

MINUTES

Meeting Title: Afan Valley Adventure Resort

Attendees:

Melanie Lindsley	Coal Authority
Leigh Sharpe	Coal Authority
Arie Zamler	Stantec
James Weddle	Stantec
Martin Dix	Stantec
Victoria Acres	Stantec

Apologies: None

Date of Meeting: 4th August 2022

Item	Subject	Actions
1.	Introductions Done by all. Vicky Acres could not re-join the meeting when changing over from Zoom to Teams platform.	
2.	Project Background / Overview Martin Dix provided project and planning overview. In summary: - The Coal Authority will be a consultee on a Section 96A submission which was submitted on the 4/08/2022 to vary the approved parameters and concept plans from those originally approved. - At a later stage the Coal Authority will be consulted separately on a Section 73 application which will include a number of changes to the masterplan, however the principals for proposed development will remain unchanged. A number of studies accompanied the 2017 planning application including: - Geo-Environmental Phase I Desk Study (BSP Consulting, doc ref: 162550, dated February 2017) - Coal Mining Assessment Report (AECOM, dated: December 2017). A number of studies and investigations are currently undertaken by Earth Science Partnership (ESP) with Stantec's direction in relation to the ground conditions as following: - Geomorphology Assessment and Ground Investigation Scoping Report (GISR) (doc ref: ESP.8053.3708 dated, August 2022). - Ground Investigation and Geo-environmental Assessment (Doc ref: ESP.8053.3747, Dated August 2022)	

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	Peat Site Investigation Report (Doc Ref: ESP.8053.3713-02, Dated August 2022). In addition to the above further site wide, plot and structure specific ground investigations and studies are planned to be undertaken post October 2022 to inform detailed design, and inform any mine treatment and remediation that may be required in relation to the proposed development.	
3.	Ground Conditions / Constraints Arie Zamler presented a summary of the site settings and ground conditions. James Weddle presented a summary of the ground conditions in relation to coal measures, mine workings and other constraints associated with the ground conditions on site. The constraints associated with the ground conditions are presented in Stantec drawing used to inform the masterplan for the proposed development (drawing ref: 0332310590/3501/001, Rev_2, dated 2022.07.12). A summary of the principal constraints for development associated with the ground conditions is presented below: - The site has a long legacy of coal workings with shallow and deep coal workings recorded by the Coal Authority in large parts of the site. A conservative High Risk Subsidence zone was established associated with the potential risk of void migration using a 15 T (15 times seam thickness) for the seams recorded by the BGS at surface. - Longwall mining is recorded at the western part of the site. InSAR images record relatively large vertical ground movements (up to 30 mm subsidence in the past 5 years) matching with the edge of the long wall mine in the western part of the site. The subsidence is likely to be related to groundwater rebound in the workings. - The Coal Authority holds records of four shafts/adits at the site. - The site is bisected by two principal normal faults recorded by the BGS. - A number of large open ground fissures are present across the site likely to be related to ground movements associated with workings. - Two landslides are recorded at the site by the BGS with a third immediately to the north of the site. The landslides are likely to be of periglacial origin. - Peat was found in the south-eastern part of the site.	
4.	Proposed mitigation A mitigation plan was issued by Stantec to inform the proposed development of the site (drawing ref: 0332310590/3501/002, Rev_3, dated 2022.08.03). A summary of the mitigation strategy associated with the ground conditions is presented below: - Structures situated in High Risk Subsidence zone - Further ground investigation is required - Grouting of workings, if present - Inspection of excavated surfaces, removal of disturbed soils (if present) and replacement with granular fill - Use raft foundations and flexible service connections - Attenuation ponds in High Risk Subsidence zone - As above plus the use of a suitable lining system to minimise the risk of leakage and flooding of possible mine workings - Roads situated in High Risk Subsidence zone - use geogrids reinforcement to accommodate potential ground movements. - Ongoing significant subsidence associated with long wall mining – Stantec recommend the exclusion of structures from this area. Development of light	

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	weight structures may be possible subject to further investigation and assessments. Use raft foundations with jacking points to accommodate potential ground movements and flexible service connections. - Recorded mine entries - A buffer exclusion zone of 30m is adopted for mine/adit entries recorded by the Coal Authority. - Recorded faults - A buffer exclusion zone of 25 m is adopted to minimise the potential risk of fault reactivation. - Ground fissures – Structures are recommended to be excluded owing to the potential for ground movements associated with ground fissures. Any roads or carparks to use geogrids reinforcement. - Landslides - Development is recommended to be avoided/minimise within the footprint of the landslides to minimise the risk of landslide reactivation. - Peat - development is not permitted where peat is present. - Drainage design – to mimic current hydrology / hydrogeological conditions and avoid concentrating significant amount of surface water infiltrating the ground at a given location.	
5.	Mine entries investigation and treatment Further geophysical surveys and intrusive ground investigation are scheduled to determine the location of the mine entries. Mine entries to be capped or segregated from future development. Structures are not permitted to be constructed above or within the zone of influence of existing mine entries.	
6.	Potential for use of geothermal energy from former workings Stantec is planning to explore the potential for use of geothermal energy from flooded mine workings as part of the proposed development. Leigh Sharpe suggested to contact the Innovation Team at the Coal Authority with regards to visibility studies, and for applying for grants for mine heat schemes as part of the proposed development. Leigh highlighted the need to consider potential interaction with any existing or future mine heat schemes in the area.	
7.	Excavated coal as part of the proposed development Leigh confirmed that an Incidental Coal Application and Agreement will need to be in place prior to the enabling and construction phases for near coal extracted as part of the proposed works. An application can take up to 10 working weeks to process. It is recommended that a Materials Management Plan (MMP) will accompany the application stating the expected volume of coal to be extracted as part of the works and it proposed final deposition within the site.	
8.	AOB None.	

Enclosed:

- Site Constraints Plan 2022 - drawing ref: 0332310590/3501/001, Rev: 2, dated 2022.07.12.
- Preliminary Site Constraints Mitigation Plan - drawing ref: 0332310590/3501/002, Rev: 3 dated 2022.08.03.