# Project Order, Variations and Research Progress

## Project Title: Telling the story

This document contains three sections. Click on the relevant section for more information.

# 1 Original Project Order

# Project Order

## Proforma 2015

### 1. Short Project Title (less than 15 words)

| |
|---|
| Telling the story |

| | |
|---|---|
| Long Project Title | Collating agricultural and socio-economic research into clear messages for landholders and townspeople. |
| GISERA Project Number | A6 |
| Proposed Start Date | 1 November 2015 |
| Proposed End Date | 30 September 2016 |
| Project Leader | Neil Huth |

### 2. GISERA Research Program

| | | |
|---|---|---|
| ☐ Biodiversity Research | ☐ Marine Research | ☒ Land Research |
| ☐ Water Research | ☐ Social & Economic Research | ☐ GHG Research |

### 3. Research Leader, Title and Organisation

*(Include time commitment to project by the Research Leader)*

| |
|---|
| Dr Neil Huth<br>Senior Research Scientist<br>Integrated Agricultural Systems<br>CSIRO Agriculture<br>Proposed Time allocation: 30 days |

## 4. Summary (less than 300 words)

GISERA phase one has seen a large amount of research work undertaken on a variety of topics and community members are keen to consume this information. However, discussions at several agricultural research forums have raised the problem that farmers feel that they do not have sufficient time to collate and interpret the large volume of information they receive from industry, community and research groups. They have been requesting that a means of packaging and communicating relevant and useful information be developed.

This project will address this by developing a means of telling the story of changes in towns and agricultural areas before CSG and during the development and production phases. This message will be assisted through the development of a detailed landscape change map and a series of communication tools that will be used at some local shows or community events. This community engagement will also be used to gather feedback on our research to date, including its strengths and information gaps. The project will provide a final report or other publication that provides the summary of our research in a user-friendly manner.

## 5. Budget Summary (From Excel Budget Pack worksheet "Project Plan Summary")

| Expenditure | 2011/12 Year 1 | 2012/13 Year 2 | 2013/14 Year 3 | 2014/15 Year 4 | 2015/16 Year 5 | 2016/17 Year 6 | 2017/18 Year 7 | Total |
|---|---|---|---|---|---|---|---|---|
| Labour | | | | | 170,127 | 83,597 | | 253,724 |
| Operating | | | | | 78,500 | | | 78,500 |
| **Total Costs** | | | | | **248,627** | **83,597** | | **332,224** |
| CSIRO | | | | | 248,627 | 83,597 | | 332,224 |
| **Total Expenditure** | | | | | **248,627** | **83,597** | | **332,224** |

| Expenditure per Task | 2011/12 Year 1 | 2012/13 Year 2 | 2013/14 Year 3 | 2014/15 Year 4 | 2015/16 Year 5 | 2016/17 Year 6 | 2017/18 Year 7 | Total |
|---|---|---|---|---|---|---|---|---|
| Task 1 | | | | | 173,927 | | | 173,927 |
| Task 2 | | | | | 68,700 | | | 68,700 |
| Task 3 | | | | | 6,000 | 83,597 | | 89,597 |
| Task 4 | | | | | | | | |
| Task 5 | | | | | | | | |
| **Total Expenditure** | | | | | **248,627** | **83,597** | | **332,224** |

| Cash Funds to Project<br>Partners | 2011/12<br>Year 1 | 2012/13<br>Year 2 | 2013/14<br>Year 3 | 2014/15<br>Year 4 | 2015/16<br>Year 5 | 2016/17<br>Year 6 | 2017/18<br>Year 7 | Total |
|---|---|---|---|---|---|---|---|---|
| CSIRO | | | | | 154,851 | 55,149 | | 210,000 |
| Sub Total | | | | | 154,851 | 55,149 | | 210,000 |
| **Total Cash to Partners** | | | | | **154,851** | **55,149** | | **210,000** |

| Source of Cash Contributions | 2011/12<br>Year 1 | 2012/13<br>Year 2 | 2013/14<br>Year 3 | 2014/15<br>Year 4 | 2015/16<br>Year 5 | 2016/17<br>Year 6 | 2017/18<br>Year 7 | Total |
|---|---|---|---|---|---|---|---|---|
| GISERA | | | | | 154,851 | 55,149 | | 210,000 |
| **Total Cash Contributions** | | | | | **154,851** | **55,149** | | **210,000** |

