Traffic and Access

This factsheet focuses on our proposals around traffic modelling and the design evolution of our traffic and access options which have been presented in the Phase Two Community Consultation Leaflet (pages 24-27).

Comments received from our previous consultation exercises about road access had a strong focus on road safety for both motorised and non-motorised users (NMU) and potential conflicts which could arise with the Horningsea greenway. We were also asked about the possible location of the permanent access to the Site and where this could be situated within the local or strategic road network.

This factsheet was originally published in June 2021 as part of our phase two consultation. We have now published this revised version (October 2021) to provide an update on the estimated number of non-HGV traffic movements included in **Table 1**.

What has happened so far?

Since the site selection announcement in January 2021, we have commenced the initial design stages of the Cambridge Waste Water Treatment Plant Relocation Project (CWWTPRP), which includes starting to develop site access options for how we will access the site both during construction and once the site is operational.

As part of this development process we have taken on board feedback received during the Phase One consultation, responses to the site selection announcement and feedback provided by stakeholders. This feedback, along with initial modelling of operational traffic flows, has enabled us to design a series of site access options for consultation with stakeholders.

These options are described in our consultation leaflet, with more information provided below.

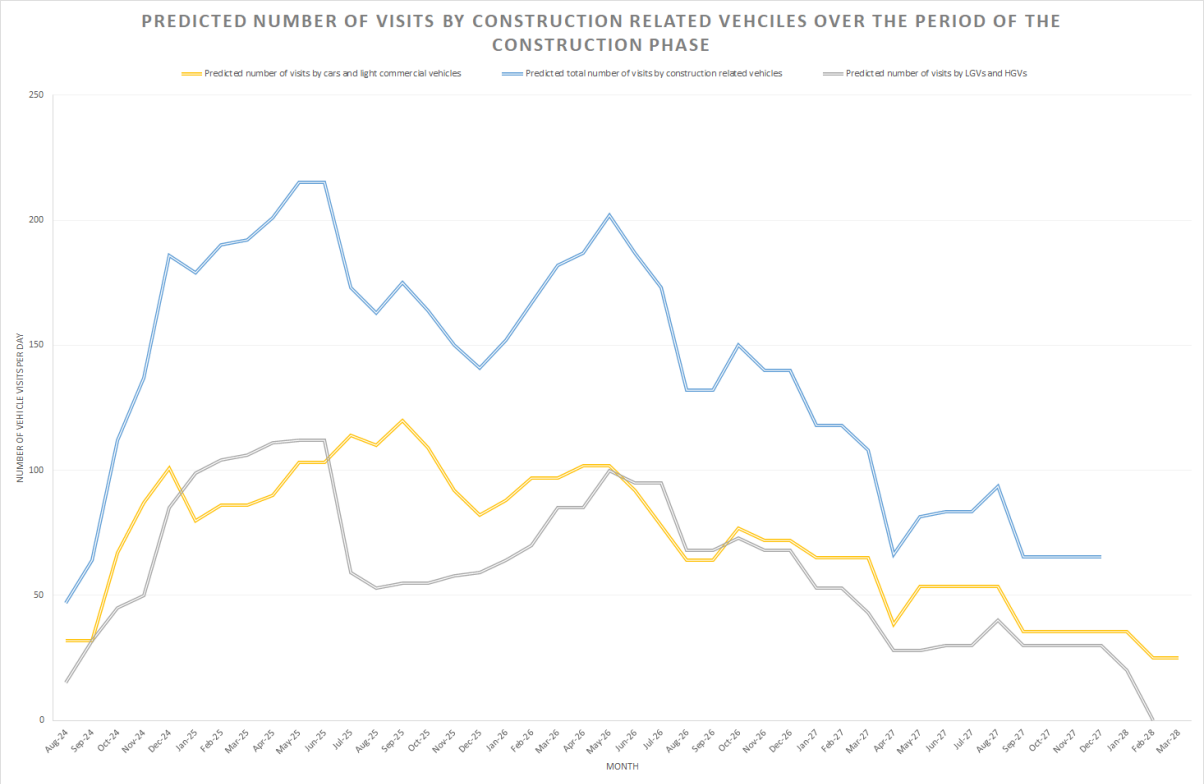
Our aims are:

