

P e l l F r i s c h m a n n

Necton Greener Grid Park

Transport Statement & Construction Traffic
Management Plan

August 2023

107169

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Prepared for

Statkraft UK Limited

22 Bishopsgate
London
EC2N 4BQ

Prepared by

Pell Frischmann

93 George Street
Edinburgh
EH2 3ES



Pell Frischmann

Contents

1	Introduction	1
2	Development Description.....	2
2.1	Development Location and Layout	2
3	Existing Network	4
3.1	Active Travel Network	4
3.2	Existing Highway Links	4
3.3	Road Safety Review	4
3.4	Baseline Traffic Flows.....	5
4	Access Strategy	6
4.1	General Access Requirements	6
4.2	Adjacent Development.....	6
4.3	Existing Substation Access.....	7
4.4	Access Option A	7
4.5	Access Option B	8
5	Construction Traffic.....	10
5.1	Trip Generation	10
5.2	Distribution of Construction Trips.....	10
5.3	Abnormal Load Access	11
5.4	Traffic Impact During Construction	11
5.5	Traffic Impact During Operation.....	11
6	Construction Traffic Management Proposals	12
6.1	General Measures	12
6.2	Road Signage	13
6.3	Wear & Tear Agreement.....	13
6.4	Turning Facilities & Banksmen	14
6.5	AIL Traffic Management Measures.....	14
6.6	AIL Convoy Health & Safety Measures	16
6.7	Emergency & Contingency Plan	16
7	Summary.....	18

Figures

Figure 1	Development Location.....	2
Figure 2	Development Layout.....	3
Figure 3	Existing Access Junction	7
Figure 4	Access Option A	8
Figure 5	Example Information Sign	13

Tables

Table 1:	2021 Baseline 24-hour Average Traffic Data	5
Table 2:	2024 Baseline 24-hour Average Traffic Data	5
Table 3:	Peak Construction Traffic Flows.....	10
Table 4:	Construction Traffic Impact.....	11

Appendices

Appendix A: A47 Access Junction

Appendix B: Traffic Generation

1 Introduction

Pell Frischmann has been instructed by Statkraft UK Limited (the Applicant) to produce a combined Transport Statement and Construction Traffic Management Plan (CTMP) in support of a full planning application for proposed Necton Greener Grid Park (GGP) (the proposed development) on land located to the northeast of the village of Necton, Norfolk.

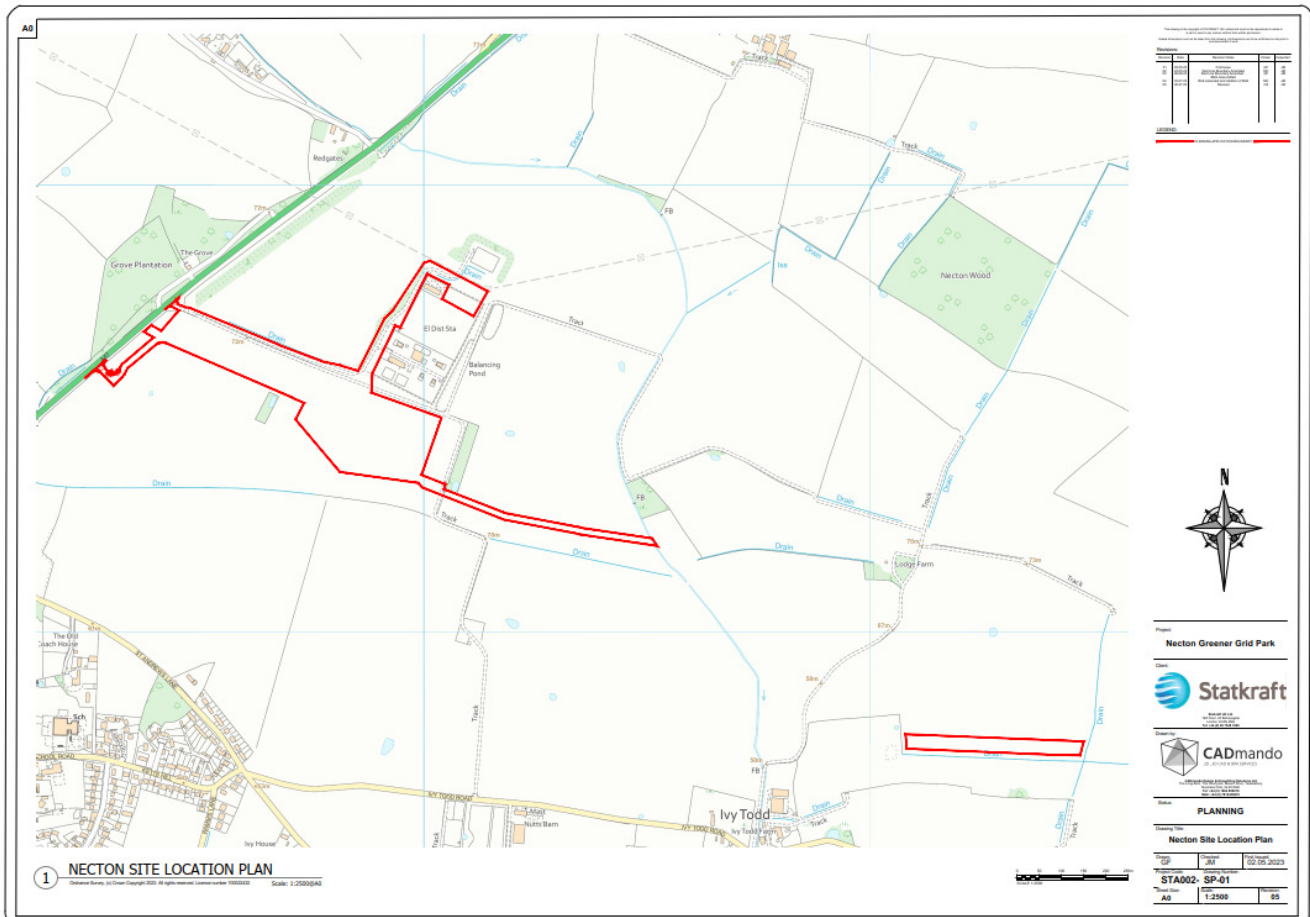
This report provides an overview of the proposed development in relation to construction traffic, assesses the anticipated impact of the proposed development on the road network within the local area and sets out the proposed mitigation measures for use at the site.

2 Development Description

2.1 Development Location and Layout

The location of the proposed development is shown in Figure 1. The proposed development comprises of grid balancing equipment, along with associated infrastructure, landscaping and access tracks.

Figure 1 Development Location



The proposed development is located to the southwest of the existing Necton Substation. Land to the immediate south and east of the substation is being used for the grid connection and substation works for Vattenfall's Vanguard and Boreas offshore wind farms and works to undertake the grid connection and substation works are ongoing.

