

Agenda Item	3.2
Report No	HC/51/19

HIGHLAND COUNCIL

Committee: Highland Council

Date: 12 September 2019

Report Title: 19/00374/FUL: Scottish Hydro Electric Transmission Plc
Land 1000M SE of Dalchork House, Lairg

Report By: Acting Head of Development Management – Highland

1. Purpose/Executive Summary

- 1.1 **Description:** The erection and operation of a 132kV substation comprising platform area, control building, associated plant and infrastructure, ancillary facilities, public road improvements to the A836 between the site entrance and the junction with the A838, upgrade of an existing forest track, site compound (half of which will remain permanent for operational purposes) and landscape works.
- 1.2

Ward: 1 – North, West and Central Sutherland

Development category: National

Pre-Determination Hearing: Yes

Reason referred to Committee: National Development

All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

2. Recommendations

- 2.1 Members are asked to agree the recommendation to Grant planning permission as set out in section 11 of the report.

3. PROPOSED DEVELOPMENT

3.1 The application seeks consent for the erection of a new substation to provide a connection for contracted renewable generation in the area to the electricity transmission network via a proposed new double circuit 132kV overhead line (OHL) and underground cable to Loch Buidhe Substation (subject to a separate application under the Electricity Act). Ancillary development includes:

- A substation platform in the region of 3 hectares (240m x 120m);
- Electrical infrastructure located on the substation platform with an approximate height of 13m;
- A control building located on the substation platform with dimensions in the region of 500m² (18m x 28m) and 7m in height;
- A communications mast located adjacent to the control building up to a maximum of 25m in height;
- A site compound (providing a welfare and laydown area) adjacent to the substation platform, of which half will be permanent for operational purposes and half will be temporary and reinstated after construction;
- Upgrading approximately 1km of forestry access track of approximately 5m in width and the widening of the junction off the A836;
- Public road improvements to the A836 between the site entrance and the junction with the A838;
- Motion activated lighting;
- Boundary treatments including security fencing and stock fencing

3.2 A degree of cut and fill will be required to accommodate the development with a proposed finished platform level of 130m AOD. The applicant also proposes to mitigate potential visual impacts through medication of the landform, and through structural planting. The construction programme is expected to last around 23 months.

3.3 The area around Lairg is currently served by a single circuit 132 kV OHL which runs from Cassley Grid Supply Point (GSP) near the north end of Loch Shin to the Shin substation at Inveran, via the existing GSP at Lairg. The connection of additional renewable energy to the network in recent years means that the existing circuit is at capacity. Current renewable energy generation connections to the existing infrastructure include:

- 49.3MW of wind farm and hydro generation at Lairg GSP and;
- 16.5MW of hydro generation at Cassley GSP.

The existing OHL will be dismantled as part of this current project.

3.4 The proposed development is identified within Annex A of National Planning Framework 3 (NPF3) as a National Development, falling under the class of development noted as *'new and/or upgraded onshore sub stations directly linked to electricity transmission cabling of or in excess of 132 kilovolts'*.

3.5 The applicant sought formal pre-application advice through the Council's Pre-Application Advice Service for Major Developments and this was provided in September 2014 outlining that the project was considered acceptable in principle

however highlighted that a number of issues would require to be adequately addressed as part of any future application including the degree of visibility in the landscape and impact on the local road network.

3.6 The application was subject to an EIA Screening request in 2015 which concluded that an Environmental Impact Assessment would not be required. Nevertheless the application is supported by a detailed Environmental Appraisal, the scope which was in parts agreed in advance with Highland Council and other statutory consultees. The application also includes a report detailing public consultation events and feedback which outlines how the proposal has evolved as a result of the public consultation process.

3.7 There have been no variations to the application since it was lodged.

4. SITE DESCRIPTION

4.1 The application site boundary covers a total area of 54.61 hectares including all land required to accommodate construction, landscaping and site access, as well as the building footprints and electrical infrastructure and is located with Dalchork Wood, a commercial forestry plantation around 3km to the north of Lairg. The site has recently been cleared by the landowner. The site falls from a north easterly direction sloping towards Loch Shin.

4.2 The nearest houses to the site lie at Saval and Savalbag to the south east of the site, by around 900m-1km. The small rural communities of Tirryside, Achfrish and Achnairn lie to the north west of the site to the other side of the A839.

5. PLANNING HISTORY

5.1	15/01190/SCRE: Erection of 275/132 kV substation	EIA Not Required	14 th May 2015
	18/01905/PAN: Construct a new 132kV substation comprising platform area, control building, associated electrical plant and infrastructure, ancillary facilities, access tracks and landscape works (Proposal of Application Notice)		10 th August 2018

Also relevant to this application:

5.2	19/01236/S37: Lairg to Loch Buidhe 132kV overhead line	Pending Consideration	
	18/05384/SCRE: Proposed 132kV Overhead Line supported by double trident 'H' pole structures to provide a grid connection	EIA Required	5 th December 2018

6. PUBLIC PARTICIPATION

6.1 Advertised: Schedule 3 Development/Unknown Neighbour
Date Advertised: 1st March 2019

Representation deadline: 15th March 2019

Timeous representations: 13 (11 objections, 1 general comment and 1 support comment)

Late representations: 0

6.2 Material considerations raised are summarised as follows:

General Comments

- a) Parent Council of Lairg Primary School welcome the benefits the project would bring locally however express concerns about increase in traffic particularly with regard safe routes to school – suggest safe cycle or walking paths should be in place for the duration of the build.

Support Comment

- b) It is considered that SSE have taken due consideration for impacts on homeowners, landscape, environment, wildlife and historic areas;
- c) Infrastructure must grow to ensure the area keeps up with the remainder of Highland;
- d) The proposal represents a reduced scale of pylon and reduced impact on homes;
- e) The few loud voices from a minority of the community should not be misunderstood to represent the whole of the community;

Objection Comments

- f) Questioning the needs case for the proposal - 'doubt whether this substation is even required as there surely be fewer wind farms planned'
- g) Too close to the junction with Shinness and the Tongue A Road
- h) Too close to Lairg village – causing suffering during construction
- i) Out of place infrastructure – visibility from Saval and Shinness
- j) Light and noise pollution
- k) Forestry cover cannot be relied on – evergreen species should be planted
- l) The A836 is a dangerous road and also part of a national cycle route – this development would increase safety issues
- m) Adverse impact on tourism
- n) Adverse wildlife impact
- o) Cumulative impact with other projects including OHL proposal and a new water treatment project at Savalbeg and proposed extension to Lairg WF
- p) Size of development is out of character with its surroundings

6.3 All letters of representation are available for inspection via the Council's eplanning portal which can be accessed through the internet www.wam.highland.gov.uk/wam.

7. CONSULTATIONS

7.1 **Lairg Community Council:** No objections however do note some concerns regarding public safety. Consideration should be given to local children who walk/cycle to and from school daily. The number of cyclists using this route could be upward of 3,000 per year as it forms part of the Lands end to JOG route. The

grass verge that pedestrians could use to avoid traffic is a wet bog most of the year. The CC therefore believe that a suitable cycle/walking path should be created upon or prior to commencement of the project.

7.2 Transport Planning: No objections subject to conditions relating to:

- Detailed access layout to the substation from the A836 including road widening;
- Formation of visibility splays;
- Submission of a detailed Construction Traffic Management Plan (to address measures to mitigate conflict with pedestrians and cyclists with specific regard to school children)

7.3 Flood Risk Management Team: No objections. SEPA's Flood Map indicates pockets of surface water flooding across the site and along the route of the proposed access track. A small un-named watercourse is present within the site boundary close to the proposed platform and temporary construction/welfare areas; this is too small to have been included in the modelling for SEPA's flood map and its flood risk to the development is unknown. The site is therefore considered to be potentially at risk of flooding during a severe weather event. The proposal falls into the category of 'Essential Infrastructure'; within SEPA's Land Use Vulnerability Classification. Proposals of this sort are considered generally suitable for development and should be constructed to remain operational during floods without impeding water flow. The Flood Risk Assessment and Surface Water Management Plan submitted considers fluvial and pluvial flood risk to the development – the FRM team are satisfied with its conclusion the development is at low risk of flooding. A buffer zone of a minimum of 6m should be left free of development between the watercourse and new development for future access and maintenance purposes. The FRM team are satisfied with the proposed surface water drainage proposals.

7.4 Access Officer: No objections. An Access Management Plan should be considered as a condition for this development to ensure opportunities can be utilised and where possible enhanced. In particular there is an existing track running through this site, Dalchork to Savalmore albeit records do not support this is a Right of Way. Whilst it is accepted that this will not be accessible to the public during construction, it should be open to public recreational access during the operation of the development.

7.5 Forestry Officer: The assessment identifies 6.60 hectares of permanent woodland removal associated with the substation infrastructure and a further 16.90 hectares associated with the new 132Kv OHL operational corridor. This amounts to 23.50 hectares of permanent woodland removal. No assessment has been made in relation to the Scottish Government's policy on the Control of Woodland Removal (CWR policy). The purpose of the new substation in reaction to a need for increased network capacity in support of renewable energy developments in the area. With reference to the CWR policy, I would consider this to meet the acceptability criteria given in Annex C of the policy, as the proposed change in land use would contribute significantly to Helping Scotland mitigate or adapt to climate change by facilitating appropriate development of renewable energy projects. There is a net woodland loss of 6.5 hectares therefore a

Compensatory Planting Plan will be required, to be prepared by a suitability qualified forestry consultant and in consultation with Highland Council and Scottish Forestry.

- 7.7 **Development Plans:** No objections. Developer contributions will be required if any infrastructure upgrades are identified by Transport Planning or the Access Officer. The Council's preference for public art is for this to be an integral part of the overall design of a development. In exceptional cases public art may be acceptable off site, in these circumstances contributions of up to the value of 1% of the capital budget could be collected by the Council and secured by means of a legal agreement.
- 7.8 **Historic Environment Team:** No response
- 7.9 **Landscape Officer:** No response
- 7.10 **Scottish Natural Heritage (SNH):** No objections. The site lies close to Strath Carnaig and Strath Fleet Moors Special Protection Area classified for its hen harrier. SNH consider that the proposal will not have a significant effect on any qualifying interests either directly or indirectly. An Appropriate Assessment is therefore not required. This is due to the following aspects of the proposals:
- The site is located 1.8km from the SPA and will not result in a loss of supporting habitat for hen harriers and;
 - The applicant has included a hen harrier species protection plan. This identifies specific mitigation measures to be taken to reduce the risk for any adverse impacts on SPA hen harrier
- 7.11 **Scottish Environmental Protection Agency (SEPA):** No objections subject to the conditions to secure the following:
- The ford crossing between the new access road and the proposed pylon access road should be replaced with a suitably sized open arch culvert or span bridge
 - Opportunities for enhancement or creation of wetland habitats (habitat compensation for the loss of wetland habitat) to be provided;
 - Submission of a site specific peat management plan
- 7.12 **Historic Environment Scotland:** No objections. The proposal has been considered in terms of impact on the following assets however HES do not have comments:
- Scheduled Monument SM 1829 Altbreck, broch 1650m ESE of Dalchork Bridge
 - Scheduled Monument SM5563 Altbreck, homestead 1800m ESE of Dalchork Bridge

8. DEVELOPMENT PLAN POLICY

The following policies are relevant to the assessment of the application

8.1 Highland Wide Local Development Plan 2012

28 - Sustainable Design

29 - Design Quality and Place-making

30 - Physical Constraints
31 - Developer Contributions
45 - Communications Infrastructure
46 - Siting and Design of Communications Infrastructure
51 - Trees and Development
52 - Principle of Development in Woodland
55 - Peat and Soils
56 - Travel
57 - Natural, Built and Cultural Heritage
58 - Protected Species
59 - Other important Species
60 - Other Importance Habitats
61 - Landscape
63 - Water Environment
64 - Flood Risk
65 - Waste Water Treatment
66 - Surface Water Drainage
69 - Electricity Transmission Infrastructure
72 - Pollution
73 - Air Quality
77 - Public Access

8.2 **Caithness and Sutherland Local Development Plan 2019**

There are no site specific policies covering the site however part of the overall strategy for the are includes:

'Supporting and enabling a High Voltage Energy Transmission Network (as identified in NPF3) recognising the strategic need and where relevant national priority of some schemes, whilst carefully considering route options and detail of proposals, promoting optimisation of the network to achieve significant benefits with limited impacts through a co-ordinated approach and smart solutions'.

