Glenfarg WTW Traffic Management Plan

Document Issue:

Revision	Purpose	Date
0	Initial outline of traffic management proposals	**17/02/23**
1	Updated following SW comments	**23/05/23**
2	Updated/Rewritten	**25/10/23**
3	Updated following KMD comments	**05/11/23**
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Review by ESD:

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1. Introduction

1.1 General Information

The village of Glenfarg is in the Ochil Hills in Perth & Kinross, Scotland. Glenfarg is 11 miles from Perth and is served by the M90 motorway. The village and its surrounding hamlets including Duncrievie in the parish of Abernethy and Dron and Arngask. (see figure 1)

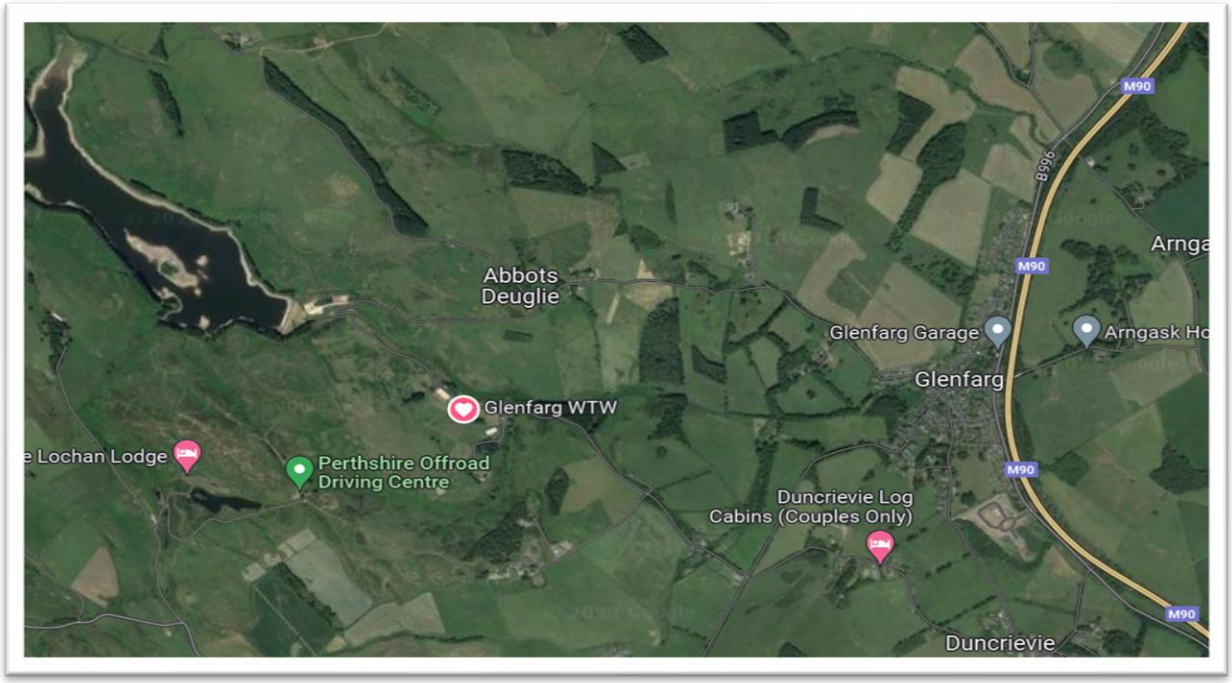

figure 1

1.1.1 WTW Upgrade Project

ESD are undertaking works on behalf of Scottish Water to design, construct, and commission the construction package involved in the upgrade of the existing Glenfarg Water Treatment works (WTW). (See Figure 1)

The planned project at the Water Treatment Works (WTW) at East Blair, is needed to secure a high quality and resilient water supply for around 180,000 customers that the WTW serves across Kinross-shire and Fife.

The proposed investment includes the provision of significant additional drinking water storage capacity as well as upgrades to the existing Water Treatment Works to allow more consistent production of drinking water at the site, to improve the resilience of the area's water supply and provide capacity to support growing communities.
The works will include:

- A new Chlorine Contact Tank with disinfectant mixing and chlorine control
- A new 33Ml Clear Water Tank or tanks
- New alum dosing system
- New polymer batching and dosing system
- New RGF Backwash system including-tank, transfer & backwash pumps
- New& final water pH correction via new caustic dosing equipment
- Treated water tie-ins / connections
- Treated water sampling
- Wastewater tie-ins
- Service water system
- Associated electrical ICA works
- New Standby Generator & Generator Fuel Tank
- Emergency Shut Down for disinfection control.
- Upgrade to the existing works power supply
- Improvements to Filter controls identified as an Interim measure to be delivered as a priority
- Improvements to PAC Control identified as an Interim measure to be delivered as a priority
- All necessary Systems Integration, Telemetry & Temporary Works required to support the above scope items.
- Replacement of the slow sand filters with a similar treatment process
- Construction of a new filtered water pumping station
- New inlet/outlet transfer pipework from the current works location to new works location at the existing reservoir
- Upgrades of the existing access road and access bridge
- Utility diversions/protection to allow construction of the new works

As part of the package of works, ESD will require the movement of construction materials through the village of Glenfarg and along a single-track carriageway over approximately 2km.
ESD will endeavour to cause minimum adverse effects to the public roads and the wider network to maintain the current usage of the traffic routes along with Scottish Water daily operations.

1.1.2 Purpose of this document

The Traffic Management Plan (TMP) outlined herein pertains to the Glenfarg Water Treatment Works (WTW) upgrade project, with the primary objective of ensuring the safety of construction activities concerning vehicular traffic. The purpose of this document is multi-faceted, encompassing the following key aspects:

1.1.3 Traffic Safety Measures:

The TMP serves as a comprehensive guide delineating the traffic safety measures to be enforced during all phases of the Glenfarg WTW upgrade project. These measures are designed to mitigate potential risks associated with construction traffic.

1.1.4 Minimisation of Disruption:

The plan emphasises the need to programmatically schedule construction activities to minimise disruptions to Glenfarg Village and the surrounding areas. Consideration will be given to general traffic flow to mitigate inconveniences during construction.

1.1.5 Access Points and Haulage Routes:

Within this document, we detail the main access points and primary haulage routes that will be employed during the project. The clarity of access points and haulage routes ensures that traffic is efficiently managed.

1.1.6 Development of Specific Method Statements:

The TMP is an evolving document that will be further developed in conjunction with the local roads department and the Site Manager. Specific method statements will be incorporated as required to ensure the safe integration of construction activities with public highways.

1.1.7 Commitment Implementation:

This document facilitates the implementation of commitments made regarding traffic management. Any commitments not already integrated into the project design but necessitating specific implementation will find inclusion within this TMP.

1.1.8 Supervision and Compliance:

ESD is committed to supervising and informing all project personnel and contractors, including its supply chain, to ensure that the traffic control measures defined in this TMP are diligently adhered to throughout the course of the WTW upgrade project.

1.1.9 Operational Continuity:

ESD's approach to project execution prioritises the continuity of existing Scottish Water operations, rights of way, and access points. Every effort will be made to ensure that construction activities do not unduly disrupt these operations.

1.2.0 Inconvenience Mitigation:

A key focus of the TMP is to minimise, to the extent reasonably practicable, any inconvenience caused to the public resulting from increased traffic flows and the disruptive effects of construction traffic on local roads.

1.2.1 Site Access and Safety:

The TMP underscores the importance of maintaining current site access for Scottish Water tankers. Additionally, strict plant segregation will be observed for all civil works conducted in proximity to the tanker access road, ensuring the safety of personnel and vehicular traffic.

