Appendix 11.1

Construction Traffic Management Plan

Glenlee Substation Extension

Construction Traffic Management Plan

August 2019

SP Energy Networks

SP Energy Networks

Glenlee Substation Extension

Construction Traffic Management Plan

August 2019

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
A	17.10.2017	Fabien Jahnke	John Dooley	John Dooley	Issue 1 – Draft framework for Client Review
B	20.11.2017	Fabien Jahnke	John Dooley	John Dooley	Issue 2 – Draft framework for Client Review
C	18.12.2017	Fabien Jahnke	John Dooley	John Dooley	Issue 3 – Draft framework for Client Review
D	20.03.2018	Fabien Jahnke	John Dooley	John Dooley	Issue 4 – Draft framework for Client Review
E	20.04.2018	Santi Perez	Fabien Jahnke	David Chudziak	Issue 5 – Draft framework for Client Review
F	03.08.2018	Fabien Jahnke	John Dooley	John Dooley	Issue 6 – Draft framework for Client Review
G	13.09.2018	Fabien Jahnke	John Dooley	John Dooley	Issue 7 – Draft framework for Client Review
H	02.08.2019	Sean Stephen	Fabien Jahnke	John Dooley	Issue 8 – Draft framework for Client Review
I	29.08.2019	Sean Stephen	Fabien Jahnke	Kelvin Clarke	Final Issue 1

Document reference: 329055-ITD-GL-001-I

Information class: Standard

Contents

1 Introduction

1.1 Purpose

Mott MacDonald were appointed by LUC on behalf of SP Energy Networks (SPEN) to produce a framework Construction Traffic Management Plan (CTMP) in support of the proposed extension to the existing 132kV Glenlee Substation (hereafter referred to as the Development) situated to the south west of St. John's Town of Dalry in Dumfries and Galloway.

The Development will form part of the wider Kendoon to Tongland 132kV Reinforcement Project.

Mott MacDonald produced the Environmental Statement (ES) Traffic and Transport Chapter to support the Environmental Impact Assessment (EIA) process for the proposed Development. It was identified through the EIA process that a CTMP would be required.

The framework CTMP provides preliminary details of proposed traffic management measures and associated interventions to be implemented during the construction phase of the Development to minimise disruption and improve safety. The CTMP will be enhanced and expanded as appropriate by SPEN's appointed contractor(s), prior to commencement of construction activities and as necessary during the construction phase; the CTMP is considered a 'live' document.

1.2 Consultation

Consultation was undertaken with Dumfries and Galloway Council (D&GC) Roads Department to ascertain their views on: the environmental impacts relating to access, traffic and transport; any other particular concerns they may have regarding the Development, and; any proposed road works.

A meeting with officers from D&GC Roads Department and D&GC Planning Department was held at D&GC offices in Dumfries on 16th May 2018 to discuss the development as well as the creation of a CTMP in advance of the planning application submission. A subsequent meeting to discuss evolving matters was held on 10th December 2018.

A summary of the consultation is provided in **Table 1-1**.

Table 1-1: Consultation Summary

Consultee	Key Issues	Actions
Dumfries and Galloway Council (D&GC)	D&GC advised that any permanent accommodation works to the public road will require formal Roads Construction Consent, however temporary accommodation works contained within the public road boundary can be managed under Road Opening Permits (i.e. Section 56).	Proposed accommodation works will only be temporary with all works reinstated to their original condition post construction. Road Opening Permits will be applied for by the contractor as detailed in **Section 3.1**.
	D&GC advise that a wear and tear agreement must be agreed with the Council under a Section 96 agreement. At the start and end of each phase of works before and after condition video surveys of the proposed delivery and construction traffic routes should be undertaken jointly and a copy of the survey provided to D&GC.	Proposed methodology for before and after surveys detailed in **Section 3.4** of this CTMP.
	D&GC advise that construction traffic shall not wait or stack on the public roads.	This is noted in **Section 4.6** of this CTMP.
	D&GC advise that construction vehicles will require to display a unique identification number shown on a plate clearly visible.	This is noted in **Section 4.6** of this CTMP.
	D&GC advise that SPEN will need to appoint a community liaison officer.	This is noted in **Section 4.7** of this CTMP.
	D&GC advise that drivers need to adhere/comply to the code of conduct and that an indication of the consequences for non-compliance should be provided.	This is noted in **Section 4.9** of this CTMP.
	D&GC highlighted the presence of public footpaths crossing the road (Southern Upland Way and core path 30) and also the fact that the A762 and U2s are part of the National Byway cycling route. D&GC advised that risk should be assessed and mitigated against.	Non-motorised user surveys have been undertaken with analysis of the data. Proposed mitigations measures indicated in **Section 3.3** of this CTMP.
	D&GC highlighted the presence of both the Primary and Secondary Scholl in St John's Town of Dalry and indicated that if practicable deliveries should be scheduled outwith school opening and closing times.	This is noted in **Section 4.2** of this CTMP

Source: Mott MacDonald

1.3 Structure of this Report

Section 2 sets out background information associated with the Development and defines proposals for infrastructure accommodation works.

Section 3 presents the traffic management mitigation measures proposed during the construction phase of the Development.

Section 4 presents the traffic management operational measures proposed during the construction phase of the Development.

Section 5 provides a summary statement for the CTMP.

Section 6 provides key contact details for the Development.

2 Background and Development Proposals

2.1 Construction Programme

Construction is expected to commence in August 2020 with a scheduled duration of 59-months.

The construction programme is included in **Appendix A**.

2.2 Construction Traffic

Construction related activities for the Development comprise all activities relating to the enabling works, the construction/upgrading of access tracks, earthworks (including spoil removal), base construction and commissioning.

The predicted number of traffic movements (note: one trip = two movements; i.e. one delivery and one return journey) generated by construction activity during the key construction phases[1] are summarised in **Table 2-1**.

Table 2-1: Vehicle Movements Generated by Construction Activity for the Development

Activity	Type of Vehicle	Total Vehicle Movements
Enabling Works	Lorry (20 tonne capacity)	420
Access Road Construction	Lorry (20 tonne capacity)	2,940
Earthworks	Lorry (20 tonne capacity)	4,500
Base Construction	Lorry (20 m^3 capacity) concrete ready-mix trucks with a 6 m^3 capacity	1,460
Commissioning	Lorry (20 tonne capacity)	1,140
TOTAL HGV TRAFFIC MOVEMENTS		**10,460**
TOTAL LGV TRAFFIC MOVEMENTS		**23,000**
TOTAL ALL TRAFFIC MOVEMENTS		**33,460**

Source: Mott MacDonald

Construction traffic is estimated at an average of 74 vehicle movements per day over the entire construction period, with an estimated maximum averaging 94 vehicle movements per day occurring during both April 2021 and August 2021 (this coincides with the start and end of the earthworks activity). The Development 'peak' period is therefore considered to be April 2021 to August 2021 inclusive.

2.3 Access Routes

The traffic routes which are expected to be utilised to access the Development will vary depending on the origin points of construction materials. The most probable transport access routes are:

- For travel to/from the north:
  - A77, the A713, the A762 and U2s; and
  - A76, the B741, Gateside Road, the A762 and U2s.
- For travel to/from the south: A75, the A713, the A762 and U2s.
- For travel to/from the east: the A75 via Dumfries, the A712, the A713, the A762 and U2s.

LGV movements will also occur on the A702.