The Action Programme also lists a new substation in the vicinity of Lairg with an overhead line connection to the substation at Loch Buidhe as a specific action.

8.3 **Highland Council Supplementary Planning Policy Guidance**

Construction Environmental Management Process for Large Scale Projects (August 2010)
Developer Contributions (March 2013)
Flood Risk and Drainage Impact Assessment (Jan 2013)
Green Networks (Jan 2013)
Highland Historic Environment Strategy (Jan 2013)
Highland's Statutorily Protected Species (March 2013)
Sustainable Design Guide (Jan 2013)
Trees, Woodlands and Development (Jan 2013)

9. OTHER MATERIAL POLICY CONSIDERATIONS

9.1 Scottish Government Planning Policy and Guidance:

- Scottish Planning Policy (2014) – including policies for:-
 - A Low Carbon Place
 - A Natural Resilient Place
- National Planning Framework 3
- Scottish Energy Strategy

10. PLANNING APPRAISAL

10.1 Section 25 of the Town and Country Planning (Scotland) Act 1997 requires planning applications to be determined in accordance with the development plan unless material considerations indicate otherwise.

Determining Issues

10.2 This means that the application requires to be assessed against all policies of the Development Plan relevant to the application, all national and local policy guidance and all other material considerations relevant to the application.

Planning Considerations

10.3 The key considerations in this case are:

- a) Development Plan and other planning policy
- b) National policy
- c) Layout and design
- d) Landscape and Visual Impact
- e) Cultural heritage
- f) Access and traffic impact
- g) Water and drainage including flood risk
- h) Ecology/nature conservation
- i) Noise
- j) Construction impact
- k) Economic impact
- l) Other material considerations.

Development plan/other planning policy

10.4 The Development Plan comprises both the adopted Highland-wide Local Development Plan (HwLDP) and Caithness and Sutherland Local Development Plan. As noted in Section 8.2, the latter recognises the strategic need to support

enable a High Voltage Energy Transmission Network. Whilst this establishes the principle of the proposed development being acceptable, this is subject to consideration of a number of detailed factors as listed above.

- 10.5 The principle HwLDP policy on which the application requires to be assessed is Policy 69- Electricity Transmission Infrastructure. Other policies listed in Section 8.1 are also relevant and require due consideration such as Policy 61 – Landscape. These matters are assessed within a number of material considerations examined within this report. These include matters raised within public representations.
- 10.6 The Development Plan supports the broad principle of energy development. Policy 69 specifically highlights that the “Council will have regard to their level of strategic significance in transmitting electricity from areas of generation to areas of consumption.” “It will support proposals which are assessed as not having unacceptable impact on the environment including natural, built and cultural heritage features.” Where development is assessed as not having unacceptable significant impact on the environment, then the proposal would accord with the Development Plan.

National policy

- 10.7 Scotland’s Third National Planning Framework (NPF- 3) sets out the government’s thoughts on how best to achieve a more successful country through increasing sustainable economic growth. It includes plans for infrastructural investment including a high voltage electricity transmission network deemed vital in meeting national targets for electricity generation, statutory climate change targets and security of energy supplies. The current application falls into the category of National Development. Whilst this establishes a need for the project all necessary assessments and consents are still required for such development. Appropriate levels of mitigation would still be expected to help avoid or reduce environmental effects and demonstrate “no adverse effect” on the integrity of European protected sites.
- 10.8 An aim of the planning system is to achieve the right development in the right place; not to allow development at any cost. SPP introduces a presumption in favour of development that contributes to sustainable development. The connection of approved renewable energy projects to the grid, which would be enhanced by this project, advances its sustainable development credentials. The expansion of the grid transmission network in the north of Scotland not only is a short term economic construction boost, but also a long term infrastructural benefit to the area. A priority of the Scottish Energy Strategy (2107) is to champion Scotland’s renewable energy potential, creating new jobs and supply chain opportunities.

Layout and design

- 10.9 The site selection process for the substation is detailed in the EIAR. It is noted that this began in 2013 with the initial project scope requiring the applicant to design and develop a 275kV substation to facilitate a link between anticipated renewable power generation opportunities in the Lairg area and the wider grid reinforcements currently being undertaken by SHE Transmission in the Highlands. 7 potential sites were considered, with four subsequently ruled out

after engineering and environmental assessments were considered and a preferred site was identified to the north of Lairg. Following consultation and engagement with the local community this site was then ruled out and other site options were re-considered in order to satisfy concerns during the consultation process. The proposed substation site option was subsequently identified as a site location within Dalchork wood. Following the site selection, a range of design alternatives were also considered such as different configurations for terminal towers, equipment, buildings and so forth.

- 10.10 Due to the changes in demand for renewable generation in the Lairg area, SHE Transmission undertook review of the reinforcement options to assess the technical solution. This concluded that a 275kV solution was no longer required and that a 132kV substation would be sufficient to accommodate the extra demand. The key benefit of this change in terms of design requirements is a substantial reduction in the area required to create a level platform from 285m by 239m to 240m by 120m. In addition, this change requires no supergrid transformers which will ensure minimal operating noise with no abnormal loads required to facilitate construction.
- 10.11 The proposed development is located within an area of managed coniferous forestry with scattered, isolated dwellings and farmsteads within the wider area. The building has been designed with the aim of reducing its visual prominence as much as possible, through use of cladding panels finished in olive green to match the backdrop of forestry plantation. The cut and fill works required will also be used to create soft slope gradients to reflect those of the surrounding area and to ensure sympathetic transition between existing and proposed contours.

Landscape and Visual Impact

- 10.12 The Environmental Appraisal considers both landscape and visual impacts of the proposed development, with photomontages provided from a range of viewpoints and produced in accordance with the Council's Visualisation Standards. The Assessment is focused on a study area of 5km, beyond which the development is considered unlikely to result in any adverse effects. Whilst photomontages provide a useful aid in showing the appearance of the proposed development, they are just one tool used by the Planning Authority in the assessment of visual impact.
- 10.13 The proposed development would sit in a slightly bowl-shaped area south of Cnoc a Chatha (170m AOD) and north east of another area of high ground (170m AOD). Land use in the wider area comprises a mosaic of improved and semi improved grassland, rough grazings, moorland and many commercial forestry plantations. The site itself lies within the boundary of Dalchork Wood – a commercial plantation which is undergoing a programme of felling and restocking. The area immediately surrounding the Proposed Development has been clear felled. Within the wider area there is evidence of man made features including wind farms at Rosehall and Achany and a smaller wind turbine development south east of Lairg comprising of 3 turbines. Other features include telecommunication and radio masts, steel lattice OHL, woodpole mounted overhead lines as well as the hydroelectric dam and power station at Loch Shin.

- 10.14 A 'Bare Ground' Zone of Theoretical Visibility is included in the assessment; this takes no account of the potential screening effects of existing building or vegetation and is therefore intended to demonstrate the worst case scenario. Theoretical visibility equates to 38% of the 5km study area and is concentrated over an area to the west, taking in Loch Shin and land to the east and west of the loch, and fragmented, mainly elevated areas to the north, east and south. The 'With Screening' ZTV is intended to provide an indication of theoretical visibility in the year 2021 to take account of the 2017-2021 forest felling (excluding any restocking) and includes the screening effect of buildings and existing vegetation to provide a more realistic scenario. Visibility within the study area in this situation extends to 18%, primarily to the west of the site.
- 10.15 3 viewpoints have been provided to specifically aid in the assessment of visual impact from residential receptors (and road users) at Saval, from the A838 at Colaboll and the minor road at Sallachy. These are all short range views ranging from 1km to 3km distance from the proposed development and the assessment considers visual effects both during the construction phase and thereafter during the operational phase.

Viewpoint 1 – Saval (1km from the application site)

- 10.16 The current from this location towards the application site the view is currently occupied by improved grassland, agricultural machinery and farm buildings in the foreground with a backcloth of forestry and felled forestry. The assessment outlines that construction works from this viewpoint will be noticeable however such impacts will be short term (18 months) and will not impact on the main views from houses in this location which are to the south. During operation, the assessment acknowledges that most of the substation will be visible, with the lower portions screened by the intervening landform. Mitigation planting will help to screen the substation further once mature however there will remain some areas of visibility with the building occupying 14% of a 90-degree panorama. Overall the impact is considered to be moderate; this position is agreed.

Viewpoint 2 – A838 at Cobaboll (1km from proposed site boundary)

- 10.17 The assessment outlines that construction operations will be entirely visible from this location where they will be seen in the context of the existing OHL and area of clear-felled forestry. Whilst such effects will be limited in terms of duration, on completion of the development the substation will be visible from this location until such time as a restocked forest establishes and forms a visual screen. As such the assessment assigns a major impact from this location; this position is agreed. The effects however will be experienced by road users and therefore views will be obtainable for only a limited period of time.

Viewpoint 3 – Minor Road at Sallachy (2.86km from proposed site boundary)

- 10.18 From this view, the site is visible on the opposite shore of Loch Shin within a mosaic of improved grassland, rough grazing, forestry and areas of clear felled forestry. Existing steel lattice mounted overhead lines can also be seen from this view. During construction, high level operations will be visible with partial screening by landform. These will form a very small component of the view given the distances involved. During the operation of the substation the lower parts of

the development will continue to be screened by topography and following restocking the development will be entirely screened. As such the assessment assigns a minor/moderate impact reducing to negligible. This position is agreed.

- 10.19 As noted above the use of replanting and landscape is fundamental to the proposed development. The strategy in this respect is outlined in detail in the Environmental Appraisal which outlines that the area surrounding the proposed development will be restocked with productive conifers and the immediate surroundings will be planted with pine and riparian woodland which will not be subject to clear felling. This planting will be implemented with a view of biodiversity of the area due to the use of native trees and shrub species. The substation infrastructure, associated earthworks and landforms will be softened in the landscape by use of species which will complement the surrounding indigenous species; the species mix is listed in the Environmental Appraisal and includes scots pine, birch and rowan. These will reach a height of 30m over a period of 30 years.
- 10.20 It is evident that a building of this scale in a semi-rural location will result in some visual impact and from some locations; and that due to the overall proportions of the building the magnitude of change will be particularly perceptible from some locations. is evidenced in some of the representations received on the application From the Environmental Appraisal submitted, it is noted that the site selection process has been carefully considered by the applicant so as to take advantage of the landform, and the bowl like contours within the site to minimise visual impact as far as practicable

Cultural heritage

- 10.21 There are no Scheduled Monuments or Listed Buildings within the boundary of the proposed development and no part of the site lies within a World Heritage Site or Conservation Area. The landscape around Lairg contains rich and diverse archaeological remains dating from the Bronze Age to the post-medieval period and this is reflected in the character of the remains identified within or immediately adjacent to the site. Nine heritage assets have been identified (sites and features); these include burial monuments of early Bronze Age date, hut circles and field systems of later prehistoric age and settlement remains of post medieval date.
- 10.22 Field survey found that upstanding archaeological remains survive both within the existing, recently felled commercial forestry plantation and in the moorland and pasture areas to the south east of the proposed development in areas that have seen little modification or a development since the 19th Century. Taking into account the disturbance caused by previous and ongoing forestry activities it is considered that there is a low potential for unknown buried remains to survive within the site boundary. There is potential for construction works to result in direct effects on heritage assets however such effects are concluded to not be significant and appropriate mitigation measures are detailed in the EA; this will involve further archaeological investigation which is secured by condition.