In summary, this TMP serves as a vital framework for the management of traffic during the Glenfarg WTW upgrade project. It encompasses a broad spectrum of safety measures, access planning, and commitments to minimise disruptions, all of which will be enforced to ensure the safe and efficient execution of the project while safeguarding the interests of the local community. As the project unfolds, this document will be continually refined and adapted to ensure its continued relevance and effectiveness

1.2.1 Route Assessment

The proposed route, via Church Brae into Glenfarg, has been meticulously assessed for its suitability in facilitating the safe and efficient transportation of materials and equipment to Glenfarg Water Treatment Works to the classified road network. This route presents the following key advantages:

- Optimal Route Efficiency:
  The selected route is the most direct path to a well-maintained classified road, minimising travel distance and time. This is of utmost importance for the project's logistics and overall efficiency.

- Pedestrian Accessibility:
  A significant consideration in route selection was the presence of footways that cater to pedestrian traffic, especially in the built-up areas along the Church Brae route. This provision ensures safe separation between pedestrians and vehicular traffic.

- Verge Overrun and Road Deterioration Mitigation:
  The alternative routes, though longer, pass through multiple settlements and roads that are unsuitable for accommodating two-way traffic with large goods vehicles. This predicament would likely result in a high degree of verge overrun and deterioration of the road haunch. By selecting the proposed route, we aim to minimise the negative impact on road infrastructure, reducing potential repair and maintenance costs.

- Safety Assessment by SWECO:
  A safety assessment of the preferred haul route was commissioned by ESD and conducted by SWECO. This assessment ensures that safety measures have been incorporated into the proposed route to minimise risks associated with construction traffic.
  Also, within this safety assessment there are details to alter the junction at Ladeside/Church Brae junction, the junction will not be changed for a one-way or traffic flow reprioritised.

- Traffic Management and Pedestrian Safety:
  In alignment with the safety assessment, comprehensive traffic management plans have been developed and will be implemented to guarantee the safety of both construction traffic and pedestrians. This includes the use of clear signage, traffic control personnel, and measures to minimise construction-related disruptions to residents.

It is unequivocally concluded that the proposed route via Church Brae through Glenfarg is the most appropriate choice for this construction project. Its directness, pedestrian accessibility, and mitigation of road damage issues make it the preferred route, ensuring safe and efficient operations while minimising the impact on local communities and the environment.

1.2.2 Proposed route

While the proposed route offers the most viable access for site traffic, it is essential to acknowledge and address the potential challenges associated with ensuring the safety and efficient flow of traffic. In response to these challenges, ESD is committed to implementing the following improvements as detailed within this document to enhance the safety and convenience of movement along this route.

1.2.3 Passing Places

To facilitate the safe passage of vehicles and minimise any potential conflicts with other road users, ESD will initiate the improvement of passing places along the rural section of the route, extending from the

site access point to Glenfarg Village. The improvement of the existing passing places will require the consent and approval of the relevant landowners.

1.2.4 Vegetation

Visibility along the proposed route is of paramount importance. ESD will undertake the necessary clearance of overhanging and roadside vegetation to enhance sightlines, ensuring improved safety for all road users. However, it's important to note that any such vegetation clearance will be subject to the approval of landowners. No mature trees are expected to be removed.

1.2.5 Traffic Impact

ESD is committed to implementing measures aimed at minimising the impact of construction traffic. To achieve this, the following strategies will be employed:

- Material Reuse:
  ESD will adopt a sustainable approach by ensuring that spoil resulting from excavations is reused within the project site whenever feasible. This approach reduces the need for additional vehicles to transport materials, thus contributing to traffic reduction.

- Cut/Fill Balance:
  ESD will proactively manage the balance between excavated material (cut) and material required to fill construction areas (fill). This approach not only minimises the transportation of excess material but also reduces the potential for additional traffic.

- Material Deposits:
  Any surplus materials that cannot be repurposed within the project site will be carefully managed. ESD will explore suitable locations for depositing excess material to avoid any negative traffic impact on Glenfarg or nearby residential areas. Such deposition options will be selected after careful consideration and with the least traffic disruption in mind.

In summary, ESD is dedicated to enhancing the safety and efficiency of the proposed route by implementing passing places, clearing vegetation, and mitigating traffic impacts through strategic material management. The success of these measures will be closely monitored and is contingent on the approval and cooperation of relevant landowners. This proactive approach aligns with ESD's commitment to responsible construction practices and the well-being of the local community.

2. Key Feedback on the TMP

In the process of seeking planning permission, which has been officially submitted to PKC under reference 23/01353/FLL, feedback has been actively gathered from various stakeholders. This feedback has highlighted several areas of concern that necessitate attention and mitigation within the Traffic Management Plan (TMP). The concerns raised include but are not limited to:

- Child Safety:
  Ensuring the safety of children in proximity to construction activities.
- Discrimination:
  Addressing potential issues related to discrimination during construction.
- Emergency Vehicle Access:
  Ensuring unimpeded access for emergency vehicles.

- Environment:
  Mitigating the environmental impact of construction activities.
- Ladeside Church Brae:
  Addressing specific concerns related to the Ladeside Church Brae area.
- Noise, Dust & Vibration:
  Managing and mitigating the potential impacts of noise, dust, and vibration on the local community.
- Pedestrian Safety:
  Safeguarding the safety of pedestrians in the vicinity of the construction site.
- Road Upgrades:
  Addressing any necessary road upgrades to accommodate construction traffic and ensure road quality.
- Road Safety:
  Ensuring road safety is maintained throughout construction.
- Traffic & Parking Restrictions:
  Managing traffic flow and parking restrictions effectively.
- Winter Conditions:
  Addressing potential challenges and safety concerns related to winter conditions.

The Traffic Management Plan (TMP) has been thoroughly reviewed and updated in response to the concerns raised. While addressing each concern, the TMP strives to implement practical and effective measures to ensure the safety, accessibility, and well-being of the local community during the construction phase. ESD remains committed to a proactive and responsible approach to construction, aiming to align with local expectations and regulations. The feedback received has played an invaluable role in refining the TMP and ensuring that it addresses the specific needs and concerns of the community.

2.1 Ongoing Liaison

To facilitate effective communication and maintain a strong relationship with the local community, a Community Liaison Group has been established, and it will remain active throughout the duration of the project. This group serves as a vital conduit for collaboration and information exchange between Scottish Water, their contractors, and the local community council. Additionally, it provides a platform for community representatives and other stakeholders affected by the development to engage and share their perspectives and concerns, particularly those pertaining to construction and traffic management.

The key objectives and functions of the Community Liaison Group include:

- Information Sharing:
  Regular sessions will be held to present project plans, including traffic management strategies and other pertinent matters related to construction. These sessions offer an opportunity for transparent communication between project stakeholders and the local community.
- Feedback Mechanism:
  Members of the local community council and other representatives will have the chance to voice their views, opinions, and any concerns encountered during the project. It's an essential mechanism for actively addressing and mitigating issues that may arise.
- Documentation and Action:
  All concerns and feedback will be documented systematically. Scottish Water commits to taking appropriate actions in response to the concerns raised by the community. These actions will aim to resolve issues and ensure that the project aligns with community expectations.

- Transparency:
  A note will be produced reflecting attendance and actions agreed at each meeting of the Community Liaison Group. These Action Logs will be made publicly available, allowing everyone in the community to access and review the outcomes of these sessions.
- Public Updates:
  Regular updates will be disseminated to the general public via the Scottish Water Communications Team and the official Scottish Water website. This broader communication ensures that the entire community is informed of project developments and any relevant information regarding traffic management and construction activities.

The establishment of this ongoing liaison group demonstrates a commitment to open and constructive engagement with the local community. It underlines Scottish Water's dedication to ensuring that the concerns and needs of the community are recognised and addressed, and that community members are well-informed about the progress of the project, including traffic management initiatives.

3. Traffic Routes

3.1 Vehicle Types

To ensure safe and compliant traffic management, the Traffic Management Plan categorises vehicles into two groups:

- Heavy Vehicles (HGVs):
  These include larger construction vehicles that fall under the heavy category.

- Light Vehicles (LGVs):
  This category encompasses smaller vehicles, distinct from the heavier construction traffic.

