

Jacksons Edge Service Reservoir

Project No. 80007626

Heavy Traffic Movements during Jacksons Edge Road Closures

Introduction:

This document relates to the estimated heavy traffic movements during proposed road closures along Jacksons Edge Road to enable construction of a new twin compartment service reservoir at Jacksons Edge SR Disley, Cheshire. Heavy traffic refers to vehicles gross weight in excess of 20-tonnes.

All material (soil) moving vehicles are 32-tonne gross. Each vehicle will carry approx 9m³ of material and approx *540m³ of material can be relocated per day.

*It is assumed that 2No. Excavators will be present at the main service reservoir site, which will simultaneously fill 2No. Tippers at a time. The estimated cycle time of filling the tippers, disposal at Light Alders Lane and return is 20-mins. This equates to 3 movements per vehicle per hour i.e. as it is estimated that 2-tippers will be used this equates to 6 movements per hour and 60 movements per working day.

All material quantities are gross which has an allowance factor for 'bulking' which varies between 30% and 50%.

The reasons to support the full road closure of Jacksons Edge Road are:

- Safety of vehicle users – high risk of vehicular impact as road is very narrow in parts and average speed of existing traffic is high
- Maintenance of highway associated with large soil movements i.e. cleanliness of road

We propose to close the road on 5 separate occasions as detailed below:

1. Excavation of Compartment No.1 and Valve-house:

Removal from site to storage, 1950m³ topsoil, 9750m³ subsoil and 6,600m³ of mudstone which is 18,300m³ in total.

This should take approx 34 working days to move.

- *Summary: 60 vehicle movements per day.*
- *Summary: Approx 2,040 vehicle movements over 34 working days.*

Estimated Road Closure for 7-weeks.

Total material at store:	Topsoil -	1,950m ³
	Subsoil -	9,750m ³
	Mudstone -	6,600m ³
	(Total in store is 18,300m ³ for approx 70 weeks)	

2. Reinstatement & Landscaping of Main compartment No.1 and Valve-house

Towards the end of Compartment 1 construction, it will be required to return material from the existing storage field for backfilling around the new compartment. This consists of: 9,750m³ of subsoil and 1,200m³ of topsoil which is 10,950m³ in total.

This should take approx 21 working days to move.

- *Summary: 60 vehicle movements per day.*
- *Summary: Approx 1,260 vehicle movements over 21 days)*

Estimated Road closure for 5-weeks

Total material at store	Topsoil -	750m ³
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Subsoil - NOTHING
Mudstone - 6,600m³
(Total in store is 7,350m³ for approx 4 weeks)

3. Excavation of Compartment No.2:

Removal from site to storage, 280m³ of topsoil, 2,500m³ of subsoil and 2,500m³ of mudstone which is 5,280 m³ total.

This should take approx 10 working days to move.

- *Summary: 60 vehicle movements per day.*
- *Summary: Approx 600 vehicle movements over 10 days.*

Estimated Road closure for 2-weeks

Total material at store: Topsoil - 1,030m³
 Subsoil - 2,500m³
 Mudstone - 9,100m³
(Total in store is 12,630m³ for approx 40 weeks)

4. Importing Engineering Fill to Compartment No.2:

In conjunction with demolition of the existing Reservoir, infill is required under and around the new reservoir. This will consist of 2,275m³ of lean mix concrete (i.e. 380No. 6m³ Concrete Deliveries), and approx 1,000m³ (i.e. 112No Deliveries), of imported stone for base. Total material to come to site 3,275m³. Say 3 deliveries per hour = 30 per day = 150 deliveries per week

This should take approx 17 working days to move

- *Summary: 30 vehicle movements per days*
- *Summary: 150 vehicle movements per week*

Estimated Road closure for 4-weeks

5. Reinstatement & Landscaping of Main Compartment No.2

5.1 Towards the end of Compartment 2 construction, it will be required to return material from the existing storage field for backfilling around the new compartment. This consists of 1,030m³ of topsoil, 2,500m³ of subsoil and 9,100m³ of mudstone which is 12,630m³ in total.

This should take approx 24 working days to move.

- *Summary: 60 vehicle movements per day.*
- *Summary: Approx 1,440 vehicle movements over 24 days.*

*Estimated Road Closure for 5-weeks (Please see note below)

Total material at store: NOTHING

5.2 An additional 6,000m³ gross shortfall of top-soil material will be required to supplement the existing re-used material for infilling around Compartment 2.

This should take approx 10 working days to move in from an external source.

- *Summary: 60 vehicle movements per day via Carr Brow.*
- *Summary: Approx 600 vehicle movements over the 10 days*

*Estimated Road Closure for 2-weeks (Please see note below)

*Note - These road closure periods are to be combined in to a single 7-week road closure.