Access and traffic impact

- 10.23 The site would be accessed from the A836 by utilising an existing forestry track which would be upgraded to accommodate construction vehicles. Such upgrading works would follow the alignment of the existing track using rock which will be sourced from an off-site quarry. The Environmental Appraisal notes that upon operation the substation would not generate regular vehicular traffic other than an occasional maintenance vehicle. The assessment of traffic impact therefore requires to be concerned primarily with construction traffic which would comprise a temporary level of vehicular movement, over a period of 13 months.
- 10.24 The EA notes that the conventional construction traffic which would be generated daily would comprise of 'light' and 'heavy' HGV trips, for example for the delivery of aggregates, concrete and other construction materials which would be sourced locally wherever possible and accessing the site via the upgraded access from the A836. This is an important road linking Lairg with Tongue on the north coast. It is double carriageway in width however narrows to single track to the south of the access point to the site. As such a 350m section of road between the A836/A838 to the site requires to be widened to form a 5.5m carriageway with 2m verge and additional width for drainage, in order to deliver the transformers. Transport Planning have noted no objection to such widening, which can be delivered within land controlled by the Roads Authority, subject to a condition to agree the finalised layout.
- 10.25 Based on the estimated material quantities for construction activities, the total number of HVG trips predicted to arise during the construction phase is around 1,665 one way trips (3,330 movements) to be spread over the 13 month construction period. The highest trip generation would occur in Months 2 and 3 primarily due to the importation of material required to upgrade the access road. Over the 13 month period, HGV trips will average 34 movements per day. This equates to an overall increase of traffic of less than 10%. In road safety terms, the EA notes that the predicated number of development trips is not significant and would be accommodated so as not to compromise road safety or have any effect on existing accident levels. Additionally the construction phase within the highway would be undertaken under suitable traffic management schemes namely a Construction Traffic Management Plan which has already been prepared in framework format. It is common practice for applicants to prepare a fully worked up CTMP post planning decision following the appointment of a principal contractor and this is secured by condition. The CTMP will require to be agreed prior to any work commencing.
- 10.26 As noted in representations, the National Cycle Route No 1 is also part of the A836 (an on road cycle route) and the route is used by children in outlying areas travelling to school in Lairg. As such the finalised CTMP must have regard to both road users and, amongst other measures, the CTMP should specifically address potential conflict with pedestrians and cyclists. Proposals for keeping the Community Council informed of construction traffic are also required as part of the CTMP. Whilst the installation of a new cycle path cannot be secured as part of this planning permission (as it would potentially involve several landowners) the applicant has noted that this issue will be explored as part of discussions with the Community Liaison Group as a gesture of goodwill.

Water and drainage, including flood risk

- 10.27 SEPA's Flood Map indicates pockets of surface water flooding across the site and along the route of the proposed access track. A small un-named watercourse is present within the site boundary close to the proposed platform and temporary construction/welfare areas; this is too small to have been included in the modelling for SEPA's flood map and its flood risk to the development is unknown. The site is therefore considered to be potentially at risk of flooding during a severe weather event. The proposal falls into the category of 'Essential Infrastructure'; within SEPA's Land Use Vulnerability Classification. Proposals of this sort are considered generally suitable for development and should be constructed to remain operational during floods without impeding water flow. The Flood Risk Assessment submitted considers fluvial and pluvial flood risk to the development – the FRM team are satisfied with its conclusion the development is at low risk of flooding. A buffer zone of a minimum of 6m should be left free of development between the watercourse and new development for future access and maintenance purposes and this is secured by condition.
- 10.28 Surface water drainage from the site would be minimised through the installation of an upslope cut-off drain which would divert surface water around the substation platform with a discharge point to the south of the substation. Run-off within the platform area would be managed using a sustainable drainage system (SUDS) provide filtration and discharge to a local watercourse, designed in accordance with SEPA's standards. The FRM team are also satisfied with the proposed surface water drainage proposals.

Ecology/Nature Conservation

- 10.29 There are no natural heritage designations covering the site itself however it lies close to the Strath Carnaig and Strath Fleet Moors Special Protection Area designated for its hen harrier interests. SNH outline that it is unlikely that the proposal will have a significant effect on any qualifying interests either directly or indirectly. In particular the applicant has prepared a hen harrier species protection plan which identifies a number of specific mitigation measures. The plan forms part of the Environmental Appraisal which the proposed development is required to develop and operate in accordance with by condition.
- 10.30 A number of protected species surveys were also carried out in advance of the application. With the exception of one pine marten scat which the EA concludes would not be disturbed, no other protected species were found within the development site.

Noise

- 10.31 The proposed development will be a switching station which means there will be no noise emissions during its normal operation. The only noise that may be generated at the substation is the impulsive sound associated with circuit breakers which produce an audible impulse when used. Such circuit breakers are however only used to disconnect the electricity line for maintenance and during a line fault. Noise will therefore consist of a single acoustic event which would occur infrequently and irregularly.

- 10.32 Noise impact has been assessed as part of the Environmental Appraisal. As part of this assessment background noise levels during night time periods were measured at the nearest houses at Saval and Dalchork. These were found to be, on average, 20dB, which is very low and typical of rural areas. Based on these background noise levels and the estimated noise levels of a circuit breaking event, the noise assessment concludes that potential noise levels are considered to be negligible.
- 10.33 Due to the distances involved between the site and the nearest houses (1km), construction noise was scoped out the assessment in agreement with Environmental Health. The Planning Authority no longer controls working hours by planning condition as this is a matter which can be addressed by Environmental Health under

Construction Impacts

- 10.34 The development of a project of this scale will have considerable “temporary” impacts including for example construction traffic as assessed earlier in this report but also construction noise, dust, waste, etc. Such impacts are expected intermittently through 23 months of construction split into 2 key overlapping phases:
- 1) Enabling and civils construction – 15 months
 - 2) Electrical construction – 16 months

As with many SSE/SHETL projects the applicant has a commitment toward a project specific Construction and Environmental Management Plan approach, the finalised details of which, following appointment of the project contractor, would require approval of the planning authority in consultation relevant consultees.

- 10.35 There is expectation that any appointed contractor would adopt best practical means to limit the degree and timings of such impacts. This requires limitation on construction hours as offered by the applicant, timing of deliveries types (HGV's and abnormal loads). Other controls including Dust Management Plans, Pollution Prevention Plans, Waste Management Plans, Surface Water Management, etc. would also be expected within a project specific Construction and Environmental Management Plan.

Economic Impacts

- 10.36 The development of grid infrastructure has been identified as a national priority together within investment in renewable energy. The development of substation projects as presented within this application not only are beneficial in strengthening the robustness of the country's grid network, further job and investment opportunities are created through the development of associated supply chains. The development is required to facilitate the connection of wind farms / hydroschemes to the national grid, which will allow the export of electricity generated to consumers. The relationship of the development to the economic and social benefits of renewable energy developments is therefore relevant, in a positive way

- 10.37 The design, landscaping and limited visual impact of the development beyond the initial 3km means the impacts of the development are not anticipated to have adverse impact on the local economy, particularly tourism. Its impact, at a more local level, equally is not anticipated to significantly impact on existing businesses or recreational interests.

Other material considerations

- 10.38 There are no other material considerations.

Matters to be secured by Legal Agreement

- 10.39 a) A wear and tear agreement covering use of the local road network during all construction periods associated with this development.
b) Compensatory planting
- 10.40 The applicant has four months from the date that the Council's solicitor writes to the Applicant/Applicant's solicitor indicating the terms of the legal agreement, to deliver to the Council a signed legal agreement. Should an agreement not be delivered within four months, the application shall be refused under delegated powers.

11. CONCLUSION

- 11.1 The Scottish Government and the Council each have policies in support of projects which increase the capacity of the grid network to serve the community and in particular the significant level of investment in renewable energy. NPF3 justifies the need for such investment highlighting such development as of national importance.
- 11.2 Highland has been successful in attracting inward investment in renewables, enabled in part by a matching level of investment in the improvement of the grid transmission system. This success has led to the Highlands having a good understanding of this type of project and this Council having appropriate policies and guidance to assist in its assessment and to effectively manage their implementation on the ground. For example, the use of Construction and Environmental Management Documents "CEMD", a particular approach to assist with the implementation / management of such largescale projects with a focus on environmental protection. There are investment benefits too that favour these projects, not just from the short term construction but a continued stream of investment assisting with apprenticeships schemes and partnership networks with local companies.
- 11.3 Statutory and other consultees responding to this application are generally supportive. No significant adverse impacts have been identified with this project following assessment by statutory consultees. Some have requested planning conditions to be attached to any grant of planning permission to effectively ensure that their specific interests are secured.
- 11.4 There are clear impacts that might be expected from this development, particularly in its construction. These can be managed through best practice construction management techniques to ensure surrounding interests, particularly

road access and the amenity of local housing are safeguarded from the key impacts of the development, by planning conditions to strengthen and clarify the plans and supporting information as submitted by the applicant. Representations have in particular noted the potential issues which may arise from construction traffic. These are acknowledged and will be addressed fully as part of the finalised Construction Traffic Management Plan which specifically seeks information on how conflict between construction vehicles and pedestrians/cyclists will be mitigated. This will be subject to further discussion by means of the Community Liaison Group.

- 11.5 The application can be supported in the context of the Council's Development Plan and in particular it's Policy 69 on Electricity Transmission Infrastructure and the underlying support for renewable energy development which is consented in this area. All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

12. IMPLICATIONS

- 12.1 Resource: Not applicable.
- 12.2 Legal: Not applicable.
- 12.3 Community (Equality, Poverty and Rural): Not applicable.
- 12.4 Climate Change/Carbon Clever: Not applicable.
- 12.5 Risk: Not applicable.
- 12.6 Gaelic: Not applicable.

13. RECOMMENDATION

Action required before decision Y issued

Notification to Scottish Ministers	N	
Conclusion of Section 75 Obligation	Y	To secure Wear and Tear Agreement
Revocation of previous permission	N	

Subject to the above, it is recommended that planning permission be **GRANTED**, subject to the following:

Conditions and Reasons

1. The development hereby approved must be carried out in accordance with the approved plans; as set out in the application's supporting information; the submitted schedule of mitigation unless otherwise agreed in writing with the planning authority and in compliance with the conditions attached to this planning permission.

Reason: To identify the extent and terms of the development consent.

2. No development shall commence until a Construction Environmental Management Document (CEMD), in accordance with The Highland Council's Guidance Note on Construction Environmental Management Process for Large Scale Projects (August 2010) (as amended, revoked or re-enacted; with or without modification), has been submitted to, and approved in writing by, the Planning Authority (in consultation with SEPA, SNH and TECS). The CEMD shall be submitted at least two months prior to the intended start date on site and shall include the following:
 - i. An updated Schedule of Mitigation (SM) drawing together all approved mitigation proposed in support of the application and other agreed mitigation (including that required by agencies and relevant planning conditions attached to this permission);
 - ii. It should be highlighted that this proposed development is within the River Tirry catchment, which directly inputs to Loch Shin, which is a downgraded waterbody, as classified by the Water Framework Directive and is the result of rising levels of total phosphorus. Increases in total phosphorus are linked to activities that attribute to sedimentation of the water environment, which also includes diffuse pollution. The CEMP should therefore highlight the sensitive ecology of Loch Shin and where necessary commit to further catchment specific mitigation measures to reduce sediment release to the water environment. This may involve increasing buffer strips, appropriately locating cut off drains and increasing surface water management and treatment.
 - iii. Construction Environmental Management Plans (CEMPs) for the construction phase, covering:
 - a. Habitat and Species Protection;
 - b. Pollution Prevention and Control;
 - c. Dust Management;
 - d. Noise and Vibration Mitigation;
 - e. Site Waste Management;
 - f. Surface and Ground Water Management;
 - i. Drainage and sediment management measures from all construction areas including access track improvements; and
 - ii. Mechanisms to ensure that construction will not take place during periods of high flow or high rainfall.
 - g. Water Course Management;
 - h. Peat Stability, Slide Risk and Management;
 - i. Public and Private Water Supply Protection Measures;
 - j. Emergency Response Plans; and
 - k. Other relevant environmental management as may be relevant to the development.

- iv. A statement of responsibility to 'stop the job/activity' if a breach or potential breach of mitigation or legislation occurs; and
- v. Methods for monitoring, auditing, reporting and the communication of environmental management on site and with client, Planning Authority and other relevant parties.

Thereafter, development shall be carried out in accordance with the approved Schedule of Mitigation, Construction Environmental Management Document and any Construction Environmental Management Plans approved thereunder.

Reason: To ensure protection of surrounding environmental interests and general amenity.

