



SHEER WP 5 Report, 17/10/2016 (WP Leader: Andrew Gunning)

- List of the staff actively involved in the WP

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|--|--------------------|
| Andrew Gunning, RSKW | joined May-2015 |
| Brian Anderson, RSKW | joined May-2015 |
| Dr Catherine Isherwood, RSKW | joined August-2015 |
| Prof. Paul Younger, Glasgow University | joined May-2015 |
| Dr Neil Burnside, Glasgow University | joined May-2015 |
| Dr Nelly Montcoudiol, Glasgow University | joined August 2015 |

- Objectives expected after eighteen months

- WP 5.1 Generic Settings
- WP 5.2 Assistance with groundwater monitoring at Wysin, Poland

- A summary of progress towards objectives and details for each task in the recent six months

WP 5.1 is complete and the report has been provided.

WP 5.2 is ongoing. Initial work was undertaken in the first six-month period and monitoring has been underway since December 2015. To date, eight field visits and sampling rounds have been undertaken and continuous monitoring is in place at the four boreholes. The work is being led by Drs Catherine Isherwood and Nelly Montcoudiol with assistance from other RSKW and Glasgow University staff as necessary.

- Highlight clearly significant results

Baseline monitoring was completed in June, when the hydraulic fracturing process was begun. Post-fracturing monitoring is ongoing.

Samples of the frac fluid and flowback fluid were provided courtesy of PGNiG and were analysed to identify key trigger species that might indicate escape of either into the groundwater. The laboratory analysis schedule has been updated based on the findings from these analyses and the results from the baseline water analyses.

The geological model is in preparation, and will inform the hydrogeological model for the site. An initial hydrogeological model has been prepared and will be refined and updated in line with site results and the geological model when this is completed.

Assessment and interpretation of the site data are ongoing. This process is also informing the required QA process in place to ensure that site data are as robust as possible. Sample blanks and duplicates are collected on a pre-determined schedule to check for process, transport and laboratory errors or contamination.

The Baseline report is in preparation and will form part of the deliverable.

- If applicable, explain the reasons for major deviations from Annex I and their impact on other tasks

Not applicable

- If applicable, explain the reasons for failing to achieve critical objectives and/or not being on schedule and explain the impact on other tasks as well as on available resources and planning

Not applicable

- If applicable, propose corrective actions.

Not applicable

- Publications and papers in print

Paper presented: *“Development of a screening method to assess potential impacts on groundwater resources from shale gas developments”*; joint Geological Society and International Association of Hydrogeologists Conference ***Groundwater: Managing Our Hidden Asset***, Birmingham, UK (13-14 September 2016). Authors: C. Isherwood, N. Montcoudiol, A. Gunning, P. Younger. Presenter: C. Isherwood.

This section should not exceed two pages.

Deliverables due at the date

Please complete this table if deliverables are due for the reporting period

| Table 1. Deliverables due at the date | | | | | | | | | | | |
|--|-------------------------|----------------|---------------|-------------------------|---------------|--|--|--|---------------------------------------|---------------------------|-----------------|
| Del. no. | Deliverable name | Version | WP no. | Lead beneficiary | Nature | Dissemination level¹ | Delivery date from Annex I (proj month) | Actual / Forecast delivery date Dd/mm/yy yy | Status No submitted/ Submitted | Contractual Yes/No | Comments |
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Public
Restricted to other programme participants (including the Commission Services)
Restricted to a group specified by the consortium (including the Commission Services)
Confidential, only for members of the consortium (including the Commission Services)