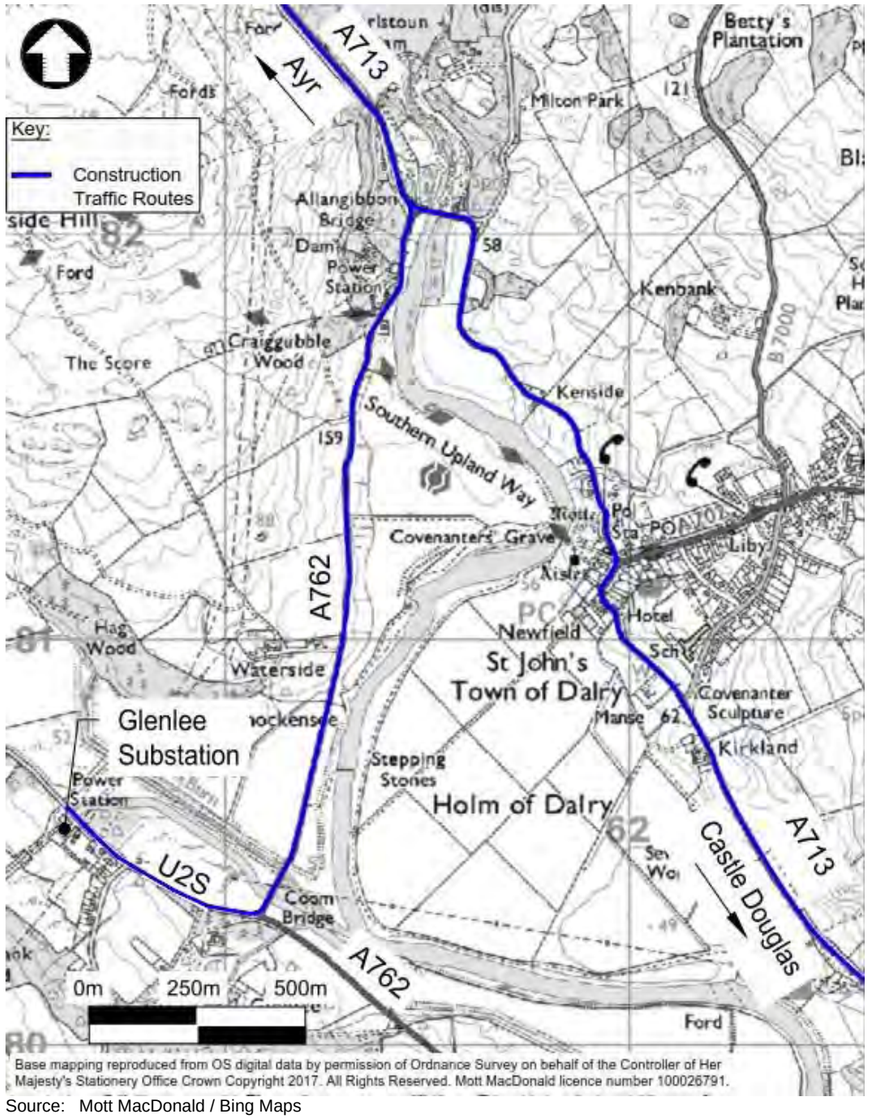
During the construction phase of the Development, it will be mandated that HGV traffic:

- Shall not travel through New Galloway via the A762; this is to reduce the impact of construction traffic on New Galloway;
- Must not travel through Moniaive via the A702; this is to reduce the impact of construction traffic on Moniaive; and
- Shall not travel through central Dalmellington; this is to reduce impact of construction traffic on the Dalmellington historic centre.

HGV traffic travelling to the Development will therefore all approach from the north from the A762, this is as illustrated in **Figure 2-1**.

[1] The construction period of the proposed development is currently planned to finish in June 2025, however from June 2022 onwards, the proposed development will generate low levels of traffic and professional judgement suggest that effects arising from such low level of traffic will be negligible and therefore not significant. As such, the assessment of the likely significant traffic and transport effects with the construction of the proposed development has focused on the key construction phases up until June 2022.

Figure 2-1: Construction Traffic Routes

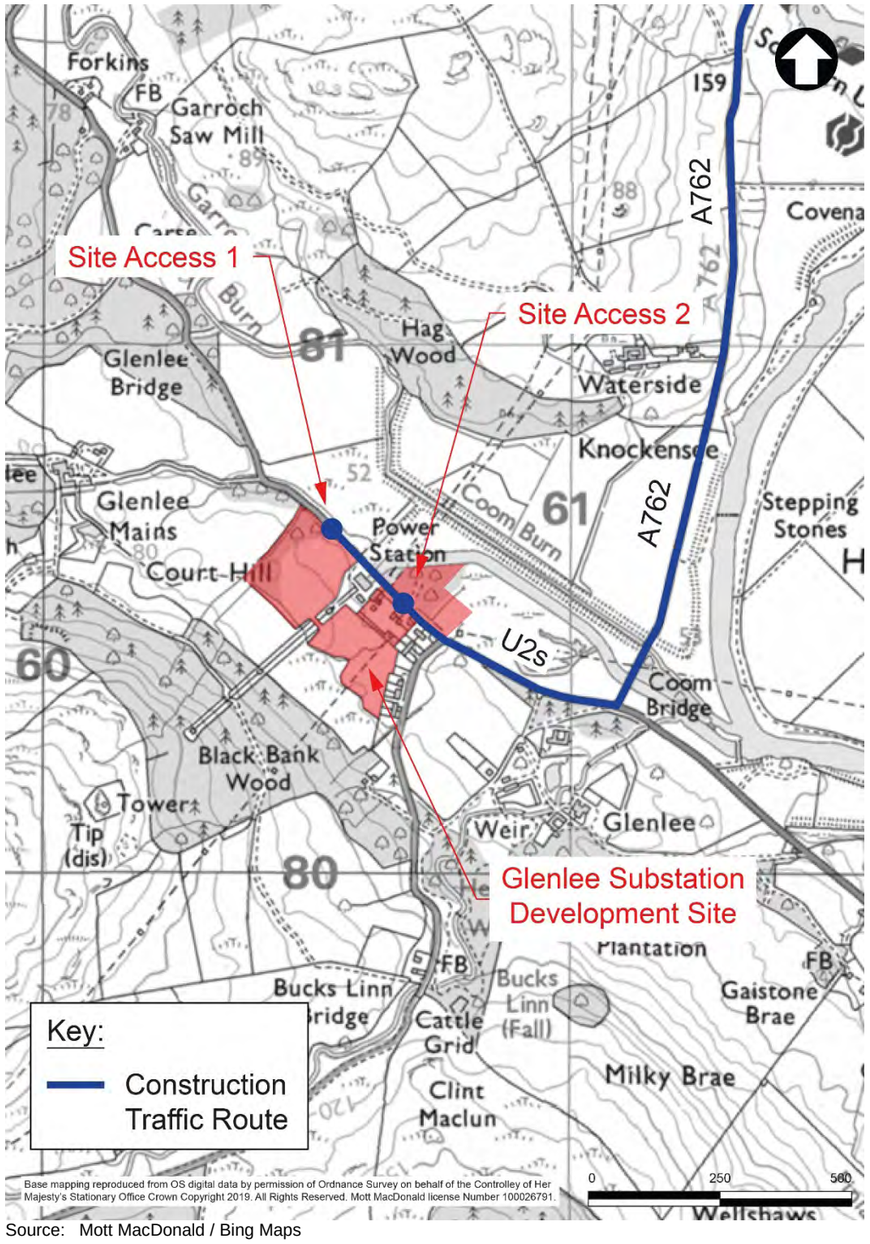


Source: Mott MacDonald / Bing Maps

2.4 Access Locations

SPEN has identified two separate accesses to be used during the construction phase of the Development, both of which are shown in **Figure 2-2**. The existing access at the Glenlee Substation is expected to be maintained with an additional access proposed approximately 200m along the U2s to the north-west. This second access will be used exclusively as access to the Construction Site Compound.

Figure 2-2: Site Access Plan



Source: Mott MacDonald / Bing Maps

2.5 Existing Conditions

A site visit was completed on 10th October 2017 by Mott MacDonald staff. This involved a drive through of the public road sections, local to the Development, to identify potential upgrades necessary to accommodate the safe movement of Development generated construction traffic. A digital video was recorded which captured the existing public road corridor. To supplement the digital video a series of still photographs were recorded.

A subsequent site visit was completed on 31st July 2018, a digital video was recorded which captured the condition and general arrangement of the existing public road corridor. To supplement the digital video a series of still photographs were recorded.

A topographic survey covering the A762 and the U2s public road sections was procured to facilitate and present the design of proposed infrastructure upgrades.

2.5.1 A762 Public Road Section

Road widths for the A762 between the A713 (to the north) and the U2s (to the south) generally vary between 4.5m and 5m reducing locally to 4.1m across Coom Bridge.

At the time of the last site visit (31st July 2018), it was observed that the A762 has recently been resurfaced from its junction with the A713 to approx. 10m before its junction with the U2s. The junction with the U2s has not been resurfaced and localised surface deteriorations were observed. Evidence of vehicle over-run were observed in the verges at few locations.

Three bridges were identified on the A762, situated at:

- Earlstoun Power Station (A762/90) - owned and maintained by Scottish Power (Holdings) Ltd.
- Coom (A762/80)
- Glenlee Power Station (A762/70) – owned and maintained by Scottish Power (Holdings) Ltd.

See plan included in **Appendix B** for locations of the bridges.

During the site visit (31st July 2018), damage to the eastern parapet of Coom bridge was observed, with a section of the top stones being dislodged suggesting a potential vehicle collision; see **Figure 2-3**.

No visible defects were observed on other bridges in on the A762.

Figure 2-3: Coom Bridge Parapet Damage

Source: Mott MacDonald site visit 31-07-2018

2.5.2 U2s Public Road Section

Road carriageway widths for the U2s vary between 4m and 4.3m.

At the time of the site visit (31st July 2018), it was observed that the U2s has recently been resurfaced; commencing approximately 10m west of the A762 junction, for a distance of approximately 150m. The A762/U2s junction had not been resurfaced, and localised surface deteriorations were observed. Potholes and localised surface deteriorations were also observed on the section of the U2s which has not been resurfaced; with defects highlighted with yellow paint suggesting that maintenance is programmed, see **Figure 2-4**. Evidence of vehicle over-run was observed in verges at locally.