3.1.1 Heavy Vehicles

For the management of heavy vehicle traffic, the following procedures and arrangements are in place:

- Utilisation of Public Lay-By:
  The public lay-by on the B996 will be reserved exclusively for project requirements. It will serve as a holding location for HGVs and their escort vehicles. Clear signage with contact details and operating instructions will be prominently displayed at this location.
- Contact and Holding Procedure:
  Incoming heavy construction vehicles will arrive at the holding area and establish contact with the controller to await further instructions.
- Scout and Escort Vehicles:
  A scout vehicle and an escort vehicle will be deployed to ensure the safe passage of the heavy vehicle along the route. In situations where other road users are encountered, these escort vehicles will manage and facilitate safe passing in designated places.
- Direction of Travel:
  HGVs will not be allowed to travel south to exit the village but will access the site from the south. To support this, the lay-by will undergo necessary improvements and surfacing with bound material to accommodate HGVs.
- Escort Vehicle Timetable and Process:

Escort vehicles will adhere to a strict timetable and well-defined processes. These processes will evolve as required to align with the changing needs of the project. Drivers will receive training in these procedures to ensure their effectiveness.

- Lead Vehicle Position:
  The lead vehicle will maintain a safe distance in front of the HGVs to ensure safe passage and minimise interruptions to other road users.
- Escort Vehicle Ratio:
  Each HGV or convoy of HGVs will be accompanied by two escort vehicles to guarantee the safe and efficient flow of traffic. Additionally, a backup location will be designated in case the primary lay-by is full.
- Management of Non-Construction Traffic:
  The convoy vehicles will also take on the responsibility of managing interactions with non-construction traffic, ensuring a smooth and safe flow of vehicles in the vicinity.

These measures are put in place to ensure that heavy vehicle traffic is well-coordinated, in compliance with safety standards, and considerate of other road users. The training and careful planning of escort procedures will be integral to the success of this approach.

3.1.2 Escort Procedure

To ensure the safety and efficiency of the escort procedure, the following steps will be implemented and monitored by specialists who will address any arising issues promptly:

All HGV traffic will exit at junction 8 of the M90, as indicated in Figure 2 and Figure 3. The route will lead them to LB1, which is detailed in Figure 4.

figure 2

figure 3

LB1 – (B996 layby)

Escort vehicles will be stationed at LB1, indicated in Figures 4 & 5 where they will await all HGVs planning to access the construction site. Upon arrival and confirmation of load destination, the scout vehicle will move ahead to PP1, a point on Church Brae.

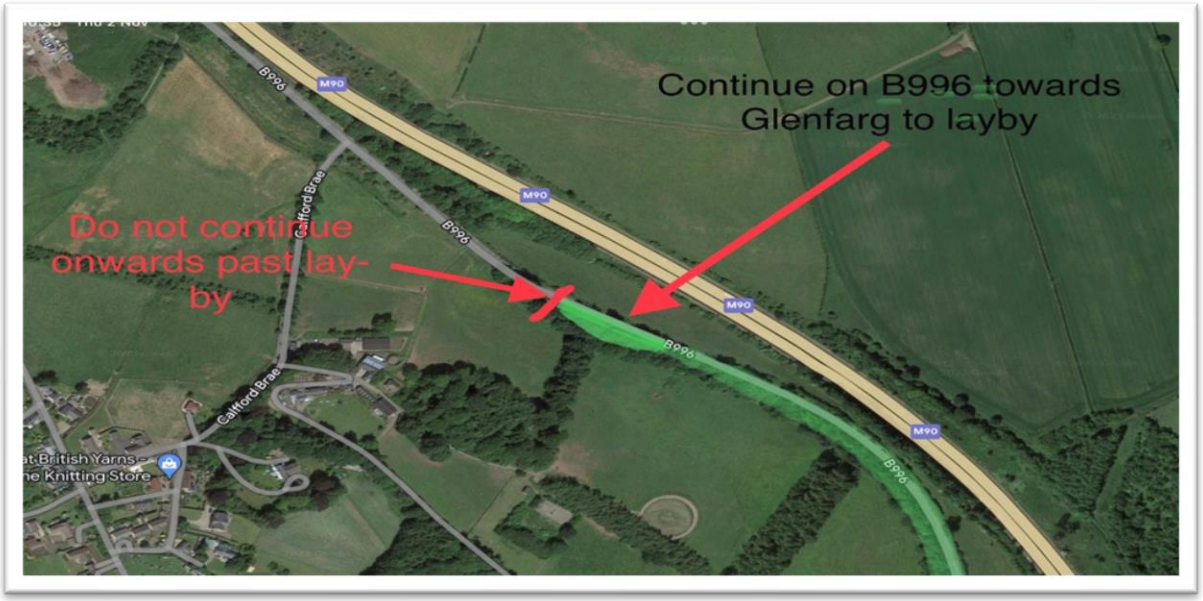

figure 4

figure 5

PP1 - (Church Brae)

Upon reaching PP1, the scout vehicle will establish communication with the escort vehicle using radio communication. The escort vehicle will initiate the journey from LB1, as illustrated in Figure 5. During this stage, the scout vehicle will manage oncoming traffic, guiding them into PP1 (see Figure 6) and inform them of the convoy en-route. A maximum speed of 20 mph will be observed when crossing the Ineos pipeline.

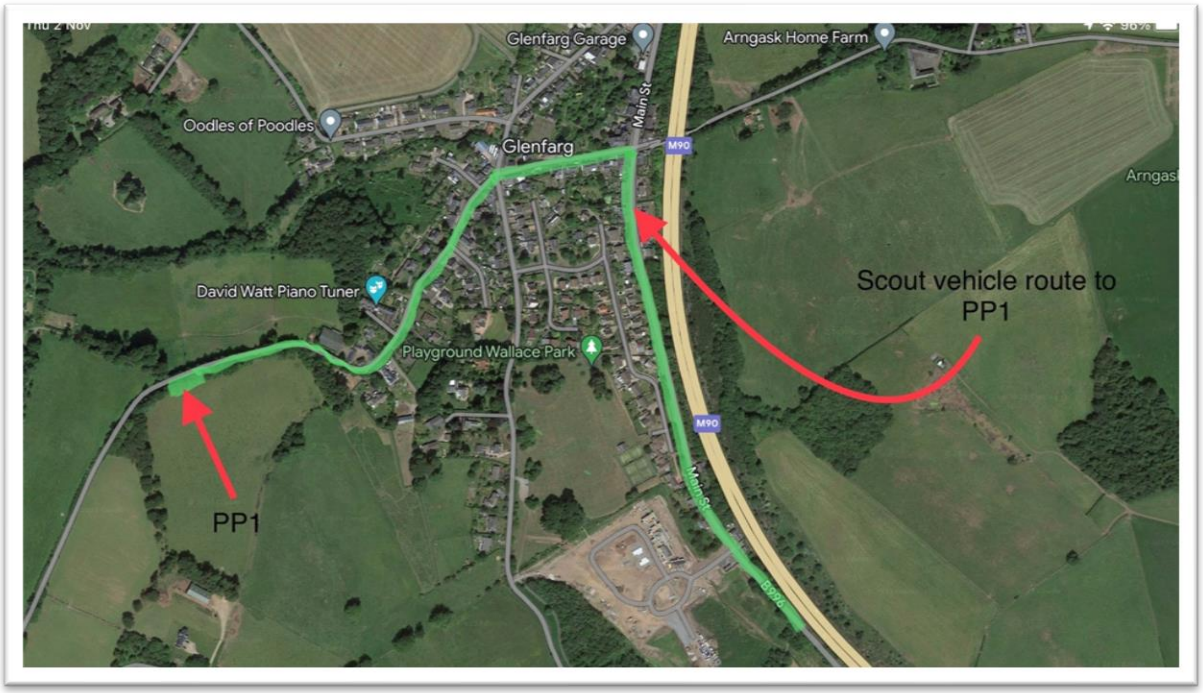

figure 6

CBPRJ - (Church Brae Private Road Junction)

The scout vehicle will arrive at CBPRJ and temporarily halt oncoming traffic from proceeding along Church Brae, as shown in Figure 7. The scout vehicle will communicate with the escort vehicle to proceed along to CBPRJ. Once visual contact is made, the scout vehicle will proceed to PP2.