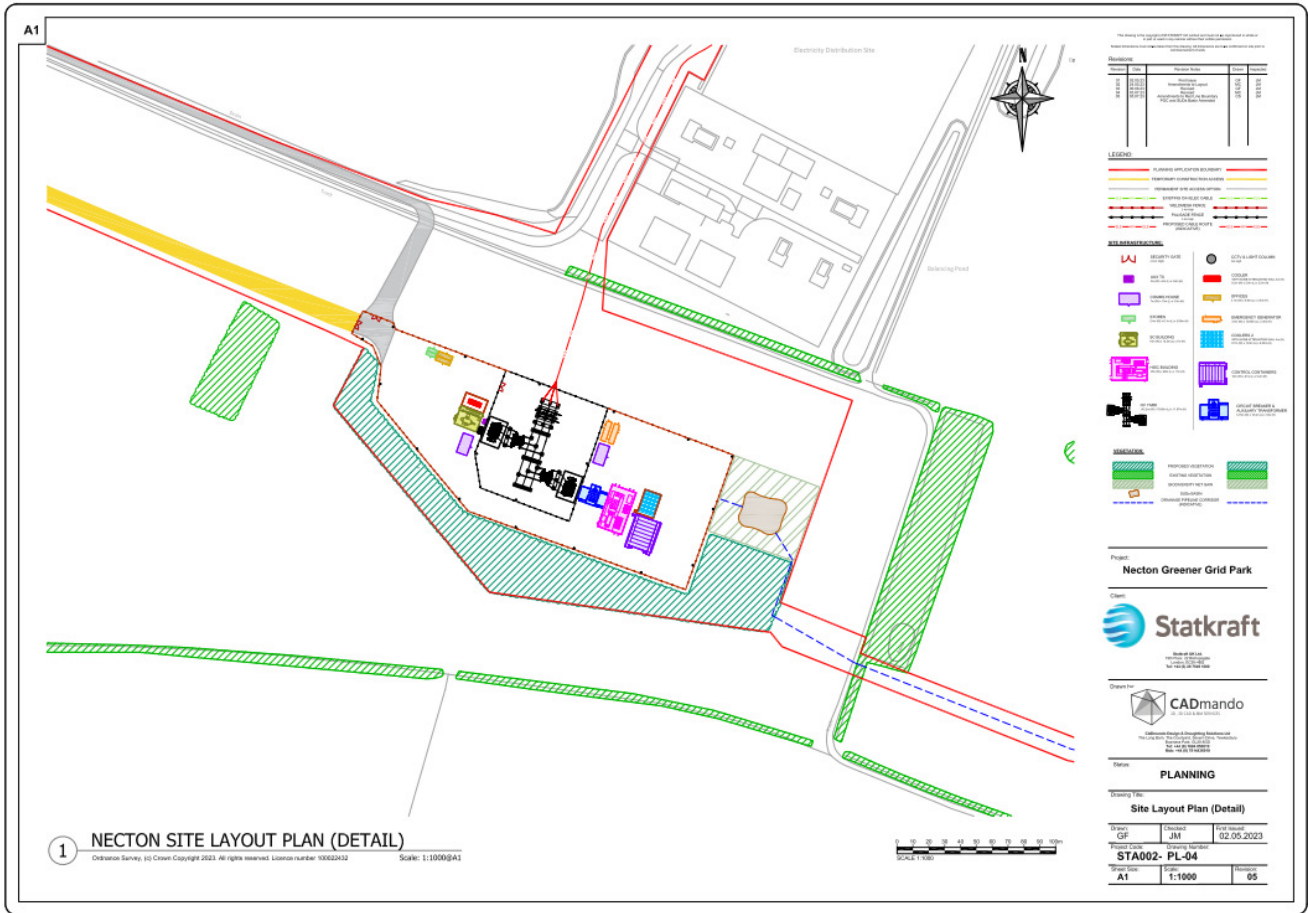
In addition to the Vattenfall works, National Grid is also undertaking works at the site and is expected to undertake works to the immediate west and northwest of the existing substation, should their application be approved.

Both the existing substation, substation expansion works and the offshore wind farm grid works will have access to their sites via the existing access junction and track leading from the A47.

The proposed development for the Statkraft GGP has two access proposals, both of which are illustrated along with the general site layout in Figure 2.

It is proposed that construction traffic access the site from a new temporary access junction on the A47. Once operational, this access would be removed and the existing access junction and track used for the existing substation would be used. Further details of the access arrangements are provided in later sections of this report.

Figure 2 Development Layout



3 Existing Network

3.1 Active Travel Network

The National Cycle Routes (NCR) map of the United Kingdom indicates that the closest route is NCR13, Tower Bridge to Fakenham, Norfolk. This route is approximately 9 kilometres (km) to the east and passes in a north-south alignment through Dereham.

A review of Norfolk County Council's (NCC) Public Rights of Way (PRoW) map of the area indicates that there are no PRoW or bridleways in the area of the proposed development or along the A47 frontage.

The A47 does not feature any public footways in the verge and as such, it is considered that active travel use of the road is not significant.

3.2 Existing Highway Links

The A47 runs to the north of the proposed development. The road forms part of the strategic trunk road network and is operated by National Highways on behalf of UK ministers. The road is constructed to a high standard and is approximately 7.3 metres (m) in width in the vicinity of the existing substation access junction. The road provides strategic connections between Leicester and Great Yarmouth, via Kings Lynn.

The A47 is subject to a 50 miles per hour (mph) speed limit through Necton village. The road is subject to a 60mph limit to the east of Necton.

The road leading from the A47 to the existing substation is a private access track owned and maintained by National Grid. The junction is metalled and is currently being upgraded to accommodate traffic associated with the Vanguard and Boreas grid connection works.

3.3 Road Safety Review

A review of the online accident database, www.crashmap.co.uk, indicates that there have been sixteen accidents on the A47 within a 1km radius of the proposed development over the last five-year period. The accidents are categorised as "slight" (damage only), "serious" (injury incidents) and "fatal" (those resulting in a death). The number of accidents noted are:

- Slight: 11 accidents;
- Serious: 4 accidents; and
- Fatal: 1 accident.

The majority of accidents have occurred in either Necton (8 slight and 3 serious accidents) at either junctions onto the A47 or within close proximity to junctions within the village A47 frontage or at other junctions on the A47. The junction at Moor Lane was the location of the fatal accident and 1 serious accident.

No accidents were noted at the substation access junction.

Buses, motorcycles and young drivers were involved in 5 accidents, including three serious accidents. HGV traffic was involved in five accidents including the fatal accident at the Moor Lane junction.

The geometry of the A47 is relatively straight which suggests that speed is a factor in a number of the incidents reported. Five of the accidents also were recorded as occurring in winter months when road conditions are noted as being generally less favourable.

A review of the road noted that verge vegetation was overgrown in sections and this may restrict forward visibility at certain locations.

3.4 Baseline Traffic Flows

Baseline traffic flows have been obtained from the Department for Transport (DfT) database has been obtained for roads within the study network. Traffic data from 2021 was obtained to ensure that results were not impacted by Covid 19 travel restrictions.

The baseline traffic flows for 2021 are illustrated in Table 1.

Table 1: 2021 Baseline 24-hour Average Traffic Data

DfT Ref	Description	Cars & LGV	HGV	Total Traffic
46514	A47 at Little Fransham	13,471	1,677	15,148

Construction work is expected to commence in 2024, should the proposed development be consented. To provide a future year baseline, the 2021 surveys were factored using National Road Traffic Forecast (NRTF) Low Growth factors to create 2024 flows.

The future year baseline traffic data is illustrated in Table 2.

Table 2: 2024 Baseline 24-hour Average Traffic Data

Description	Cars & LGV	HGV	Total Traffic
A47	13,687	1,704	15,390

The largest traffic generating development located close to the proposed development is that associated with the Vanguard and Boreas grid connection. As the majority of traffic associated with this development will occur during the construction phase, the traffic effects of it are transitory in nature.

The volume of traffic associated with the development will fluctuate depending upon the construction activities undertaken at that time. As the planning determination for the GGP development is not yet known, it is not possible to determine the exact traffic volumes associated with the Vanguard & Boreas grid connection at the time of the Necton works.

Given that the Vanguard and Boreas grid connection works are committed, the inclusion of that traffic would increase baseline traffic flows, resulting in the Necton GGP works having a reduced percentage impact on the road network. Given that the A47 is not a congested network, the non-inclusion of committed development traffic is considered to be a more robust assessment than including it as committed development flows.

The inclusion of traffic growth factors to create 2024 traffic flows will provide an increase in traffic to account for other traffic generating developments in the area, notably housing developments that are proposed in Necton village.

4 Access Strategy

Discussions on the access strategy have been held with National Highways. At present, National Highways have not responded to queries raised in January 2023, and as such, two access options are presented in this report to cover two possible strategies.

4.1 General Access Requirements

The proposed site is for the development of a GGP, which typically feature Synchronous Condensers that are housed in small warehouse-type Energy Management Buildings. GGPs deliver grid stabilisation functions that leads to an increase in the amount of renewable energy delivered on the grid network and thus reduce costs for consumers. As such, the development needs to be located in close proximity to the existing substation.