3. No development shall commence on site until a construction phase Traffic Management Plan (CTMP) (including a routing plan for construction vehicles) has been submitted to, and approved in writing by, the Planning Authority. The approved traffic management plan shall be implemented prior to development commencing and remain in place until the development is complete. The CTMP shall include:

- Identification of quarries and haul routes of materials to be used as far as the site access, the types of HGV and the numbers of movements proposed together with a programme of the proposed movements.
- Proposed measures to mitigate the impact of general construction traffic and abnormal loads on the local road network following detailed assessment of the relevant roads.
- A pre commencement and monthly interim and a post construction (within one month of completion) joint condition surveys (or a revised interim period as agreed in writing) of the agreed construction traffic routes.
- Details of any traffic management measures including temporary signage required for the duration of the construction period.
- Identification of a named point of contact for the Council to deal with the Traffic Management Plan;
- Proposals for keeping the Community Council informed and dealing with queries and complaints regarding construction traffic related to the development
- Provision of a vacuum road sweeper (if considered necessary by the Roads Authority to keep the public road free of debris).
- In the event of the proposed development being constructed at the same time as the related Overhead Line Project (19/01236/S37) and where this uses the same site access, the CTMP shall consider the impact of the construction traffic from the concurrent schemes on the routes proposed to be used for this development. It shall propose appropriate mitigation for the concurrent construction traffic from both schemes and shall demonstrate how this concurrent traffic will be managed.) Alternatively the scheme shall be constructed so that there is no concurrent traffic.

Reason: In the interests of road safety and to ensure adequate road safety measures are in place including measures to minimise conflict with routes to schools, cyclists and local events

4. No development shall commence until a detailed layout of the access to the approved substation from the A836 has been submitted to and approved in writing by the Planning Authority in consultation with the Roads Authority. The layout shall include:

- Road widening of the A836 (from the junction with the A838 to 15m north of the access) to form a 5.5m carriageway with 2m verge and additional width for roadside drainage;
- Redesign and upgrading of the A838/A836 junction including details of signage;
- Swept path analysis for design Heavy Goods Vehicles and abnormal vehicles
- Detailed proposals for surface water drainage and diversion of existing watercourse and ditches.

Thereafter the road widening and junction are to be completed in accordance with the approved plans up to binder course level (or as agreed with the Council) prior to any other development. The junction and widening shall be completed in full prior to the substation being brought into use.

Reason: to ensure the road is enhanced and thereafter maintained to safely accommodate the increased traffic arising from the construction traffic associated with this development and existing road users.

5. No other development shall commence until visibility splays of 4.5m x 215m (the X dimension and Y dimension respectively) in each direction formed from the centre line of the junction have been provided. At no time shall anything obscure visibility between a driver's eye height positioned at the X dimension and an object height of 0.60m anywhere along the Y dimension.

Reason: In the interests of road safety.

6. No development shall commence until a Peat Management Plan, developed in consultation with SEPA and SNH, has been submitted to, and approved in writing to, the Planning Authority. The Peat Management Plan shall draw upon the findings of any approved Environmental Statement, Peat Slide Risk Assessment, consider the findings of any additional ground investigations carried out prior to development commencing and include a management/reinstatement scheme for all peat areas within the application site, including:

- i. Details and plans for all peat and soil stripping and excavation and the storage and proposed use and replacement of peat, topsoil and subsoil; and
- ii. A method statement setting out the measures to protect peat during excavation, storage, handling and reuse.

The Peat Management Plan shall take due consideration of the mineral and slope stability of the site identified in the peat landslide risk assessment and shall have regard to the drainage implications of soil movement and storage. The Plan shall be implemented as approved.

Reason: To ensure that a plan is in place to deal with the storage and reuse of peat within the application site, including peat stability and slide risks

7. No development shall commence until a Compensatory Planting Plan has been submitted to and approved in writing by the Planning Authority. The Plan shall provide for an additional 6.5 hectares of planting. Thereafter the Plan shall be implemented in full during the first planting season following commencement of development.

Reason: To ensure compliance with Scottish Government's Control of Woodland removal policy and to offset the loss of trees within the application site.

8. No development shall commence until an Access Management Plan has been submitted to and approved in writing by the Planning Authority. The Plan shall include measures to ensure the track running through the site (Dalchork to Savalmore) remains open to recreational access during the operation of the development.

Reason: In the interests of pedestrian safety.

9. No development shall commence until a Biodiversity Net Gain Analysis has been submitted to and approved in writing by the Planning Authority in consultation with the Scottish Environmental Protection Agency. The analysis shall examine opportunities to amend the landscape design to allow for the enhancement or creation of wetland habitats as stated in the additional supporting information dated 30th May 2019. The approved landscape design shall thereafter be implemented in accordance with the timescales detailed therein.

Reason: To provide further detail on the opportunities for allow for enhance or creation of wetland habitats following an assessment of bioversity net gain.

10. Notwithstanding the details on plan ref LT061_Dalchork_086_1001 Rev 3, the ford crossing between the access road and the proposed pylon access shall be replaced with a suitably sized open arch culvert or span bridge. For the avoidance of doubt, the culvert or bridge shall be sized such that it is large enough to accommodate a 1 in 200 year flood event.

Reason: To ensure that all water crossings are free from flood risk and do not exacerbate flood risk elsewhere.

REASON FOR DECISION

The proposal accords with the provisions of the Development Plan and applicable supplementary guidance. There are no material considerations which would warrant refusal of the application.

TIME LIMIT FOR THE IMPLEMENTATION OF THIS PLANNING PERMISSION

In accordance with Section 58 of the Town and Country Planning (Scotland) Act 1997 (as amended), the development to which this planning permission relates must commence within THREE YEARS of the date of this decision notice. If development has not commenced within this period, then this planning permission shall lapse.

FOOTNOTE TO APPLICANT

Initiation and Completion Notices

The Town and Country Planning (Scotland) Act 1997 (as amended) requires all developers to submit notices to the Planning Authority prior to, and upon completion of, development. These are in addition to any other similar requirements (such as Building Warrant completion notices) and failure to comply represents a breach of planning control and may result in formal enforcement action.

1. The developer must submit a Notice of Initiation of Development in accordance with Section 27A of the Act to the Planning Authority prior to work commencing on site.
2. On completion of the development, the developer must submit a Notice of Completion in accordance with Section 27B of the Act to the Planning Authority.

Copies of the notices referred to are attached to this decision notice for your convenience.

Accordance with Approved Plans and Conditions

You are advised that development must progress in accordance with the plans approved under, and any conditions attached to, this permission. You must not deviate from this permission without consent from the Planning Authority (irrespective of any changes that may separately be requested at the Building Warrant stage or by any other Statutory Authority). Any pre-conditions (those requiring certain works, submissions etc. prior to commencement of development) must be fulfilled prior to work starting on site. Failure to adhere to this permission and meet the requirements of all conditions may invalidate your permission or result in formal enforcement action.

Road Construction Consent

In addition to the above conditions you should note that Road Construction Consent will be required for this work in accordance with Section 21 of the Roads Scotland Act 1984. The applicant should contact the Transport Planning Team to discuss the RCC application and should allow at least 3 months prior:

Transport Planning, Development and Infrastructure, HQ, Glenurquhart Road, Inverness, IV3 5NX Phone: 01463 702965 Email: transport.planning@highland.gov.uk to commencement of any works for processing such an application. Additional permission may be required from other parties regarding the works required to the drainage / minor watercourse in order to widen the road

Flood Risk

It is important to note that the granting of planning permission does not imply there is an unconditional absence of flood risk relating to (or emanating from) the application site. As per Scottish Planning Policy (paragraph 259), planning permission does not remove the liability position of developers or owners in relation to flood risk.

Scottish Water

You are advised that a supply and connection to Scottish Water infrastructure is dependent on sufficient spare capacity at the time of the application for connection to Scottish Water. The granting of planning permission does not guarantee a connection. Any enquiries with regards to sewerage connection and/or water supply should be directed to Scottish Water on 0845 601 8855.

Septic Tanks and Soakaways

Where a private foul drainage solution is proposed, you will require separate consent from the Scottish Environment Protection Agency (SEPA). Planning permission does not guarantee that approval will be given by SEPA and as such you are advised to contact them direct to discuss the matter (01349 862021).

Local Roads Authority Consent

In addition to planning permission, you may require one or more separate consents (such as road construction consent, dropped kerb consent, a road openings permit, occupation of the road permit etc.) from the Area Roads Team prior to work commencing. These consents may require additional work and/or introduce additional specifications and you are therefore advised to contact your local Area Roads office for further guidance at the earliest opportunity.

Failure to comply with access, parking and drainage infrastructure requirements may endanger road users, affect the safety and free-flow of traffic and is likely to result in enforcement action being taken against you under both the Town and Country Planning (Scotland) Act 1997 and the Roads (Scotland) Act 1984.

Further information on the Council's roads standards can be found at: <http://www.highland.gov.uk/yourenvironment/roadsandtransport>

Application forms and guidance notes for access-related consents can be downloaded from:

http://www.highland.gov.uk/info/20005/roads_and_pavements/101/permits_for_working_on_public_roads/2

Mud and Debris on Road

Please note that it is an offence under Section 95 of the Roads (Scotland) Act 1984 to allow mud or any other material to be deposited, and thereafter remain, on a public road from any vehicle or development site. You must, therefore, put in place a strategy for dealing with any material deposited on the public road network and maintain this until development is complete.

Construction Hours and Noise-Generating Activities: You are advised that construction work associated with the approved development (incl. the loading/unloading of delivery vehicles, plant or other machinery), for which noise is audible at the boundary of the application site, should not normally take place outwith the hours of 08:00 and 19:00 Monday to Friday, 08:00 and 13:00 on Saturdays or at any time on a Sunday or Bank Holiday in Scotland, as prescribed in Schedule 1 of the Banking and Financial Dealings Act 1971 (as amended).

Work falling outwith these hours which gives rise to amenity concerns, or noise at any time which exceeds acceptable levels, may result in the service of a notice under Section 60 of the Control of Pollution Act 1974 (as amended). Breaching a Section 60 notice constitutes an offence and is likely to result in court action.

If you wish formal consent to work at specific times or on specific days, you may apply to the Council's Environmental Health Officer under Section 61 of the 1974 Act. Any such application should be submitted after you have obtained your Building Warrant, if required, and will be considered on its merits. Any decision taken will reflect the nature of the development, the site's location and the proximity of noise sensitive premises. Please contact env.health@highland.gov.uk for more information.

