



# **Hodder WTW Traffic Management Plan**

80040117-01-MMB-HODDE-NA-97-RP-I-0008

October 2019

United Utilities



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# Issue and Revision Record

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## Table of Contents

<b>1.</b>	<b>Introduction</b>	<b>1</b>
1.1	Site Address	1
1.2	Summary	1
<b>2.</b>	<b>The Proposal</b>	<b>3</b>
2.1	Description of the Works	3
2.2	Work Programme	3
2.3	HGV Routes	3
2.3.1	Concrete	3
2.3.2	Aggregates	5
2.3.3	Other Construction Materials	5
2.4	Profile of Car/Van and HGV Generation	7
2.5	Vehicle Movements	8
2.6	Pre-cast Vs In-Situ Traffic Assessment	12
2.7	On-site Batching of Concrete	13
2.8	Soil Stabilisation	13
2.8.1	On-site Haul Road & Compound	13
2.8.2	Piling Mat	13
<b>3.</b>	<b>Constraints to Movement</b>	<b>14</b>
<b>4.</b>	<b>Measures to Control HGV Movements</b>	<b>15</b>
4.1	Site Access	15
4.2	Days/hours of operation	15
4.3	Wheel Cleaning Measures	15
4.4	Vehicle Call-up Procedure	15
4.5	Provision of Signage on Designated Route	16
4.6	Access through Slaidburn	16
<b>5.</b>	<b>Consultation</b>	<b>17</b>
5.1	Planned Liaison with the Local Authority and Parish Council	17
5.2	Public Rights of Way	17
5.3	Disruption to Existing Waste Collections	17
5.4	Adjacent Land Uses	17
5.5	Disruption to Existing Road Users	17
<b>A.</b>	<b>Drawings</b>	<b>18</b>



# 1. Introduction

## 1.1 Site Address

United Utilities  
Hodder Water Treatment Works  
Bentham Road  
Slaidburn  
Clitheroe  
BB7 3AQ

## 1.2 Summary

This Traffic Management Plan has been prepared to demonstrate the likely generation and routing of traffic associated with the proposed renovation and construction works at Hodder Water Treatment Works (WTW) and Stocks Reservoir.

The proposal involves the construction of a new large-scale concrete structure, modifications to existing plant, construction of new plant and works to the overflow weir at Stocks Reservoir. The developments are required as existing plant is nearing asset expiry and is becoming increasingly difficult to maintain. The upgrades will allow the treatment works to meet current regulatory standards, achieve flow throughput and provide additional dry-weather storage.

The site is located North-East of the village of Slaidburn and at the foot of Stocks Reservoir dam. Access to site from Slaidburn is via The Skaithe and Catlow Road. From The Skaithe, the existing operational site shares an access road with Stocks Fly Fishery, Life for a Life Foundation and Catlow Farm.

Alternatively, access can be gained from the North from Bentham, following Lythe Fell Road (Quiet Lane) to Catlow Road, the entrance to site described above.

The construction works will generate car and light van traffic associated with construction workers. It will also generate a volume of Heavy Goods Vehicles (HGV) delivering plant and machinery, concrete, aggregates, steelwork, pipework, mechanical items and other general construction materials.

In order to construct the proposed works, sizeable excavations will be required. Rather than remove the spoil generated from the site (~3,500m<sup>3</sup>), creating additional volumes of traffic, it is proposed to utilise the spoil to create a landscaping bund located within an adjacent field (subject to required permissions), owned by United Utilities Plc and directly accessible from Catlow Road. For completeness, if Planning Permission for the re-landscaping is not obtained, and the soils require moving off site, then this muck away volume would generate in the region of another 400 HGV movements.

The traffic management plan has been structured as follows;

- Section 2 provides a description of the proposed development and the timescale for the construction period. The estimates of both car and HGV traffic are provided. At this stage we are unable to estimate the numbers of vehicle movements along each route, as the suppliers have not yet been chosen.

- Section 3 describes the identified constraints to vehicle movements.
- Section 4 identifies measures to control the impact of HGV movements.
- Section 5 describes the planned liaison/consultation with the interested parties.

## 2. The Proposal

### 2.1 Description of the Works

The proposed development includes the following;

- Tree and vegetation removal to allow for construction of the proposed works.
- Construction of 8No. Rapid Gravity Filters (RGFs) complete with associated pipework, mechanical/electrical installations and a steel-clad building to house the equipment. Each filter will have a plan area of 85m<sup>2</sup> and be filled with filter media.
- Construction of a clean backwash tank (incorporated in to the main RGF structure).
- Construction of 2No. dirty backwash tanks complete with associated foundation, pipework and mechanical/electrical installations.
- Construction of 4No. washwater lamella clarifiers complete with associated foundation, pipework and mechanical/electrical installations.
- Modifications to the existing lime dosing system to improve reliability.
- Works to increase the level of the overflow weir at Stocks reservoir.
- Decommissioning and removal from site of the existing Bells Pressure Filters (147No.).
- Site security enhancements associated with the new installations.
- Landscaping including tree planting.

### 2.2 Work Programme

The current project programme shows the following for each major stage of works which are programmed to take place between Spring 2020 and Spring / Summer 2023 in the following sequence;

- 3 months – Enabling works, site setup, haul road and work compound construction
- 2 months – RGF bulk excavation
- 3 months – RGF Piling & foundation works
- 8 months – RGF civil construction, including steel frame & cladding
- 2 months – Stocks Reservoir works
- 2 months – Dirty backwash tank works
- 2 months – RGF pipework, mechanical / electrical installation
- 3 months – Lamella clarifier construction
- 6 months – RGF commissioning
- 5 months – Decommissioning and removal of Bells Filters
- 7 months – Finishing works, landscaping and demobilisation