| In-Kind Contribution from<br>Partners | 2011/12<br>Year 1 | 2012/13<br>Year 2 | 2013/14<br>Year 3 | 2014/15<br>Year 4 | 2015/16<br>Year 5 | 2016/17<br>Year 6 | 2017/18<br>Year 7 | Total |
|---|---|---|---|---|---|---|---|---|
| CSIRO | | | | | 93,776 | 28,448 | | 122,224 |
| **Total In-Kind Contribution from Partners** | | | | | **93,776** | **28,448** | | **122,224** |

| | Total funding over all years | Percentage of Total Budget |
|---|---|---|
| GISERA Investment | 210,000 | 63% |
| CSIRO Investment | 122,224 | 37% |
| Total Other Investment | | |
| **TOTAL** | **332,224** | **100%** |

| Task | Milestone Number | Milestone Description | Funded by | Participant Recipient | Start Date (mm-yy) | Delivery Date (mm-yy) | Fiscal Year | Fiscal Quarter | Payment $ |
|---|---|---|---|---|---|---|---|---|---|
| **Task 1** | 1.1 | Commence Engagement and Collation of airborne survey data | GISERA | CSIRO | Nov-15 | Dec-15 | 2015-16 | | $51,617 |
| **Task 2** | 2.1 | Generation of landscape change maps | GISERA | CSIRO | Jan-16 | Mar-16 | 2015-16 | | $51,617 |
| **Task 3** | 3.1 | Public engagement | GISERA | CSIRO | Apr-16 | Jun-16 | 2015-16 | | $51,617 |
| **Task 4** | 4.1 | Draft Report/Publication | GISERA | CSIRO | Jul-16 | Sept-16 | 2016-17 | | $55,149 |

## 6. Other Researchers (include organisations)

| Researcher | Time Commitment (project as a whole) | Principle area of expertise | Years of experience | Organisation |
|---|---|---|---|---|
| Dr Andrea Walton | 35 days | Socio-Economic Research | >10 | CSIRO |
| Dr Peter Caccetta | 15 days | Terrestrial Mapping and Monitoring | >20 | CSIRO |
| Dr Xiaoliang Wu | 15 days | Terrestrial Mapping and Monitoring | >20 | CSIRO |
| Dr Simon Collings | 10 days | Image processing | >10 | CSIRO |
| Dr Drew Devereux | 10 days | Photogrammetric methods | >5 | CSIRO |
| Brett Cocks | 26 days | CSG and Farmer engagement | >15 | CSIRO |
| Perry Poulton | 25 days | GIS and Farming Systems | >25 | CSIRO |
| Ainsleigh Wixon | 14 days | Project Support | >3 | CSIRO |

## 7. GISERA Objectives Addressed

Carrying out of research and improving and extending knowledge of social and environmental impacts and opportunities of CSG-LNG projects for the benefit of the CSG-LNG industry, the relevant community and the broader public.

## 8. Program Outcomes Achieved

Details are provided in *Section 13. Project Objectives and Outputs.*

## 9. Program Outputs Achieved

Details are provided in *Section 13. Project Objectives and Outputs.*

## 10. What is the knowledge gap that these research outputs will address?

- A coherent synthesis of existing research in a form suitable for public consumption that describes rural change through the various phases of CSG development.
- An assessment of any strengths and knowledge gaps within this research by researchers and the community.
- Evaluation of photogrammetric techniques to demonstrate changes over time for the CSG industry and the general public.

## 11. How will these Research outputs and outcomes be used by farmers or the CSG-LNG industry?

The main research output will be information about the existing and emerging GISERA research findings presented in a format suitable for the general public. Recent science reviews and community forums have highlighted the problems of information transfer. For example, farmers are keen to learn about research findings but are also cognoscente that they are time poor and struggling to grasp all information set before them. Furthermore, scientific publications are not always presented in form suitable for broad consumption. This project aims to assist existing research to be used by farmers, townspeople and relevant stakeholders.

## 12. Project Development

GISERA Phase one has seen some really amazing research during a very interesting period of history for the Surat Basin. There is now a wide body of research and information on a broad range of topics. CSG development will continue to expand into new areas where the lessons of this research will be of great importance. It is imperative that these lessons be synthesised into a coherent story of development in the rural areas of the Surat and the findings of research undertaken during this period. It is also important to gather feedback on our telling of this story. This feedback will provide valuable information on our research and on any important issues that remain as information gaps.

The recent review of GISERA priorities reinforced the need for such an effort with several comments including the following requirements and concepts:

- "baseline monitoring & public access to data"
- "Make results easily available, easy to read and meaningful"
- "current projects are fragmented"
- "ensure the GISERA voice gets traction"
- "time series research in all the domains is very important, including getting base line measures"

Furthermore, engagement with farmers (Project 2 – A Shared Space) specifically asked stakeholders about preferred means of information transfer and they were clear that they felt that it was important that they had access to the information for them to then use given the ongoing changes in the broader community and CSG companies. However, recent community forums have provided further feedback from landholders that they are struggling to deal with the amount of information that is being generated by industry, community and research groups. The community is asking researchers to find a way to present their information in a way that is accessible and useable without being "dumbed down".