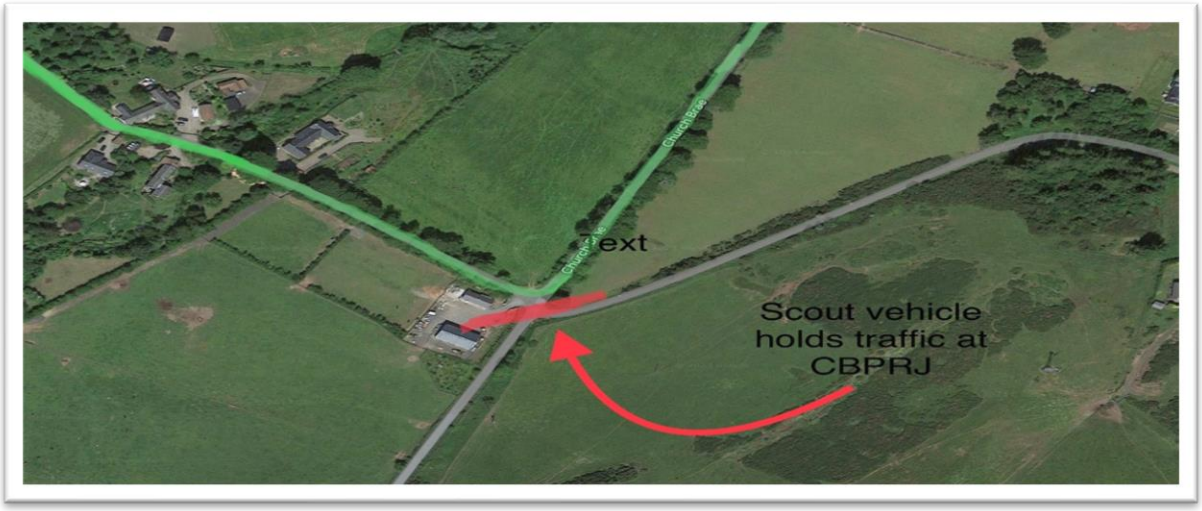

figure 7

PP2 – (Private Road)

The scout vehicle will reach PP2 and establish communication with the escort vehicle via radio to commence the journey. Similar to PP1, the scout vehicle will manage oncoming traffic, guiding them into PP2 and informing them of the convoy en route, as seen in Figure 8 and Figure 9. Visual contact with the convoy will be maintained.

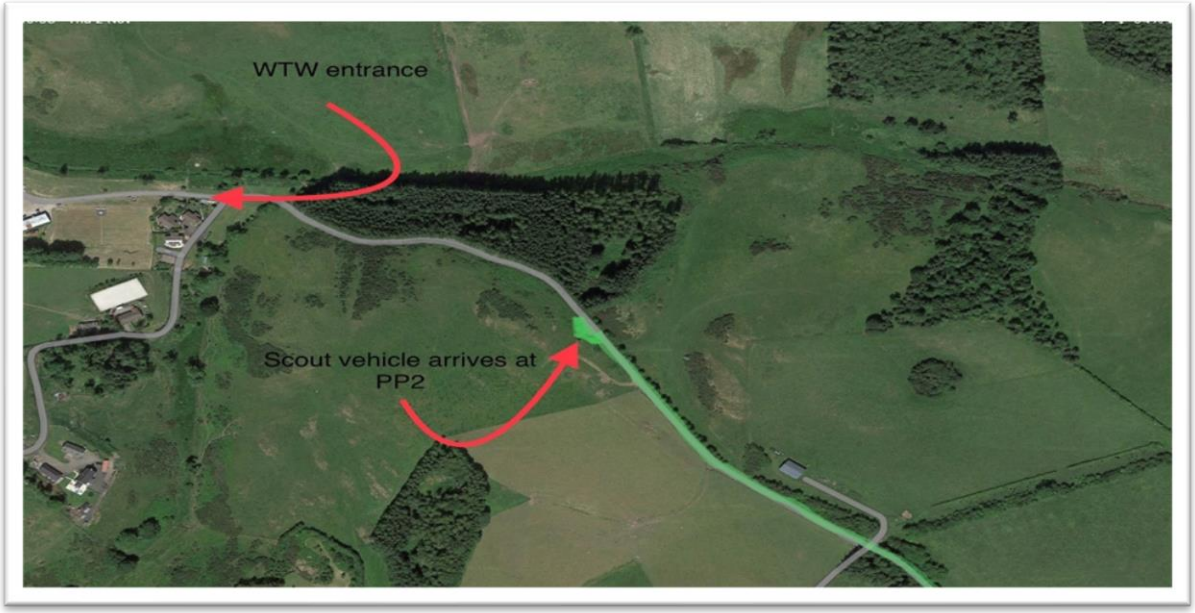

figure 8

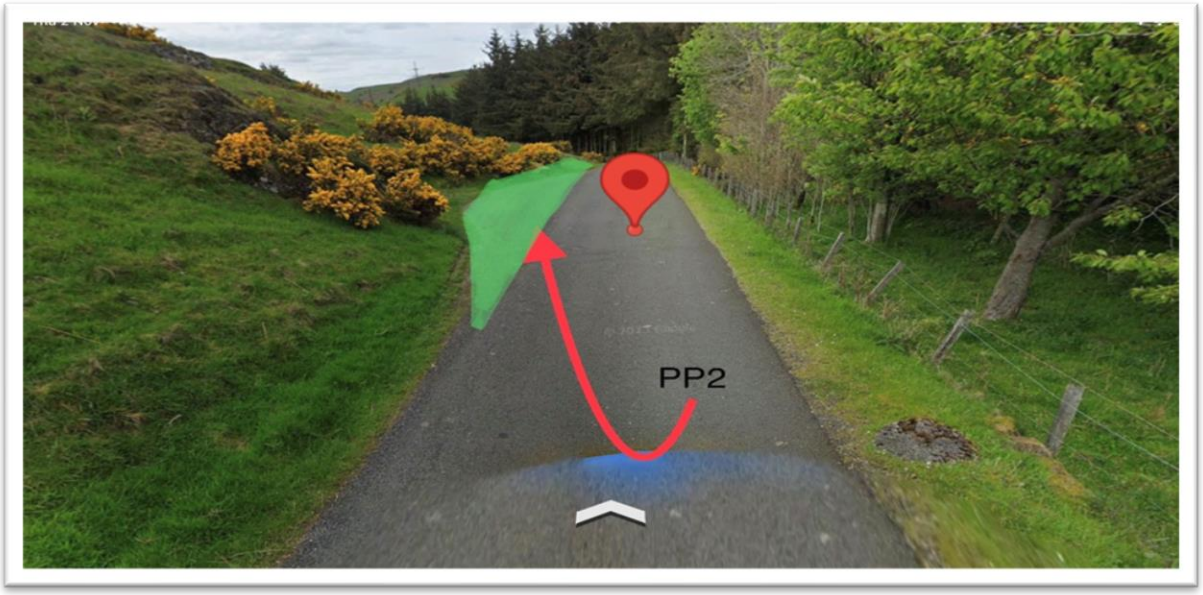

figure 9

This procedure will ensure that heavy construction traffic is safely escorted from the M90 junction to the construction site. It's important to note that the procedure is reversed for convoys leaving the site to ensure a consistent flow of traffic in both directions. Careful communication and coordination between the scout and escort vehicles will be crucial for the success of this process.

3.1.3 Light Vehicles

Light Goods Vehicles (LGVs) will be required to follow the same route as HGVs without the need for an escort but must adhere to set speed limits. LGVs may access from the north as well. Shared traveling among LGVs will be encouraged to limit the number of LGVs on the road. Subcontractors will be asked to provide details on how they intend to manage this process, which will be monitored by ESD.