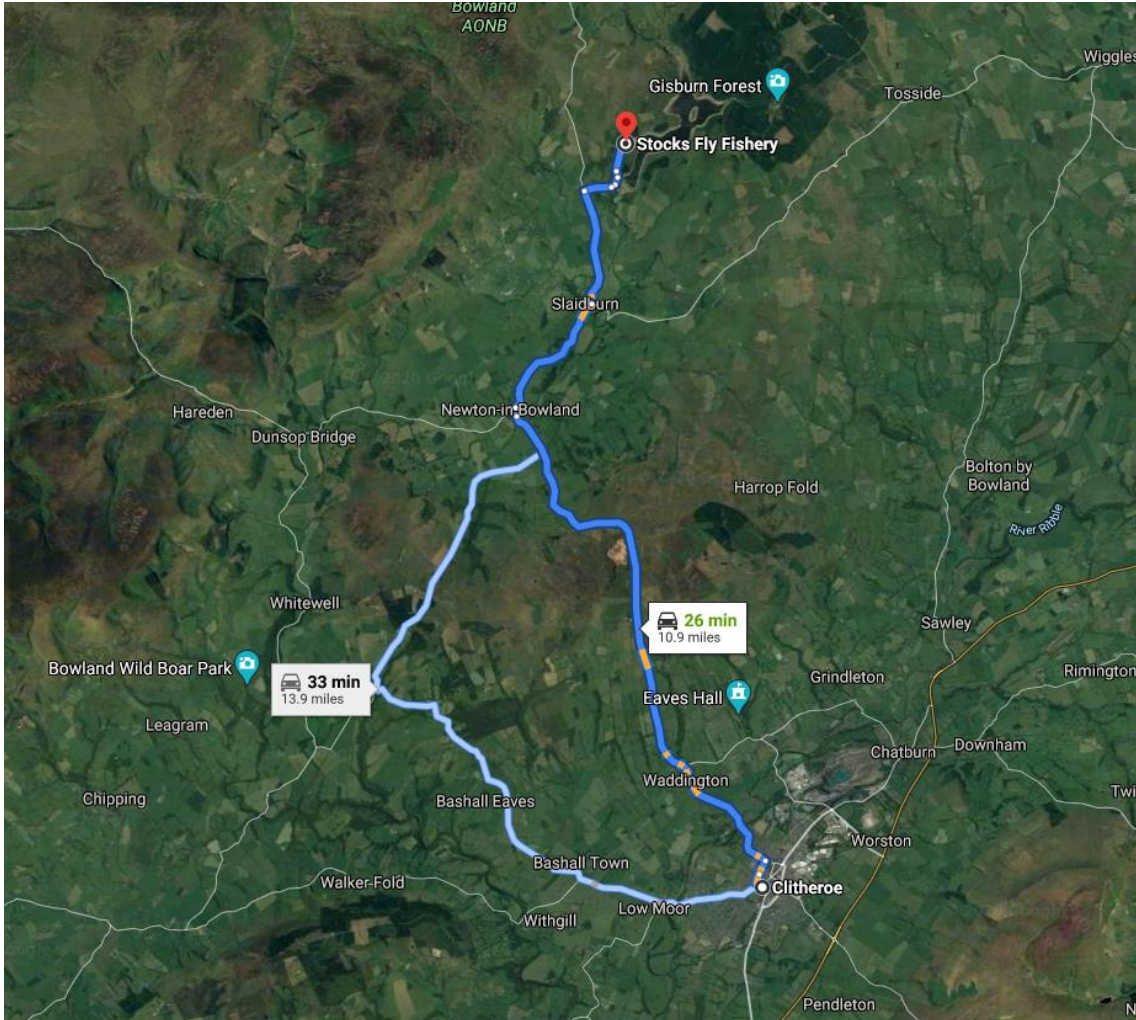
### 2.3 HGV Routes

#### 2.3.1 Concrete

As the new RGF will be constructed from in-situ concrete, a large proportion of HGV movements will be wet concrete deliveries. To reduce embodied CO<sub>2</sub> associated with transportation and to maximise use of local materials, it is envisaged that the concrete will be sourced from either the North (Bentham) or the South (Burnley or Blackburn), with deliveries travelling along a route passing through either Bentham or Clitheroe respectively. Figure 1 shows the route options from Clitheroe to the site. Figure 2 shows the route passing through Bentham to the site. The concrete supplier is yet to be determined. The preferred route will be

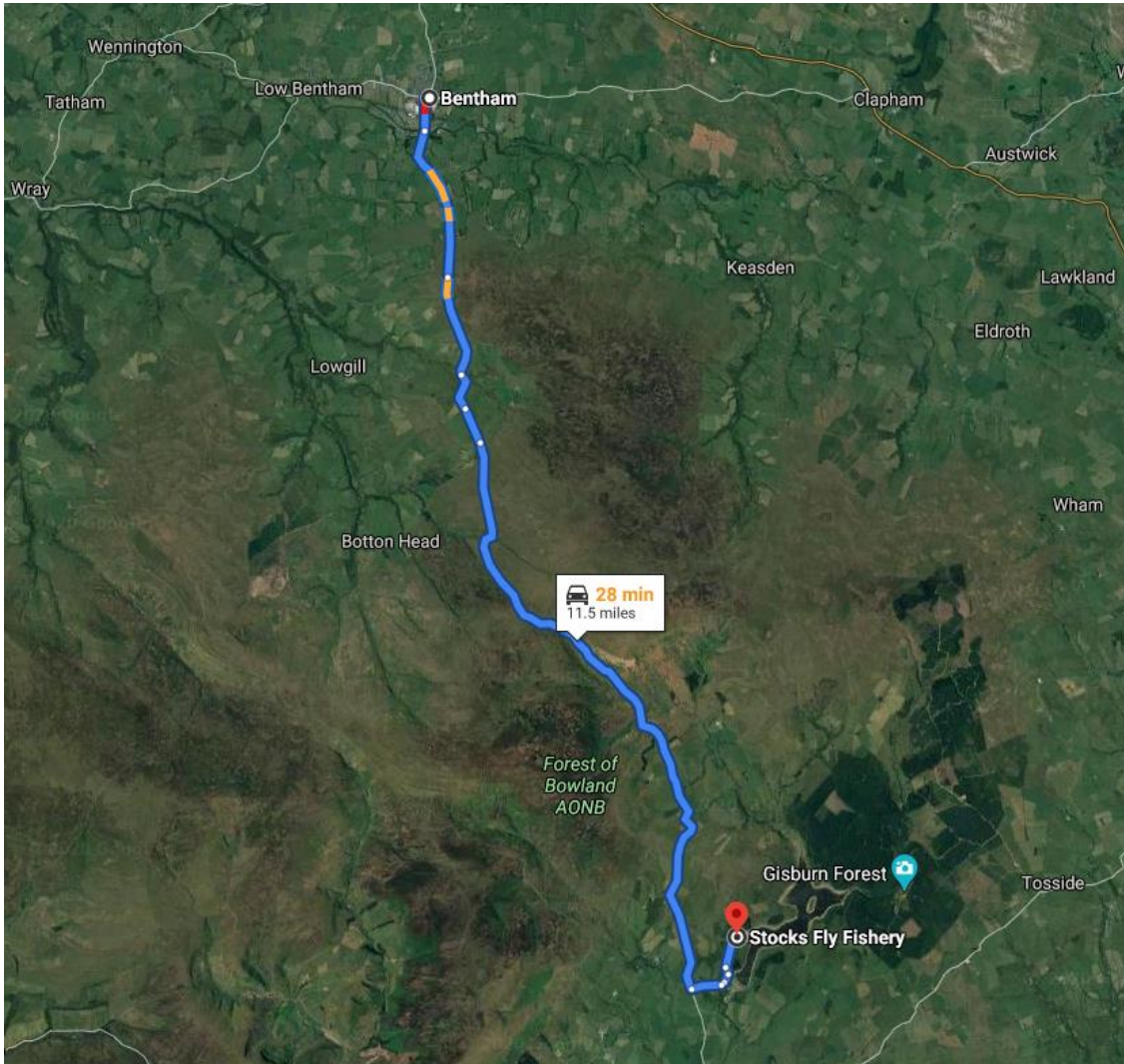
selected following consultation with the plant logistics specialists taking account of community impacts and potential conflict with other road users.

**Figure 1: Route options from Clitheroe to site**



Source: Google Maps

**Figure 2: Route from Bentham to site**



Source: Google Maps

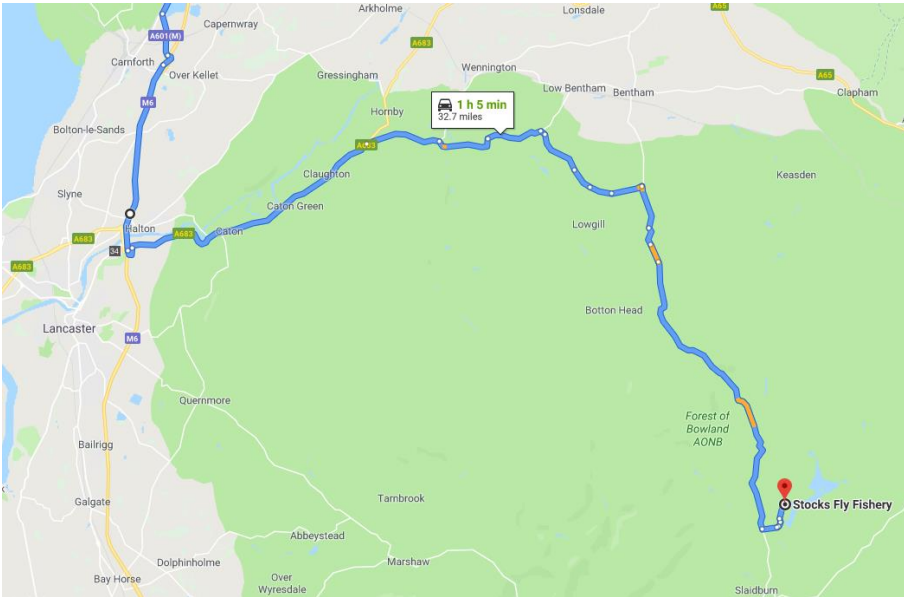
### 2.3.2 Aggregates

As with concrete, it is envisaged that the aggregates will be sourced from a local quarry to minimise delivery mileage, and CO<sub>2</sub> generated from transportation, of which the closest is Waddington Fell Quarry, and which is passed on the route from Clitheroe. Other options include quarries to the North of Bentham, which would use the Bentham route. The aggregate supplier is yet to be determined.