We propose a project that brings scientists across the Agricultural and Socio-economic areas to synthesise our work into a coherent story for people in the rural areas of the Surat. The story should contain information on the state of the area before CSG, during the development phase, and now during the production phase. It should paint a picture of what happened in the towns, and on the farms. It should not only bring information into one source, but draw together themes across the research projects to make it coherent (e.g. how did changes in the town affect people on the land?). This story will then be presented to people as a showcase of GISERA's research efforts and as a way of getting our information into the local communities. We plan to present the information, face-to-face, at local agricultural shows. We would present the research, our publications, our people. We would also use these interactions to gather feedback on our science in terms of its utility and relevance. We tell the story, but we also listen.

Phase 1 of the GISERA projects has accumulated some detailed imagery of the Chinchilla-Miles area during the construction phase. Historical aerial imagery has also been collated for that

area. We propose to update this with a future aerial survey to show the landscape after development. From these datasets, it may be possible to create a time series of 3D virtual landscapes which we would allow people to navigate and explore interactively at the local shows. The imagery will show historical agricultural developments, and the recent changes brought about by CSG. Experience tells us that these pictures help engagement with farmers. Spatial analysis of the changes in land use (e.g. the emergence of the new irrigation districts) will also be presented graphically.

The story of socio-economic change will be developed using the existing research results but can also make use of data from the repeated community wellbeing survey and other phase 2 work currently proposed for completion early next year. A socio-economic researcher will also lead the feedback and evaluation component of our interactions at the local shows. It is hoped that the interactions will be two-way in nature, resulting in increased understanding of the issues by researchers. Involvement of other research teams in the shows would be encouraged if stakeholder engagement would benefit their projects. This project can be a vehicle for impact by other teams.

The local agricultural shows run during April and May. Feedback from surveys and informal discussions would need to be incorporated into a final publication seeking to tell the story. A short report to GISERA about local feedback would be provided as a secondary output. A draft final report or informative publication would be provided during the second half of 2016.

## 13. Project Objectives and Outputs

This project will

- Provide feedback from members of the community on the strengths and research gaps in existing GISERA research portfolios.
- Detailed spatial imagery showing landscape changes during recent CSG developments within a large area surveyed during a previous project.
- Improved understanding of changes on farms and in towns during CSG development
- Improved awareness of GISERA research

Outputs include:

- Results of a community survey of GISERA research
- A publication that seeks to present the large body of GISERA research in a concise but informative manner
- Tools for use in future community engagement

## 14. Project Plan

### 14.1 Project Schedule

| ID | Task Title | Task Leader | Scheduled Start | Scheduled Finish | Predecessor |
|---|---|---|---|---|---|
| **Task 1** | Commence Engagement and Collation of airborne survey data | Neil Huth | 01-11-2015 | 31-12-2015 | - |
| **Task 2** | Generation of landscape change maps and commence story pieces. | Neil Huth | 01-01-2016 | 31-03-2016 | Task 2 |
| **Task 3** | Public engagement | Neil Huth | 01-04-2016 | 30-06-2016 | Task 3 |
| **Task 4** | Draft Report/Publication | Neil Huth | 01-07-2016 | 30-09-2016 | Task 4 |

**TASK 1**

**TASK NAME: Commence Engagement and** Collation of airborne survey data

**TASK LEADER:** Neil Huth

**OVERALL TIMEFRAME:** 31-12-2015

**BACKGROUND:** One of the objectives of this project is to generate detailed maps of landscape change to assist in communicating changes that occur during CSG development. This will require flying an updated survey of the area undertaken during the "Making Tracks" project. Historical imagery will also be collated for the area to show the longer term landscape changes that were already underway before the onset of CSG development.

**TASK OBJECTIVES:** 1) To undertake an updated photographic survey of the Chinchilla-Miles-Condamine area and to collate historical imagery of the area, 2) To engage with industry bodies (such as Gasfields Commission and Agforce) to outline the project and exchange ideas.

**TASK OUTPUTS & SPECIFIC DELIVERABLES:** A brief report describing progress on photographic survey and obtaining historical imagery and initial engagement with relevant industry bodies.