3.1.4 Electric Delivery Vehicles

ESD will request its supply chain to prioritise the use of electric delivery vehicles whenever possible to reduce potential pollution. ESD intends to ensure that escort vehicles are electric as well.

3.1.5 No Engine Idling

To minimise environmental impact, all plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so.

3.1.6 Mud on roads

ESD will ensure that existing roads within the Water Treatment Works (WTW) and public roads, along with the drainage systems, will be kept free of mud and loose materials resulting from construction works at Glenfarg WTW. A road brush will be employed at construction access points during periods of inclement weather or heavy haulage to prevent mud buildup. This will help maintain the cleanliness and safety of the road network.

4. Section 96, Route Activities & Upgrades

Before the construction works commence, a pre-start survey will be conducted jointly with the Perth & Kinross Council, the Roads Authority, to assess the existing condition of the road network.

Following the completion of the works, a joint dilapidation survey will be carried out with the Roads Authority. According to the Roads Scotland Act 1984, Section 96, the Roads Authority is entitled to compensation for any extraordinary expenses incurred due to damage caused by excessively heavy or extraordinary traffic generated by the operator.

ESD intends to collaborate with the council to determine the extent of any damage caused by construction traffic on the proposed site access routes, using the pre-start and dilapidation surveys as reference.

ESD commits to funding the necessary repairs during and after the completion of their project, ensuring that the council does not incur any extraordinary expenses in this regard. Whether Perth & Kinross Council chooses to carry out the required works and then be reimbursed for them or whether ESD engages a road maintenance contractor directly to perform the work will be mutually agreed upon. This approach ensures the timely repair and maintenance of the affected roads without imposing an undue financial burden on the council.

4.1 Passing Place Upgrades

The plan includes the upgrade of three existing passing places on Church Brae and the private section of the road, as depicted in Figure 9 & 10. These upgrades will contribute to the safe and efficient flow of traffic on the route, particularly in areas where space is limited.

figure 10

4.1.1 Lay-by Development for Escort Vehicle & HGV`s

The existing lay-by on the B996 outside of Glenfarg will be enhanced to serve as a designated meeting point for HGVs that require an escort to reach the construction site. This upgrade aims to facilitate the safe assembly of vehicles before they proceed to the site. (See Figure 11 for reference.)

figure 11

4.1.2 Anti-Skid Surfacing on Church Brae

Due to the incline of Church Brae, there may be grip issues during adverse weather conditions. The project intends to address this concern by applying an anti-skid surface dressing to enhance skid resistance, subject to approval from Perth & Kinross Council. It is important to note that implementing this improvement will require a road closure. An agreement with PKC will be required for this purpose. (See Figure 12 for reference.)

figure 12

4.1.3 Verge Improvements & Vegetation Clearance

To address the issue of rutting on both sides of the road, the project will involve digging out the verges and replacing them with hardcore material wherever required. Additionally, with the approval of the landowner, overhanging branches will be trimmed back to improve visibility along the rural part of the route. The specific traffic management measures required to carry out these works will be implemented, and the Traffic Management Plan (TMP) will be updated with the final details.

4.1.4 Improved Signage

To comply with The Traffic Sign Regulation & General Direction 2016, improved signage will be installed at various locations within Glenfarg Village and along the rural access roads leading to the Water Treatment Works. These signs will cover important information such as speed limits, requirements for escorting, and the presence of construction traffic.

4.1.5 Traffic Calming Measures & Speed Monitoring

To ensure that speed limits are adhered to within the area, ESD will implement the following measures for construction related traffic:

- Speed Bumps:

  Speed bumps will be deployed at suitable points along the haulage route on private roads, with input and agreement from stakeholders.
- Portable speed monitoring:
  Handheld speed monitors will be used at periodic intervals on the route to monitor compliance with set speed limits.
- 3 Strikes Policy:
  ESD will employ a "3 strikes and you're out" policy for persistent offenders who repeatedly violate speed limits.
- Red Card Policy:
  Those caught excessively breaking speed limits will be "red-carded" from the project, indicating that they will no longer be allowed to work on the site.
- Solar Signage:
  Solar-powered signs will be installed to display speed limits and encourage drivers to observe these limits while traveling to the Water Treatment Works.

4.1.6 Bridge

A temporary Bailey Bridge will be constructed over Glendy Mill Bridge (see figure 13). Glendy Mill Bridge, a category C listed building dating back to the late 18th century, is a single-span segmental-arched road bridge over Glendy Burn. It is constructed from roughly squared rubble and squared stone voussoirs. This temporary bridge will ensure that no damage occurs to the existing bridge while construction activities are carried out.
These bridge-related activities are intended to facilitate safe and efficient access to the project site and prevent any harm to historical structures.

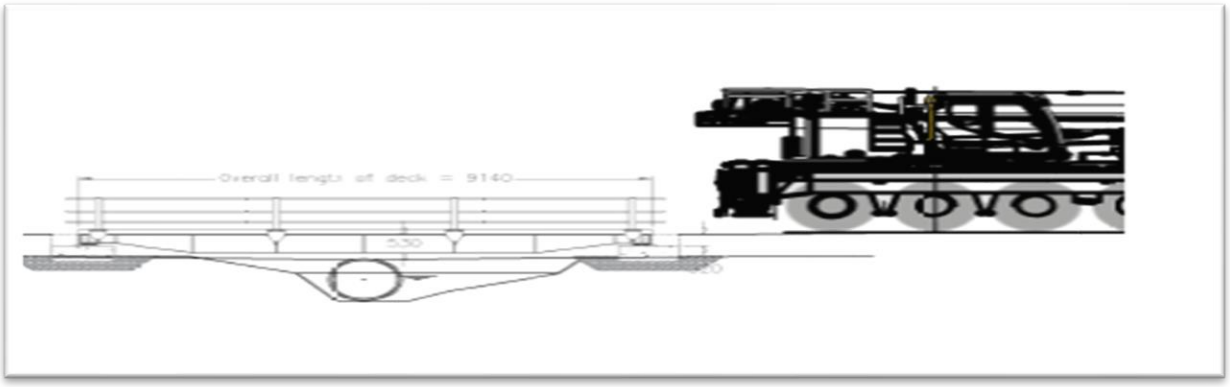

figure 13

5. Pedestrian Safety

ESD is committed to maintaining public roads and rights of way throughout the construction works, unless prior agreements with relevant stakeholders dictate otherwise. In order to safeguard the safety of existing road users, ESD will implement significant safety measures. Specifically, during the school start-up and close window, ESD intends to provide a crossing officer at the Ladeside junction. This measure aims to enhance pedestrian safety and minimise potential risks (see figure 14).