### 2.3.3 Other Construction Materials

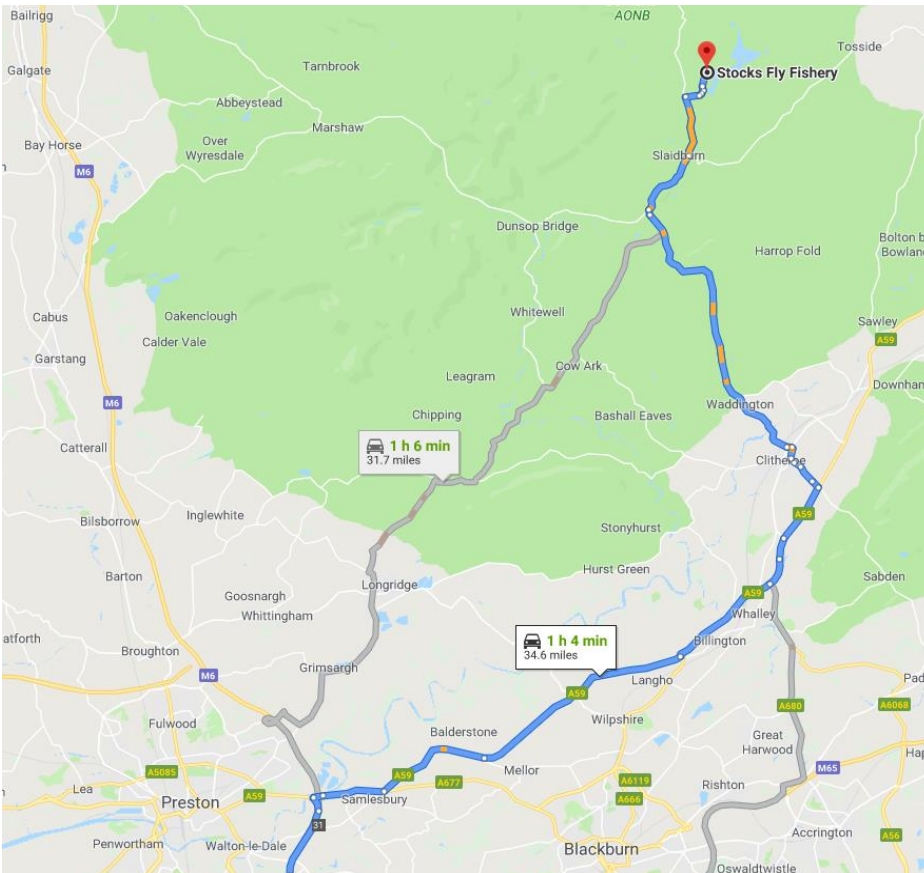
Many other materials will be required as part of the construction, the sources of which are still to be confirmed. Due to the site's location it is envisaged that these materials could come from the North, South and East. In each case, vehicles would make use of main arterial carriageways as far as is practical. The following figures show the suggested options. As a prerequisite to their purchase order, each supplier will be issued with an agreed route map which they must follow.

