

Summary Notes of Meeting: piling mitigation options and pumping tests

Project: HS2 MWCC Lot C1
Document number: 1MCo5-ALJ-EV-MRC-C001-110005
Meeting Date: 01/05/2018, 10:00 – 12:30
Meeting Title: Groundwater management strategy and design update
Location: Room 3.13, Snowhill

Attendees

Name	Organisation
Reg. 13	HS2
Reg. 13	Environment Agency
Reg. 13	Align
Reg. 13	Align

Apologies

Name	Organisation

Distribution

Name	Organisation
Attendees & Reg. 13 , Reg. 13 , Reg. 13	Align

Notes

#	Actions and Notes	Action	Date
1.	Introductions		
2	Safety Share		
3	Objectives To provide a general update to the EA and discussion regarding groundwater management strategy		

#	Actions and Notes	Action	Date
	<p>presented to the EA prior to applying for the consent for carrying out the pumping test as this will speed up the consenting process</p> <ul style="list-style-type: none"> • For recharge of abstracted water back to ground Affinity Water concerns would need to be addressed • The pumping wells can be drilled (but not tested) as part of the general GI consent • The EA will issue 1 consent for each pumping test and the abstraction and discharge consent will be issued under the same consent as part of the protective provision provided that the groundwater is uncontaminated • The application should follow the approach in WR32 although the form does not need to be completed. • Recommend that rising / falling head tests are completed in recharge holes before trying to use them 		
8	<p>Design update – tunnelling</p> <p>Align provided a brief update on progress with tunnel design – no major changes since last update</p>		
9	<p>Design update – ventilation shafts</p> <p>Align provided a brief update on the shaft design options. Two options currently being taken forward:</p> <ul style="list-style-type: none"> • Reg. 12(5)(a) and Reg. 12(5)(a) shafts – 14m internal diameter • Reg. 12(5)(a), Reg. 12(5)(a) and Reg. 12(5)(a) – 32m internal diameter 		
10	<p>Next meeting</p> <p>No date set</p>		

Attachments: Approach to discharge of Groundwater Undertakings and Assurances

Approach to discharge of Groundwater Undertakings and Assurances

U&A 49:

Impacts of the Proposed Scheme on groundwater flows, levels and quality, have been analysed. Where the assessment predicts that a likely significant adverse effect may occur, a strategy to manage the risk will be agreed with the Environment Agency. Potential significant adverse effects on groundwater, due to construction, (such as excavations to form cuttings or tunnels, including green tunnels), will be mitigated locally wherever reasonably practicable. The tunnels will be designed so that the ingress of groundwater is not significant. The assessment has demonstrated that the passage of groundwater past the tunnels is not significantly reduced. The drainage within the Proposed Scheme will be designed, where reasonably practicable, to encourage the recharge of groundwater bodies.

Level 1 report

Overarching strategy – details approach and documentation. Outline of contents:

Objectives – meet requirements of U&A49. Demonstrate management and mitigation is in place

Approach and documentation – how reports fit together and what they show, who they are distributed to

Management process – communications, who does what, monitoring, process for managing significant effects (what to do when things go wrong), relationship to Emergency Action Plan

Review – any changes in techniques or approach, is monitoring in right place, right frequency, right parameters, relationship with monitoring position statement

Level 2 report

Groundwater assessment for each asset:

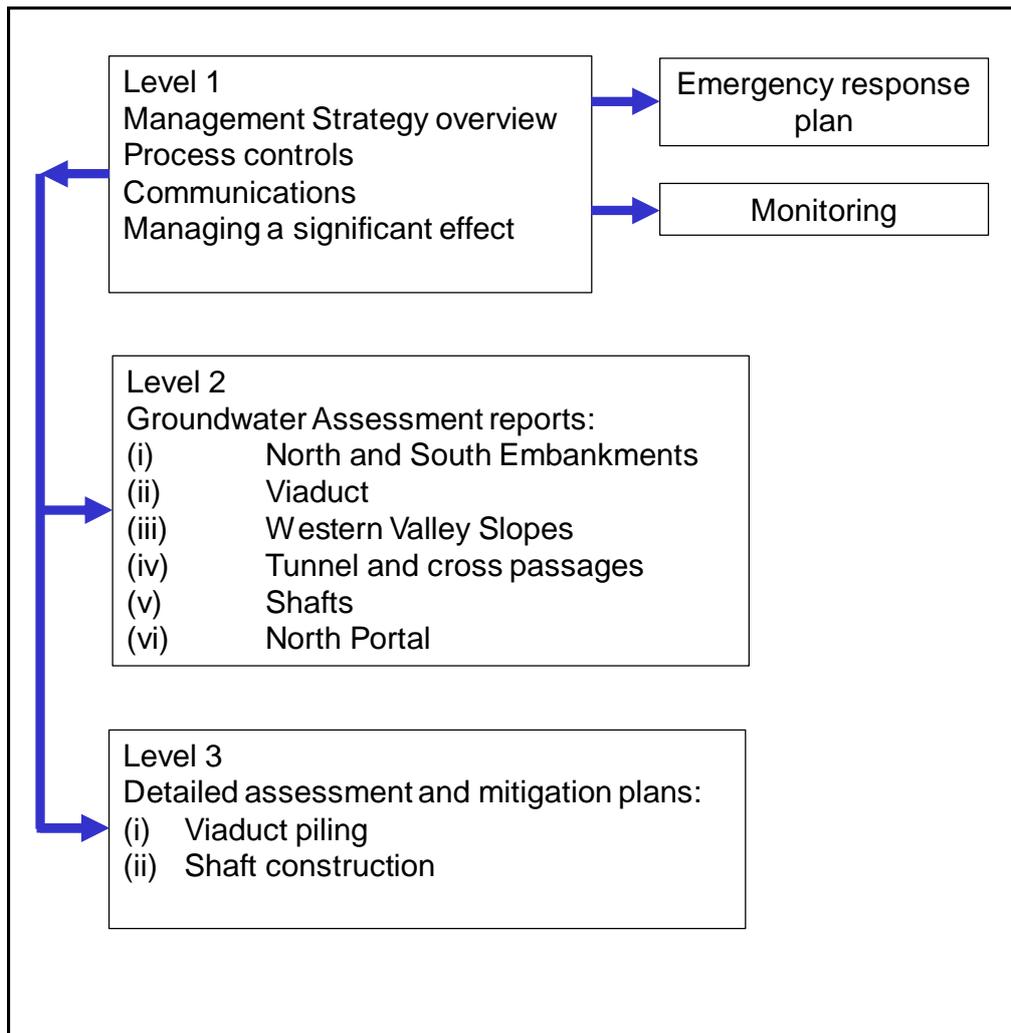
- (i) North and South Embankments
- (ii) Viaduct
- (iii) Western Valley Slopes, Landscape Area and South Portal
- (iv) Tunnel and cross passages
- (v) Shafts
- (vi) North Portal

