Hatfield-5301: Planning and assessing borrow pits as source of aggregate material

Planning and assessing borrow pits as source of aggregate material

Challenge

Challenge ID:	HCP-5301	Originator:	Onshore: Hatfield
Title:	**Planning and assessing borrow pits as source of aggregate material.**		
Theme:	ON 5.3: Logistics planning and operations - Facility siting, pipeline routing and roads development		
Consortium Lead:	Arup	Interviewed Company:	Arup
Geography:	ON.REG.00 - Generic onshore		

Challenge Description	
What is not possible / not adequately addressed at present?	
Identify suitable borrow pit locations with aim to reduce hauling distances, determine appropriate setbacks from sensitive areas (e.g. streams and lakes), and assess the volume of aggregate extracted.	
What effect does this challenge have on operations?	
Reducing costs and environmental impact by reducing haulage distance and traffic. Component of environmental management plan for operations that require aggregate and development of borrow pits. At decommissioning, regrade as necessary to establish safe slopes and restore the natural drainage to the area.	
Thematic information requirements:	Lithology, structural geology, surficial geology Land use
What do you currently do to address this challenge? How is this challenge conventionally addressed?	
Imagery analysis (aerial and satellite), resource/geological mapping, site visits- fieldwork	
What kind of solutions do you envisage could address this challenge?	
High resolution optical images and multispectral imagery	
What is your view on the capability of technology to meet this need? Are you currently using EO tech? If not, why not?	
Mature technology with lots of choice of sensors	

Challenge Classification			
Impact on Lifecycle (0=none, 4=high):		Climate / Topography / Urgency:	
Pre-license:	0	Climate class:	Generic climate
Exploration:	1	Topographic class:	Not specific
Development:	3	Seasonal variations:	Any season
Production:	1	Impact area:	Cost reduction
Decommissioning:	2	Technology urgency:	2 - Short term (2-5 years)

Challenge Information Requirements	
Update frequency:	Snapshot

Data currently used:	Landsat, ASTER, GoogleEarth, RapidEye, aerial photography
Spatial resolution:	License
Thematic accuracy:	Not specific
Required formats:	Not specific
Timeliness (Vintage):	Within a month
Geographic extents:	Basin, License
Existing standards:	None

Relevant products

Content by label

There is no content with the specified labels