**Figure 3: Route from the North**



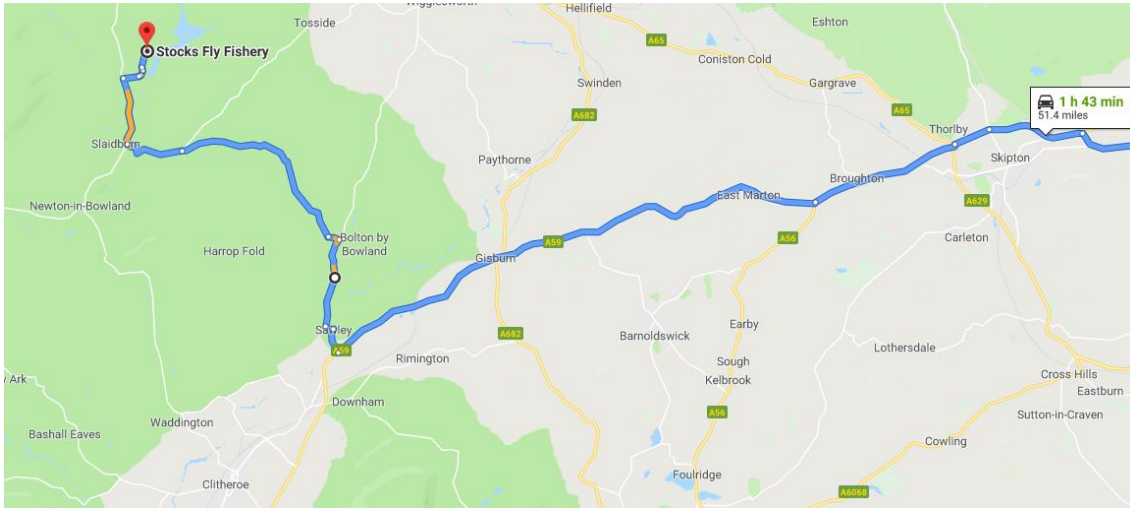
Source: Google Maps

**Figure 4: Route from the South**



Source: Google Maps

**Figure 5: Route from the East**



Source: Google Maps

## 2.4 Profile of Car/Van and HGV Generation

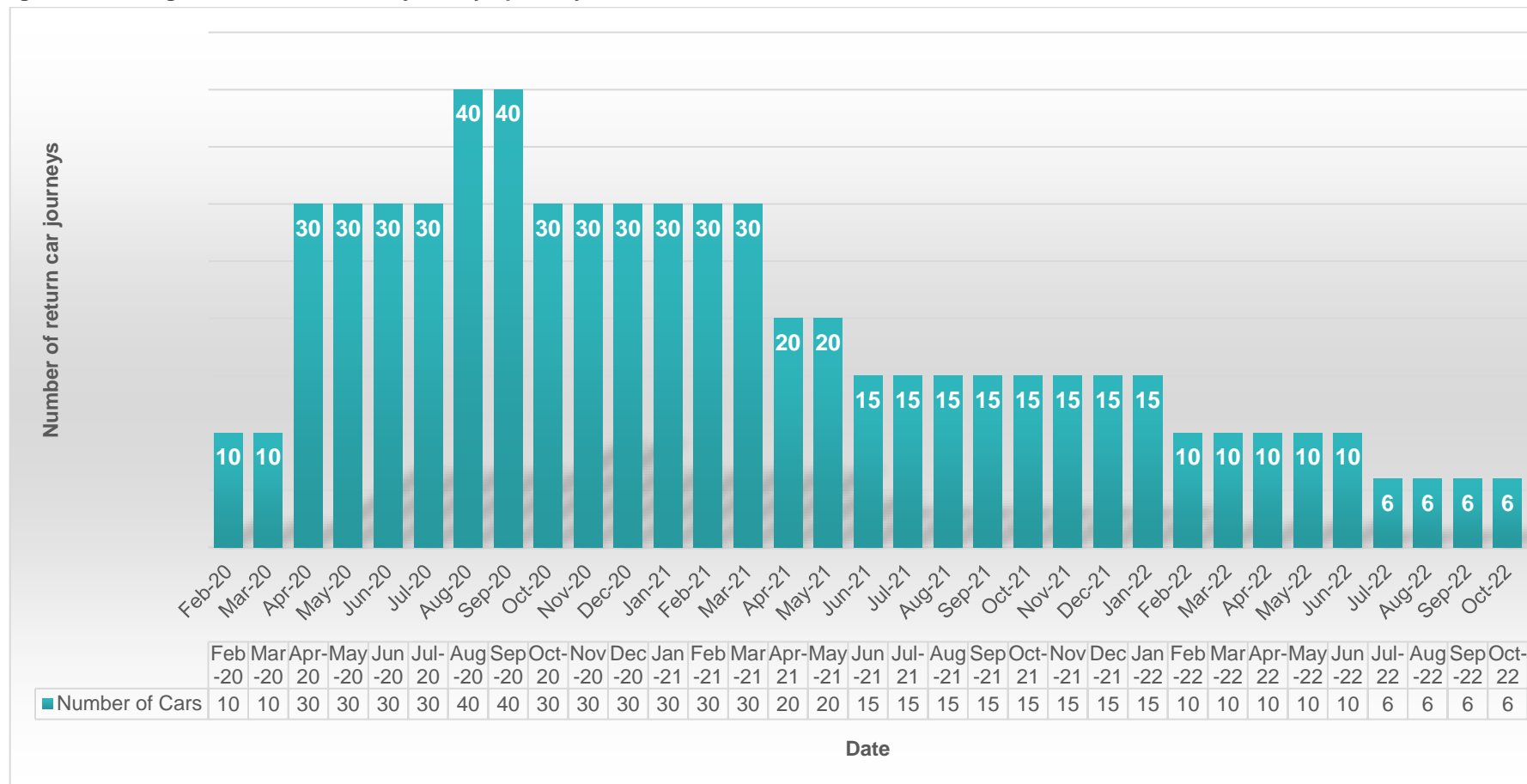
The typical types of vehicles that will be used throughout the project are;

- Concrete mixer wagon (HGV)
- Eight-wheel rigid tipper lorry delivering aggregates and removing spoil (HGV)
- Articulated low loader delivering plant and machinery to the site (HGV)
- Articulated container vehicles delivering materials and specialist equipment (HGV)
- Eight-wheel rigid flatbed delivering piles, steel work, cladding, pipes, bricks / blocks, mechanical equipment (HGV)
- Rigid curtain sided lorry delivering general building supplies and equipment (HGV)
- Mobile cranes to facilitate site lifting operations and offloading (HGV)
- Construction staff / labour cars / vans

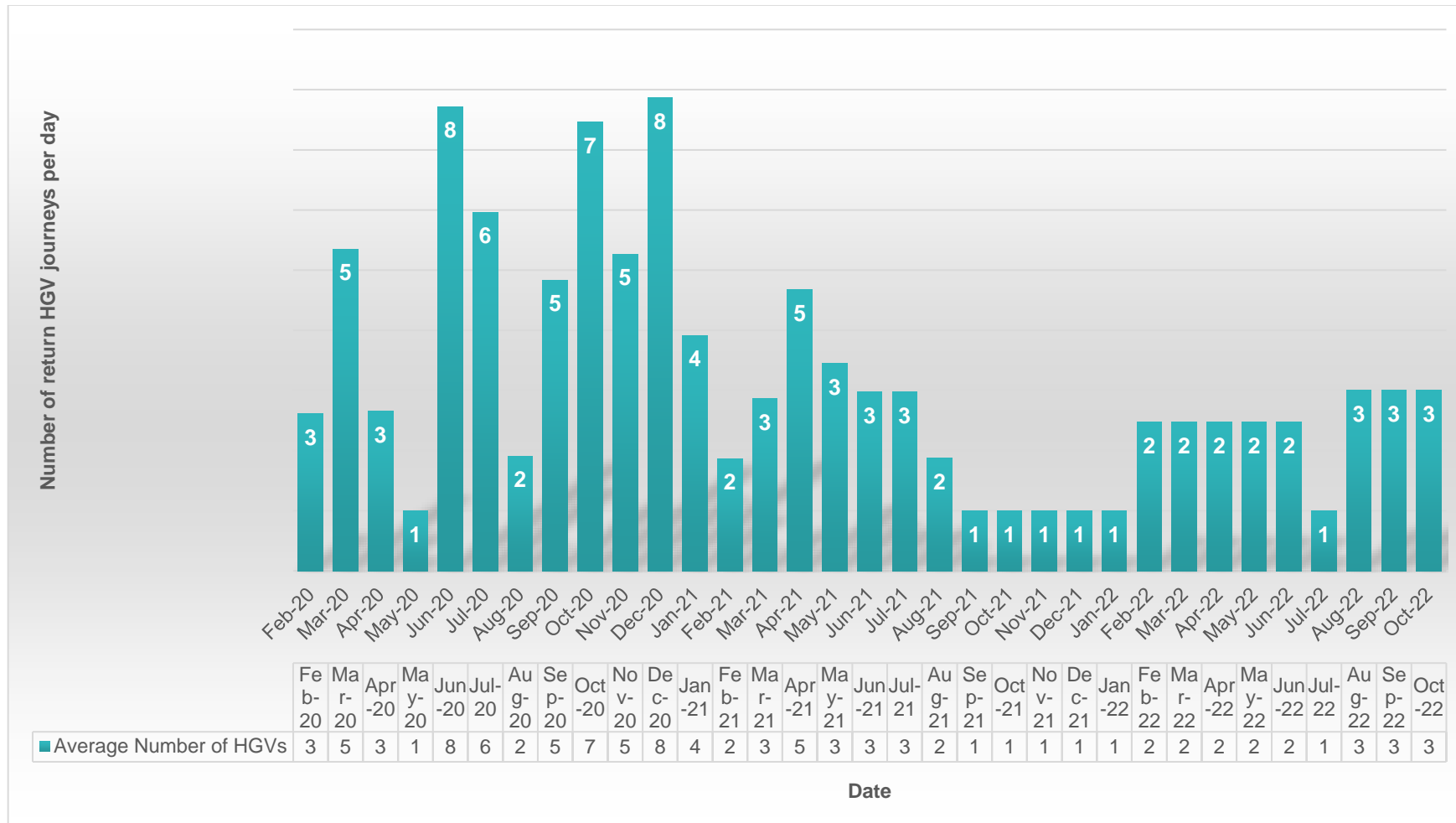
## 2.5 Vehicle Movements

The generation of vehicles onto the local road network as a result of the construction works has been analysed. The estimated numbers in terms of daily car / van and HGV generation on a month-by-month basis is shown in Figure 6 to Figure 9 below.