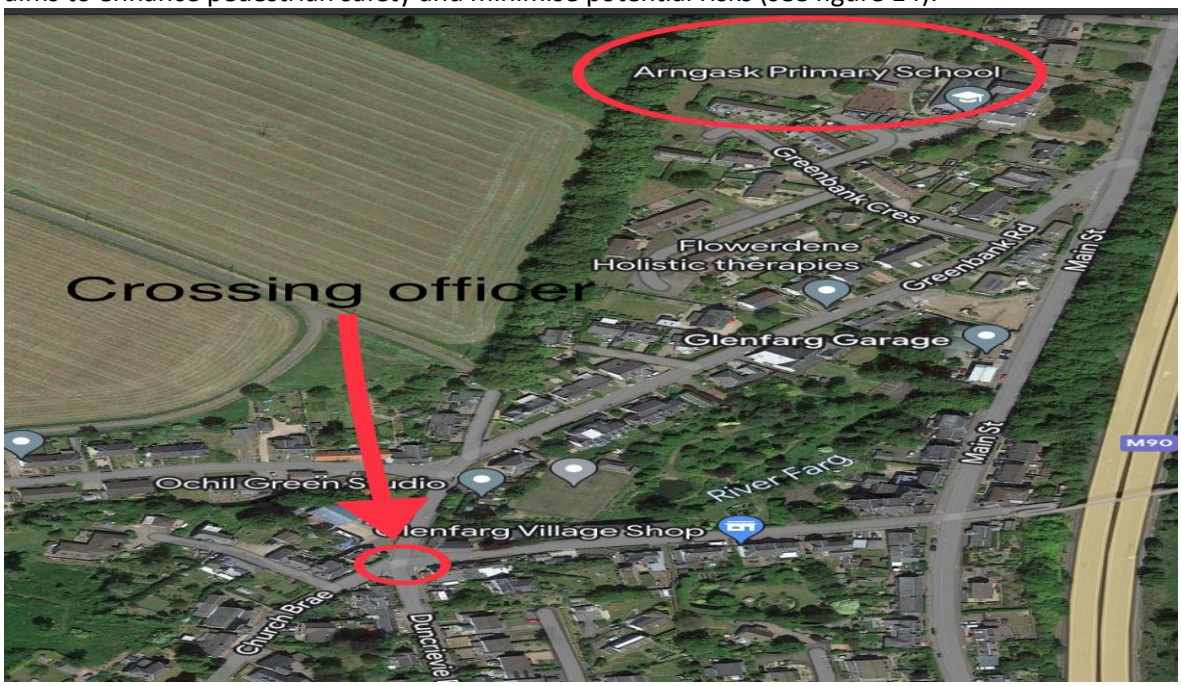

Figure 14

There will be specific times at set intervals for escorting HGVs to the construction site, and this process will be systematically carried out to ensure low speeds and prioritise public safety. Detailed information about this escort process is provided in Section 3 of this document. The escort vehicles will be operated by trained drivers who are well-versed in the escort procedure.

Parking restrictions will primarily be imposed in the upper section of Church Brae, where the road narrows, Scottish Water will endeavour to locate an area for vehicles to park whilst parking restrictions are in force. There are no plans to restrict parking in the vicinity of the local shop. The project is actively seeking to rent parking space as close to Church Brae as possible, contingent upon landowner approval. Additional provision will be made for any residents who require additional support.

The site access point along the private section of the road leading from Church Brae will be a shared access point used by construction traffic, SW operations and the public. Traffic along these routes will be strictly regulated to maintain safe conditions, with a reduced speed limit of 15mph in effect. The existing access road from the main treatment works to the reservoir location will undergo improvements, including the improvement of passing places. Speed bumps will be installed, with agreement, to enforce speed limits and promote safe driving practices.

To further enhance pedestrian safety within the construction site, designated pedestrian footpaths will be established around the site to separate pedestrians from vehicles and plant machinery to the greatest extent possible. Furthermore, designated crossing points will be set up to facilitate safe pedestrian

crossings of the site access route. It's important to note that these designated crossing points are intended for use by site pedestrians only.

6. Communication

In terms of communication, ESD has outlined a comprehensive plan to ensure that all stakeholders, including employees, subcontractors, suppliers, residents, businesses, and emergency services, are well-informed about the traffic management measures in place:

6.1 Signage

Signage will be used to clearly communicate changes, restrictions, directions, and diversions to drivers. Special construction traffic signage will be employed to identify work areas and traffic management routes.

6.1.1 Employees, Sub-Contractors & Suppliers

All site-employed drivers will receive induction on the traffic management plan and receive regular Toolbox Talks to stay informed about the TMP and any updates. Sub-contractors will be informed of the traffic management plan, and toolbox talks will be shared as needed. Suppliers will receive instructions accompanying delivery orders, detailing traffic management requirements.

6.1.2 Site Inductions

Site inductions for construction workers will cover various topics, including instructions on the vehicle escort system, environmental protection, noise, and pollution reduction measures, expected behaviours when interacting with Glenfarg Village, flood risk response actions, and agreed traffic routes and access points.

6.1.3 Residents & Businesses

Letters will be sent to all residents and business operators affected by the traffic management system. Feedback from these groups can be directed to the Community Liaison Group or the Project Communications Advisor

6.1.4 Emergency Services

Emergency services will always have access to the route and will be given the convoy controllers contact details to advise of any operations. The convoy controller will liaise with the emergency services to ascertain when the route can be used again. Following the decision to allow Light Vehicles through the village, the potential impact on Emergency Services is further reduced.
ESD will engage with the emergency services to go over and agree emergency access route.

6.1.5 WhatsApp Group & Website

ESD will provide a WhatsApp group to convey information for unusual traffic movements to Glenfarg ESD will also have a website where Scottish Water will update with all relevant information. Also, the website can be accessed via Glenfarg QR code, below.

figure 17

6.1.6 Community Email, Events & Newsletters

ESD has a dedicated community email address for customer communication. community@esd.scot.Community events and newsletters will be organised to keep the community informed about project updates.

This comprehensive communication strategy demonstrates ESD's commitment to keeping all relevant stakeholders well-informed about the traffic management plan and its updates.

7. Monitoring & Inspection during Construction Phases

ESD's monitoring and inspection plan during the construction phases includes several key elements to ensure the safety and condition of roads, properties, and the environment:

- Regular inspection of local roads, with safety items and obstructions logged by the convoy controller.
- Safety defects reported by the convoy driver during operational shifts.
- Weekly inspection and photo records of the Church Brae INEOS FPS crossing retaining wall.
- Fortnightly inspection by qualified staff to identify potential major defects, such as embankment slippage or overruns.
- Timely repairs to any major defects caused by operations that pose risks to construction or public traffic.

7.1 Condition Surveys

Property condition surveys carried out before and after construction for identified neighbouring properties that allow access.

- Surveys to accurately record building conditions in areas with significant traffic increases.
- Re-checking the survey upon project completion to ensure no damage to buildings along the haul route.

7.1.2 Freight Operator Recognition Schemes (FORS) & Construction Logistics and Community Safety (Clocs)

ESD acknowledges and encourages compliance with FORS and Clocs principles by suppliers and haulage companies.

Key principles include creating safer drivers, improving fuel economy, identifying at-risk drivers, promoting fewer journeys to and from the site, and providing more certainty with deliveries and collections.

7.1.3 Winter Maintenance

ESD will maintain winter maintenance during low temperatures and inclement weather using ploughs and grit/salt.

- A daily meteorological report will inform the escort team of winter conditions and route treatment requirements.
- Plant and salt will be located in Glenfarg for gritting before vehicles require access to the works.

7.1.4 Noise & Vibration

ESD will consider the potential noise and vibration impact of the Glenfarg WTW upgrade project, adhering to SEPA guidance.

- Noise impact assessments will be conducted to establish a baseline, using competent personnel.
- Vibration impact assessments will be sought with advice from dedicated vibration specialists to address this niche area of acoustics.

ESD's commitment to monitoring and inspection is evident in its approach to road safety, property protection, winter maintenance, and mitigating noise and vibration impacts, aligning with industry best practices and environmental protection regulations.

8. Site Access/Egress arrangements

ESD has carefully planned the site access and egress arrangements for the Glenfarg WTW upgrade project to ensure security, safety, and minimal disruption to local operations:

- The main access to the site will be upgraded with a security fence to prevent unauthorised access to the existing treatment works during the construction phase.
- The access will remain open but will be prominently signed to prohibit public entry.
- A gateman will be employed to reinforce access restrictions and record vehicle information for all deliveries, enhancing site security.
- CCTV cameras will be installed to ensure public and site safety, capturing delivery vehicle information and enhancing security measures.
- Adequate car parking will be provided within the site compound between the existing works and the reservoir, accommodating permanent site staff, visitors, and deliveries.
- Vehicles associated with the works will not be allowed to park in Scottish Water's existing car park without prior permission from ESD management.
- ESD will control all project construction traffic to the site, ensuring coordination and safety measures are in place.

These site access and egress arrangements demonstrate ESD's commitment to maintaining safety, security, and efficient operations during the project while minimising any disruptions to local activities.