- Protect road user safety.
- Protect NMU safety.
- Minimise environmental impacts.
- Provide better recreational connectivity for non-motorised users (NMUs).
- Minimise our impact on the local road network.
- Minimise additional congestion on the local road network .
- Avoid conflicts with aspirations of Greater Cambridge Greenways Project

Likely traffic movements

Construction phase

The graph below details the predicted construction traffic flows for the construction phase, based upon our current understanding of the construction works required.



Graph 1: Predicted construction traffic visits over the period of the construction phase

These predictions will feed into the transport assessment and are also being used to develop the location and design of the permanent site access.

Operational traffic

Table 1a below provides the predicted number of visits (both ways) which at our phase two consultation we said would be associated with facility staff and smaller scale deliveries once the facility is operational, which are unlikely to require HGVs.

Table 1a: Estimated operational visits associated with facility staff

Vehicle type	Number of visits	Frequency
Light commercial vehicles comprising of:		
Sludge technicians	2	Daily
Operations team	2	Daily
Maintenance technician	1	Mon-Friday
CHP technician	1	Mon-Friday
Cars	6	Daily
Chemical deliveries	3	Per week
Other service vehicles	2	Per week

Operational traffic update September 2021

Table 1a assumes that on weekdays there would be six light commercial vehicles and six cars visiting the site (or 24 movements, one each time a vehicle either enters or leaves the site). This was based on the most up to date and detailed information available as part of the iterative proposals for the

new facility we presented for consultation at phase two. As of October 2021, it is now confirmed that the total estimated number of combined small vehicle and van movements at the new facility (both ways) per day will instead total 92 movements. This is due to the recently confirmed inclusion of 30 office workers, which at phase two consultation, the relocation of these office worker roles was too uncertain for the figures to be included. This will represent a like-for-like comparison with the existing traffic levels for office staff already associated with the current plant at Cowley Road, meaning this change does not result in additional small vehicles and vans visiting the new facility compared to their existing levels.

Table 1b below provides the updated (October 2021) predicted number of visits (both ways) associated with facility staff and smaller scale deliveries once the facility is operational.

Table 1b: Estimated operational visits associated with facility staff

Vehicle type	Number of visits	Frequency
Light commercial vehicles comprising of:		
Sludge technicians	2	Daily
Operations team	2	Daily
Maintenance technician	1	Mon-Friday
CHP technician	1	Mon-Friday
Cars	6	Daily
Chemical deliveries and other service vehicles	2	Daily
Office workers	30	Mon-Friday
Operational visitors to the WWTP	2	Daily

Operational HGV movements

In order to give a perspective of how the new facility will operate in comparison to the existing Milton Waste Water Treatment Works both existing and future estimates HGV movements have been presented side by side in Table 2 below. The future estimates are based on when the new facility is at full capacity including all the built-in growth of the existing works and the additional capacity added from Waterbeach. When the new works is commissioned, it is likely that the traffic movements at that time will be similar to the existing works.

Table 2: Estimated Future operational HGV movements vs current operational HGV movements

Type	Average daily vehicle movements	
	Milton WWTP	Future
Liquid sludge imports	57	62
Biosolids exports	10	10
Non-routine tanker movements	12	14
Septic waste movements	50	60
Total HGV movements	**129**	**146**

Permanent access options

For the purposes of consultation, we are presenting three options for permanent highway access to the site. We will select our preferred option based on technical and environmental studies and all stakeholder feedback received during this phase 2 consultation.

The new vehicle access for the site will meet the national standards relating to the design, assessment and operation of the highway network and will form part of the wider network connection and take into consideration the needs of motorised users and non-motorised users (NMUs).