The construction of the proposed development will take between 12 and 18 months and will include deliveries of the following:

- Aggregate for the construction of the development platform;
- Ready mix concrete for the creation of the foundation structures;
- Articulated HGV deliveries for the creation of the accommodation buildings and high voltage electrical equipment;
- Abnormal Indivisible Load (AIL) deliveries of the transformer and Synchronous Condenser units;
- General HGV and LGV deliveries of construction and commissioning materials; and
- Construction staff working at the site.

Following the commissioning of the site, regular access for operational and maintenance purposes will be required. Based upon the operation of Statkraft's operational site in Keith, it is expected that daily access by two staff per day would be required.

4.2 Adjacent Development

The adjacent substation is operated by National Grid (NG) There is a pending application with Breckland Council for an extension to the substation, with a CTMP condition recommended by NCC's Highways. NG still require operational and maintenance access to the site.

Located to the south and east of the substation is the grid connection and substation proposed for the Vattenfall's Norfolk Boreas and Vanguard Offshore Wind Farms is already consented under the Development Consents Order (DCO) process. This development is a significant traffic generating development and has precedence in its access arrangements.

The Vattenfall development will coincide with the GGP development construction programme and as such, the construction traffic for both developments will need to be accommodated on the trunk road network and as part of the access strategy for the site.

4.3 Existing Substation Access

The proposed development site is accessed via agricultural field accesses taken from the substation access junction onto the A47. The existing access junction is illustrated in Figure 3

Figure 3 Existing Access Junction



From Google Streetview (2022)

The agricultural access can be seen to the right of the substation access track.

This access track is to be used by Vattenfall to provide construction and ongoing access to their Norfolk Boreas and Vanguard development and, as such, it is not possible for Statkraft to use this to access their site. As such, two alternative access options are proposed.

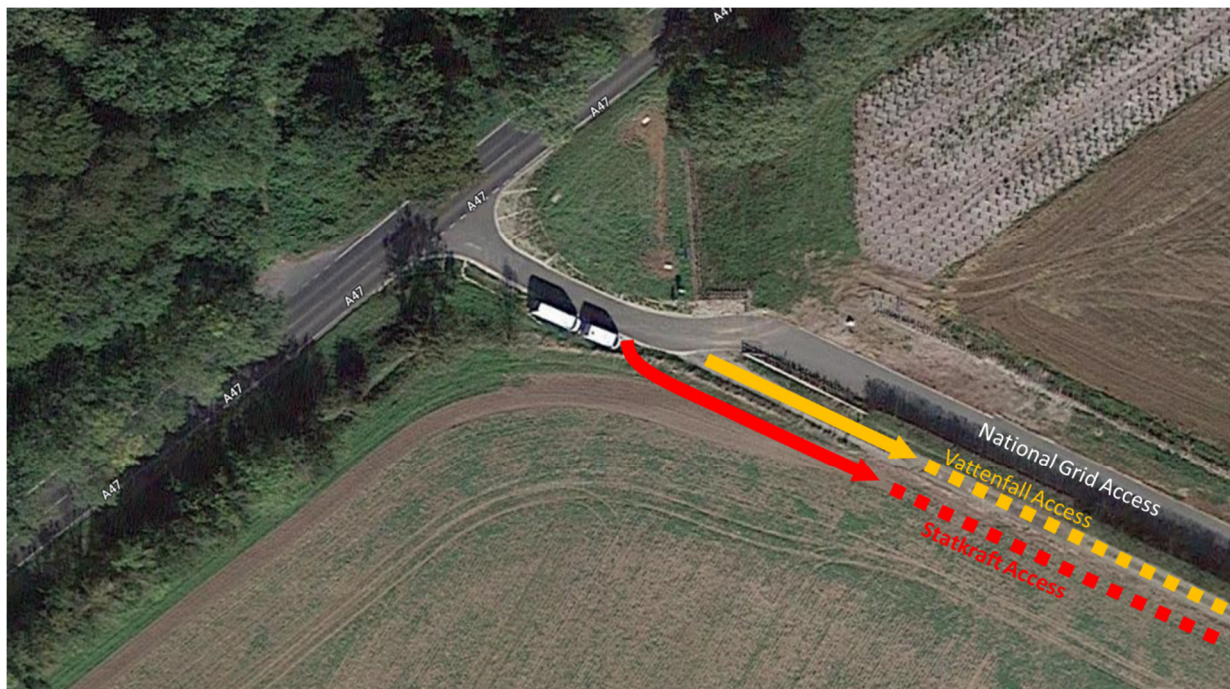
4.4 Access Option A

It has been suggested that Statkraft provide a third access track running in parallel to their site to the right of the Vattenfall access track. This however would result in a three-way access needing to be constructed in close proximity to the existing A47 junction (circa 30m). Such an access arrangement is illustrated in Figure 4.

The proximity of three access tracks from one access junction onto a trunk road, with little space for manoeuvring or area to place effective traffic management is an obvious safety concern for the operation of both construction projects. The potential for HGV traffic to slow down and to block back onto the trunk road is of concern and Statkraft is keen to consider an alternative to this for the construction phase.

Once the NG and Vattenfall works are complete, it will be possible for traffic to access the proposed development using the existing access junction and access track. As such, it is proposed that this option be adopted for the operational phase of the proposed development.

Figure 4 Access Option A



4.5 Access Option B

Access Option B would be used for the construction phase of the development and would be a temporary solution only.

To remove the potential for confusion and accidents at the existing site access junction, it is proposed that a new access junction be constructed to solely service the construction phase of the Statkraft site.

A temporary Left In / Left Out junction, designed in accordance with the DMRB standards and located 250m to the southwest of the existing access junction would allow safe and efficient construction access to the Statkraft site by segregating construction traffic and allowing a more effective traffic management plan to be set up.

The access junction is located on a section of road with good forward visibility and compliant visibility splays of 215m in either direction can be accommodated. The proposed layout is provided in Appendix A.

The junction would be temporary in nature and would not be permanent. Upon completion of the construction works, the junction would be removed in full and the verge restored. All operational and maintenance activities would be taken from the existing substation access junction.

The junction would operate and be designed to ensure a Left In / Left Out operation only, to provide a safe means of access and egress from the site. Roundabouts are located in relatively close proximity in either direction and a robust and effective traffic management plan would be delivered to ensure full compliance, including the use of:

- Unique vehicle identification markings for all Statkraft traffic;
- Requirement for HGV traffic to be fitted with GPS trackers to monitor and enforce the approved access routes;
- Inclusion of the approved access strategy in all contracts and significant penalties if contractors breach this condition; and
- The use of CCTV at the site access junction to record and monitor all movements.

These measures would ensure full compliance of the access strategy during the construction phase.

Statkraft have advised that they are willing to accept a planning condition to provide a Stage 1/2 Road Safety Audit to provide further justification of the access junction proposals, if required by National Highways.

Access to the site will occur at a busy period for the A47 with the proposed Norfolk Boreas / Vanguard construction works, should consent be granted. The proposed development will improve the efficiency and reliability of the electrical grid at a time when maximum electrical productivity is being sought by the Government to offset the rising cost of power. It is therefore not possible to delay the project until the offshore substation and cabling works have ceased.

The existing substation access junction has a number of safety concerns relating to multiple construction uses and the safe and efficient operation of the A47 and construction activities for Statkraft and Vattenfall cannot be guaranteed by the combined use of the one junction.

The proposal for a time limited, Left In / Left Out junction, supported by a robust traffic management plan would allow all sites to be built at the same time, whilst improving safety for all construction activities and removing the potential for traffic impinging on the safe operation of the trunk road.

5 Construction Traffic

5.1 Trip Generation

The GGP construction works are estimated to take 12 to 18 months and would commence in 2024 if planning permission is granted. To provide a worst-case scenario, a construction period of 12 months has been assumed.

The programme has been divided into its component sections and estimates of the likely traffic generation have been made from the material quantities, staff requirements and component deliveries required. The main areas of construction traffic can be subdivided into:

- Import of Plant and Machinery;
- Site Establishment Loads;
- Import of Bulk Materials;
- Import of Ready-Mix Concrete;
- Import of General Building Supplies;
- Delivery of HV Electrical Components;
- Delivery of general site materials and supplies;
- Grid and electrical connection works; and
- Arrival and departure of construction and commissioning staff at the site.