9. Vehicle/Machinery

The document provides a comprehensive overview of construction related vehicle and machinery-related aspects of the Glenfarg WTW upgrade project, including anticipated numbers, types, and management of deliveries, machinery, and abnormal vehicles. Anticipated haulage includes construction materials, concrete, M&E plant, site cabins, staff vehicles, and waste management contract vehicles. Below is a summary of the key points:

9.1 HGV Numbers

Average 20-30 HGVs per week, with peaks during concrete works and surfacing operations. The concrete plant location requires 3 trucks per hour during concrete pours.

9.1.1 LGV Numbers

Up to 50 per day depending on works activities. The below table is indicative of expected vehicles accessing the WTW through Glenfarg Village.

Material	Delivery Vehicle	Exp. Frequency
Concrete	Concrete Mixing Lorry	When pouring 3 vehicles p/h
Site cabins & welfare	Large Hiab	Site setup & Demob
Rebar	Flatbed Lorry	Intermittent
Site Consumables	LGV Transit/Sprinter	Daily
Waste	Skip Wagon	Every Week
Clear Water Tanks	Abnormal Loads	4 deliveries
Cranes & Other Machinery	Abnormal Loads	Intermittent Throughout Project
Fuel	Fuel Tanker	As and when required

9.1.2 Plant & Machinery

Mobile crane will be managed by ESD through a site lead appointed person and crane coordinator. Delivery and collection of the mobile crane will be planned to avoid disruptions. Other key construction plant and machinery include MEWPs, telehandlers, task lighting, tower lighting, compressor, generator, and fuel deliveries

Plant, machinery and equipment is delivered to site to suit the task in hand and will be managed through DMS to ensure each vehicle can be booked in to site and placed in position without disrupting other site activities or the public highway.

9.1.3 Abnormal Vehicles

The project anticipates the use of abnormal vehicles for the delivery of machinery or materials.

Abnormal load deliveries will be in accordance with government guidance and evaluated in advance by specialist contractors for safety.

9.1.4 Delivery Management Software

All sub-contract supply chain members will arrange delivery dates and times with the Logistics Manager via the DMS for efficient planning.

9.1.5 Planned Attendance

Planned operational attendance at the site is not forecasted to change during and after the project's completion. Mechanical and electrical maintenance is based on the maintenance scheduling system.

9.1.6 Reactive Attendance

Response to telemetry alarms, intruder alarms, and equipment breakdown incidents may generate additional operator visits, but traffic volumes for such visits are expected to be low.

This section of the document provides detailed information about the expected traffic and equipment management during the Glenfarg WTW upgrade project, ensuring efficient operations and minimal disruption to the community.

10. Site Location

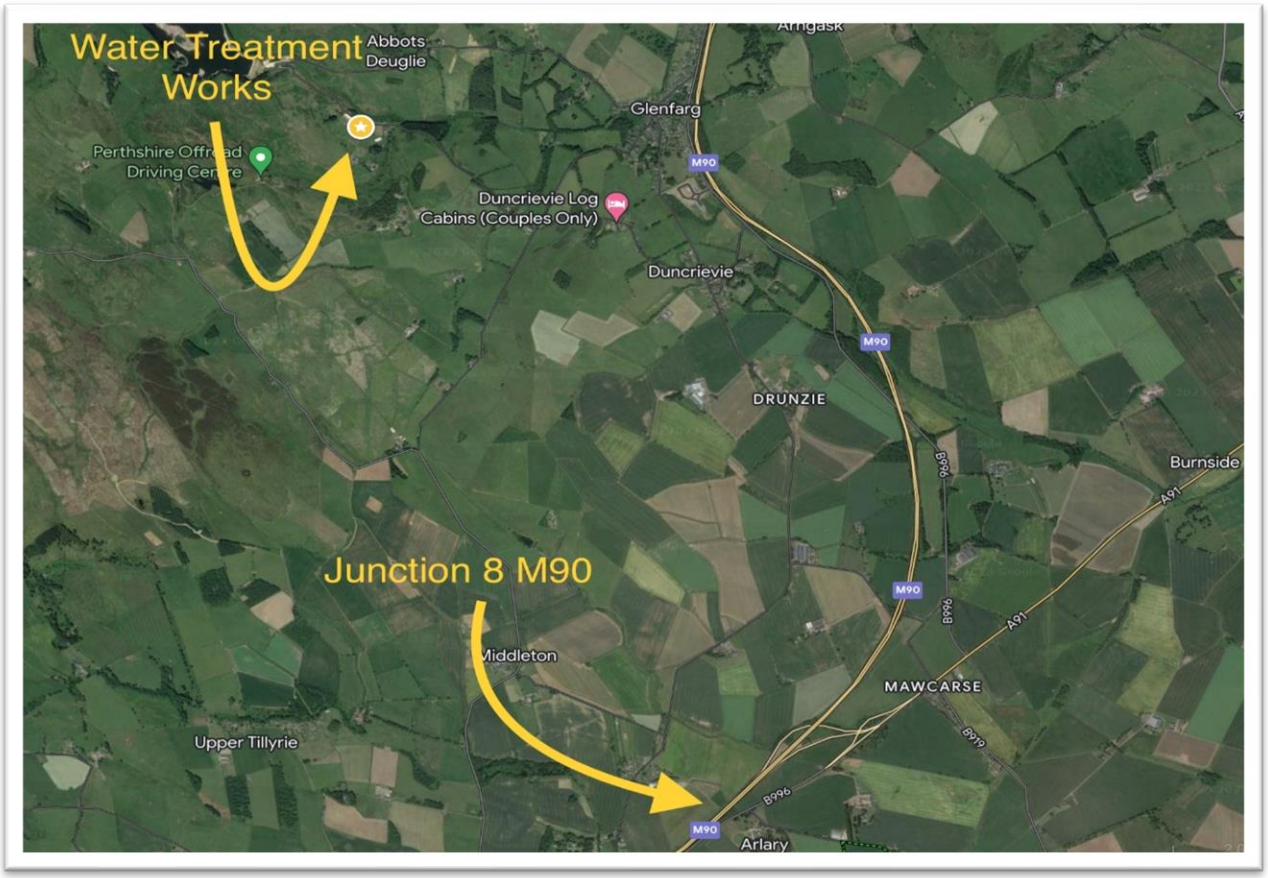

figure 18

At junction 8, take the A91 exit to St Andrews/Glenfarg

0.9 miles

Continue onto A91

0.2 miles

Turn left onto B996

2.6 miles

Turn left onto Ladeside

0.8 miles

Turn right

0.8 miles

Work
Glenfarg, WTW PH2 9QL

Figure 19

10.1 Vehicle Approach from North & East

This section of the document outlines the specific vehicle approach routes for delivery vehicles coming from the North and East. According to the plan:

- All delivery vehicles from the North and East are required to access Glenfarg from Junction 8 of the M90.
- To reach Junction 8, vehicles will travel southbound on the M90 to Junction 6 in Kinross.
- At Junction 6, they will use the elevated junction roundabout to return to the M90 northbound.
- Finally, they will exit at Junction 8, following the route as shown in Figure 20.

This route is designed to ensure that delivery vehicles approach Glenfarg in a specific manner, minimising traffic through other routes and ensuring efficient access to the construction site.