Each report builds on the ES, updating the hydrogeological assessment with additional ground investigation data (where available), outlining proposed construction activities and potential effects on the groundwater environment. The proposed mitigation to address significant effects is then identified along with a high level overview of monitoring requirements to determine effectiveness. The detailed assessment of mitigation is provided in the Level 3 report. Consent requirements and stakeholder liaison are also detailed along with further actions.

Level 3 report

Where significant potential effects are identified that require a detailed assessment of potential impacts and mitigation requirements a detailed mitigation options appraisal will be prepared. Two such reports are proposed:

- (i) Piling at the viaduct and embankments
- (ii) Shaft construction



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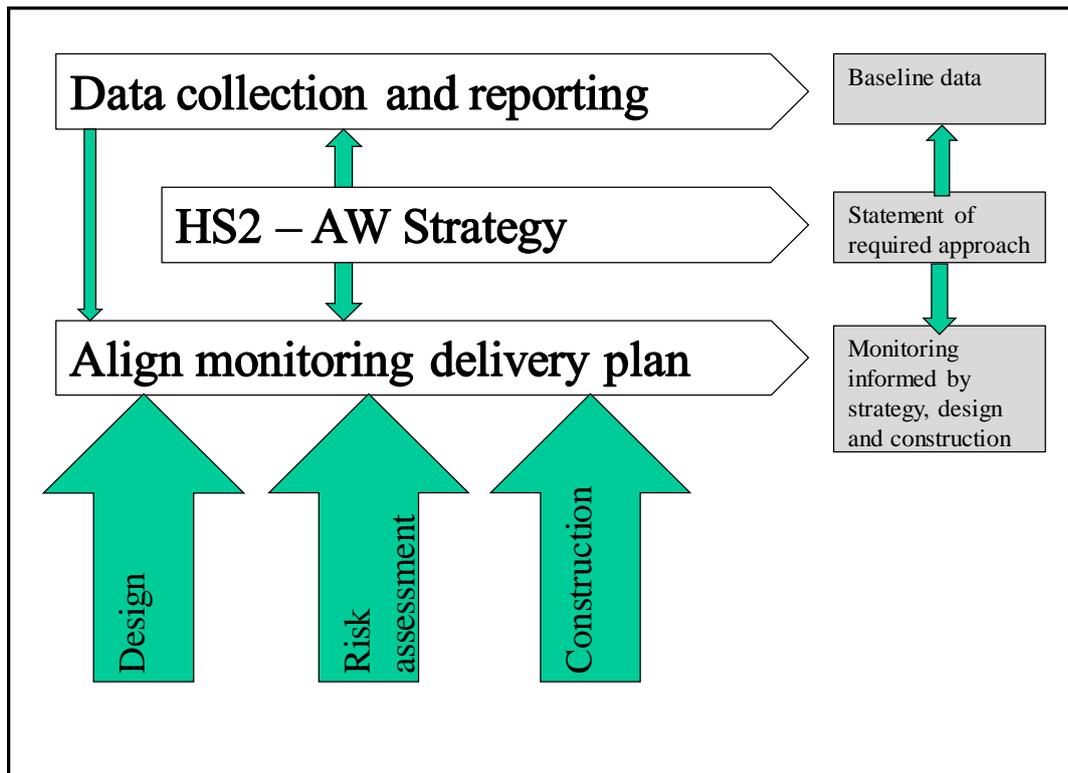
Monitoring will be undertaken in consultation with the Environment Agency prior to and during construction, and if required post construction, to establish baseline conditions for surface water and groundwater and to confirm the effectiveness of temporary and permanent mitigation measures together with any remedial works deemed necessary.

Monitoring position statement prepared including:

- outline of ground investigation contracts completed
- monitoring wells installed
- post GI monitoring undertaken
- agreed priority monitoring
- additional GI proposed by Align
- monitoring proposed by Align

Document to include surface water and groundwater. Needs to demonstrate that Align is aware of the monitoring that is being undertaken, what it shows.

Links to HS2 Monitoring Strategy and Atkins monitoring database.



Programme

Preliminary discussions have been held with the EA and it is agreed that the U&As need to be discharged before construction can start. The EA will need to review the documents and share these with the local teams. Following review comments will be provided to Align and the required changes addressed prior to re-issue for sign off.

Indicative programme for delivery of draft reports to HS2:

May to June: delivery of Level 2 and 3 reports
 July: delivery of Level 1 report
 June: Delivery of monitoring position statement
 July / August: Delivery of monitoring review
 July - Sept – EA review and comments to Align
 End Sept: report updates and issue final to EA