The traffic generation during the construction phase has used first principles to establish the volume and tonnage of construction materials. This has then been converted to two-way vehicle movements to create the construction programme illustrated in Appendix B.

The peak of construction activity occurs in Month 2 of the construction programme.

5.2 Distribution of Construction Trips

Exact material suppliers will be determined through the Balance of Plant (BoP) contract. The supplies anticipated for use in this study however are based upon the following:

- Aggregate and Ready-Mix Concrete: Supplied from suppliers to the east of the site in the Dereham area and accessed via the A47;
- HV electrical equipment: Supplied from the wider Midlands area and transported to site via the A47;
- Synchronous Condenser and Transformers: Sourced from Europe or the UK and imported through Great Yarmouth or Lowestoft port
- General construction supplies: Supplied from east of the site;
- General site deliveries: Supplied from the wider area and accessing the site using the A47; and
- Construction Staff: Accessing the site from either Swafham or Dereham.

The peak construction traffic flows are summarised in Table 3.

Table 3: Peak Construction Traffic Flows

Description	Cars & LGV	HGV	Total Traffic
A47	14	52	66

5.3 Abnormal Load Access

The Synchronous Condenser and transformers would be considered AIL loads. Two synchronous condensers and two transformer loads would be required at the proposed development along with the associated site erection crane.

The access junction onto the A47 has been designed to accommodate the proposed loads. A wider area review of AIL access on the trunk road network will be undertaken post determination when the exact dimensions and weights of the proposed loads has been confirmed through the tendering process.

The AIL associated with the proposed development will be smaller than those proposed by Vattenfall and National Grid for the nearby substation site. As such, it is highly likely that the AIL for the GGP site will use the same access route as these larger loads.

5.4 Traffic Impact During Construction

The peak traffic data was combined with the baseline traffic data to allow a comparison between the baseline results to be made. The increase in traffic volumes is illustrated in percentage increases for each class of vehicle. This is presented in Table 4.

Table 4: Construction Traffic Impact

Description	Cars & LGV	HGV	Total Traffic	Cars & LGV % Increase	HGV % Increase	Total Traffic % Increase
A47	13,701	1,756	15,456	0.10%	2.96%	0.43%

Please note that rounding errors may occur in the table above

The traffic impact associated with the construction phase of the development is considered minimal within the wider road network and no further assessment is considered necessary.

5.5 Traffic Impact During Operation

Based upon the operation of Statkraft's operational site in Keith, which is similar to the proposed development, it is expected that daily access by two staff per day would be required. This level of traffic generation is not considered significant and no wider traffic impact review would be required for the operational phase.

6 Construction Traffic Management Proposals

The traffic management proposals in this report will be provided to the principal contractor and they will be required to abide by these regulations as part of their commercial contracts with the Applicant. Failure to follow the traffic management measures proposed would be a contractual matter and could result in contractors being dismissed from the site.

Pages with information about the construction of the proposed development will be available on the project website. These will be updated throughout the construction period. If visitors to the site are unable to find the answer to their question in the webpages, an email address will be provided on the project website to contact the Applicant. In addition, details will also be circulated via a newsletter advising about ongoing activities. A telephone number for the Principal Contractor would be published during operational hours to resolve any traffic management problems that occur and these calls would be logged and reported to the Applicant on a weekly basis to monitor the situation.

All contractors will be monitored through regular spot-checks to ensure they follow the approved access routes and abide by the Left In / Left Out operation of the access junction. Signage at the junction will be provided to ensure correct usage.

Use of a visible vehicle identification system should be employed to ensure compliance with the agreed route and driver behaviour standards. This will allow the public to identify any rogue vehicles to the site office for easy recognition and review.

The Applicant will also create a protocol for working with local businesses to ensure the construction traffic does not interfere with deliveries or normal business traffic wherever possible.

The following measures would be provided to assist in managing traffic across the study area road network. It is proposed that a CTMP would be secured by planning condition in agreement with the local authority.

6.1 General Measures

Wherever reasonably possible, local suppliers such as quarries and concrete works are proposed to help minimise traffic levels on the network.

The following measures would be implemented through this CTMP during the construction phase:

- Contractual requirement in the BoP contract that contractors will only use the agreed access route and will access the site using Left In / Left out movements;
- Direction signage signposting traffic on the agreed access route;
- Identification numbers of HGV and vans to allow easy recognition;
- Providing the public with details of how to report use of unapproved routes or driving issues of concern;
- Using GPS trackers to allow the monitoring of bulk delivery vehicle movements;
- Setting out site staff disciplinary measures for those who ignore the agreed access route and enforcing these throughout the construction period;
- All site vehicles will feature “white noise” reversing warning devices to reduce noise disruption when on site;
- All materials delivery lorries (dry materials) will be sheeted to reduce dust and stop spillage on public roads;
- Specific training and disciplinary measures will be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway;
- Wheel cleaning facilities will be established at the site entrance. A road sweeper would also be provided at site to ensure that the A47 is kept clean; and
- Site induction for all staff instructing them on what route to site they can use to enter and exit the site and obtaining their acknowledgement that there is only one approved access route. The induction would include:

- A tool box talk safety briefing;
- The need for appropriate care and speed control;
- A briefing on driver speed reduction agreements (to slow site traffic at sensitive locations through Necton village and other sensitive areas).

6.2 Road Signage

A junction signage strategy will be prepared and agreed with the National Highways prior to works commencing. The strategy will include the following:

- Direction signage to ensure vehicles access the site safely from the A47 at the site access junction; and
- Site access signage and Chapter 8 (Traffic Signs Manual) “Slow Down” and “Heavy Plant Crossing” signage to advise other road users of increased movements on the A47.

Regular maintenance will be undertaken at the sign locations to keep the plates clean and to ensure that verge vegetation does not obscure them.

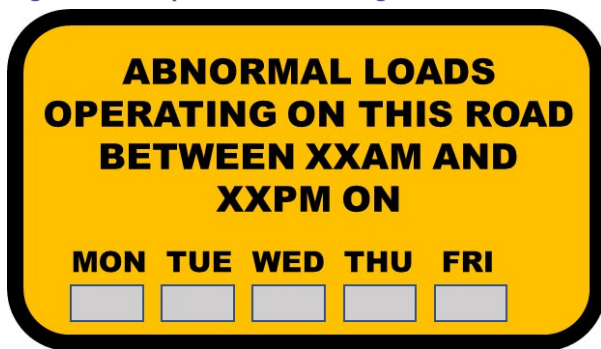
In addition to the statutory road signage noted around the site access junctions, further information signage would be provided to assist road users especially during AIL deliveries. Advance warning signs would be installed on the A47 at locations agreed with National Highways.

Information signage could be installed to help assist drivers and an example is illustrated in Figure 5. Flip up panels (shown in grey) would be used to mask over days where convoys would not be operating. When no convoys are moving, the sign would be bagged over by the Traffic Management contractor.

This signage will assist in helping improve driver information and allow other road users to consider alternative routes or times for their journey (where such options exist).

Regular maintenance will be undertaken at the sign locations to keep the plates clean and to ensure that verge vegetation does not obscure them.

Figure 5 Example Information Sign



6.3 Wear & Tear Agreement

An agreement is suggested to cover the cost of any abnormal wear and tear at the A47 access junction. This would be agreed with National Highways subject to the granting of planning approval.

The wear & tear agreement will address concerns about possible damage to the public road, verges and structures. It will be based upon condition surveys of the road to ensure that the condition of the road does not deteriorate as a result of the construction works.

Video footage of the pre-construction phase condition of the agreed area covered by the condition survey would be recorded to provide a baseline of the state of the road prior to any construction work commencing. This High Definition (HD) baseline review would inform any change in the road condition during the construction stage of the proposed Development as it notes the existing condition of the road surface and features and details current condition.

The condition survey would feature still images for the survey and would measure specific defects to monitor their progression. Locations of points would be accurately logged using a GPS tracker.

To agree the current state of the road, the report would be agreed with National Highways prior to construction works commencing.

Any immediate necessary repairs would be coordinated with the National Highways. Any damage caused by traffic associated with the proposed development, during the construction period that would be hazardous to public traffic, would be repaired immediately.

