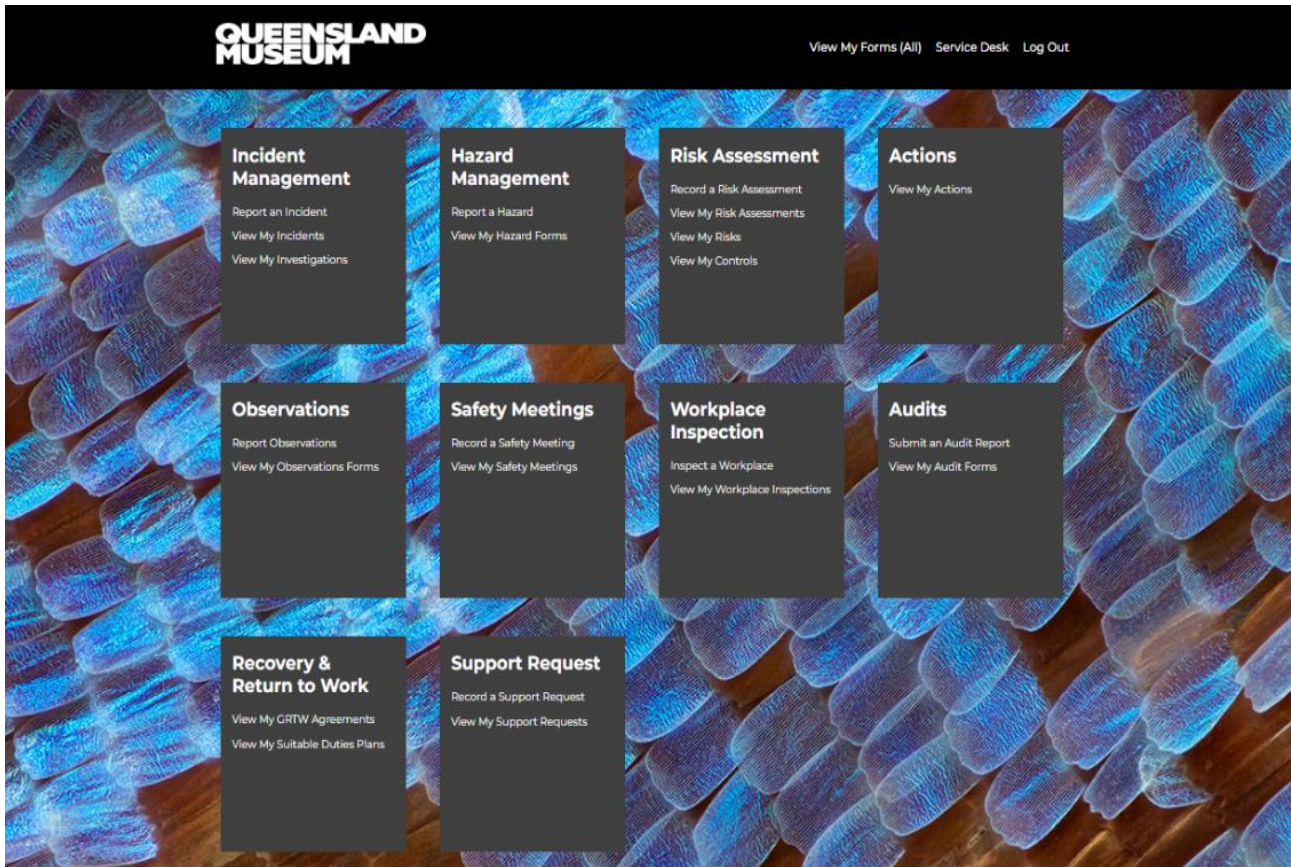


Image 5: QM integrum WHS digital solution front page

Outcome 4. Museums Biological Specimen Preparation (BSP) Toolkit

The BSP Toolkit was developed in consultation with the BSP Work Group and specialists in biological laboratories external to QM. The BSP Toolkit is intended to provide advice and information to the Museum industry and includes the following:

1. Zoonotic risks
2. Process risks
3. Risk assessment
4. Vaccination
5. Biological specimen collection steps
6. Storage containers
7. Decontamination methods and chemicals
8. Biological laboratory requirements
9. Biological laboratory inspection checklist
10. Communication and information:
 - Attachment A – Example Zoonoses Management Procedure
 - Attachment B – Example Laboratory Operations Manual
 - Attachment C – Example BSP Standard Operating Procedures and Training Tool

- Attachment D – Example BSP Fridge Freezer Inventory

Outcome 5. Industry placement program for a tertiary student studying WHS Science

QM reached out to universities that offer WHS-based degrees and submitted a registration form outlining the project options, expressly informing potential applicants of the Enforceable Undertaking. One application from a student completing a 4-year Bachelor of WHS Science was received and accepted.

The industry placement student started with QM in February 2024 and completed the 15-week placement in May 2024. The industry placement student completed six tasks including a legislative review project, which studied the research on psychosocial risks and ambient noise in the workplace. This involved conducting background noise monitoring and a comprehensive survey of QM workers based in areas of the museum where staff engage with the public. Recommendations include adjusting limits to the cycle lengths for exhibition music.

5. Next Steps

The EU is a three (3) year commitment to address and improve WHS across the museum and provide information to industry and community. Over years 2 and 3 the focus will be on:

- Providing Certificate III Laboratory Skills Training course.
- Implementing a revised WHS management system at QM.
- Updating QM WHS training programs.
- Auditing the QM WHS management system.
- Conducting Leadership and Culture Surveys at QM.
- Providing the Small Museum WHS and Risk Toolkit to industry.
- Providing WHS Educational Resources to the community.

6. Summary

Safety is a circle of continuous planned improvement and review:

- Adequate investment in health and safety is essential, each team investing with time and effort.
- Health is equally important as safety and effective health management requires careful planning.
- Continuous improvement is the goal, and scheduled periods of review and planning are essential.

'Plan, Do, Check, Act'