**Figure 6: Average car and van return journeys per day**

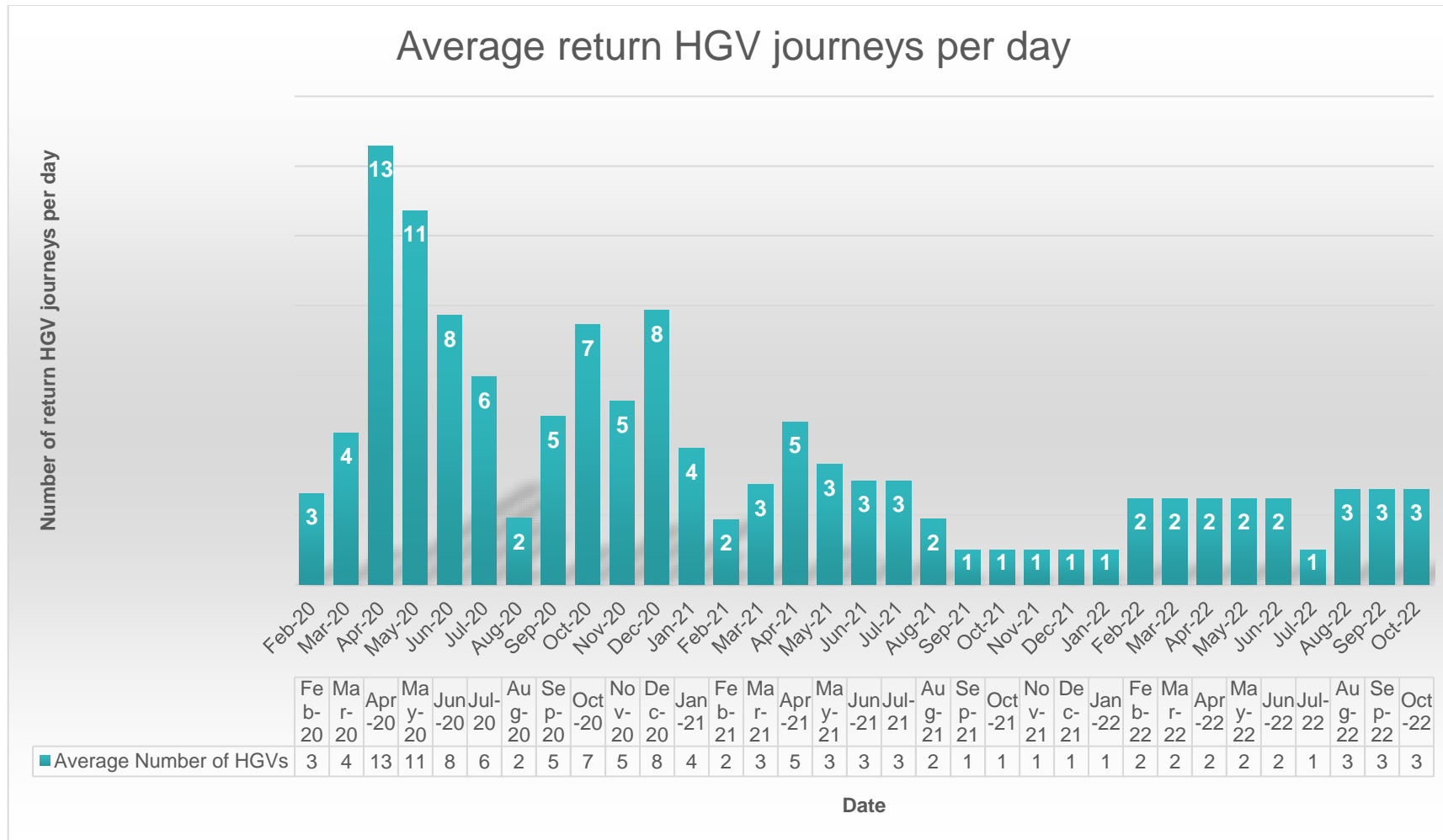


**Figure 7: Average HGV return journeys per day (assuming soils remain on site)**



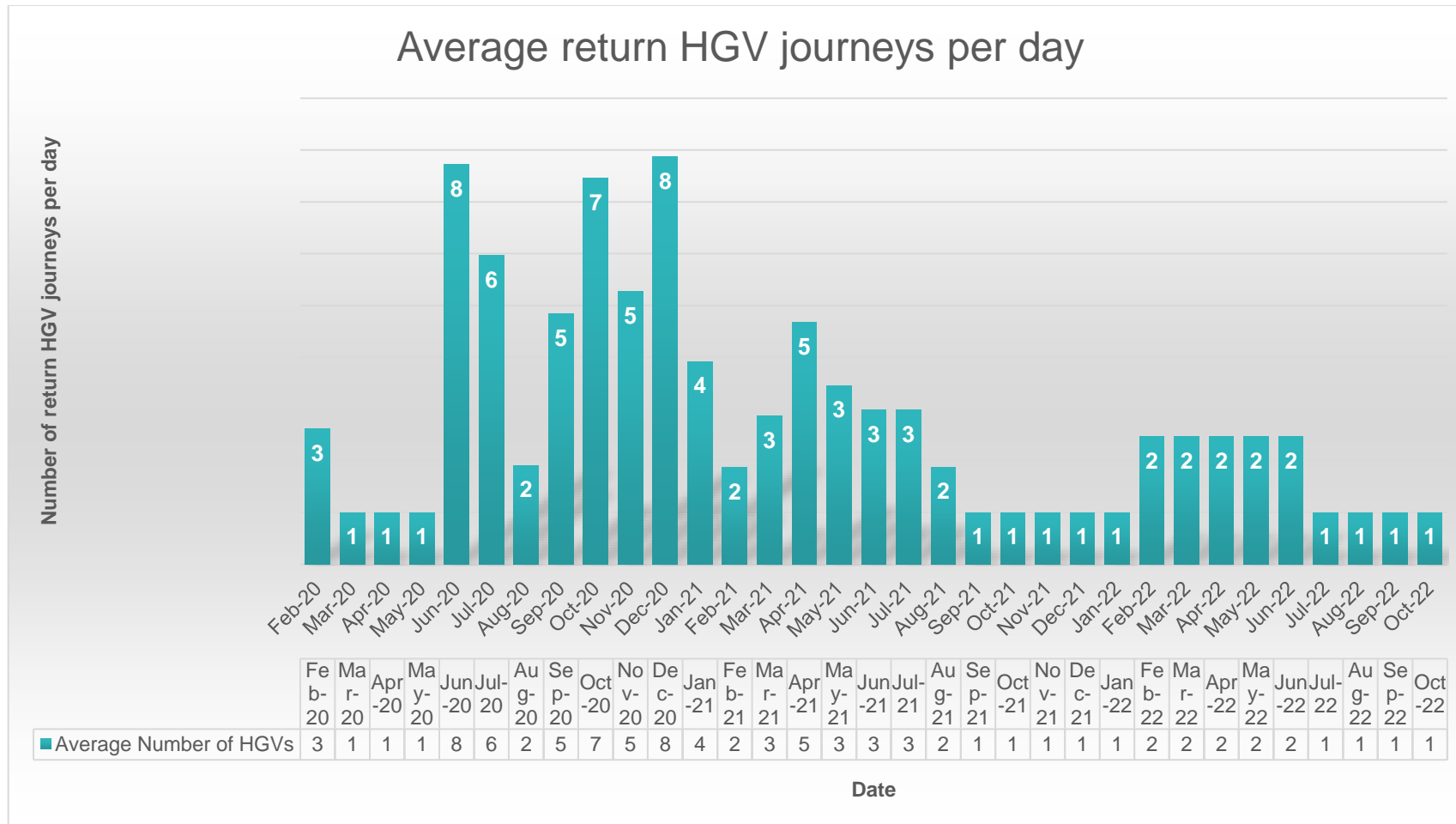
Source: 80040117-01-MMB-HODDE-NA-DC-C-00001 – Traffic Assessment

Figure 8: Average HGV return journeys per day (assuming soils exported from site)



Source: 80040117-01-MMB-HODDE-NA-DC-C-00001 – Traffic Assessment

**Figure 9: Average HGV return journeys per day (assuming soils remain on site & soils stabilisation on Haul Road and Compound)**