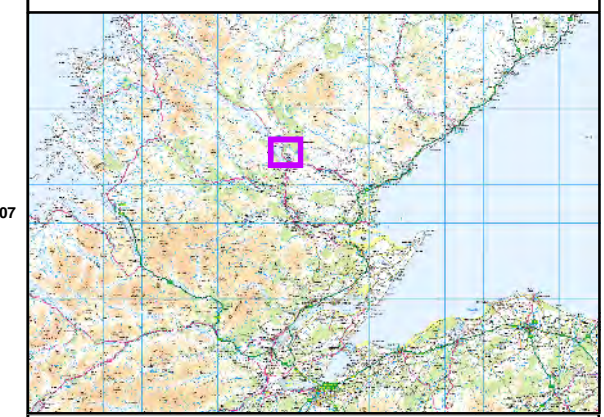
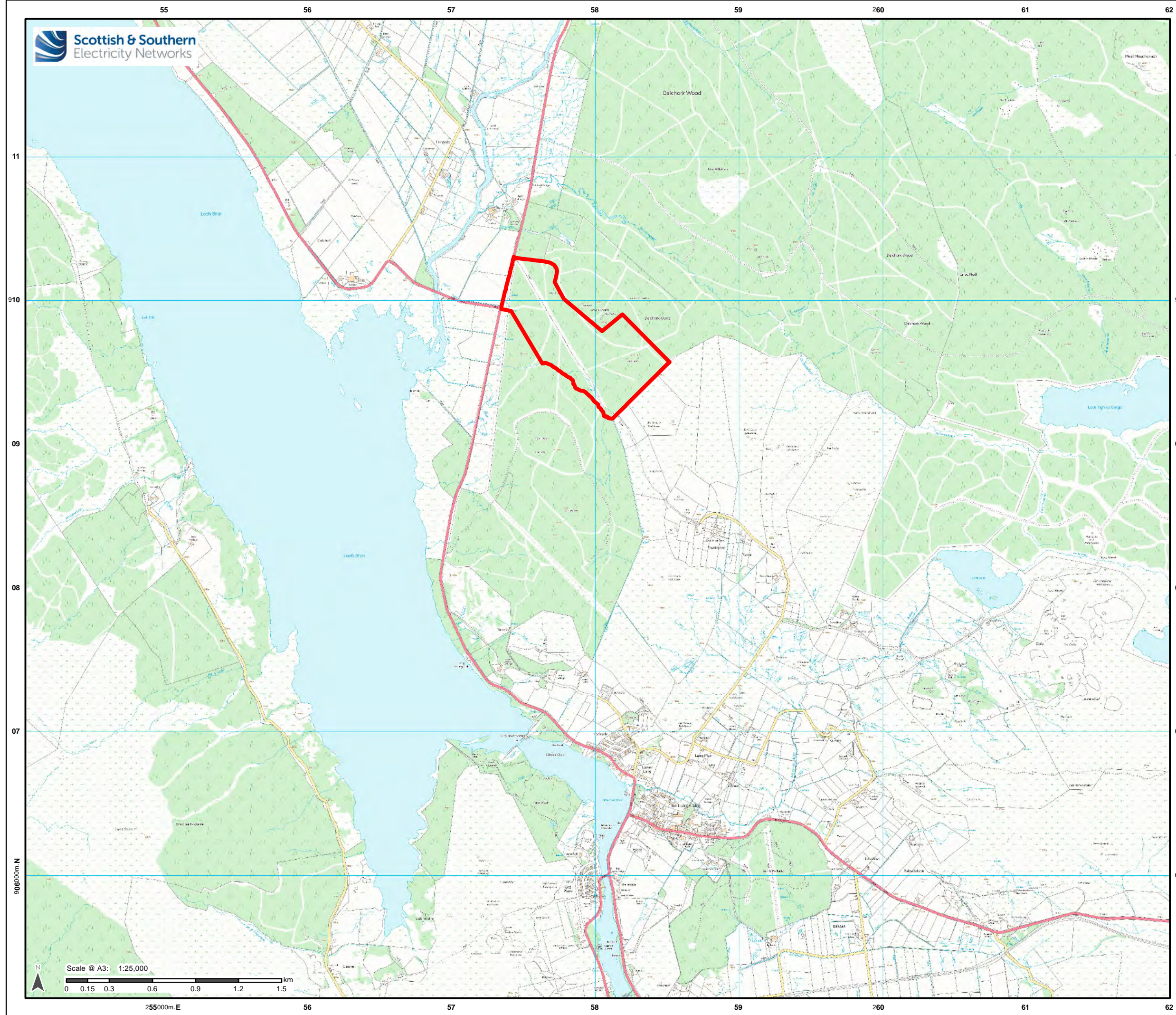
Protected Species – Halting of Work

You are advised that work on site must stop immediately, and Scottish Natural Heritage must be contacted, if evidence of any protected species or nesting/breeding sites, not previously detected during the course of the application and provided for in this permission, are found on site. For the avoidance of doubt, it is an offence to deliberately or recklessly kill, injure or disturb protected species or to damage or destroy the breeding site of a protected species. These sites are protected even if the animal is not there at the time of discovery. Further information regarding protected species and developer responsibilities is available from SNH: www.snh.gov.uk/protecting-scotlands-nature/protected-species

Designation: Acting Head of Development Management – Highland
Author: Gillian Pearson
Background Papers: Documents referred to in report and in case file.
Relevant Plans: Plan 1 - Location Plan
Plan 2 - Site Layout Plan
Plan 3 - Elevations
Plan 4 - North Elevations
Plan 5 - Floor Plan
Plan 6 - Electrical Layout
Plan 7 - Access Road and Road Widening
Plan 8 - Platform Earthworks

Legend

 Redline Planning Boundary



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Project No: LT000061
Project: Lairg to Loch Buidhe 132kV Reinforcement

Title: Proposed Dalchork Substation
Redline Planning Boundary

Drawn by: KJR Date: 28/01/2019

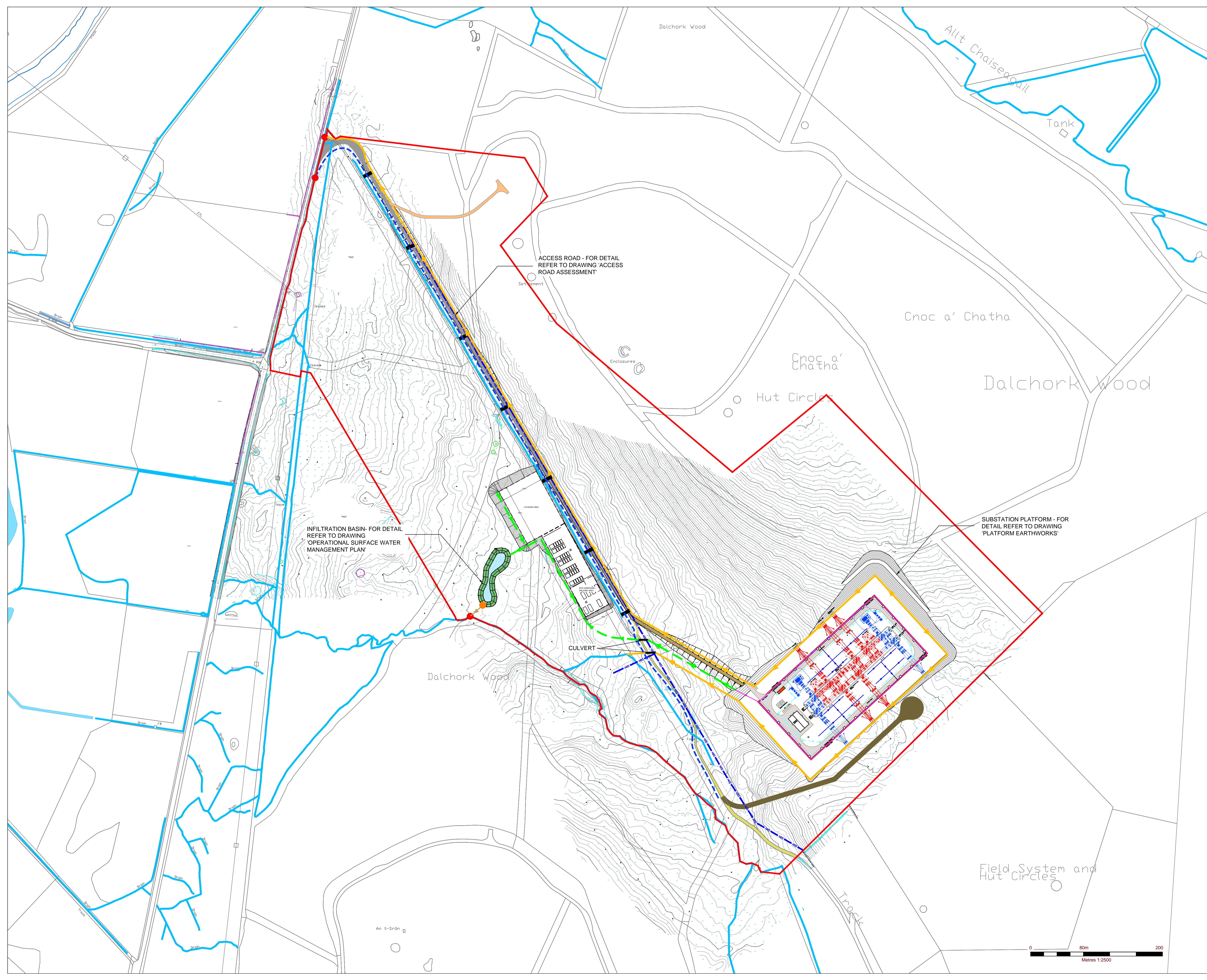
Drawing: LT000061_ENV_022_Dalchork_Redline

List of all relevant drawings or documents that directly relate to the current revision of the drawing

Document Reference:

Legend

- SITE BOUNDARY
- NEW SCOPE OF WORK (EQUIPMENT)
- FUTURE SCOPE OF WORK (EQUIPMENT)
- PROPOSED NEW SITE ACCESS ROAD (AREA: 0.37ha)
- PROPOSED ACCESS ROAD UPGRADE (AREA 0.68ha)
- PROPOSED PYLON ACCESS (AREA 0.31ha)
- PLATFORM ROAD
- EXISTING ROAD
- PROPOSED FORESTRY ROAD
- INTERCEPTION DRAIN
- CULVERT
- PLATFORM PERIMETER FILTER DRAIN
- PLATFORM CARRIER DRAINPIPE
- TRANSFORMER SUMP DRAINAGE / MANHOLE
- CONTROLLED SURFACE WATER DISCHARGE FROM ATTENUATION POND
- EXISTING SURFACE WATER FEATURE
- NEW SURFACE WATER DISCHARGE
- FLOW CONTROL HYDROBRAKE OPTIMUM[®] CHAMBER
- EXISTING WATER MAINS
- PROPOSED CONVEYANCE DRAINS
- EXISTING / UPGRADED DOWNGRADIENT TRACKSIDE DRAIN
- FUEL / OIL INTERCEPTOR



Rev:	3	Description:	
Date:	03/18	Updated drainage parallel to access track	
Drawn:	IG		
Checked:	RL		
Approved:	DPK		

Revisions:

Suppliers Drawing Number:	Sheet No:	Revision No:
2	0	3

SLR 4/5 LOCHSIDE VIEW
EDINBURGH PARK
EDINBURGH
EH12 9DH
T: 0131 335 6830
F: 0131 335 6831
www.slrc consulting.com

Scottish and Southern Energy
Power Distribution

SSE Inverlmond House, 200 Dunkeld Road
Perth, PH1 3AQ, UK www.sse.com

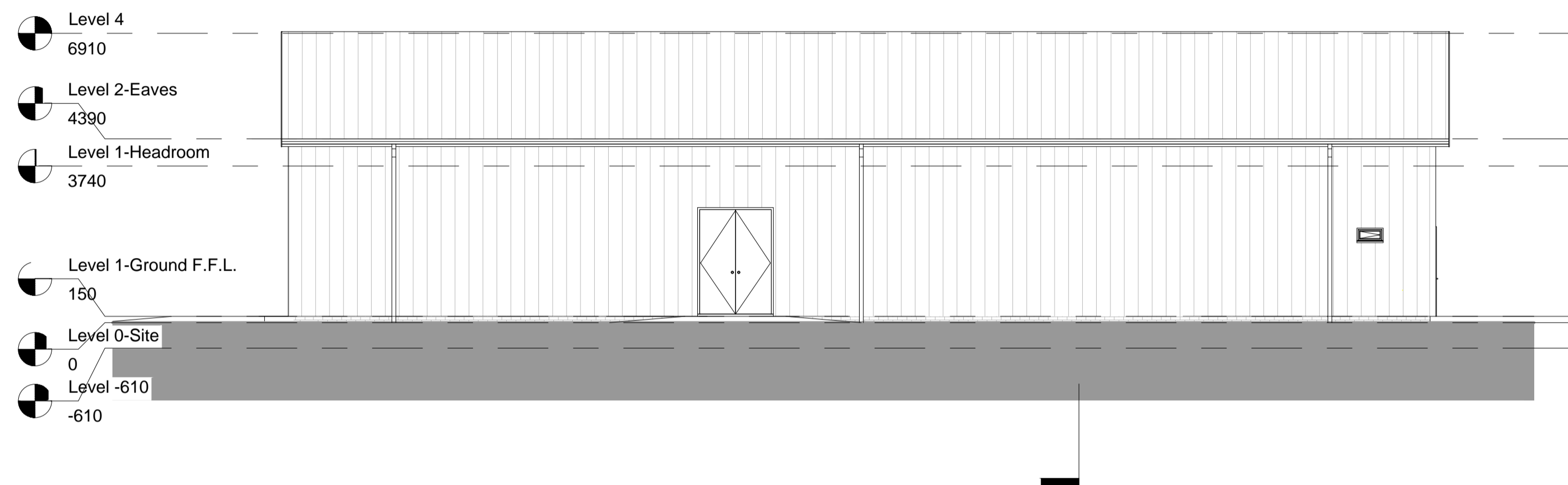
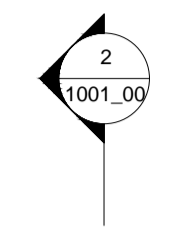
Project:
LT061 Dalchork Substation