One bridge was identified on the U2s situated at:

- Glenlee Power Station (U2s/10) – owned and maintained by Scottish Power (Holdings) Ltd.

See plan included in **Appendix B** for location of the U2s bridge.

No visible defects were observed on the U2s bridge.

Figure 2-4: U2s Surface Edge Erosion

Source: Mott MacDonald site visit 31-07-2018

2.5.3 Consultation

Mott MacDonald contacted D&GC, by email on the 31st January 2018, to request information on the bridges on the A762 and U2s and was informed that there were no current weight restrictions. See **Appendix B** for consultation email record.

2.6 Proposed Infrastructure Upgrades

Road widths for the A762 and U2s typically vary between 4m and 5m and are expected to see significant increases in construction traffic (particularly HGVs). As such it is proposed to locally widen strategic sections of the A762 and U2s to provide passing places; achieving a minimum width of 6.75m.

It is proposed that accommodation works will only be temporary with all works promptly reinstated to their original condition post construction.

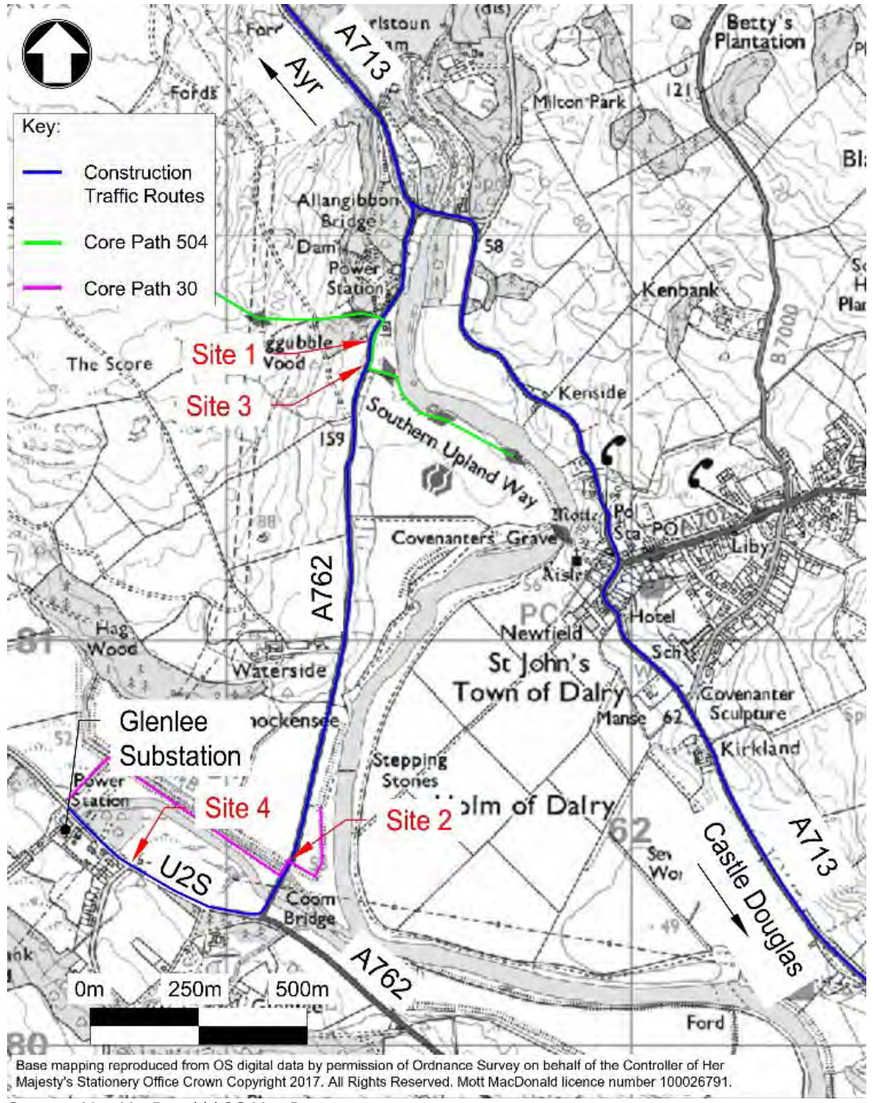
Drawings 329055-MMD-GL-XX-DR-C-0001 and 329055-MMD-GL-XX-DR-C-0002, included in **Appendix C**, indicate locations and indicative extents of proposed widening to accommodate passing places on both the A762 and U2s public roads.

It has been assessed that minor accommodation works will also be required at two existing access locations.

2.7 Core Paths and National ByWay Cycle Route

Two core paths and one cycle route were identified on-site and through desk-top review. The two core paths intersect the A762 whilst the National ByWay cycle route follows the A762 / U2S. These routes are shown in **Figure 2-4** and are described briefly below.

Figure 2-5: Core Paths and NMU Count Sites



Source: Mott MacDonald / OS Map Data

2.7.1 Core Path 504 - Southern Upland Way

The Southern Upland Way is a long-distance, coast-to-coast walking route which runs from Cockburnspath in the east to Portpatrick in the west. The route follows the southern bank of the Water of Ken and emerges onto the A762 just south of Earlstoun Power Station. It then follows the road north for approximately 30m before cutting back off-road to the west.

2.7.2 Core Path 30 - Glenlee

Core Path 30 is an off-road, water-side walking route which runs from Dalry to Glenlee Hydro Power Station. The route follows the western bank of the Water of Ken and emerges onto the A762 just north of the junction with U2s. The route then follows the road south for approximately 30m over the bridge, before cutting back off-road to the west and continuing along Coom Burn, terminating at Glenlee.

2.7.3 National ByWay Cycle Route

The National ByWay is a national cycle route network which utilises predominantly rural lanes. The route approaches Dalry from the north along the B7000, cuts west through the town via the A702, before joining the A713 heading north. After crossing west over the Water of Ken, the route then follows the A762 south and the U2s west, briefly, before continuing off to the southwest.

2.7.4 Non-Motorised User Surveys

Non-Motorised user surveys (NMU) were carried out at two sites, see locations below.

- Site 1: Intersection of Core Path 504 and the A762
- Site 2: Intersection of Core Path 30 and the A762

In addition, pedal cyclist counts were carried at the following two sites:

- Site 3: A762 south of Earlstoun Power Station Bridge
- Site 4: U2s at its intersection with the U3s

The purpose of the surveys was to determine the level of pedestrian, equestrian and pedal cycle usage along the A762 and pedal cycle along the U2s.

The surveys were carried out for full 24-hour periods over seven days, from Wednesday 1st August to Tuesday 7th. The surveys were timed to coincide with school summer holidays in Scotland in order to capture what would likely be the peak use for these predominantly recreational routes. Counts were carried out via CCTV camera with subsequent manual classification and summarised in 15-minute intervals.

2.7.4.1 NMU Survey Analysis

A full assessment of NMUs has been included within Chapter 10 of the Glenlee Substation ES, concluding that surveyed levels of NMU movements are considered relatively low, however adequate provision of warning signage will be required to be designed and installed by the selected contractor; alerting the public to construction traffic and drivers of upcoming locations where there is an interface between construction traffic and core paths.

It is envisaged that with adequate signage, then both Core Paths 30 and 504 can remain open during the construction period. Further details are provided in **Section 3.3** of this CTMP.

3 Mitigation Measures

3.1 General

Local vehicle routes were assessed with the primary aim being to minimise disturbance to local communities.

The contractor will use reasonable endeavours to keep roads and accesses free from mud and other loose materials arising from construction traffic to/from the Development.

Bowsers will be used at site to wash wheels of vehicles and prevent debris being carried on to the public road network.

Where reasonable and practicable, project-related vehicles will avoid travelling in convoys on public roads.

Any damage to the public road(s) which is proven to be as a result of construction activities will be repaired with the repairs implemented and/or funded by SPEN thereof in consultation with D&GC.

Staff using private vehicles to travel to work will park their vehicles in designated site car parks and not on public roads.

The contractor will use reasonable endeavours to mitigate potential impacts on the local community and keep delays and disruptions to traffic to a reasonably practicable minimum.

The contractor will discuss and agree traffic management measures required with D&GC.

Road opening permits will be required for sections of the route where infrastructure works are scheduled to take place. In this regard the contractor will liaise with D&GC in line with statutory requirements.

3.2 Access Routes for Construction Traffic

The most probable access routes for construction vehicles (HGVs) are identified in **Section 2.3**.

HGV traffic routes have been defined in order that project related traffic will keep to the most appropriate routes and thus, where possible, minimise movements within residential areas. The contractor will keep site access points clear.

Confirmation of the access routes identified will be agreed with the appropriate Road Authorities when a contractor has been selected.

3.3 Public Transport, Pedestrian, Equestrian or Cycles Routes

The contractor will discuss with D&GC regarding matters that may affect the flow of buses and as appropriate will take reasonable precautions to mitigate any disruption to bus services.