**TASK 2**

**TASK NAME:** Generation of landscape change maps and commence story pieces.

**TASK LEADER:** Neil Huth

**OVERALL TIMEFRAME:** 31-03-2016

**BACKGROUND:** Generation of detailed maps of landscape change requires the processing of large amounts of data through a series of complex analytical processes. This can will take several weeks using high performance computing facilities. Feedback from research and industry people working on issues of landscape change (e.g. rehabilitation, revegetation) will be sought. Story

pieces (fact sheets, posters, imagery) will be created from previously published reports and the newly generated change maps. These communication devices will follow standard CSIRO/GISERA publication review and approval protocols and will be provided to GISERA partners.

**TASK OBJECTIVE:** To produce detailed maps of landscape change including changes in visible features, ground surface elevation and water flow.

**TASK OUTPUTS & SPECIFIC DELIVERABLES:** A short report describing 1) progress in generating the maps and some demonstration of the resulting dataset (including rehabilitation and revegetation where possible), and 2) a list of story pieces complete and under development.

**TASK 3**

**TASK NAME:** Community Engagement

**TASK LEADER:** Neil Huth

**OVERALL TIMEFRAME:** 30-06-2016

**BACKGROUND:** The community has asked for research to be collated and communicated in a more suitable manner. This will be attempted firstly through the presentation of our research at a series of community events.

**TASK OBJECTIVE:** To communicate GISERA research through face-to-face meetings with people at local shows or community events and to gather feedback on this.

**TASK OUTPUTS & SPECIFIC DELIVERABLES:** A short report describing 1) the engagement processes and some preliminary lessons arising from these, and 2) a complete list of story pieces developed within the project.

**TASK 4**

**TASK NAME:** Final Report

**TASK LEADER:** Neil Huth

**OVERALL TIMEFRAME:** 30-09-2016

**BACKGROUND:** Development of the coherent research story and community engagement should be complete and feedback from the public collected.

**TASK OBJECTIVES: 1)** To document the GISERA research story in a meaningful and useful way and to document public perceptions about the strengths and gaps in our research, 2) Present report findings to relevant industry bodies.

**TASK OUTPUTS & SPECIFIC DELIVERABLES: 1)** A draft report/publication documenting the research story and pulling all the story pieces into one communication,2) a second short report outlining the results of the community feedback and 3) a short report outlining process of communicating the report to industry groups.

## 15. Budget Justification

The budget for this project has been approved by GISERA's Research Advisory Committee and Management Committee.

The project leader is an experience member of the GISERA agricultural land management team, he is locally-based, and has assembled a broad team to assist in the various aspects of the project.

## 16. Project Governance

Progress against project milestones and tasks (specified in item 14) will be assessed regularly as part of GISERA's general research portfolio management.

## 17. Communications Plan

General communication will be managed by GISERA.

Project outputs will be made available on the GISERA website and, where possible, be communicated through the various GISERA communications forums. Furthermore, the project involves a significant communications component.

## 18. Risks

Capacity to deliver: The project leader has sufficient experience to lead and supervise the various activities and ascertain the research outcomes. Close links with the various GISERA Land Management and socio-economic companion projects will provide extra support. Staff departure could pose a risk to some project operations, but many tasks can be fulfilled by other staff.

In projects of short duration the risk of adverse weather conditions on field work is heightened. The aerial survey needs to be completed before the end of the 2015 calendar year.

Project Management: The project team includes several experienced project leaders and so risks to project management are low.

## 19. Intellectual Property and Confidentiality

| | | | | |
|---|---|---|---|---|
| Background IP (clause 10.1, 10.2) | **Party** | **Description of Background IP** | **Restrictions on use (if any)** | **Value** |
| | | | | $ |
| | | | | $ |
| Ownership of Non-Derivative IP (clause 11.3) | CSIRO | | | |
| Confidentiality of Project Results (clause 15.6) | Project results are not confidential. | | | |
| Additional Commercialisation requirements (clause 12.1) | Not Applicable | | | |
| Distribution of Commercialisation Income (clause 1.1) | Not applicable | | | |
| Commercialisation Interest (clause 1.1) | **Party** | | **Commercialisation Interest** | |
| | APLNG | | N/A | |
| | CSIRO | | N/A | |
| | QGC | | N/A | |

GISERA Gas Industry Social & Environmental Research Alliance

20. Approval from Project Parties

In signing this document you are committing your organisation to provide the specified funds, personnel and the required in-kind contributions.