Project Number: 405.00660.00024 **Location:** Lairg

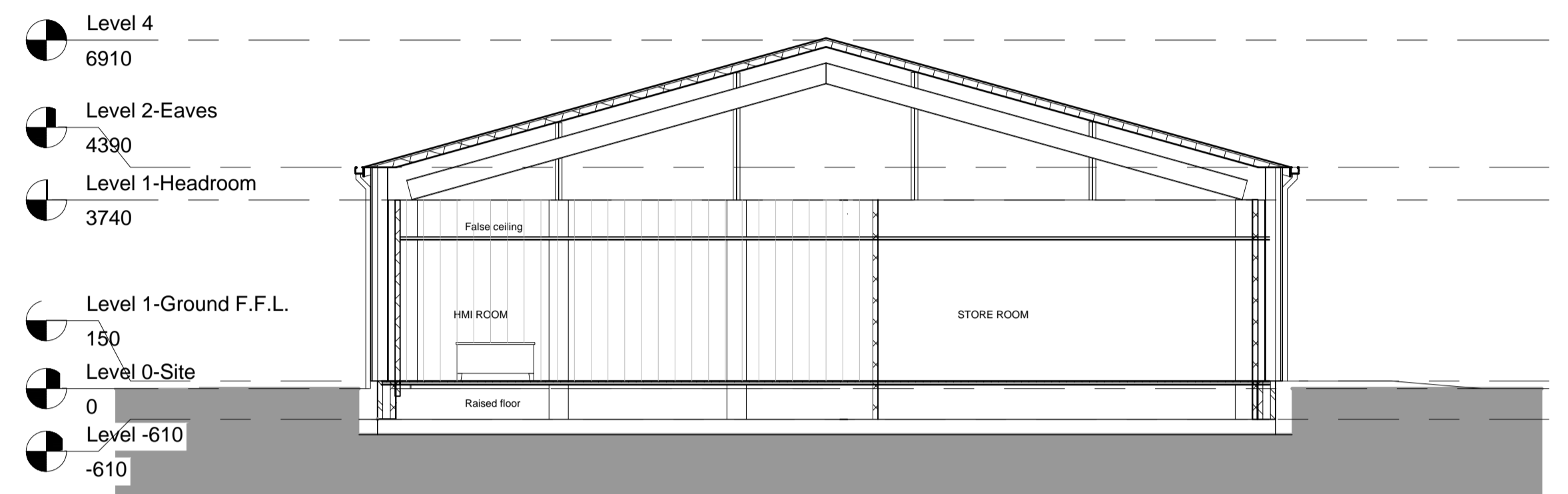
Title:
General Site Layout

Drawing Status: For Information	Drawn: IG
Scale: 1:2500 @ A1	Checked: RL
Date: March 2018	Approved: DPK
SSE Drawing Number: LT061_Dalchork_0806_1001	Sheet No: 0 Revision No: 3

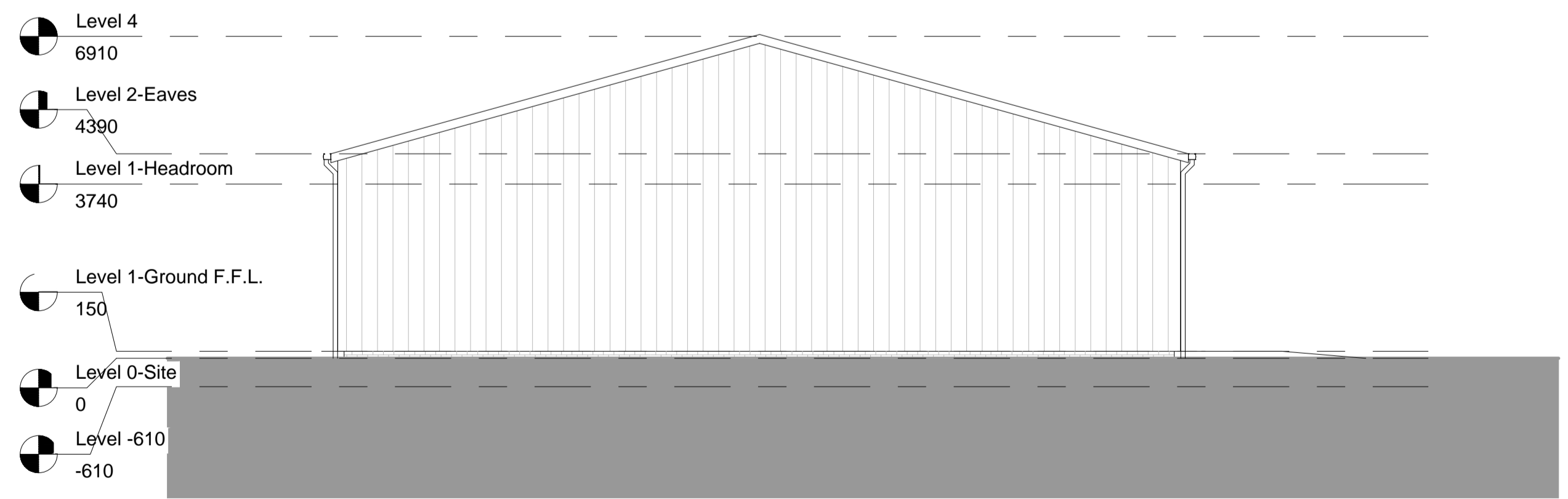
- Notes:
1. Building colour shall be RAL-6003, Olive Green
 2. External finish shall be profiled steel cladding



SOUTH WEST ELEVATION



SECTION A - A



SOUTH EAST ELEVATION

Rev:	5	Description:
Date:	01/18	Building updated
Drawn:	PS	
Checked:	RL	
Approved:	DPK	

Revisions:

TREENWOOD HOUSE
ROWDEN LANE
BRADFORD-ON-AVON
WILTS, BA15 2AU
T: 01225 309400
F: 01225 309401
www.slrconsulting.com

Suppliers Drawing Number: Sheet No: Revision No:

SSE Inveralmond House, 200 Dunkeld Road
Perth, PH1 3AQ, UK
www.sse.com

Project:
PROPOSED DALCHORK SUB STATION

Project Number: 405.00660.00024 Location:

Title:
Control Building - South East & South West Elevations, Section AA

Drawing Status: Drawn: PS

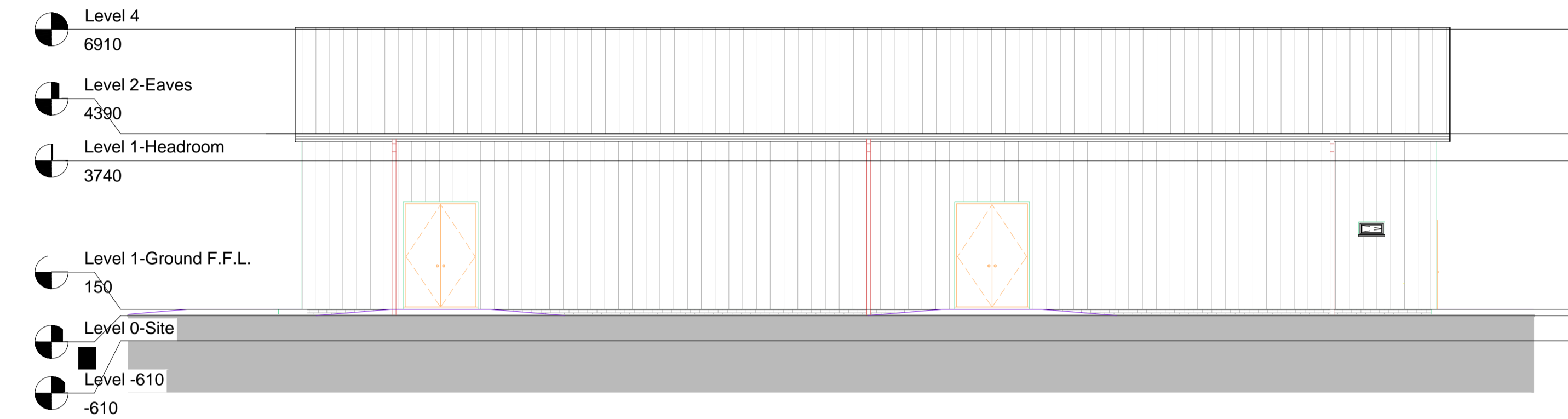
Scale: 1 : 100@A1 Checked: DG

Date: January 2018 Approved:

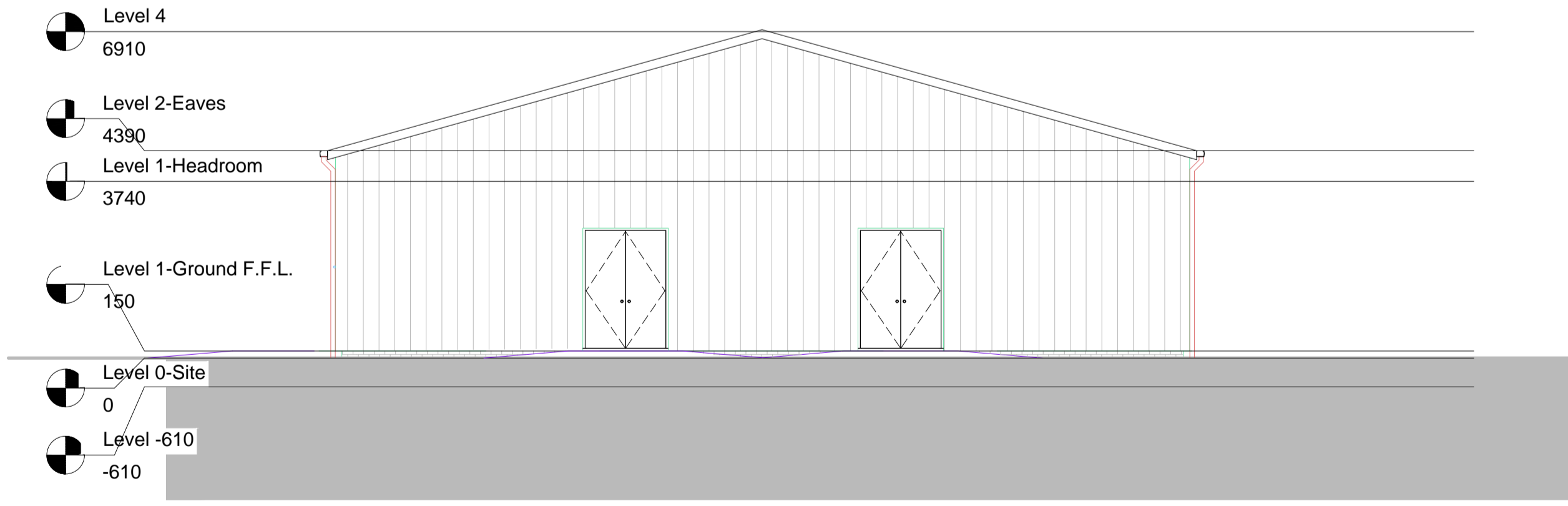
SSE Drawing Number: LT061_Dalchork_0808_1001_00 Sheet No: Revision No: 05

Document Reference:

- Notes:
 1. Building colour shall be RAL-6003, Olive Green
 2. External finish shall be profiled steel cladding



NORTH EAST ELEVATION



NORTH WEST ELEVATION

Rev:	05	Description:
Date:	01/18	Building updated
Drawn:	PS	
Checked:	RL	
Approved:	DPK	

Revisions:



TREENWOOD HOUSE
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Suppliers Drawing Number: Sheet No: Revision No:



Power Distribution

SSE Inveralmond House, 200 Dunkeld Road
 Perth, PH1 3AQ, UK www.sse.com

Project:
 PROPOSED DALCHORK SUB STATION

Project Number: 405.00660.00024 Location:

Title:
 North West & North East Elevations

Drawing Status: Drawn: PS

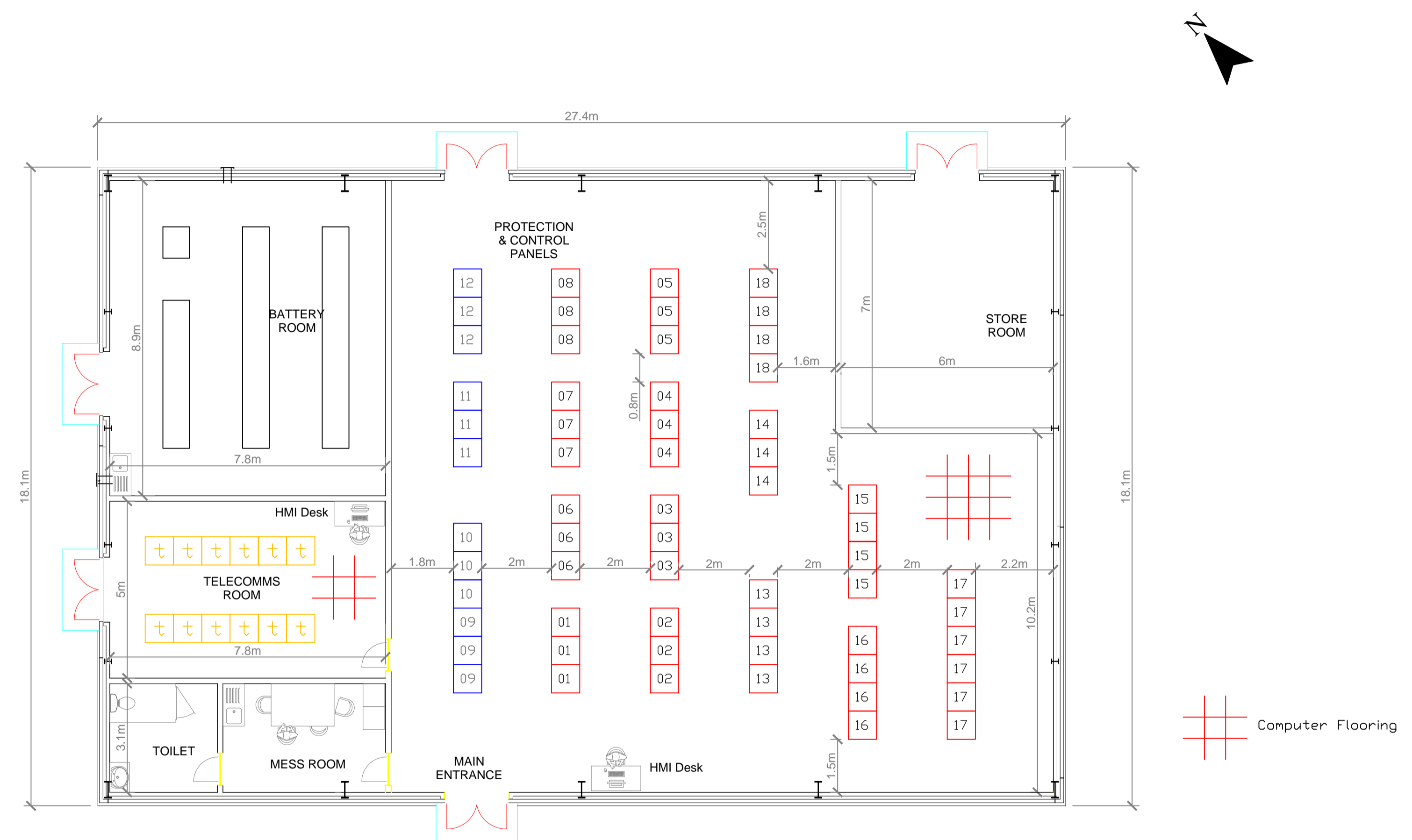
Scale: 1 : 100 @A1 Checked: RL

Date: January 2018 Approved: DPK

SSE Drawing Number: LT061_Dalchork_0808_1002_00 Sheet No: Revision No: 05

Document Reference:

- Notes:
 1. Building colour shall be RAL-6003, Olive Green
 2. External finish shall be profiled steel cladding



Rev:	05	Description:
Date:	01/18	Building updated
Drawn:	PS	
Checked:	RL	
Approved:	DPK	

Revisions:



TREENWOOD HOUSE
 ROWDEN LANE
 BRADFORD-ON-AVON
 WILTS. BA15 2AU
 T: 01225 309400
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 www.slrcsulting.com

Suppliers Drawing Number: Sheet No: Revision No:



Power Distribution

SSE Inveralmond House, 200 Dunkeld Road
 Perth, PH1 3AQ, UK www.sse.com

Project:
 PROPOSED DALCHORK SUB STATION

Project Number: 405.00660.00024 **Location:**

Title:
 Ground Floor Plan

Drawing Status: **Drawn:** PS

Scale: 1 : 100@A1 **Checked:** RL

Date: January 2017 **Approved:** DPK

SSE Drawing Number: LT061_Dalchork_0808_1000_00 **Sheet No: Revision No:** 05

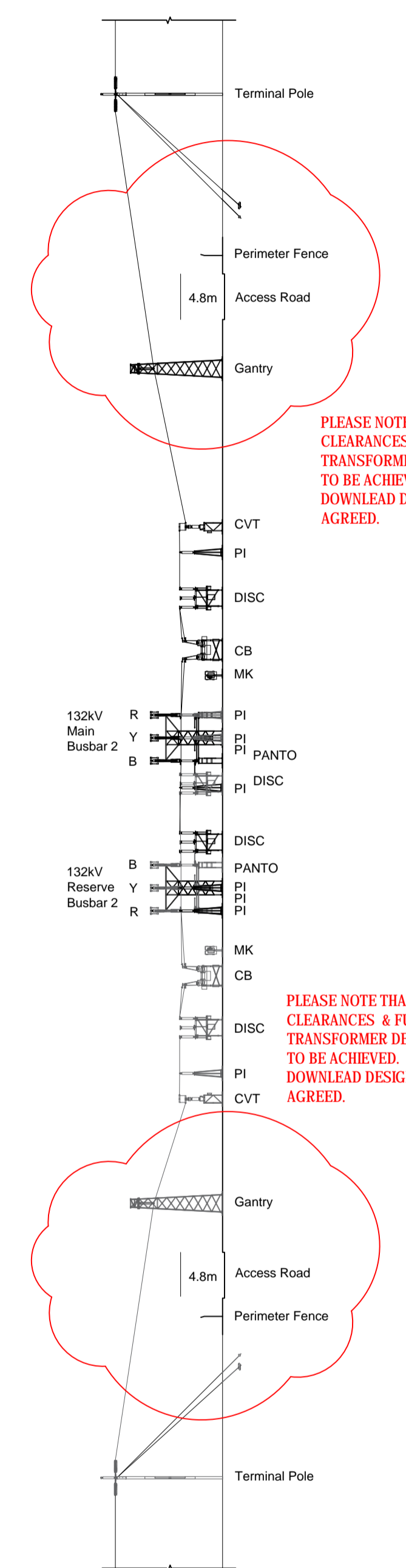
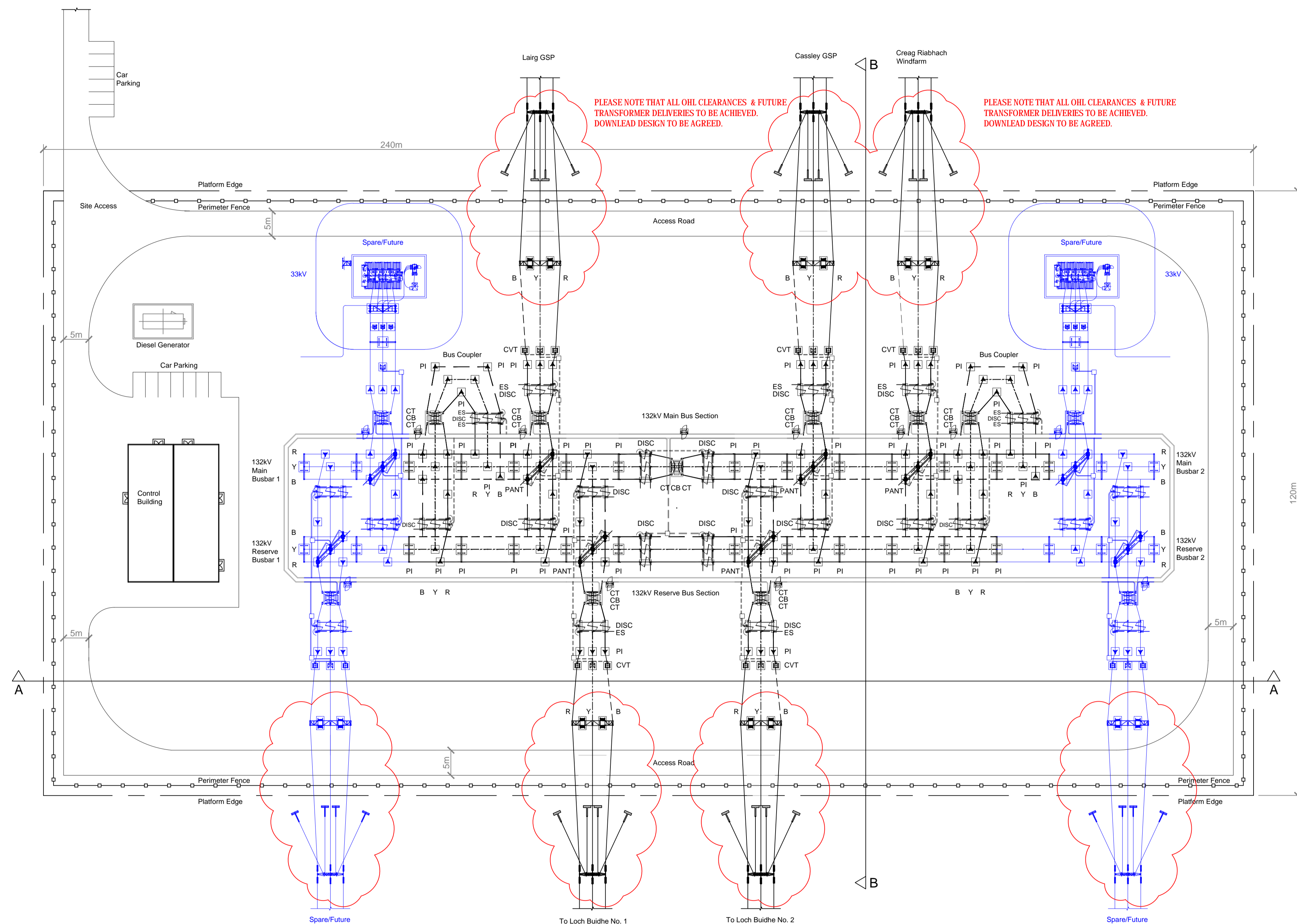
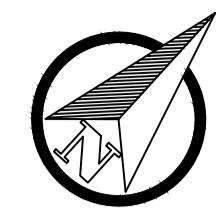
NOTES:-

1. THIS LAYOUT SHOWS ALL CIRCUIT REQUIREMENTS FOR LT61 AND ALL FUTURE DEVELOPMENT CIRCUITS AS SHOWN IN BLUE REFLECTING DRD DOCUMENT NUMBER RI-052-BC-2 REV4 DATED 24.8.17
2. PROPOSED SITE FOR DISCUSSION PURPOSES ONLY.
3. REFER TO SSE ELECTRICAL LAYOUT DRAWING LT61_DALK_1104_0003.
4. NOTE THAT SEPARATE STORE BUILDING MAY BE REQUIRED AND LOCATED ON SITE LOCATION & SIZE T.B.C
5. LAYOUT MAY BE REQUIRED TO BE AMENDED DEPENDENT ON FINAL SITE SELECTION.
6. ELECTRICAL LAYOUT SHOWN IS PURELY FOR DISCUSSION PURPOSES ONLY.
7. ALL EQUIPMENT SHOWN TO BE FINALISED AND CONFIRMED BY ENGINEER/DESIGN TEAM AND UNTIL DONE SO ALL ASPECTS OF THE SHOWN DESIGN ARE SUBJECT TO CHANGE.
8. ALL EQUIPMENT SHOWN TO BE CONSIDERED NEW.
9. AIS PLANT INFORMATION TAKEN FROM STANDARD SSE FRAMEWORK LAYOUTS.
10. DFCDCC98 G4D D05H CFA 5F95 1 & 2 S5a
11. ALL DIMENSIONS GIVEN IN MILLIMETRES (mm) U.N.O.
12. SECURITY DESIGN TO BE AGREED AND SHOWN.