We initially produced a long list of options which were assessed against a variety of economic, environmental, safety and social and strategic factors. We also carried out preliminary consultation on the long list with the Local Highway Authority (Cambridgeshire County Council (CCC)) and Highways England (HE) for their comments.

Using the high-level information and evidence gathered by the above assessments and consultations, the long list of options has been sifted, with options being rejected due to one or more of the following reasons:

- Alignment with existing or emerging local or national strategies and priorities;
- Potential to impact on highway safety;
- Potential for likely significant environmental or community effects;
- Not technically viable;
- Unaffordable in context of the scheme; and
- Unlikely to be considered acceptable solutions by stakeholders and the general public.

As presented in the main consultation leaflet the above exercises have produced three potential vehicle access options, one of which consists of two sub-options. Please see pages 24-27 of our Phase Two Community Consultation Leaflet or visit www.cwwtr.com for details.

Temporary site access

Prior to the construction of the permanent access we will need to construct a temporary site access for construction related traffic. The temporary site access for construction traffic will be via the route illustrated in Option 1A off Horningsea Road. The duration of use for the temporary site access will be subject to the option selected for the permanent site access as construction timescales differ between the options based on elements such as the complexity of the route design and need for associated infrastructure. As with the permanent site access, the temporary site access will need to meet the national standards relating to the design, assessment and operation of the highway network and will need to take into consideration the needs of motorised users and NMUs on the local road network.

Next Steps

Over the coming months, as well as seeking consultation feedback on the options, we will be commencing technical and environmental studies to inform our selection of the site access and provide more information on likely impacts on the local community and environment. Below is a summary of how we carry out junction modelling, what data we use and how this informs both our design and technical studies.

Junction Modelling

We will be using computerised junction modelling to analyse the impacts of construction and operational traffic on the Local Road Network (LRN) and, where relevant, junctions of the A14. Modelling forecasted traffic flows against baseline data (existing transport conditions on the LRN

and the findings of baseline traffic surveys) enables us to predict the economic, social and environmental impacts of changes in traffic flows as a result of our scheme and helps to develop mitigation, where appropriate. The modelling of forecasted operational traffic flows is not just fundamental to determining traffic impacts, but is also pivotal to developing a safe, robustly designed site access which takes into account existing conditions and travel needs.

The junctions that will be modelled will have a focus area of the LRN immediately affected by the scheme and will include consideration of facilities for non-motorised users (NMUs) and public transport users. By understanding the patterns of travel for different types of user classes it provides opportunities to look for wider benefits and minimise disruption.

The model will produce traffic forecasts for two modelled years: 2028 (opening year) and 2033 (5 years after opening year) and will include committed developments, at the time of the assessment, and the latest highways information.

Additionally, the local Personal Injury Collision data for a 5 -year period will be analysed and will inform any junction design and improvements.

Our junction modelling and subsequent impact assessment will be carried out in accordance with the National Planning Policy Framework, National Policy Statement for Waste Water and the Department for Transport's Transport Analysis Guidance (TAG). Alignment with the aforementioned policies along with other relevant national, regional, local and emerging local policies will be presented in the Transport Assessment submitted as part of our DCO application.

Mitigation and travel routes for the construction phases will be developed as part of the transport assessment and will be outlined in the 'Outline Construction Environmental Management Plan' and 'Travel Plan and Construction Traffic Management Plan'. These would be controlled and managed through onsite management, construction traffic restriction zoning and enforced speed limits and signage. These documents will form part of our DCO application.

Traffic data for use in technical studies

Given the effects of the COVID-19 pandemic on our travel patterns, existing traffic flow data and historical survey data is unlikely to accurately represent normal conditions on the highway network in the post pandemic world and therefore supplementary Manually Classified Counts (MCC's) and queue surveys will be undertaken in the following locations, depending on the selected access option:

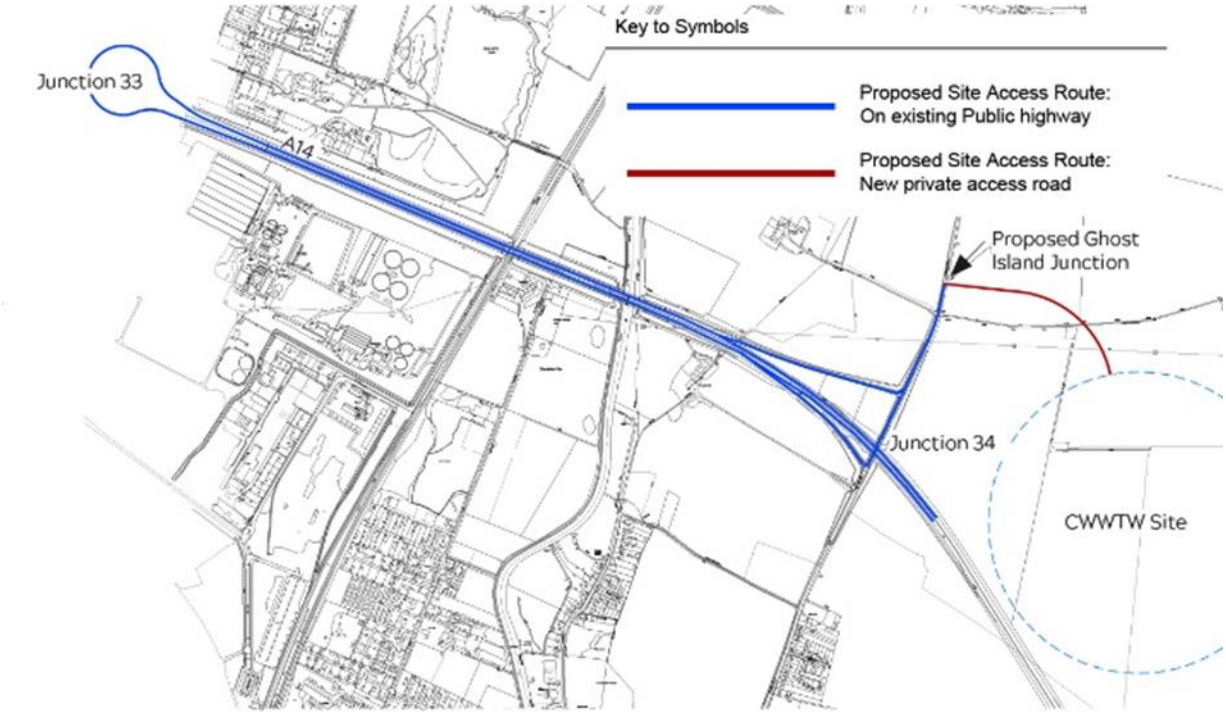
- Junction 33 of the A14
- Junction 34 of the A14
- Junction 35 of the A14 (the Quy Interchange)
- Horningsea Road/Low Fen Drove Way Junction
- Newmarket Road (A1303)/ High Ditch Road Junction
- High Ditch Road/Low Fen Drove Way Junction
- A1303/Church Road junction, immediately north of J35

The data collected as part of these surveys and that provided from the local highway authority and data collected on the movement of Non-Motorised Users will form the baseline conditions which our future forecasts are then assessed against.