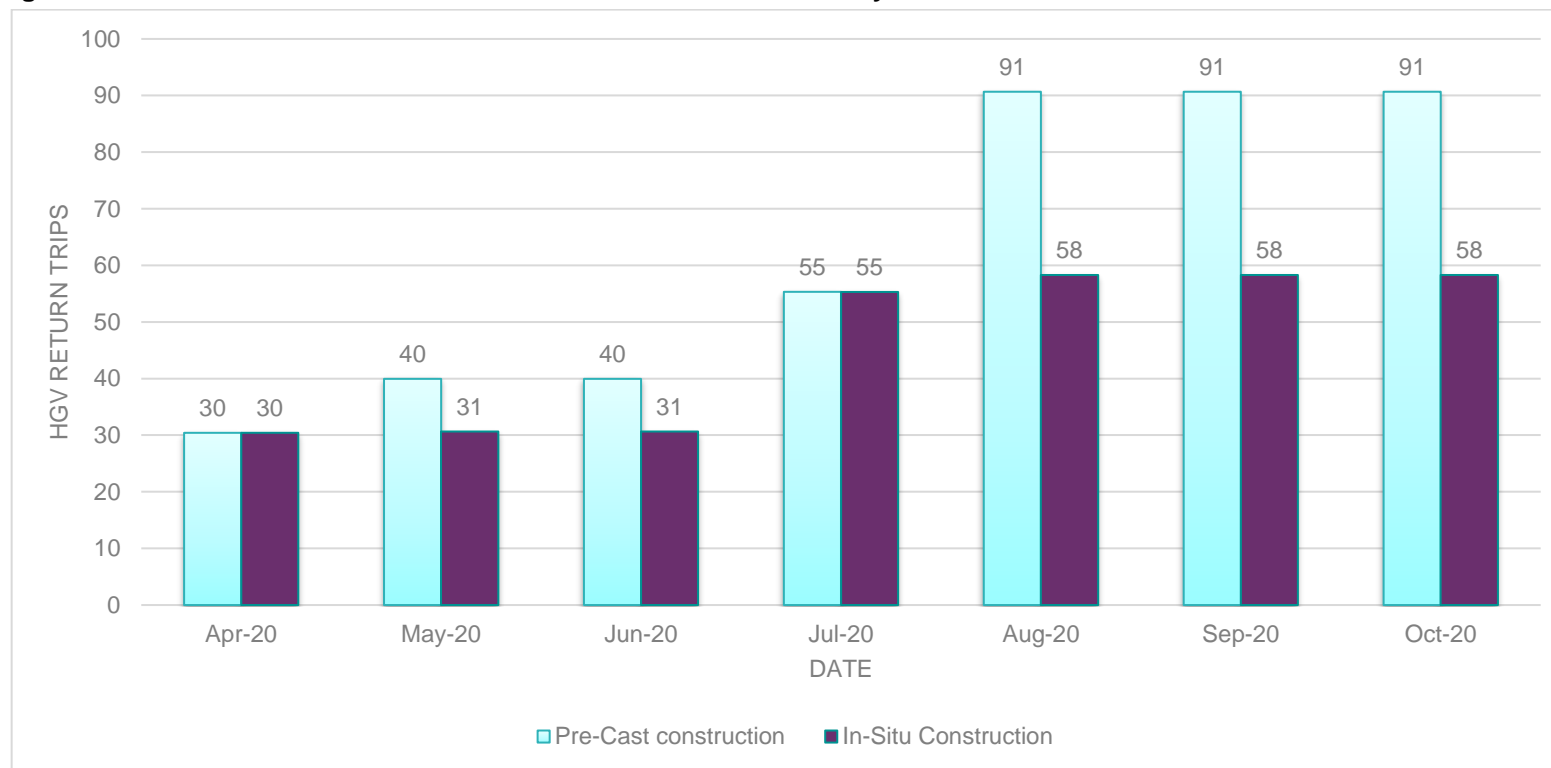


Source: 80040117-01-MMB-HODDE-NA-DC-C-00001 – Traffic Assessment

## 2.6 Pre-cast Vs In-Situ Traffic Assessment

During the outline design phase, an assessment was completed to analyse the traffic impact of constructing the RGF with in-situ compared to a pre-cast construction. The figure below shows the number of HGV movements relative to the construction method. Based on this, an in-situ construction is preferred.

**Figure 10: RGF In-Situ Vs Pre-Cast construction – HGV return Journeys**



Source: 80040117-01-HODDE-NA-DC-C-00001-Traffic Assessment

## 2.7 On-site Batching of Concrete

During the design phase the option of on-site batching of concrete was explored. The process was discounted for the following reasons;

- The constituent materials of concrete would all need to be delivered to site (cement, aggregates, admixtures etc). This would result in similar vehicle movements as associated with wet concrete deliveries. Furthermore, the cement would need to be delivered by dry bulk cement tankers (articulated) which would increase the number of this size of vehicle on the local road network.
- Although controllable, there would be an increased risk of cement dust emissions if on-site batching was utilised. Cement dust is a recognised irritant and exposure can result in respiratory conditions.
- The operation would result in an increased light/noise/vibration level in the area. Although there are few immediate receptors, the general area is regularly frequented by the public via the network of footpaths. The lights would need to be on during all production activities which would likely span in to the night.
- There are limited facilities on site to deal with waste arisings that would be generated when washing down the process equipment. This waste would need to be removed from site thus increasing traffic movements.
- An assessment also concluded that the volume of concrete required over the staggered programme was not sufficient to make the option commercially viable. Batching on site would also potentially impact local economies as material could be sought from much further afield.

## 2.8 Soil Stabilisation

Soil stabilisation is an innovative method of hardening existing ground and materials to form a useable temporary surface compared with a more traditional method of placing and compacting virgin/processed aggregates.

### 2.8.1 On-site Haul Road & Compound

The Contractor has committed to utilising soil stabilisation to form a haul road and working compound within Phynis field. Although more costly, utilisation here will result in removing the need to import 1800 Tons of aggregate and subsequently the need for approximately 90 HGV journeys.

The graph showing expected HGV movements for this scenario is shown in Figure 9Figure 9.

### 2.8.2 Piling Mat

The Contractor is also reviewing the possibility of stabilising the ground beneath the main structure to act as a piling mat, again, instead of importing aggregate. The piling mat is a technically complex installation and must be competent to safely support the piling rigs. The viability therefore depends on detailed investigation and design and at this point cannot be confirmed.

## 3. Constraints to Movement

Due to the nature and location of the works, several constraints have been identified when assessing the project. These include but are not limited to;

- Restricted access through the village of Slaidburn
- Public Rights of Way (PRoW)
- Narrow single-track roads, with occasional passing places, in the general area
- Single track road bridges in the general area
- Potential conflicts with other road users
- Poor visibility around corners in the general area
- Vehicles parked on the side of the road outside dwellings in Waddington / Slaidburn
- Brennand's Endowed Primary School is on the route of deliveries
- Waddington and West Bradford Primary School is on the route of deliveries
- Grindleton CofE Primary School
- Bentham Auction Market – generally weekly on Tuesdays and Wednesdays
- Shared access track with Stocks Fly Fishery / RSPB / Life for a Life Foundation

## 4. Measures to Control HGV Movements

The following measures to control HGV movements and minimise disruption are proposed.

### 4.1 Site Access

Refer to drawing 80040117-01-MMB-HODDE-97-DR-I-00004 – Traffic Management Plan in Appendix A for details of the proposed access provisions local to and within the site, material storage and unloading areas. The intention is to ensure that vehicles are able to enter, turn and exit in a forward direction removing the need (and associated safety concerns) of reversing.

### 4.2 Days/hours of operation

Construction work will be undertaken on site in the following hours:

- Monday to Friday: 07:00 to 18:00
- Saturday: 08:00 to 13:00
- Sunday and Bank Holidays: No work

The movement of HGV will be restricted to between the hours of 7.30am and 6.00pm to minimise the environmental/social impact. Where possible HGV deliveries will be scheduled to occur outside of 8.30-9.30am and 3.00-4.00pm during school term time to avoid coinciding with the start/finish of local schools in the area. Only in exceptional circumstances will these hours of operation be exceeded such as for major equipment delivery or in the case where emergency works are required.

