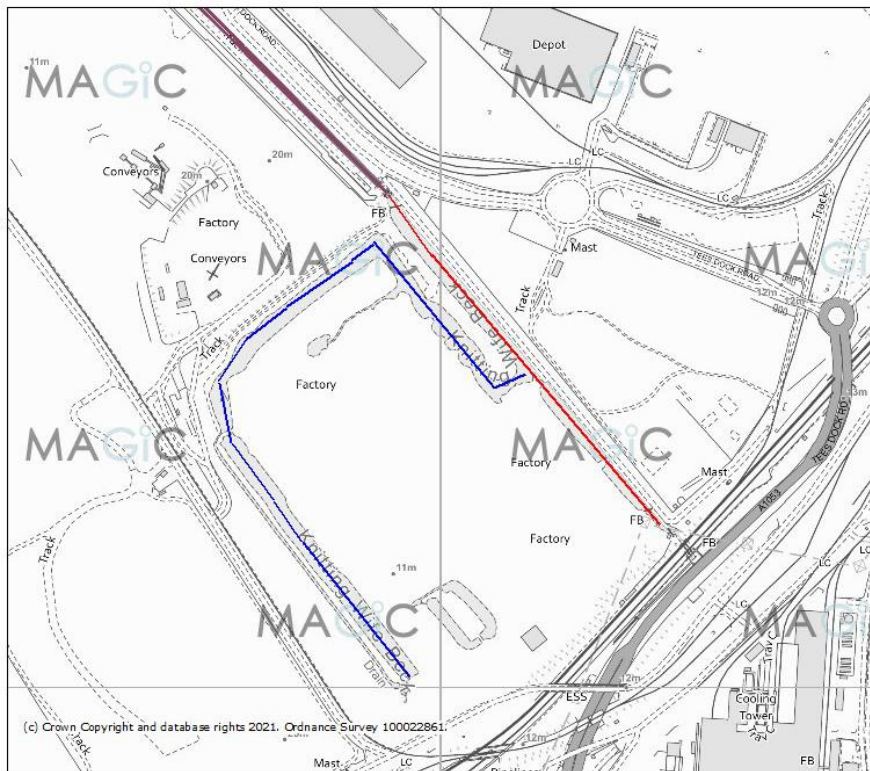


River condition assessment of the, Cleveland and Lackenby Channels
through the Teesworks site.



Key. _____ Cleveland Channel.

_____ Lackenby Channel.

A river condition assessment survey was under taken on the Cleveland and Lackenby channels that flow through the Teesworks site, using the modular river survey (Morph 5) technique in June 2021..

The river condition score is assessed using 32 condition indicators (see appendix) that are automatically extracted from the Morph 5 field surveys, once the information has been uploaded to the information system. Each river condition indicator is assigned a score of 0 to +4(positive indicators) or 0 to -4 (negative indicators). Positive indicators represent the diversity and abundance of physical habitats offered by vegetation, sediment, vegetation – sediment-related physical features, and hydraulic habitats that can be observed at low flow. Negative indicators represent the extent and severity of local human interventions or pressures. The preliminary condition score for each Morph5 subreach is calculated as the sum of the average of the positive condition indicator scores and the average of the negative condition indicator scores for the subreach. The preliminary condition score is translated into a Final condition score (5-good,4-fairly good,3-moderate,2-fairly poor,1-poor)based upon river type.

River type was assessed using the modular river system and produced the river type “large” as width and depths were great to gain an accurate sense of bed materials across the channel shape. There are a total of 15 different river types incorporated into the river condition assessment. This is based on their planform and bed material and supported by their degree of confinement and valley gradient.



Typical section of the Lackenby Channel.



Typical section of the Cleveland

River Condition and Biodiversity credit scores for each channel.

Channel.	NGR:	Preliminary condition score	Average of positive indicators	Average of negative indicators	Final Condition score
Lackenby.	NZ 55097 22431	-0.18	0.89	-1.08	Fairly poor (2)
Cleveland	NZ 54954 22529	0.45	1.37	-0.92	Moderate (3)

Channel.	Approximate length (Km)	Distinctiveness	Condition	Strategic significance	River Units (BDU)
Lackenby.	1	Medium (4)	Fairly Poor (2)	Low importance	8
Cleveland	1	Medium (4)	Moderate (3)	Low importance	12

Total River Units = 20