During construction activities, a general road wear and tear review would be undertaken with National Highways every three months during construction. Interim reviews will be undertaken by the principal contractor on a regular basis and the progress reports issued to the Applicant.

Any damage to road infrastructure caused directly by construction traffic would be made good, and street furniture that is removed on a temporary basis would be fully reinstated.

There would be a regular road edge review and any debris and mud would be removed from the public carriageway to keep the road clean and safe during the initial months of construction activity, until the construction junction and immediate access track works are complete.

Where defects occur, the principal contractor will ensure that they maintain a stockpile of road repair material on site to undertake repair works quickly and efficiently, when authorised by the Council to undertake interventions.

Upon completion of construction activities, a follow-on condition review will be undertaken and a defects list prepared. Works required to reinstate the road back to its original condition would be undertaken at the Applicant's expense following a review by National Highways.

There are cases where defects will need to be undertaken quickly and the contractor will have arrangements in place to respond to serious and significant defects within agreed hours.

6.4 Turning Facilities & Banksman

For safety reasons both onsite and for other road users, the site has been designed so all vehicles can enter and exit the site in a forward gear. No vehicle shall reverse onto public roads and shall only enter / exit the site using forward gear only.

A banksman will be provided at the site access to help guide traffic within the site and to ensure health and safety access for the site. The banksman will be in radio contact with the wider site compound to advise of movements to and from the site.

The banksman would also enforce the Left In / Left Out operation of the access junction.

6.5 AIL Traffic Management Measures

AIL movements must be escorted by the Police. Given the size of the proposed loads, it is expected that at least one private escort and a minimum of two police escort vehicles are likely to be required (exact requirement will be confirmed with the police). The likely deployment of escorts will be as follows:

- The first police escort vehicle will be the advance escort and will be located sufficiently ahead of the convoy, to advise the convoy in good time of traffic stoppages, constraints and oncoming hazards;
- The second police escort will provide support to the first escort at junction closures and would be located at the front of the lead vehicle; and
- The civilian escort will be located behind the last vehicle to protect the rear of the convoy and ensure that following vehicles do not attempt dangerous overtaking manoeuvres. This escort will also assist with direction during constrained turning manoeuvres.

Before the convoys depart the Port of Entry (PoE), the Lead Driver should check weather and traffic conditions and ensure this information is included within the daily toolbox talks.

Within the route, there are locations where general traffic flows will need to be stopped to allow the safe manoeuvre of the loads. In these circumstances the advance escorts will ensure that the traffic is stopped before the convoys enters the affected section. The advance escorts will confirm through radio contact that the area is clear and safe for transit. Should general traffic fail to observe the request to stop, the advance escort will advise the convoy to immediately halt and will then proceed to remove the rogue traffic. The convoy must not start without approval from the advance escort.

In areas where the load is likely to, or is close to straddling the centre line, the advance escort should be positioned to give advance warning to the convoy such that evasive action can be taken. In constrained areas and other locations where verges are potentially soft the drivers must exercise care to ensure the trailer wheels do not leave the road surface as this may result in adverse load stability conditions.

Urban areas along the route pose different challenges for the abnormal loads. Whilst the vehicle speeds will be less than those in the rural sections of the route, there are more potential conflicts with other road users to be aware of. These include:

- Pedestrians and cyclists;
- Local vehicular traffic;
- Parked vehicles;
- Side junctions; and
- Street furniture.

Within urban areas, the convoy escorts will need to be aware of all road and footway users at turn sections within the route. At these locations there is potential for load over-sail and reference to the swept path assessment drawings is considered essential to identify these areas. It is important to note that only the Police have the power to request that vehicles and pedestrians move.

Within urban areas there is a higher chance of parked vehicles along the route and a possibility that parked cars will restrict available road width. Whilst these areas will not impede the loads they do create a further zone where the load drivers and escorts will need to take care of conflicts that include restricted road widths, car doors opening and pedestrians crossing the road between parked vehicles.

Information relating to AIL movements will be provided directly to residents living in the immediate vicinity of the access route. Information on the movement of the abnormal load convoys would also be provided to local media outlets by the Principal Contractor (or their appointed AIL delivery contractors) to help assist the public. Information would be provided to local newspapers and radio stations.

The project website will also be used to help advise of movements. Information would relate to expected vehicle movements on the route. It is hoped that this level of information will make residents aware of convoy movements and help reduce any conflicts.

6.6 AIL Convoy Health & Safety Measures

All staff working on the project will be inducted before entering the site. This will be undertaken prior to the commencement of AIL movements.

A daily Tool Box Talk for all convoy staff to be held at the start of each working day and carried out by the appointed Transport Co-ordinator or Appointed Lead Driver. A detailed record of the talk should be kept and filed once the convoy has arrived at the site.

The Tool Box Talks will cover a minimum of the following matters:

- The current version of the CTMP to be carried by all convoy vehicles;
- Identification of any updates since the previous version of the CTMP;
- Requirement to have a CB radio (fixed or portable), with fully charged batteries;
- Anticipated transport restrictions in each section of the route;
- Driver instructions on incident reporting;
- Driver instructions on trailer steering methodology, and availability of assistance;
- Instructions on areas requiring traffic stoppage, and methodology for convoy passing through these areas;
- The welfare arrangements for drivers;
- A summary of the predicted weather, traffic and road conditions; and
- Any questions on the contingency plans.

Each of the convoy vehicles must be suitably equipped with hazard warning devices to warn all other road users. All the tractor, trailer and escort vehicles operating on the project must have the following:

- Tractor units to have beacon bars on the roof and 3M reflective markings on both sides;
- All vehicle warning signage to be in English;
- Trailer units to have amber beacons on the rear with 3M reflective markings on both sides;
- All escort vehicles will have beacon bars on the roof, with 360-degree motion for all round visibility, and 3M reflective markings;
- Fire extinguisher and first aid kit; and
- Certified cargo lashing straps are to be used at all times. Certification must be carried and made available for inspection, kept within the cab.

All hazard warning equipment must be checked and cleaned at the start of each day. Additional cleaning of the warning equipment may be required throughout the day and must be undertaken when required.

All relevant personnel must have the appropriate Personal Protective Equipment (PPE). All PPE clothing must be 'CE' marked to show it meets current standards and should be appropriate for use in trunk road situations (i.e. must be full coats with reflective bands on the arms).

6.7 Emergency & Contingency Plan

To ensure access for emergency service vehicles, a coordination protocol will be established with the blue light emergency services. As the AIL convoys are escorted by the Police, the Police will be aware of potential access issues for ambulances and fire service vehicles and can take appropriate action on the route to pull to the side of the road or mount a verge to allow emergency vehicles past.

The civilian escort vehicles carry equipment to make running repairs to vehicles in the unlikely event of a breakdown. Further spares and equipment can also be based at the site for faster responses in case of mechanical issues.

The haulier will establish contracts with local suppliers to attend to any punctures and tyre issues, to minimise any stoppage time on the route.

7 Summary

This Construction Traffic Management Plan has considered the likely impact of traffic generated by the proposed development on the local road network.

A review of the type and volume of vehicles associated with the construction programme has been provided and the peak of construction activities identified. This peak in traffic has been used to review the likely impact that construction activities would have.

Construction of the proposed development will generate approximately 66 movements vehicle movements per day at the peak of construction. It is expected that during the peak month of construction (Month 2), 52 two-way HGV movements per day will occur per day. A further 14 car / LGV trips would be created by construction staff travelling to and from the site.

The increase in traffic generation due to construction traffic was calculated using baseline traffic data from the DfT and was found that the impact of construction traffic on the A47 is not significant. On this basis, the impact on traffic generation due to construction is therefore negligible.

The construction phase would be accessed by a temporary Left In / Left Out junction that would be removed following the completion of construction activities at the site. Thereafter the site would be accessed from the existing substation access junction.

Traffic management procedures have been proposed within this report which would ensure the safe operation of the approach route to the site during construction. Determination of the final details of these traffic management measures will occur once the BoP contractor has been appointed and can be secured via an appropriately worded planning condition.