### 4.3 Wheel Cleaning Measures

The existing site has permanent surfaced circulation roads (tarmac/concrete). As there is a direct haulage route between the site and the identified location of the spoil landscaped bund, permanent wheel washing facilities are not envisaged as necessary.

Internal site circulation roads will be kept clean as required using road sweeping equipment. If the landscaping proposals cannot be agreed and excavated material must be removed from site this proposal may need to be revisited and a wheel wash provided for the duration of the spoil movements.

### 4.4 Vehicle Call-up Procedure

To ensure efficient scheduling of site works, where possible, deliveries will be given set times to arrive. Site specific delivery instructions will be sent to all suppliers and hauliers. The logistics associated with the delivery of larger plant/equipment will be discussed and agreed at specific site meetings in advance of transit. The Contractor will brief all employees and visitors about safe and courteous driving to and from the site during site inductions.

The Site Manager (or delegated representative) will be responsible for supervising, controlling and monitoring vehicle movements around the site and trained site staff will be available to coordinate and assist delivery vehicles as required. It is not envisaged that any delivery vehicle will need to wait or stack on the local road network. The Contractor's own vehicles will be parked in a separate compound close to the site offices and will not prevent deliveries accessing site.

#### 4.5 Provision of Signage on Designated Route

Once routes have been confirmed, a number of strategically located advisory route signs will be erected on the motorway/principal/trunk road network for the duration of the construction period. The style and location of the signage will be agreed with Lancashire County Council Highways Department and will be used to direct HGVs to the preferred route.

The directional signs to the site need to be supplemented with signs that control the movement of vehicles travelling from the site back to the strategic highway network. These will take the form of 'black on yellow' signs located at strategic locations to be agreed.

In addition to the directional signs, supplementary signs may be provided at agreed locations stipulating 'NO ACCESS FOR HGV CONSTRUCTION TRAFFIC' in order to prevent vehicles deviating from the preferred routes.

In particular signage will be placed at the 'snicket' in Newton to prevent vehicles using the Sat-nav route and directing them along the major road, passed The Parkers Arms public house.

The Contractor will maintain the route signage for the duration of the construction works.

#### 4.6 Access through Slaidburn

The access through Slaidburn and on to The Skaithe is narrow with limited passing places. This route will be managed, at periods of heavy sustained delivery traffic, i.e. during large concrete pours, by positioning marshals at agreed control points between Slaidburn and the site. Communicating via walkie talkies the marshals will hold vehicles on site (Catlow Road) or direct vehicles to safe passing places to ensure that HGVs are routed to site as safely and effectively as possible and with minimum disruption to local road users.

## 5. Consultation

### 5.1 Planned Liaison with the Local Authority and Parish Council

A formal process of liaison between all relevant parties is proposed to:

- Establish a channel of communication between the Contractor and the Regulating Authorities.
- Provide local residents with contact information so that any complaints can be communicated and dealt with (both during and out of hours).
- Provide a route through which transport related issues can be identified and dealt with.
- Provide prior notice of significant events e.g. delivery of abnormal loads.

### 5.2 Public Rights of Way

Although not directly affected by the works, there are a number of Public Rights of Way that pass through the local area. Liaison is underway with the local population and the Parish Council to ensure all parties are included and aware of activities over the construction period. It may be beneficial to install temporary signs where footpaths join roads advising of the construction works and resulting traffic.

### 5.3 Disruption to Existing Waste Collections

It is not envisaged that the construction works will impact any council run waste collection services. The Contractor will establish the days, times and routes of existing collections to confirm this.

### 5.4 Adjacent Land Uses

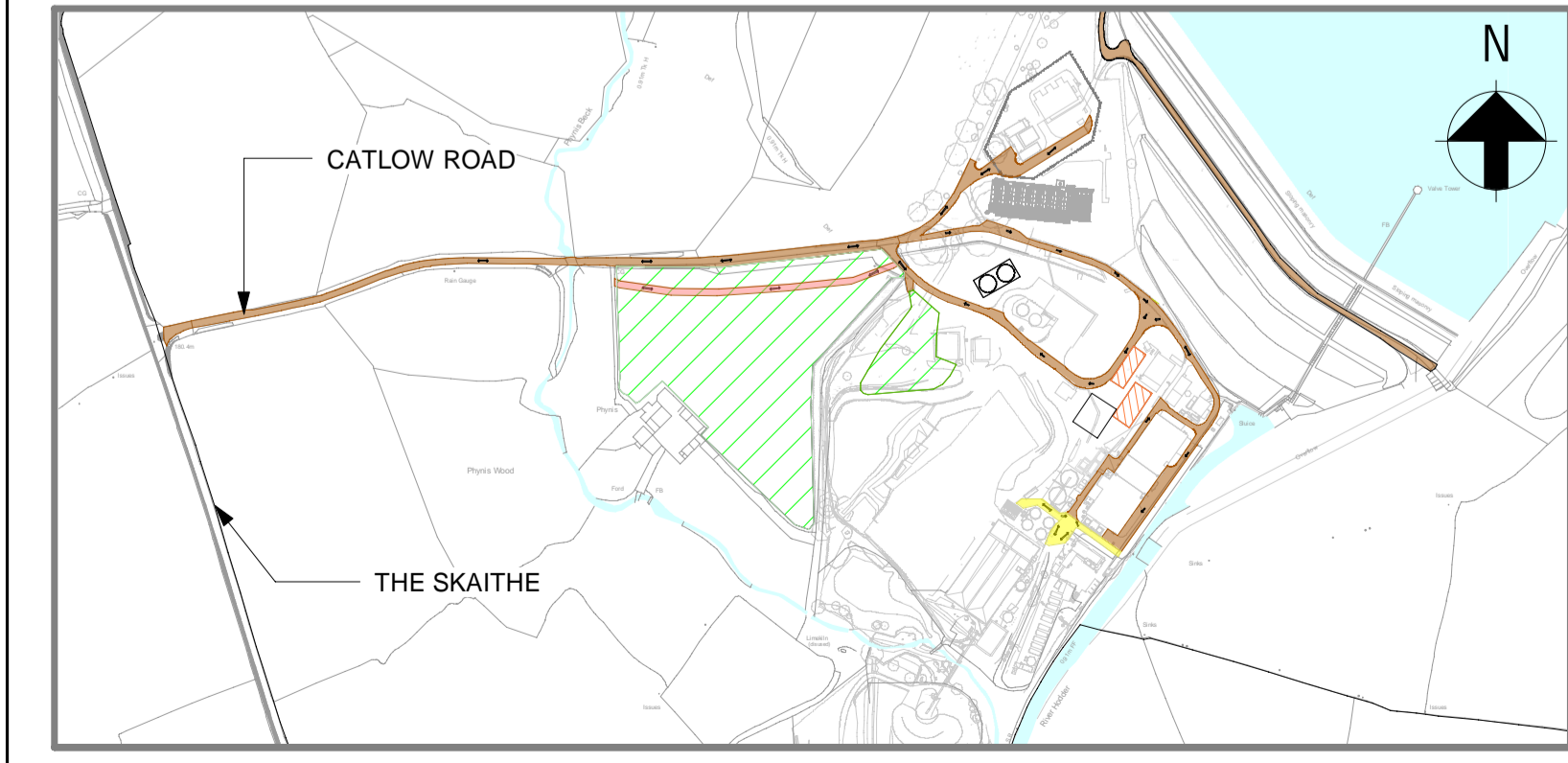
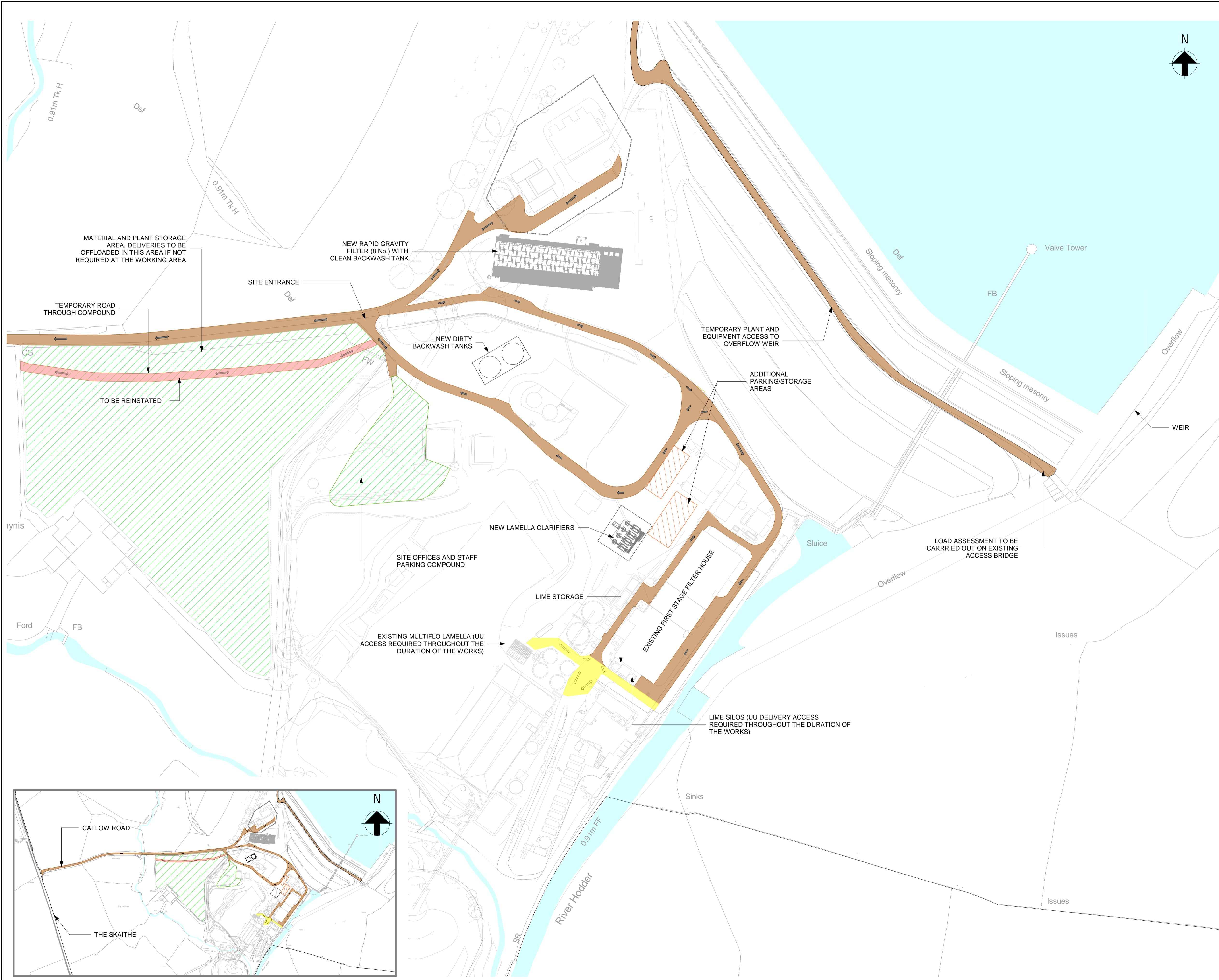
Adjacent arable farm land will not be affected by the works (other than the area required to form the landscaping bund) and therefore can continue to be farmed throughout.