During the construction phase, signage will be installed to warn drivers to the presence of public paths and cycling routes in the vicinity of the A762 and U2s; this notably include Core Path 504 (Southern Upland Way) and Core Path 30.

Appropriate signage advising of dates and hours of working will be installed on Core Paths 30 and 504 (Southern Upland Way) in advance of road crossing points to warn users of construction traffic.

3.4 Route Condition Surveys

SPEN will enter into a legal agreement under Section 96 of the Roads (Scotland) Act 1984 to formalise an inspection and maintenance regime with D&GC for agreed sections of road.

SPEN shall ensure that a baseline road condition survey is undertaken prior to the commencement of construction works in relation to each agreed phase. The baseline survey will record structures (bridges and culverts), road surface and verge conditions. An interim inspection regime will be agreed with D&GC and (if agreeable to D&GC) monthly meetings between SPEN and D&GC will be held to discuss the condition of relevant sections of road. A final survey/ inspection will be completed 1 – 3 months post construction to identify any deterioration in infrastructure condition that has occurred during the construction period.

SPEN will fund the completion of the pre-construction, interim and post-construction surveys referred to above. It is envisaged that road condition surveys will be carried out jointly with D&GC and subsequent survey outputs will be agreed by SPEN and D&GC. The persons completing the survey must be approved as suitably competent by D&GC.

SPEN will monitor construction vehicle activity aligned with the ultimate aim that damage to walkways, driveways, accesses, bridges, walls, verges, roads and private property does not occur. Monitoring will highlight any damage that has occurred and, if this is agreed as reasonably attributable to the Development, it will be repaired with the repairs implemented and/or funded by SPEN thereof in consultation with D&GC.

3.4.1 Methodology

The proposed methodology for road condition surveys is as follows:

1. Sections of route will be driven and recorded on high quality digital video. The driver and/ or passenger will be an experienced transport infrastructure professional whose competency will be approved by D&GC.
2. Still photographs and GPS co-ordinates will be recorded at locations where infrastructure is showing signs of “wear and tear” or where infrastructure damage might reasonably be expected to occur (professional judgement).
3. Accompanying site notes may be recorded via microphone with the digital video or typed in Microsoft (MS) Word format.
4. The video will be transferred to transportable media (e.g. DVD or pen drive) and filed safely with site notes and photographs.
5. A survey report shall be produced following each survey undertaken.

4 Operational Procedures

4.1 General

When implementing the CTMP, the contractor will comply with the following requirements on or adjacent to public roads and footpaths, as necessary.

Traffic management will comply with the provisions of the Traffic Signs Manual Chapter 8: Traffic Safety Measures and Signs for Road Works and Temporary Situations.

Traffic signs will comply with the Traffic Signs Regulations and General Directions 2016.

4.2 Time Controls

Construction activities will be undertaken Monday To Friday between approximately 7am and 7pm in summer (April to September), and 8am and 5pm (or as daylight allows) in winter (October to March). Hours will be 7am to 1pm on Saturdays and there will be no working on Sundays or public holidays. Should working outside of these hours be required then this would be discussed with local residents before being agreed with D&GC.

As far as is reasonably practicable, deliveries will be scheduled outwith school opening and closing times.

4.3 Speed Restrictions

Speed limits on public roads must be strictly adhered to and the need for compliance with speed limits on all roads will be emphasised to all staff during induction training / 'toolbox talks', particularly near settlements.

4.4 Temporary Signage

The contractor will comply with the requirements of D&GC regarding the signing of site access locations. All signing will also be provided in accordance with the Traffic Signs Regulations and General Directions 2016 and associated Traffic Signs Manuals 3, 5 and 8.

4.5 Road Cleaning / Sweeping

The contractor will use reasonable endeavours to keep roads, accesses free from mud and other loose materials arising from the importation of material to the Development.

Bowsers will be used at site to wash wheels of vehicles and limit potential for debris being carried on the public road. In addition, during the construction of the new haul road and significant earthworks operations, the Contractor will carry out inspections and deploy, where necessary, a road sweeper on routes adjacent to the Development used by construction traffic; estimated at once per week.

4.6 Transportation Protocol

All Contractors must adhere to the agreed CTMP and any conditions imposed by D&GC.

Prior to leaving the Quarries/Site, all vehicles must:

- display a unique identification number shown on a plate clearly visible;
- be securely sealed;
- record origin, destination and route of the vehicle;
- not leave in convoy; and
- ensure all vehicle identifications including registration plates on the vehicle are clearly visible.

On route to and from their destinations all vehicles must:

- use only approved routes as specified by the CTMP;
- strictly observe speed limits;
- be driven in a safe and courteous manner with due care and consideration for other road users both vehicular and pedestrian;
- all drivers should be aware and alert whilst driving through towns and villages particularly at school times;
- strictly adhere to the hours of operation detailed by the CTMP; and
- vehicles shall not wait or stack on any public road.

All Operators must maintain a management system whereby the following records are kept and are available to D&GC:

- the number of vehicles leaving and their destination;
- all complaints received regarding transport and action taken; and
- all instances where protocol has been breached and action taken.

All Operators must supply the following information to D&GC, which will be treated in confidence:

- action to be taken when protocol is breached; and
- keep a log of vehicle movements.

If an operator requires to use an alternative route as a result of circumstances outwith its control, the operator shall contact the Roads and Planning Authority as soon as practicable in order to agree temporary re-routing. Where the Roads and Planning Authority is aware of any circumstances which may require temporary re-routing, the Authority shall contact the operator to agree such changes.

4.7 Communication and Consultation

SPEN shall nominate a Community Liaison Officer (CLO); the CLO will be the key point of contact with the local community.

SPEN maintains a dedicated website for the KTR Project (www.spendgsr.co.uk). This website will be updated with information on the expected construction programme and contact numbers for relevant staff at SPEN, such as the Project Manager and CLO will be provided.

Signs will be erected on fences surrounding the construction compound to provide contact details of the SPEN Project Manager. These contact details would also be provided directly to the emergency services and D&GC Roads Department.

4.8 Monitoring of Traffic Management

The following monitoring requirements will be placed upon the contractor:

- The contractor will monitor traffic management schemes to maintain their effectiveness and condition and to provide for the safety of traffic, the public and staff during traffic

management works and temporary traffic control measures. The contractor will provide information regarding any delays to traffic due to construction works to D&GC.

- The contractor will monitor traffic levels on roads where reasonably required by the police or D&GC.
- The contractor will monitor site accesses and public roads adjacent to the access points to enable measures to keep accesses and roads clean to be implemented, as required.

4.9 Enforcement

All contractors will be required to adhere to the CTMP. Details of access routes will form part of the site induction and training will be held for site operatives through ‘toolbox talks’.

Compliance will be monitored by the Resident Engineer on behalf of SPEN via spot checks to ensure that vehicles follow the measures set-out in the CTMP and recording of any complaints. SPEN will stipulate that all contractors disseminate these rules to their sub-contractors.

Non-compliance with the CTMP, will constitute a breach of contract, and action will be taken against the contractor or supplier should repeated non-compliance be verified. Details of the proposed monitoring and enforcement regime will be supplied to D&GC on request.

4.10 CTMP Review

The CTMP is a ‘live document’ and will be regularly reviewed by SPEN (as appropriate, in conjunction with appointed contractor(s)) prior to and during the Development construction phase. The CTMP will accordingly be subject to amendment, as the project evolves. to ensure the most appropriate and effective measures are implemented and as necessary approved by D&GC.

5 Summary

5.1 Summary

This CTMP document represents a commitment to satisfy D&GC, as local roads authority and defines proposed traffic management measure to enhance road safety and limit the adverse effects of construction traffic on the local road network and incorporates associated proposals for infrastructure accommodation works.

It is anticipated that once suppliers and contractors are appointed, further relevant information will become available. Such information will be submitted to D&GC for perusal and appended to the CTMP if appropriate.