As the proposed development will operated remotely, operational traffic is expected to be minimal and would be conducted by smaller vehicles. The impact of this on the wider road network will be negligible.

Appendix A A47 Access Junction Proposals



- NOTE:
1. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION FOR HIGHWAY WORKS AND THE TURBINE MANUFACTURERS STANDARDS AND ALL RELEVANT DRAWINGS WITHIN THE PROJECT DESIGN PACKAGE.
 2. ALL WORKS TO BE EXECUTED IN ACCORDANCE WITH THE DMRB, THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS, DESIGN MANUAL FOR ROADS AND BRIDGES, AND TRAFFIC SIGNS MANUAL.
 3. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE. ALL LEVELS ARE IN METRES AND RELATE TO ORDNANCE DATUM.
 4. DO NOT SCALE FROM ANY DRAWING. WORK TO FIGURED DIMENSIONS ONLY. ANY DISCREPANCIES IN DIMENSIONS ARE TO BE REFERRED TO THE DESIGNER BEFORE WORK IS PUT TO HAND.
 5. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARING ANY WORKING DRAWINGS OR COMMENCING ON SITE.
 6. ALL WORKS BY THE CONTRACTOR MUST BE CARRIED OUT IN SUCH A WAY THAT ALL REQUIREMENTS UNDER THE HEALTH AND SAFETY AT WORK ACT ARE SATISFIED.
 7. ALL WORKS ARE TO BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENT OF THE STATUTORY AUTHORITIES AND CONSTRUCTION DESIGN MANAGEMENT REGULATIONS.

- KEY:
- Existing Contours
 - Proposed Major Contour
 - Proposed Minor Contour
 - Proposed Access Junction and Track
 - DMRB Standard Design Junction
 - Existing Trees - Topographic Survey
 - Existing Vegetation - Topographic Survey

Road width through bend widened to accommodate abnormal load carrier.

Pell Frischmann
 93 GEORGE STREET, EDINBURGH, EH2 3ES
 Tel: +44 (0)131 240 1270
 Email: pfedinburgh@pellfrischmann.com
 www.pellfrischmann.com

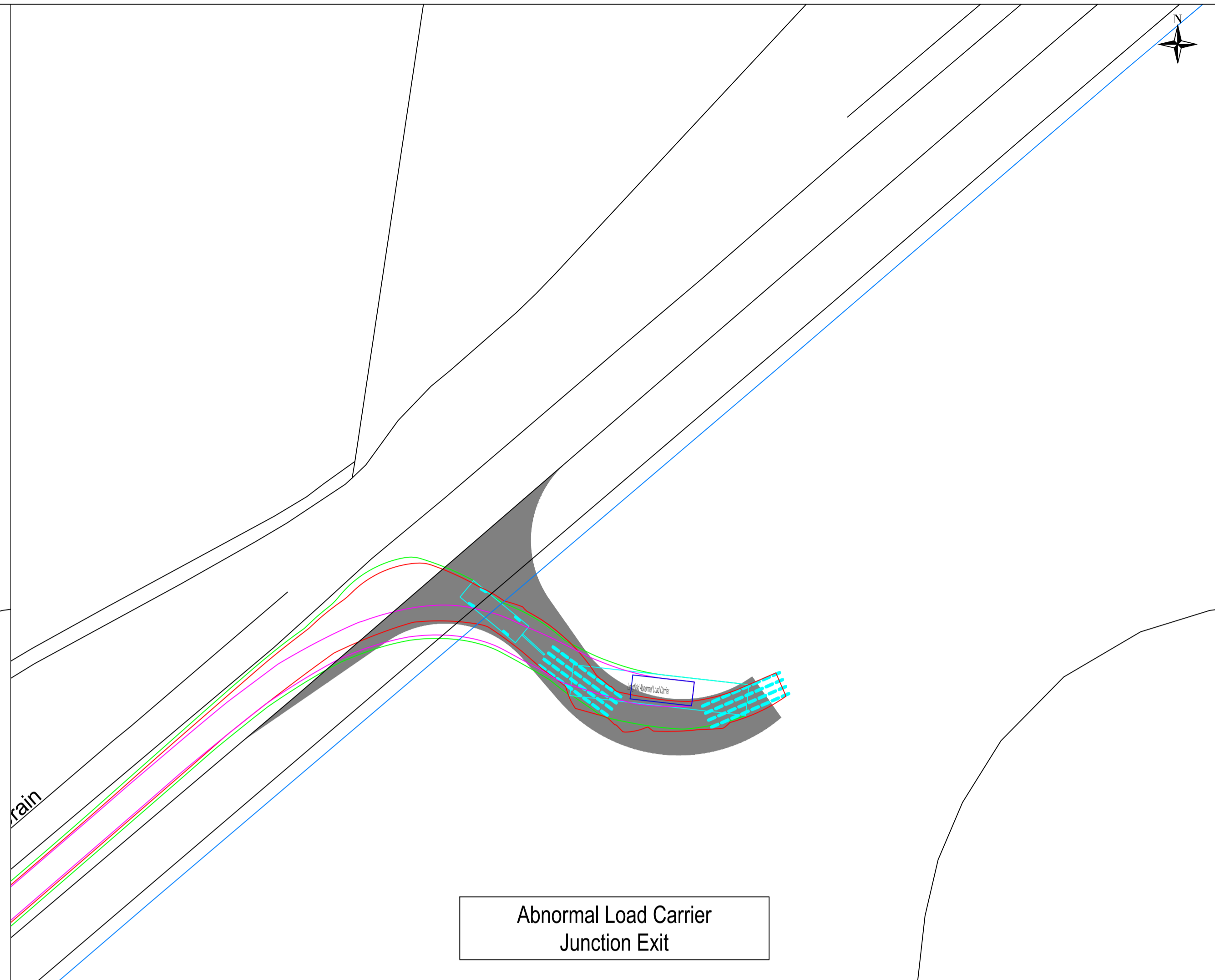
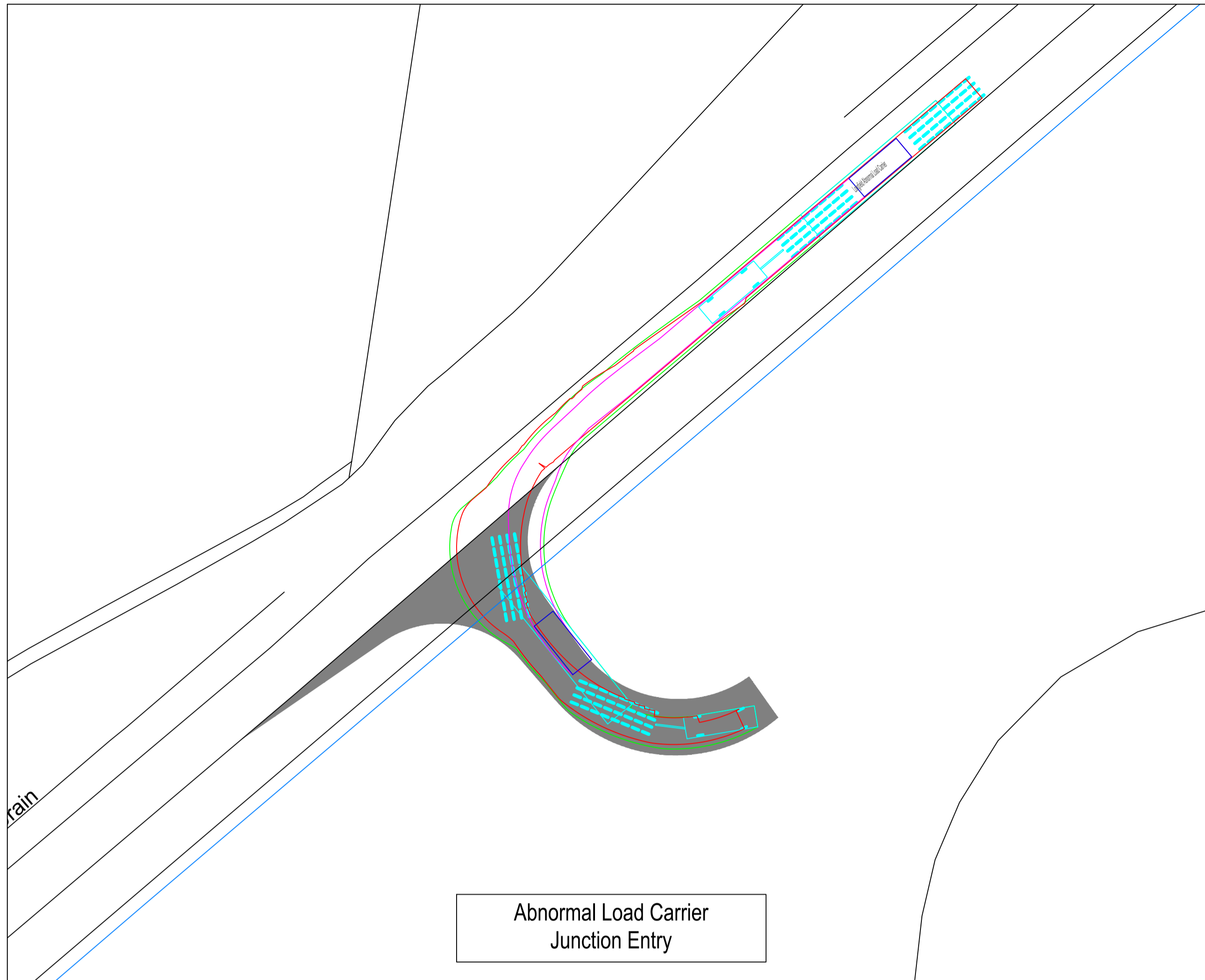
Client
Statkraft