### 5.5 Disruption to Existing Road Users

A local livestock market has been identified in the neighbouring town of Bentham with main sale days on occasional Tuesdays and every Wednesday. Livestock hauliers may use the road between Slaidburn and Bentham on these days with HGVs. It is not envisaged that the construction works will impact any existing road users however the Contractor will establish the days, times and routes of existing journeys to ensure they are able to continue unaffected.

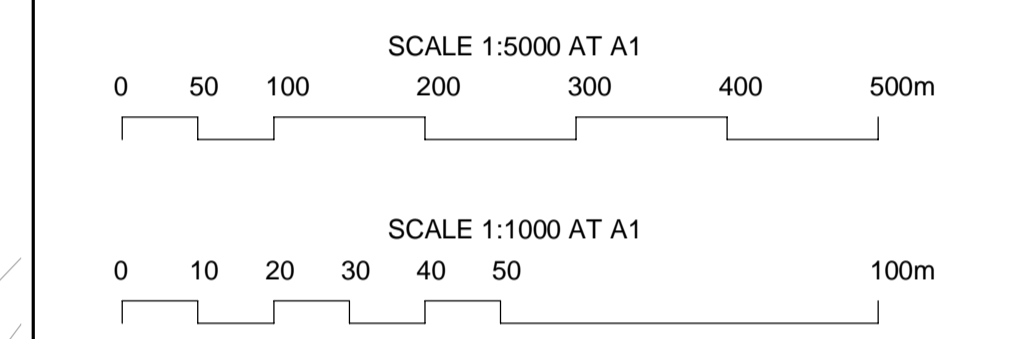
# A. Drawings

80040117-01-MMB-HODDE-97-DR-I-00004 – Traffic Management Plan



**NOTES**  
 1. ALL DIMENSIONS IN MILLIMETRES AND LEVELS IN METRES AOD UNLESS NOTED OTHERWISE.  
 2. NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING.

- LEGEND**
- CONSTRUCTION ACCESS ROUTE
  - SITE COMPOUND
  - ADDITIONAL PARKING / MATERIALS STORAGE AREA
  - PROPOSED HARDSTANDING
  - EXISTING UU ACCESS
  - TO BE REINSTATED



**CURRENT ISSUE INFORMATION**

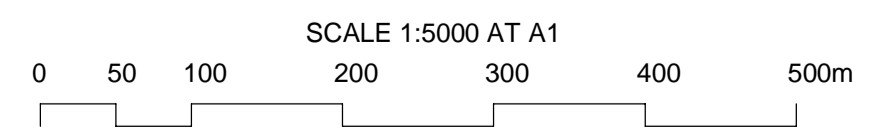
P03	ZD	KM	-	NC	MINOR UPDATES	05/03/20
P02	ZD	KM	-	NC	MINOR UPDATES	06/12/19
P01	ZD	KM	-	NC	ISSUED FOR PLANNING APPLICATION	17/10/19
VERSION	AUTH	CHK	B.CHK	REVD	REASON FOR ISSUE	DATE
S2	Issued For Information					
SUITABILITY CODE	SUITABILITY DESCRIPTION					



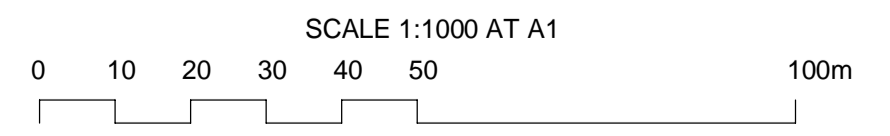
**MMB**  
 MOTT MACDONALD  
 BENTLEY

UNITED UTILITIES WATER LIMITED  
 AMP6 FRAMEWORK  
 HODDER WTW  
 TRAFFIC MANAGEMENT PLAN  
 WATER TREATMENT WORKS

**THE ACCESS DOWN TO 'THE SKAITHE'**  
 1 : 5000



**TRAFFIC MANAGEMENT PLAN**  
 1 : 1000



SCALE	SHEET SIZE
As indicated	A1
DRAWING NUMBER	REVISION
80040117-01-MMB-HODDE-97-DR-I-00004	P03

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