6 Contacts

Figure 6-1: Project Contact Details

Role (Company)	Contact Details	
Delivery Project Manager (SP Energy Networks)	Name	Antonio Fuentes
	Address	Ochil House, 10 Technology Avenue, Ground Floor, Hamilton International Technology Park, Blantyre, G72 0HT, UK
	Email	a.fuentes@spenergynetworks.co.uk
Civil Design Engineer (SP Energy Networks)	Name	Sandy Boyd
	Address	Ochil House, 10 Technology Avenue, Ground Floor, Hamilton International Technology Park, Blantyre, G72 0HT, UK
	Email	sandy.boyd@sperenergynetworks.co.uk

Appendices

A. Glenlee Substation Construction Phasing Programme

SP Energy Networks | Construction Traffic Management Plan
Glenlee Substation Extension - Indicative Construction Programme

	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Continue Below
Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Enabling Works																								
Access Road Construction																								
Earthworks																								
Base Construction																								
Commissioning																								

	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Continue Below
Activities	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	
Commissioning																								

	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Activities	47	48	49	50	51	52	53	54	55	56	57	58	59
Commissioning													
Snagging, Landscaping and Reinstatement													

B. D&GC Consultation Email

Jahnke, Fabien

To: Jahnke, Fabien
Subject: RE: Glenlee Substation Extension - A762 and U2s Structures

From: Coltart, Charis <Charis.Coltart@dumgal.gov.uk>
Sent: 27 February 2018 10:46
To: Jahnke, Fabien <Fabien.Jahnke@mottmac.com>
Cc: Drewett, Ken <Ken.Drewett@dumgal.gov.uk>
Subject: RE: Glenlee Substation Extension - A762 and U2s Structures

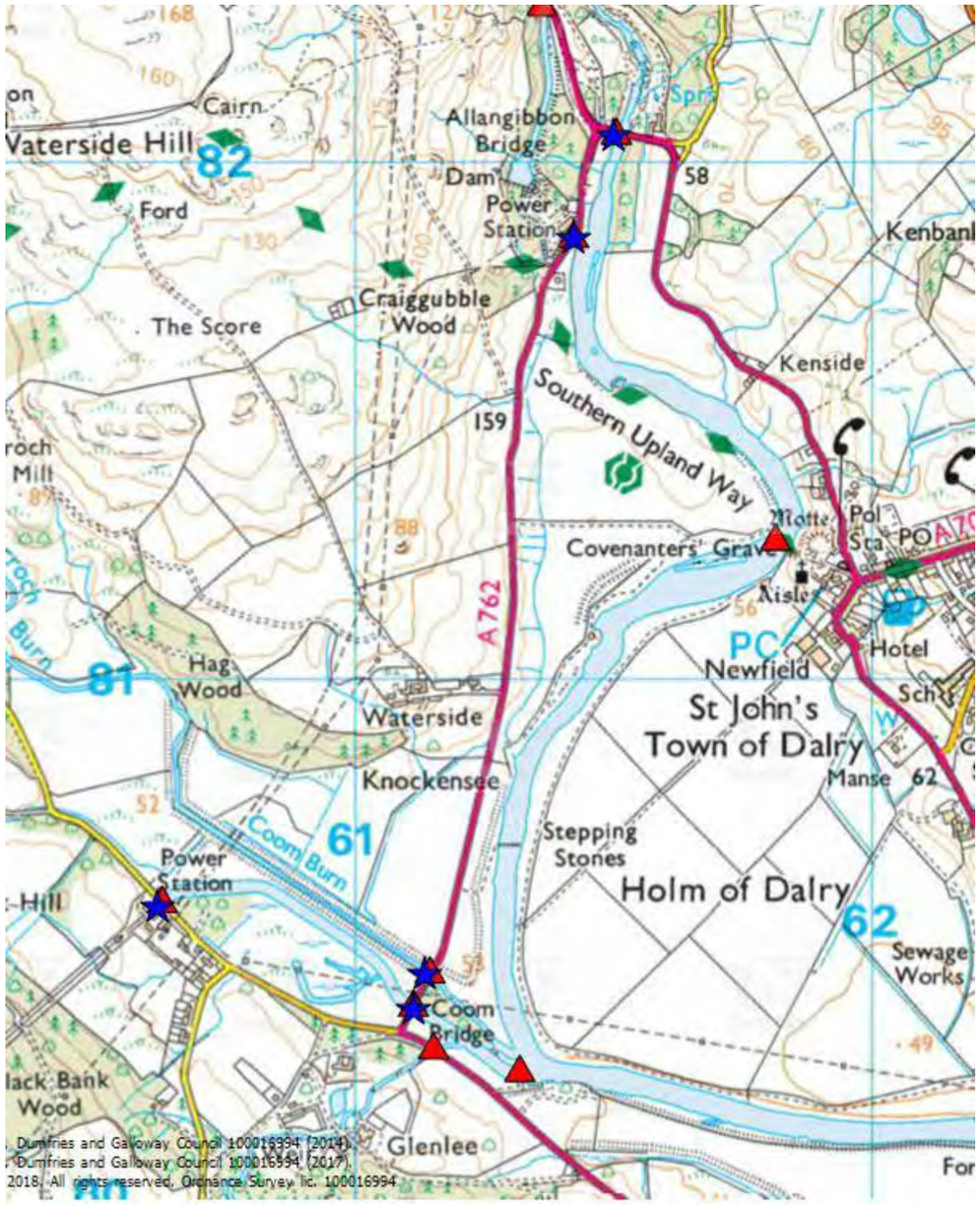
Fabien,

I have spoken with my colleagues in our Bridges and Structures section, and they have offered the following comments:-

There appears to be no weight restrictions on the bridges listed.

1. Allangibbon (A713/70)
2. Earlstoun Power Station (A762/90) – Owned and maintained by Scottish Power and has been assessed at 40T
3. Coom (A762/80) – Narrow at 4.5m wide between parapets
4. Glenlee Power Station (A762/70) – Narrow at 4m between parapets. Owned and maintained by Scottish Power and has been assessed at 40T
5. Glenlee Power Station (U2s/10) – Owned and maintained by Scottish Power and has been assessed at 40T

The 5 no. structures are marked on the map below with a blue star.



For any further Roads queries please contact Ken Drewett or myself.

For any further Bridges & Structures queries please contact Stuart Ritson (stuart.ritson@dumgal.gov.uk).

I trust the above information, which is given without prejudice to any future decision made by the Council, is of assistance.

Regards,

Charis

Charis Coltart | Senior Technician : Roads Planning | Economy, Environment & Infrastructure: Infrastructure & Transportation | Drop Point: 244
Cargen Tower | Garroch Business Centre | Dumfries | DG2 8PN
T: 01387 271100 | I: 62250 | M: 07717 226034 | E: charis.coltart@dumgal.gov.uk

From: Drewett, Ken
Sent: 26 February 2018 16:19
To: Coltart, Charis
Subject: FW: Glenlee Substation Extension - A762 and U2s Structures

From: Jahnke, Fabien [mailto:Fabien.Jahnke@mottmac.com]
Sent: 31 January 2018 11:39
To: Drewett, Ken
Cc: Dooley, John M
Subject: Glenlee Substation Extension - A762 and U2s Structures

Ken

Thanks for taking some time earlier to discuss structures on the A762 and U2s public roads near Dalry in relation to the Glenlee Substation extension.

As discussed, Mott MacDonald were appointed by LUC on behalf of SP Energy Networks to produce a framework Construction Traffic Management Plan to support the planning application of the proposed extension to the existing 132kV Glenlee Substation.

Construction access will be taken via the A713. From the A713 traffic will then access the A762 (north of Dalry) followed by the U2s. Note that no HGV traffic will travel through New Galloway via the A762, this is in order to reduce the impact of construction traffic on New Galloway. HGV traffic travelling to the substation will therefore all approach from the north from the A762.

As part of this, we would like to know whether there are any weight restrictions on the A762 and U2s public roads as shown here on Google Maps.

Could you possibly provide a list of structures on these two road sections and advise of any weight restrictions if any.

Thanks for your consideration.