Project
Necton

Drawing Title
**Access Junction
 General Arrangement**

	Name	Date	Scale
Designed	JS	21.07.2023	File 230721 Necton Junction Design
Checked	GB	21.07.2023	Drawing Status DRAFT

Drawing No.	Revision
SK01	P1



- NOTE:
1. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION FOR HIGHWAY WORKS AND THE TURBINE MANUFACTURERS STANDARDS AND ALL RELEVANT DRAWINGS WITHIN THE PROJECT DESIGN PACKAGE.
 2. ALL WORKS TO BE EXECUTED IN ACCORDANCE WITH THE DMRB, THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS, DESIGN MANUAL FOR ROADS AND BRIDGES, AND TRAFFIC SIGNS MANUAL.
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- KEY:
- Vehicle Wheels
 - Vehicle Body
 - Vehicle Load

Pell Frischmann
 93 GEORGE STREET, EDINBURGH, EH2 3ES
 Tel: +44 (0)131 240 1270
 Email: pfedinburgh@pellfrischmann.com
 www.pellfrischmann.com

Client
Statkraft

Project
Necton

Drawing Title
**Access Junction
 Swept Path Analysis**

	Name	Date	Scale	1:500 @ A1
Designed	JS	21.07.2023	File	230721 Necton Junction Design
Checked	GB	21.07.2023	Drawing Status	DRAFT
Drawing No.	SK02			Revision P1

Grove Plantation

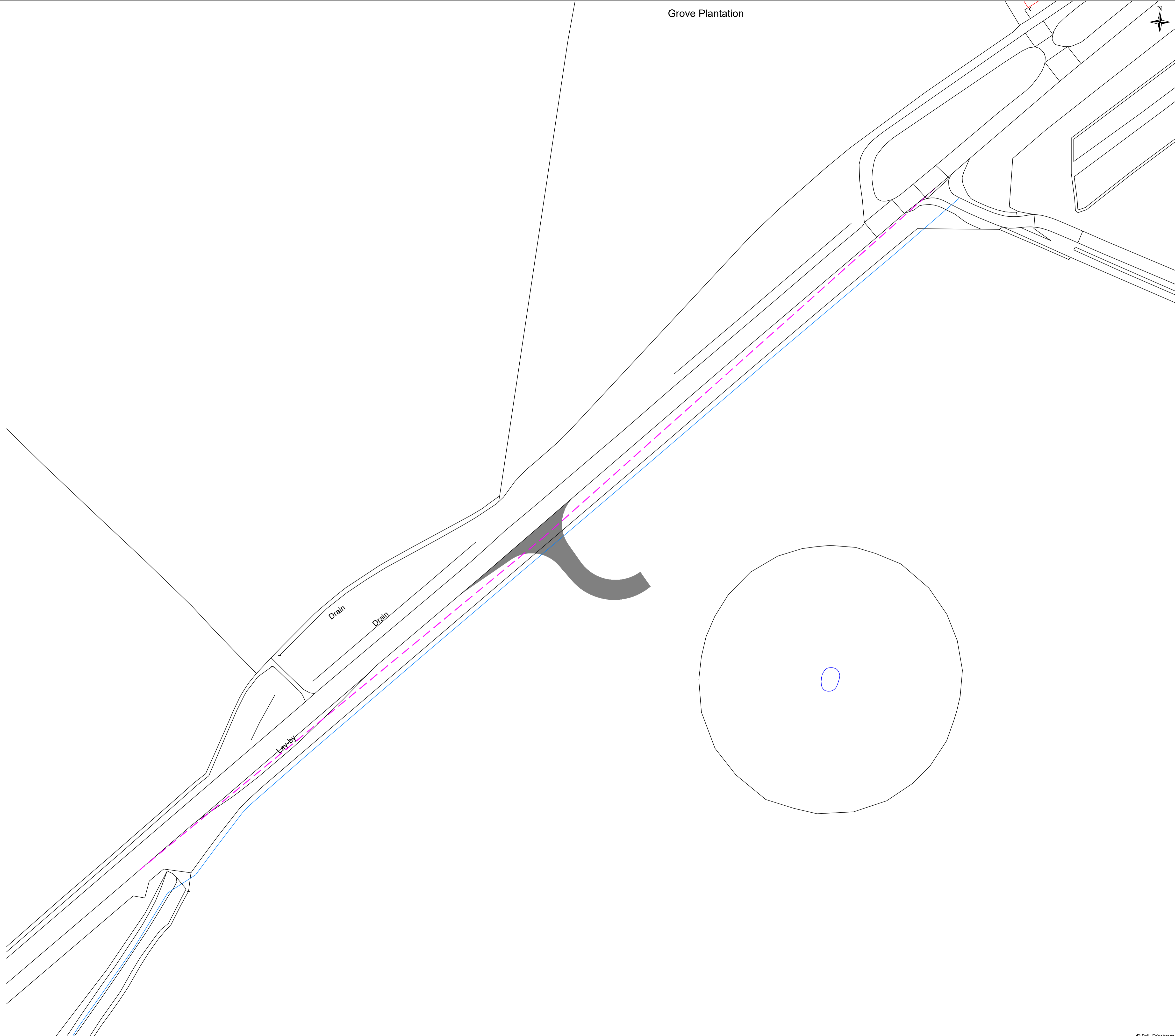


NOTE:

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KEY:

— 4.5m x 215m Visibility Splay



Pell Frischmann
 93 GEORGE STREET, EDINBURGH, EH2 3ES
 Tel: +44 (0)131 240 1270
 Email: pfedinburgh@pellfrischmann.com
 www.pellfrischmann.com

Client
Statkraft

Project
Necton

Drawing Title
**Access Junction
 Visibility Splay**

	Name	Date	Scale
Designed	JS	21.07.2023	1:750 @ A1
Checked	GB	21.07.2023	File 230721 Necton Junction Design
			Drawing Status DRAFT