**Australia Pacific LNG**

**SIGNED** for and on behalf of Australia Pacific LNG, exercising authority delegated by the GISERA Management Committee

by .....

in the presence of

.....
Signature of witness

SYLVIA RANIERI
.....
Name of witness

25 NOVEMBER 2015
.....
Date

**QGC Pty Ltd**

**SIGNED** for and on behalf of QGC Pty Ltd, exercising authority delegated by the GISERA Management Committee

by .....

in the presence of

.....
Signature of witness

Toni Hewitt
.....
Name of witness

30/11/15
.....
Date

GISERA Gas Industry Social & Environmental Research Alliance

**CSIRO**

**SIGNED** for and on behalf of CSIRO, exercising authority delegated by the GISERA Management Committee

by .....

in the presence of

.....
Signature of witness

ELIZABETH STOWER (JP QUAL)
Name of witness

2ND DEC 2015.
Date

# 2 Variations to Project Order

Changes to research Project Orders are approved by the GISERA Director, acting with authority provided by the GISERA Management Committee or Research Advisory Committee, in accordance with the GISERA Agreement (http://www.gisera.org.au/contract.html).

The table below details variations to research Project Order.

### Register of changes to Research Project Order

| Date | Issue | Action | Authorisation |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

# 3 Progress against project milestones

Progress against milestones are approved by the GISERA Director, acting with authority provided by the GISERA Management Committee or Research Advisory Committee, in accordance with the GISERA Agreement (http://www.gisera.org.au/contract.html).

Progress against project milestones/tasks is indicated by two methods: Traffic Light Reports and descriptive Project Schedule Reports.

1. Traffic light reports in the Project Schedule Table below show progress using a simple colour code:
   - Green:
     - Milestone fully met according to schedule.
     - Project is expected to continue to deliver according to plan.
     - Milestone payment is approved.
   - Amber:
     - Milestone largely met according to schedule.
     - Project has experienced delays or difficulties that will be overcome by next milestone, enabling project to return to delivery according to plan by next milestone.
     - Milestone payment approved for one amber light.
     - Milestone payment withheld for second of two successive amber lights; project review initiated and undertaken by GISERA Director.
   - Red:
     - Milestone not met according to schedule.
     - Problems in meeting milestone are likely to impact subsequent project delivery, such that revisions to project timing, scope or budget must be considered.
     - Milestone payment is withheld.
     - Project review initiated and undertaken by GISERA Research Advisory Committee.

2. Progress Schedule Reports outline task objectives and outputs and describe, in the 'progress report' section, the means and extent to which progress towards tasks has been made.

## Project Schedule Table

| ID | Task Title | Task Leader | Scheduled Start | Scheduled Finish |
|---|---|---|---|---|
| Task 1 | Commence Engagement and Collation of airborne survey data | Neil Huth | Nov-15 | Dec-15 |
| Task 2 | Generation of landscape change maps | Neil Huth | Jan-16 | Mar-16 |
| Task 3 | Public engagement | Neil Huth | Apr-16 | Jun-16 |
| Task 4 | Draft Report/Publication | Neil Huth | Jul-16 | Sept-16 |

# Project Schedule Report

## Task 1.

**TASK NAME: Commence Engagement and Collation of airborne survey data**

**TASK LEADER:** Neil Huth

**OVERALL TIMEFRAME:** 31-12-2015

**BACKGROUND:** One of the objectives of this project is to generate detailed maps of landscape change to assist in communicating changes that occur during CSG development. This will require flying an updated survey of the area undertaken during the "Making Tracks" project. Historical imagery will also be collated for the area to show the longer term landscape changes that were already underway before the onset of CSG development.

**TASK OBJECTIVES:** 1) To undertake an updated photographic survey of the Chinchilla-Miles-Condamine area and to collate historical imagery of the area, 2) To engage with industry bodies (such as Gasfields Commission and Agforce) to outline the project and exchange ideas.

**TASK OUTPUTS & SPECIFIC DELIVERABLES:** A brief report describing progress on photographic survey and obtaining historical imagery and initial engagement with relevant industry bodies.

## PROGRESS REPORT

The aerial survey was conducted during December 2015 with the contractor flying the exact same flight paths as used previously. A ground survey was also undertaken to allow testing of the ground elevation and water flow models. Both aerial and ground survey efforts have come in on time and within budget. Initial processing of the data confirms that the data is complete and a digital surface model of the survey area has been developed. Radiometric calibration will be undertaken, and ground elevation and water flow models will be generated. Furthermore, land change maps will be generated to highlight large and small scale changes during this period of time. Historical aerial imagery for some of the survey area has been collected (1956 onwards) to show longer-term landscape changes.

The scope and intent of this project has been discussed with the Agforce CSG Project officer, Daniel Phipps. Similarly, discussions have been held with Dr Jim Cavaye, who is leading efforts for developing a CSG Information Framework in conjunction with CCSG, Agforce, State Government and Gasfields commission. GISERA will also provide input into these efforts on agricultural issues.