Regards
Fabien

Fabien Jahnke
BSc (Hons)
Senior Transportation Engineer

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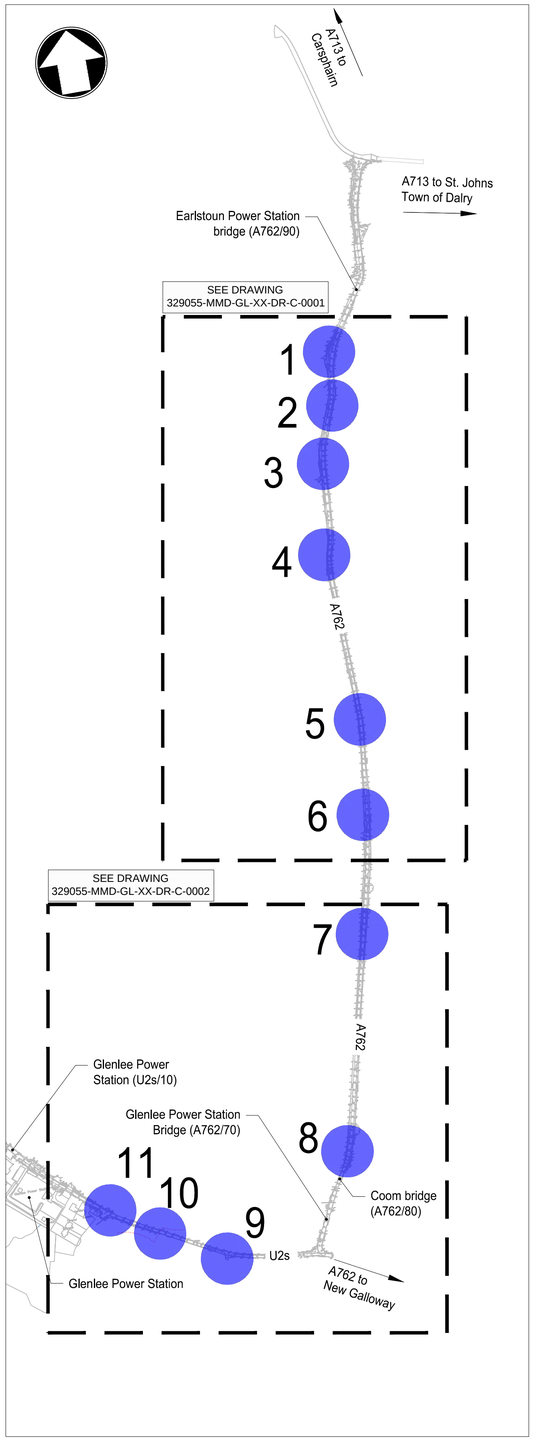
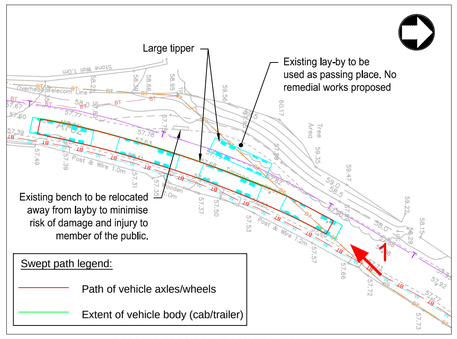
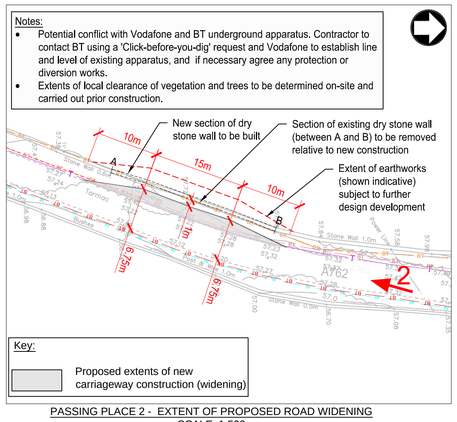
C. Passing Places and Construction Details Drawings



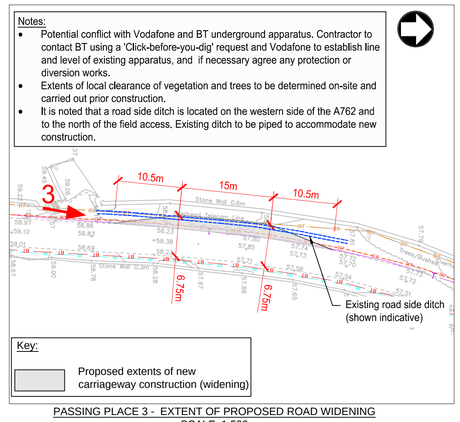
OVERVIEW PLAN - A762 AND U2s PUBLIC ROADS
SCALE: 1:5000



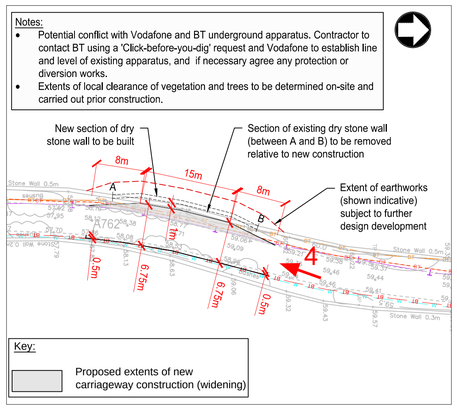
PASSING PLACE 1 - EXISTING LAY-BY
SCALE: 1:500



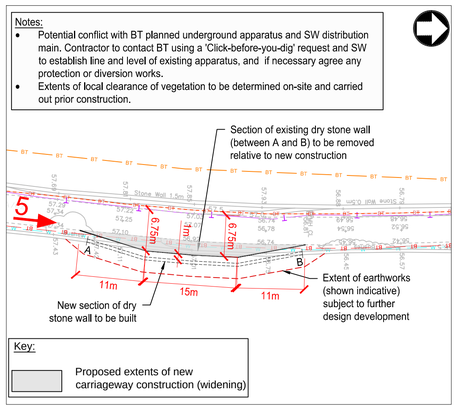
PASSING PLACE 2 - EXTENT OF PROPOSED ROAD WIDENING
SCALE: 1:500



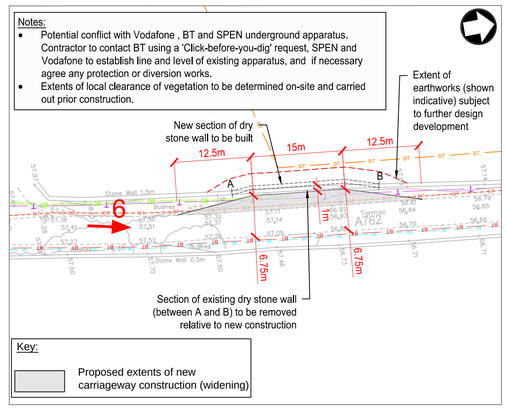
PASSING PLACE 3 - EXTENT OF PROPOSED ROAD WIDENING
SCALE: 1:500



PASSING PLACE 4 - EXTENT OF PROPOSED ROAD WIDENING
SCALE: 1:500



PASSING PLACE 5 - EXTENT OF PROPOSED ROAD WIDENING
SCALE: 1:500



PASSING PLACE 6 - EXTENT OF PROPOSED ROAD WIDENING
SCALE: 1:500

1:500 0 25m 50m

1:5000 0 250m 500m

Notes

1. The information on this drawing is based on Topographical Survey Data produced by Aspect Land & Hydrographic Surveys Ltd dated March 2018 and Base Mapping reproduced from OS digital data by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office Crown Copyright 2018. All Rights Reserved. Mott MacDonald licence number 10002679.
2. New carriageway construction detail and tie-in to be agreed with Dumfries & Galloway Council Roads Department.
3. Requirement for reinstatement and surface water drainage to be considered at detailed design.
4. The requirement for local traffic management including warning signage during construction and operation will be verified with Dumfries & Galloway Council Roads Department as appropriate.
5. Passing places entry/exit tapers to be 1:5.
6. Further engagement is required with utility providers to agree any necessary protection or diversion works.
7. Works as shown on this drawing have not been limited to the public road corridor. Landownership will need to be identified and agreement(s) reached.

Existing site conditions
(Photograph locations shown - 1)

Key to symbols

Existing utilities:

Note: Utility service information reproduced from Envirocheck search. The Contractor to check and expose all existing services using a cat scanner and hand dug trial pits as necessary prior to commencement of civils works and any discrepancies encountered should be notified immediately to the Engineer.

EC — SP Energy Networks: Non-Power (reproduced from SP Energy Network drawing ref - 59619)

BT — BT: Underground line (reproduced from BT Openreach drawing - ref: DCI04473Z & NNR04485T & YWD04488B & FIG04485K & NX607988052O).

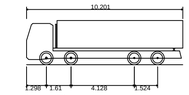
BT — BT: Overhead line (reproduced from BT Openreach drawing - ref: DCI04473Z & NNR04485T & YWD04488B & FIG04485K & NX607988052O).

BT — BT: 'Planned' (reproduced from BT Openreach drawing - ref: DCI04473Z & NNR04485T & YWD04488B & FIG04485K & NX607988052O).

W — SCOTTISH WATER: Distribution main (reproduced from Scottish Water drawing ref: CASTLE DOUGLAS/ FRESH WATER)

T — VODAFONE: Underground route.Route Inact. - Third Party (reproduced from Vodafone drawing ref - 59619 PLANS 1-7.)