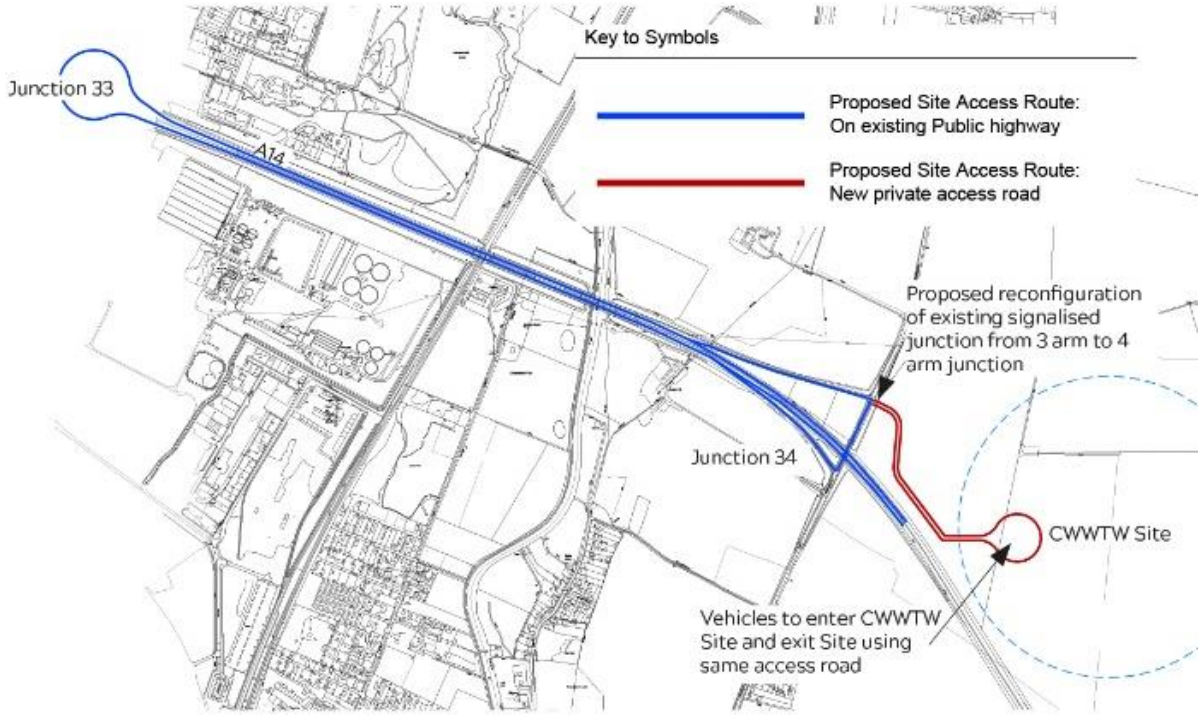
This data is then modelled against our estimated construction and operational traffic flows using industry standard software to determine transport impacts.

Maps illustrating permanent access options and likely preliminary construction traffic access