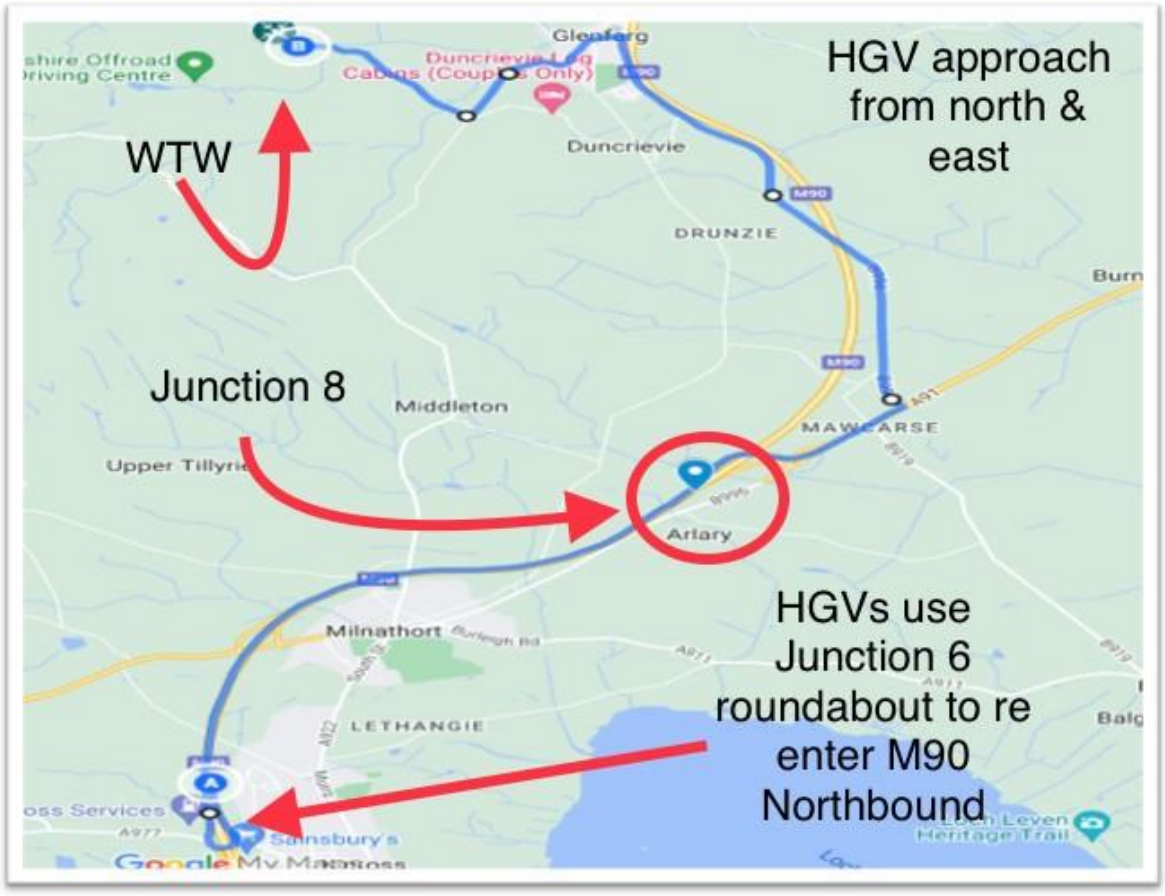

figure 20

10.1.1 Vehicle Approach from South & West

This section of the document outlines the specific vehicle approach routes for delivery vehicles coming from the South and West. According to the plan:

- All approaches to the construction site from the South and West will be from Junction 8 on the M90.
- This approach is designed to ensure that HGVs are facing the correct direction to enter LB1 on the B996, where they will await an escort.

This approach route from Junction 8 is designed to facilitate the safe and efficient entry of vehicles into the construction site, ensuring that they are correctly positioned for further traffic management measures. Figure 21 provides a visual representation of this approach.

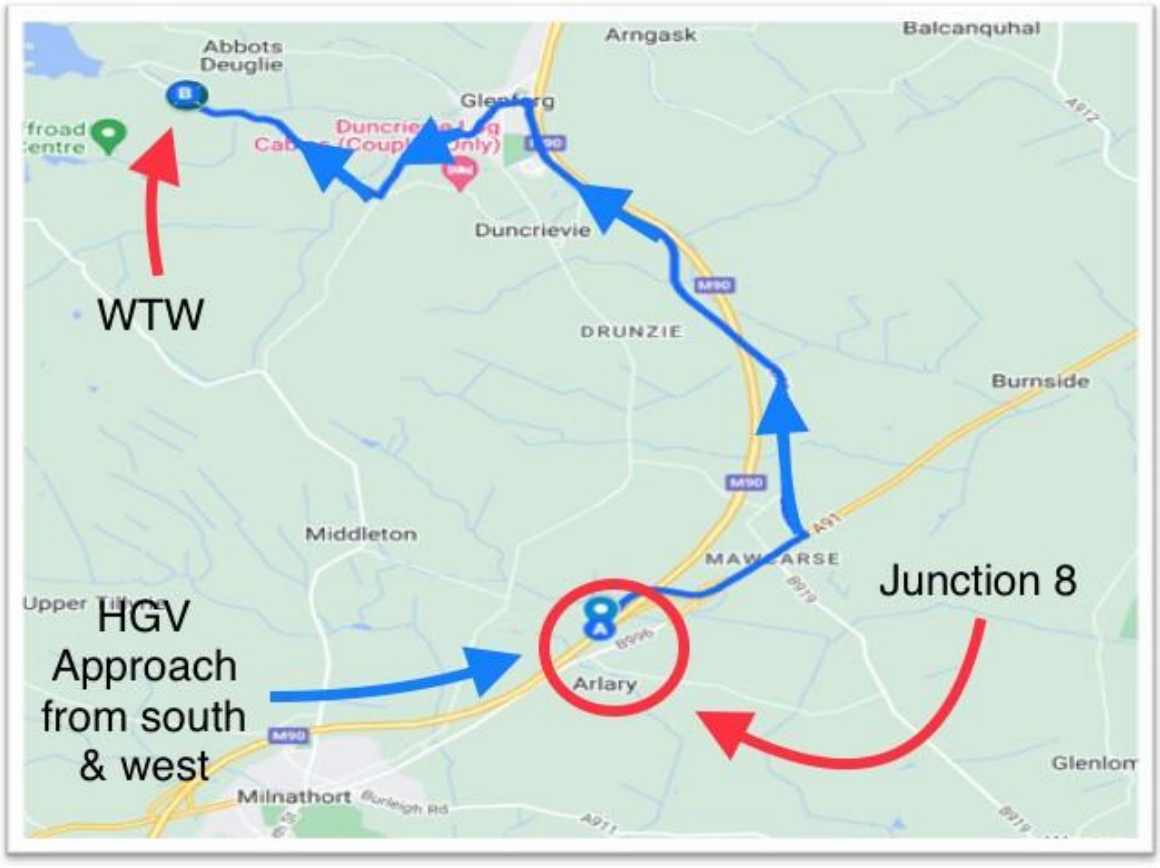

figure 21

11. Community Liaison for the Site

This section provides site details, contact information, and site times for the Glenfarg Water Treatment Works (WTW) construction project. Here's a summary:

Location: Glenfarg WTW, Glenfarg, Perthshire, PH2 9QL
Grid Reference: 3°25'44.51"W, 56°16'41.28"N

Site Contacts:
Community Liaison – community@esd.scot
Website.

12. Site times

Monday to Friday: 0800 - 1800
There may be exceptions or operations outside of these hours to accommodate public need, but these will be notified in advance to neighbours and the public.

12.1 Delivery Times

Monday to Friday: 0800 - 1800
Deliveries will be managed to avoid peak school times and other times of high traffic.

This information is essential for neighbours, stakeholders, and the public to know how and when to contact the relevant individuals and how the site operates in terms of working hours and deliveries.

13. Definitions & Abbreviations

Details / Abbreviations	Definition
SW	Scottish Water
PKC	Perth & Kinross Council
ESD	Efficient Service Delivery Joint Venture
TMP	Traffic Management Plan
TTL	Temporary Traffic Signals
TTRO	Temporary Traffic Regulation Order
WTW	Water Treatment Works
HGV	Heavy Goods Vehicle
LB1	B996 Layby
PP1	Passing Place 1
PP2	Passing Place 2
LGV	Light Goods Vehicle
CCTV	Closed Circuit Television
SV	Scout Vehicle
EV	Escort Vehicle
CBPRJ	Church Brae Private Road Junction
DMS	Delivery Management Software