SPA Vehicle configuration:



Large Tipper	
Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

329055-MMD-GL-XX-DR-C-0002 (Proposed Passing Place Provision Sheet 2 of 2)
329055-MMD-GL-XX-DR-C-0003 (Construction Details)

Reference drawings

329055-MMD-GL-XX-DR-C-0001 (Proposed Passing Place Provision Sheet 1 of 2)
329055-MMD-GL-XX-DR-C-0003 (Construction Details)

PRELIMINARY
DO NOT USE FOR CONSTRUCTION
Date : 13-09-18

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	13.09.18	JB	Issue 6: Draft	FJ	JD
P5	03.08.18	JB	Issue 5: Draft	FJ	JD

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W mottmac.com

Client

SP ENERGY NETWORKS

Title

Glenlee Substation Extension Construction Traffic Management Plan A752 and U2S Public Road Proposed Passing Place Provision Sheet 1 of 2

Designed	J Bell		Eng check	F Jahnke	
Drawn	J Bell		Coordination	F Jahnke	
Dwg check	F Jahnke		Approved	J Dooley	

Scale at A1	Status	Rev	Security
As Shown	PRE	P6	STD

Drawing Number
329055-MMD-GL-XX-DR-C-0001

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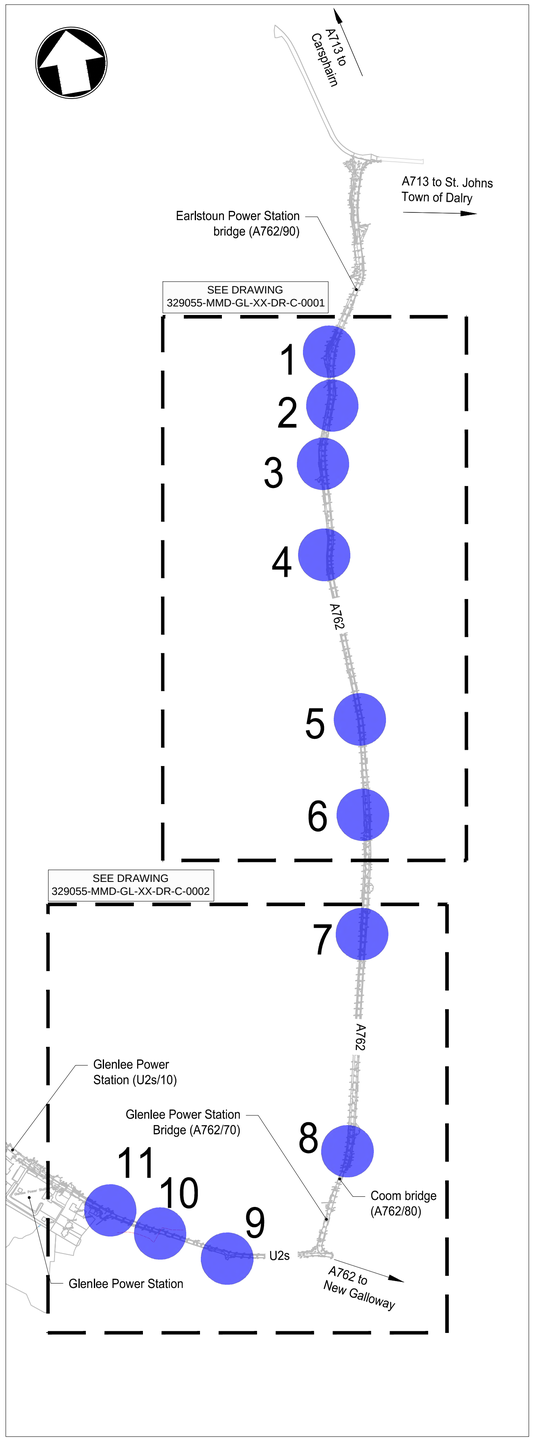
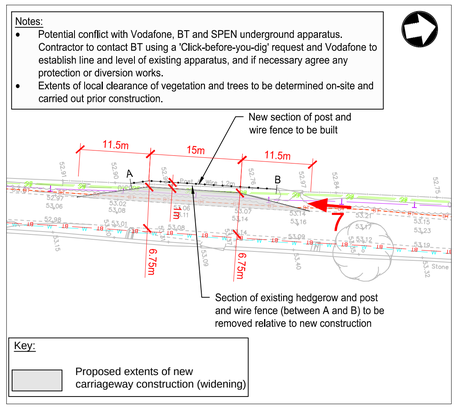
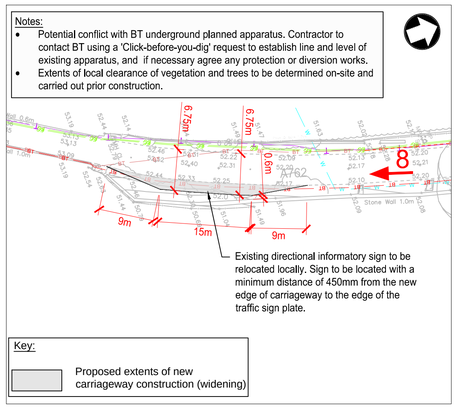


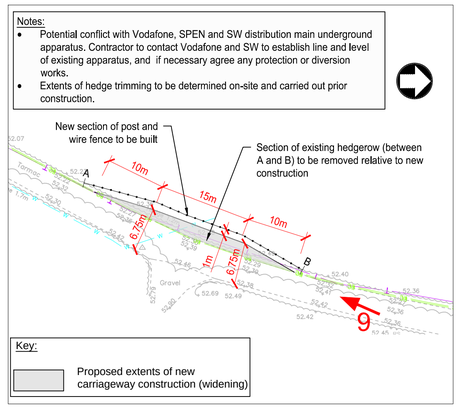
OVERVIEW PLAN - A762 AND U2S ROAD
SCALE: 1:5000



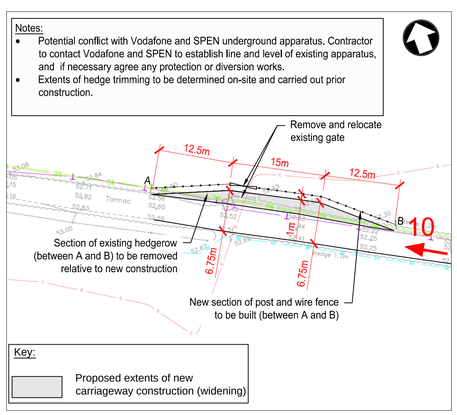
PASSING PLACE 7 - EXTENT OF PROPOSED ROAD WIDENING
SCALE: 1:500



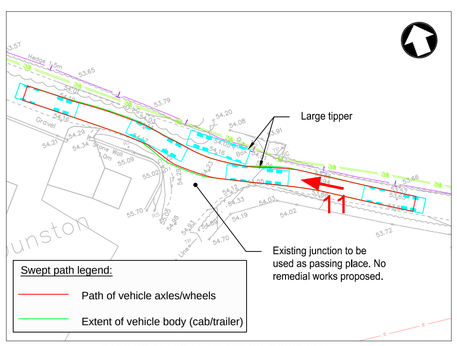
PASSING PLACE 8 - EXTENT OF PROPOSED ROAD WIDENING
SCALE: 1:500



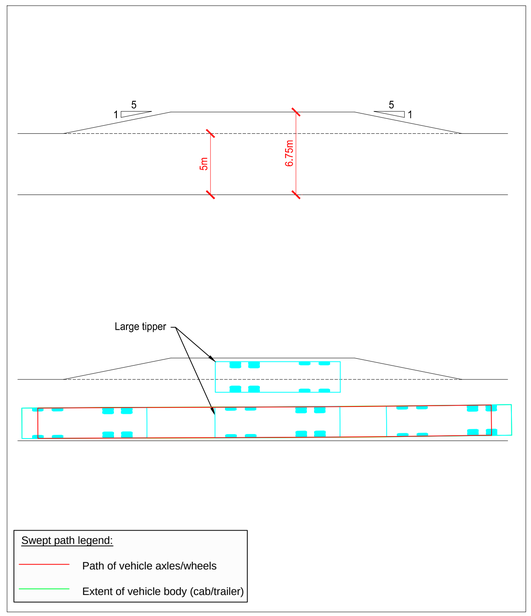
PASSING PLACE 9 - EXISTING PRIVATE ACCESS
SCALE: 1:500



PASSING PLACE 10 - EXTENT OF PROPOSED ROAD WIDENING
SCALE: 1:500



PASSING PLACE 11 - EXISTING JUNCTION
SCALE: 1:500



6.75m PASSING PLACE - LARGE TIPPER SWEPT PATH ANALYSIS
SCALE: 1:250

1:250 0 12.5m 25m
1:500 0 25m 50m
1:5000 0 250m 500m

Notes

1. The information on this drawing is based on Topographical Survey Data produced by Aspect Land & Hydrographic Surveys Ltd dated March 2018 and Base Mapping reproduced from OS digital data by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office Crown Copyright 2018. All Rights Reserved. Mott MacDonald licence number 10002679.
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6. Further engagement is required with utility providers to agree any necessary protection or diversion works.
7. Works as shown on this drawing have not been limited to the public road corridor. Landownership will need to be identified and agreement(s) reached.

Existing site conditions
(Photograph locations shown - 1)

Key to symbols

Existing utilities:

Note: Utility service information reproduced from Envirocheck search. The Contractor to check and expose all existing services using a cat scanner and hand dug trial pits as necessary prior to commencement of civils works and any discrepancies encountered should be notified immediately to the Engineer.