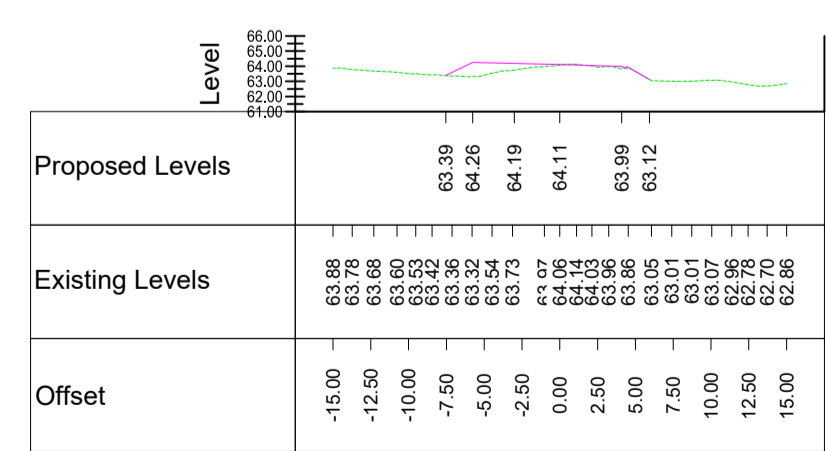
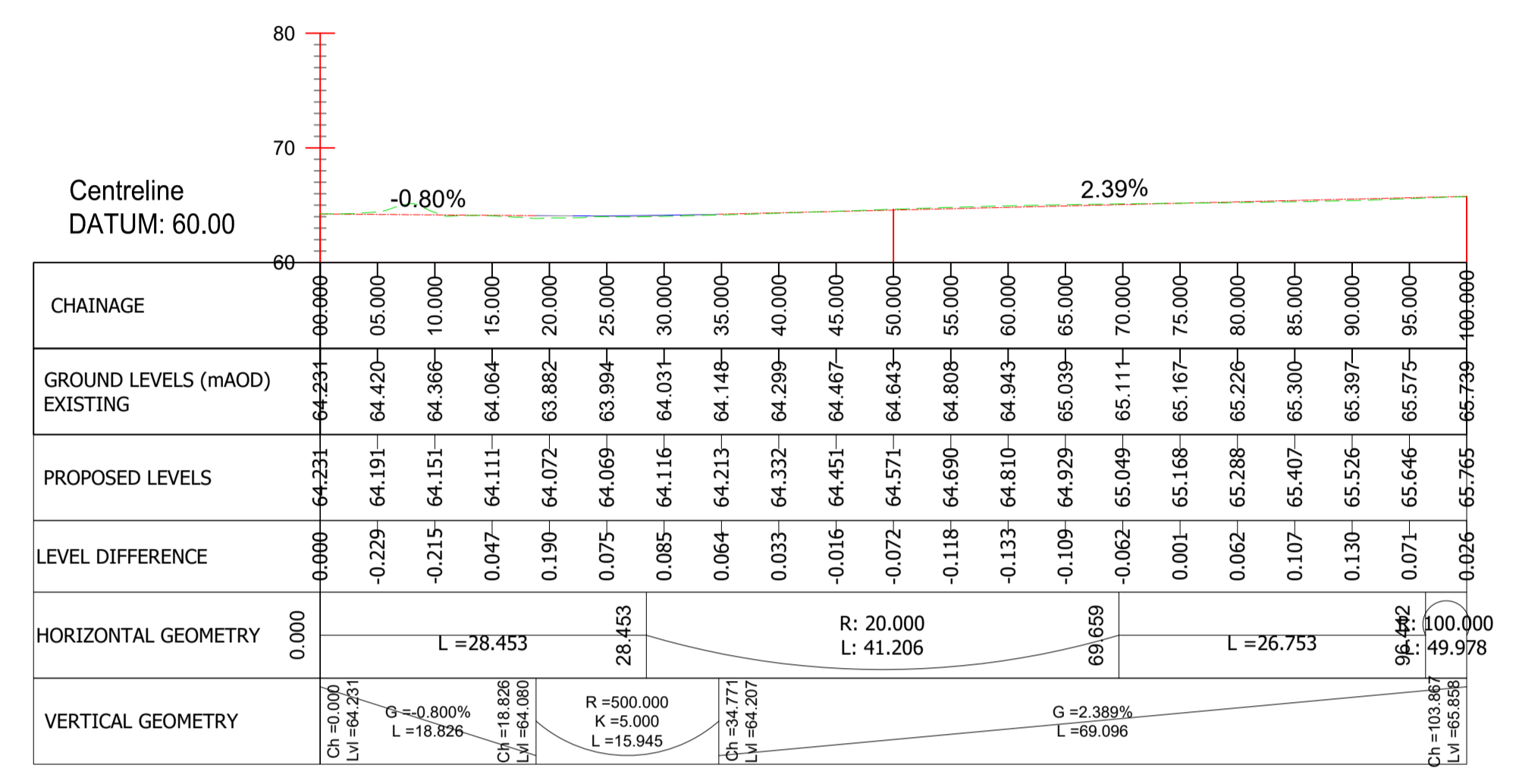
Drawing No.	Revision
SK03	P1



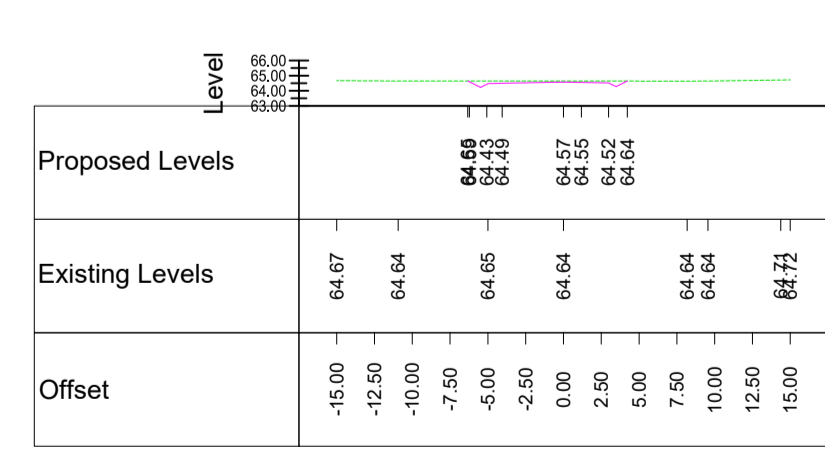
- NOTE:
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- KEY:
- Existing Ground Levels
 - Proposed Levels (Tangent)
 - Proposed Levels (Curve)

- SECTION VIEW KEY
- Existing Ground Levels
 - Proposed Levels



Chainage 15.000



Chainage 50.000

Pell Frischmann
 93 GEORGE STREET, EDINBURGH, EH2 3ES
 Tel: +44 (0)131 240 1270
 Email: pfedinburgh@pellfrischmann.com
 www.pellfrischmann.com

Client: **Statkraft**

Project: **Necton**

Drawing Title: **Long Section and Section Views**

Name	Date	Scale
Designed JS	21.07.2023	1:500 @ A1
Checked GB	21.07.2023	File: 230721 Necton Junction Design
Drawing Status	DRAFT	
Drawing No. SK04	Revision P1	

Appendix B Construction Programme

Construction Programme (Please note that rounding errors may occur)

Element	Veh													
Month		1	2	3	4	5	6	7	8	9	10	11	12	
Site Establishment / Reinstatement	HGV	100												100
General Deliveries	HGV	40	40	40	40	40	40	40	40	40	40	40	40	40
Site Clearance & Preparation	HGV	798	798											
Access Junction & Track	HGV		327										327	
Geotextile	HGV	2	2	2										
Development Platform	HGV			975	975	975								
Foundation Steel	HGV					4	4	4						
Foundation Concrete	HGV						421	421						
Cabling	HGV							7						
Cable Sand	HGV							25	25	25				
EV Gear & Switchgear	HGV									12				
Cranes	HGV						2	4		4	2			
Synchronous Condenser	HGV								2					
Buildings	HGV							33	33	33	33			
Fencing	HGV									16	16			
Fit Out	HGV										40	40	40	
Landscaping	HGV											100	100	
Commissioning	LGV											44	44	
Staff	LGV	308	308	308	308	361	361	572	572	572	572	572	572	308
Total		1248	1475	1325	1323	1381	828	1106	672	702	703	1123	632	
Total HGV		940	1167	1017	1015	1020	468	534	100	130	131	507	280	
Total LGV		308	308	308	308	361	361	572	572	572	572	616	352	
Total HGV / Day		43	52	46	46	46	21	24	5	6	6	23	13	
Total LGV / Day		14	14	14	14	16	16	26	26	26	26	28	16	
Total per Day		57	66	60	60	63	38	50	31	32	32	51	29	