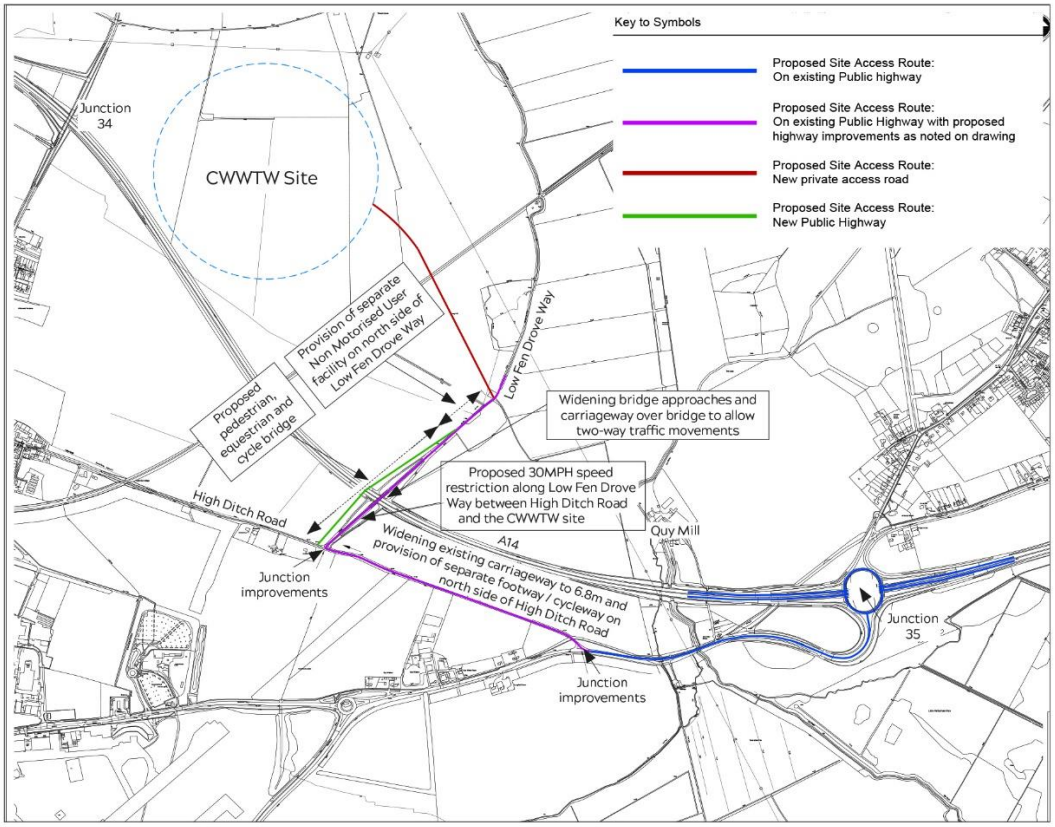
Option 1A



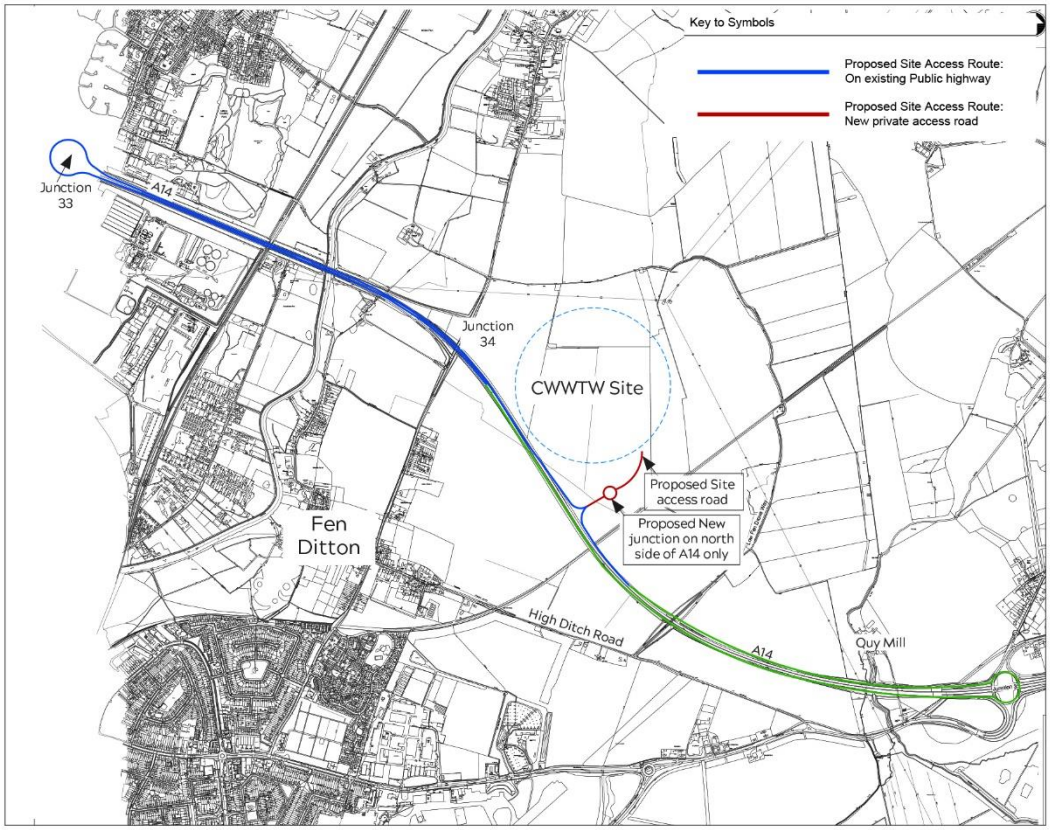
Option 1B



Option 2



Option 3



Likely preliminary construction traffic access