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- BT: Underground line (reproduced from BT Openreach drawing - ref: DCI04473Z & NNR04485T & YWD04488B & FIG04485K & NX607988052O).
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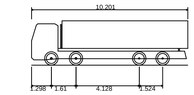
- SCOTTISH WATER: Distribution main (reproduced from Scottish Water drawing ref: CASTLE DOUGLAS/ FRESH WATER)
- VODAFONE: Underground route.Route Inact. - Third Party (reproduced from Vodafone drawing ref - 59619 PLANS 1-7.)
- SP Energy Networks: 11kV Underground cable (reproduced from SP Energy Network drawing ref - 59619)

SPA Vehicle configuration:



Large Tipper	
Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

Reference drawings

329055-MMD-GL-XX-DR-C-0001 (Proposed Passing Place Provision Sheet 1 of 2)
329055-MMD-GL-XX-DR-C-0003 (Construction Details)

PRELIMINARY
DO NOT USE FOR CONSTRUCTION
Date : 13-09-18

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	13.09.18	JB	Issue 6: Draft	FJ	JD
P5	03.08.18	JB	Issue 5: Draft	FJ	JD

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W mottmac.com

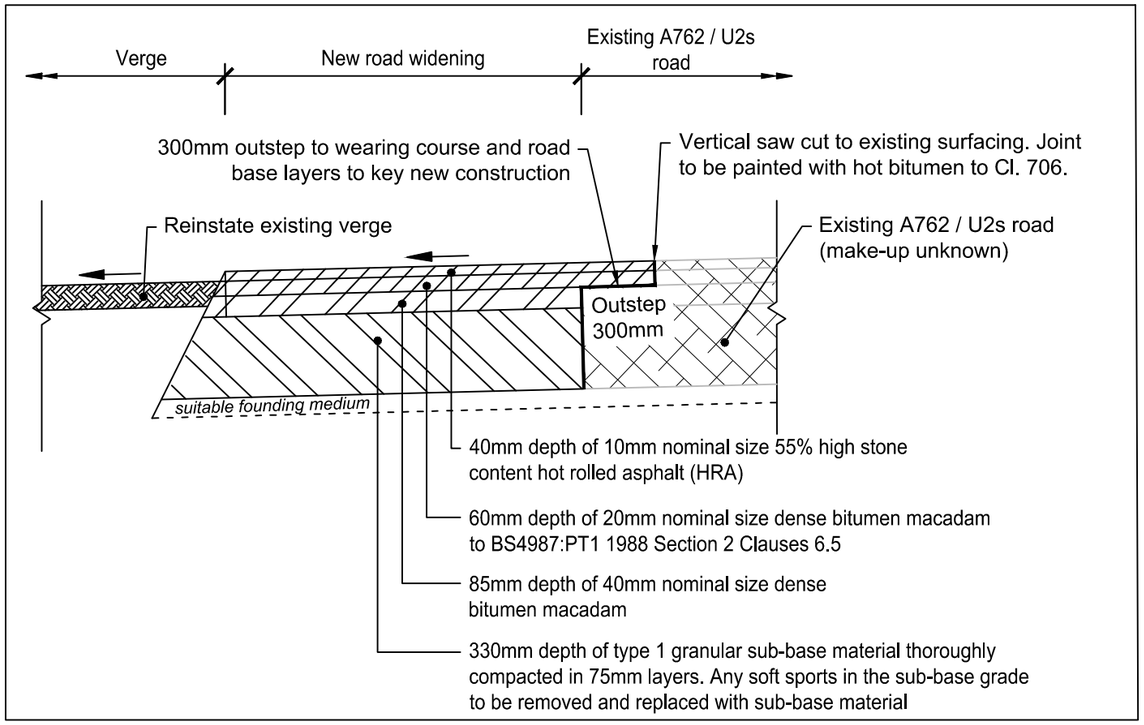
Client: SP ENERGY NETWORKS

Title
Glenlee Substation Extension Construction Traffic Management Plan A752 and U2S Public Road Proposed Passing Place Provision Sheet 2 of 2

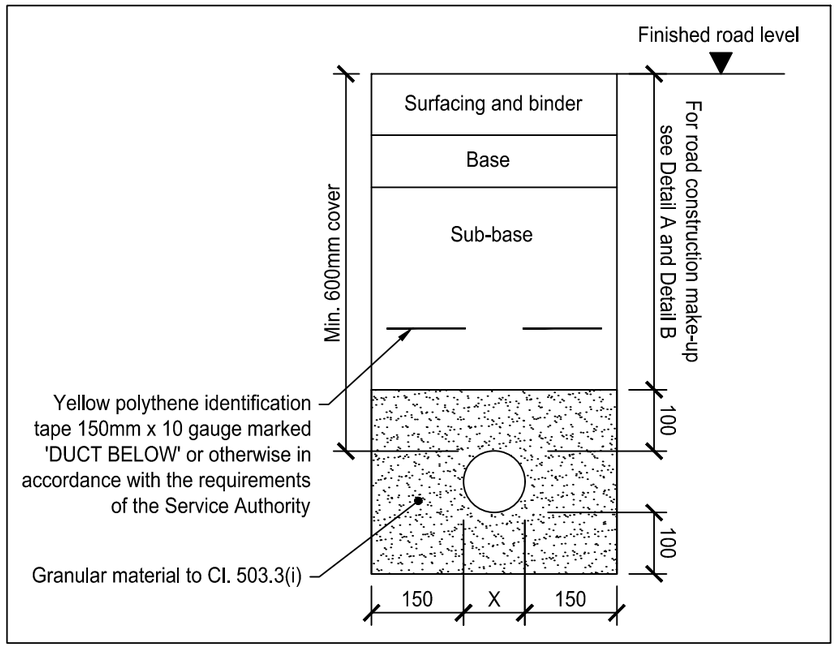
Designed	J Bell		Eng check	F Jahnke	
Drawn	J Bell		Coordination	F Jahnke	
Dwg check	F Jahnke		Approved	J Dooley	

Scale at A1	Status	Rev	Security
As Shown	PRE	P5	STD

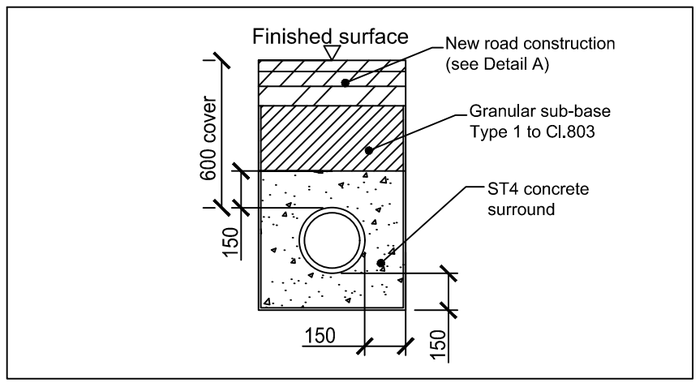
Drawing Number
329055-MMD-GL-XX-DR-C-0002



DETAIL A - NEW ROAD CONSTRUCTION (WIDENING) & TIE-IN TO EXISTING A762 ROAD
Scale @A3 1:25



DETAIL B: TELECOM DUCT SERVICE TRENCH
Scale @A3 1:10



DETAIL C - CONCRETE BED AND SURROUND PIPE PROTECTION
Scale @ A3 1:25

Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. Clause references refer to specifications for highway works.
3. New carriageway construction detail and tie-in to be agreed with Dumfries and Galloway Council Roads Department.
4. Telecom duct service trench construction detail to be agreed with the utility service provider.
5. Duct laid beneath a carriageway crossing must be 600mm cover from final surface levels and, for engineering reasons (NJUG 7), 600mm separation from other services laid in parallel or 150mm if laid at right angles.
6. Installation of Openreach services is to be executed using either 50mm or 90mm internal diameter grey PVC duct supplied by Openreach.
7. All runs should be laid as straight as possible, and deviations should be made by carefully bending the ducts or by the use of pre-formed Openreach bends.
8. X is the external diameter of the duct.

Reference Drawings:

329055-MMD-GL-XX-DR-C-0001
329055-MMD-GL-XX-DR-C-0002

PRELIMINARY
DO NOT USE FOR CONSTRUCTION
Date : 30-07-19

1:10 0 0.5m 1m
1:25 0 1.25m 2.5m

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Client
SP ENERGY NETWORKS

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	20.03.18	JB	Issue 1: Draft for client review	FJ	JD
P2	03.08.18	JB	Issue 2: Draft for client review	FJ	JD
P3	30.07.19	JB	Issue 3: Draft for client review	FJ	JD

Title
Glenlee Substation Extension
Construction Traffic Management Plan
A752 and U2S Public Road
Proposed Passing Place Provision
Construction Details

Drawn	J Bell	
Checked	F Jahnke	
Approved	J. Dooley	

Scale at A3
As shown

Drawing Number
329055-MMD-GL-XX-DR-C-0003

Security	Status	Rev
STD	PRE	P3

P:\Glasgow\ITG\Transport Planning\Projects\329055 KTR OHL Assessment\CAD\Working Drawings\329055-MMD-GL-XX-DR-C-0003_P3.dwg Jul 30, 2019 - 8:37AM bel67522