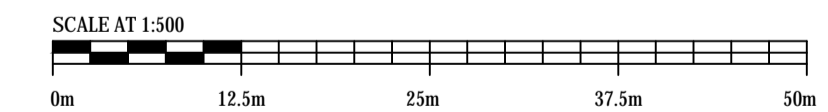
LEGEND:-

- ES EARTH SWITCH
- DISC DISCONNECTOR (RCP)
- PANTO PANTOGRAPH
- CB CIRCUIT BREAKER
- CT CURRENT TRANSFORMER
- CVT CAPACITIVE VOLTAGE TRANSFORMER
- SA SURGE ARRESTER
- PI POST INSULATOR
- MK MARSHALLING KIOSK

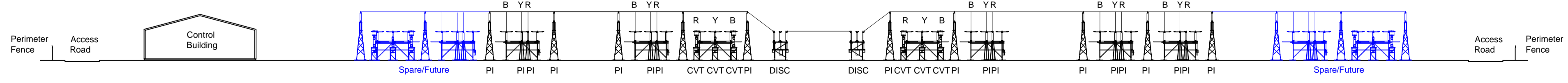
- NEW EQUIPMENT
- FUTURE EQUIPMENT
- EXISTING EQUIPMENT



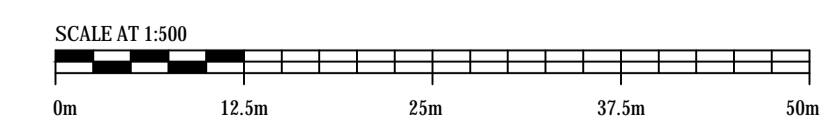
SECTION B-B
SCALE 1:500
PLEASE NOTE PROPOSED SITE LEVELS TBC



DALCHORK SITE LAYOUT
SCALE 1:500



SECTION A-A
SCALE 1:500
PLEASE NOTE PROPOSED SITE LEVELS TBC



Rev:	Drawn:	Approved:	Description:
01	PF	DJM	ISSUED FOR INFORMATION
	Checked:	Date:	
	AL	02-02-18	

SSE Inverlaid House, 200 Dunfold Road Perth, PH1 3AQ, UK www.sse.com	
Project:	LAIRG TO LOCH BUIDHE OHL
Project Number:	LT000061 Location: LAIRG
Title:	SECTIONS THROUGH PROPOSED 132kV DALCHORK SUBSTATION
Drawing Status:	For Information
Scale:	1:500 @ A1
Date:	05.01.18
Drawing Number:	LT61_DALK_1104_0005
Sheet No:	00
Revision No:	01

List of all relevant drawings or documents that directly relate to the current revision of the drawing

Document Reference:

All works are to be in accordance with the Specification for Highway Works, issued by the Department of Transport as Volume 1 of the Manual of Contract Documents for Highway Works, and any published Highland Council Specification for roadworks.

A836 ROAD WIDENING CONSTRUCTION & ACCESS JUNCTION CONSTRUCTION

- SURFACE**
- 45mm Surface course HRA 30/14 f surf to BS EN 13108-4 and PD6691 40-60 pen
- BINDER**
- 65mm Binder Course HRA 50/14 reg/bin to BS EN 13108-4 and PD6691 40-60 pen
- BASE**
- 200mm Base HRA 60/20 bin/base to BS EN 13108-4 and PD6691 40-60 pen
- ROAD FOUNDATION**
- see below for details

HAUL ROAD CONSTRUCTION

- The haul road shall be constructed of compacted granular material in layers
- SURFACE**
- 20mm thickness fine to dust granular material, rolled and compacted into pavement surface
- PAVEMENT**
- 240mm Sub-Base Type 1 to SHW Clause 803
- ROAD FOUNDATION**
- see below for details
 - Geogrid at base

ROAD FOUNDATION

- The road foundation shall be made up as either:
- a layer of capping material below a layer of sub-base material, or
 - a single layer of sub-base material
- The thickness and make up of the road foundation will depend upon the strength of the subgrade measured through CBR Values
- The contractor shall be responsible for undertaking CBR testing at the base of excavation.
- The contractor shall submit the results to the Engineer and the Highland Council to confirm the make up of the road foundation.

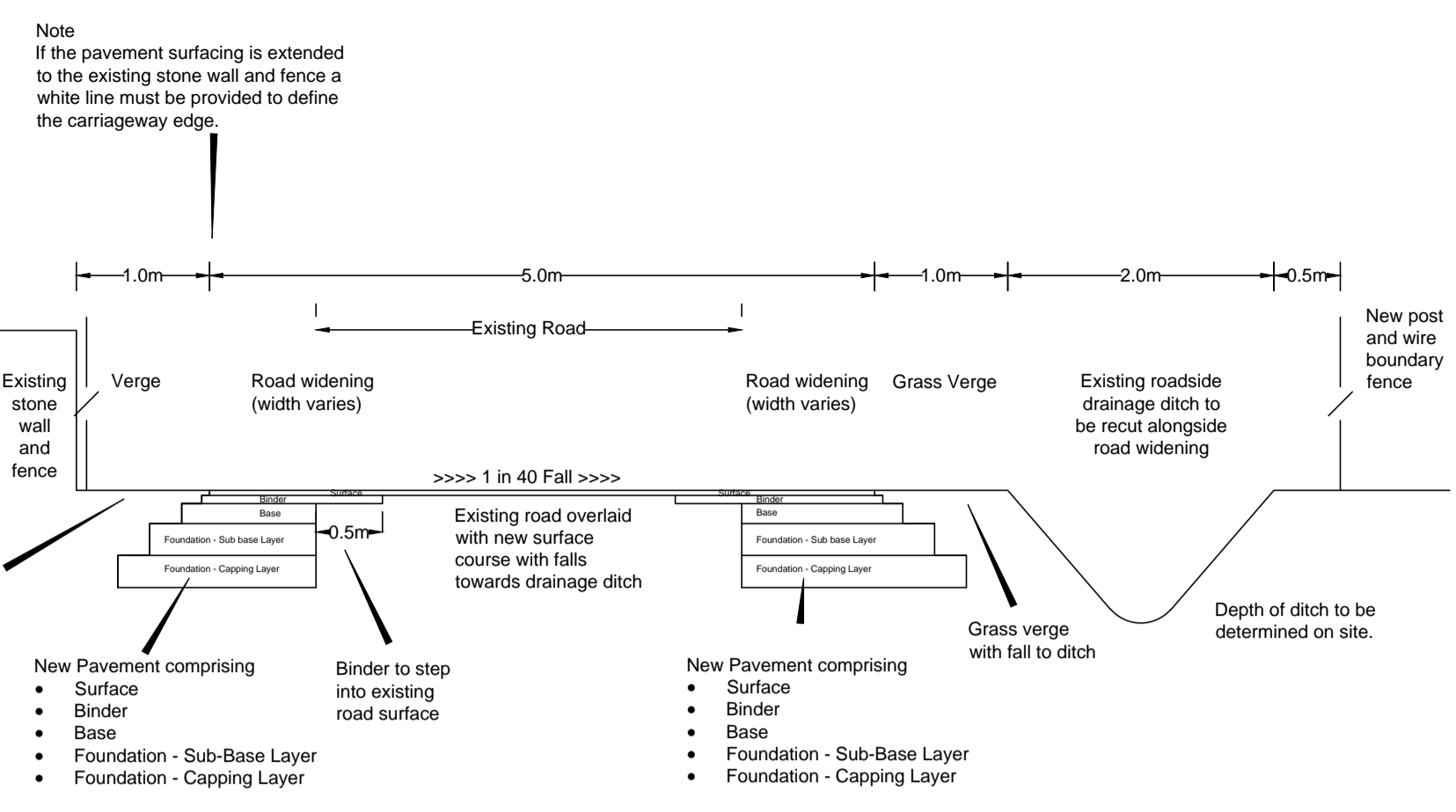
- The materials used in a capping layer shall be
- Sub-Base Type 1 to SHW Clause 803
 - 6F1 / 6F2 Capping to SHW clause 613
 - Geotextile Separation layer

The thickness of the foundation shall be determined from one of the following tables:

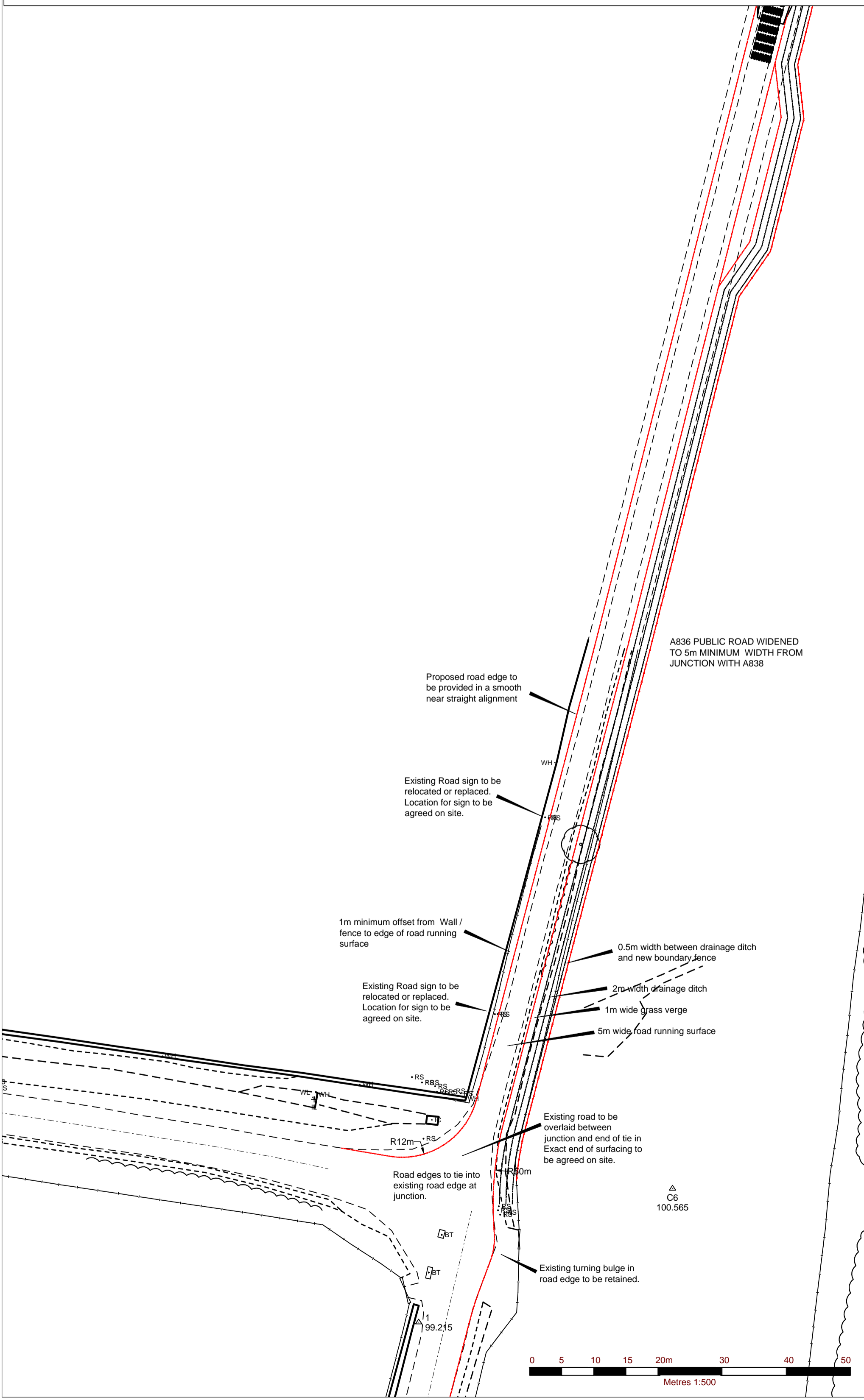
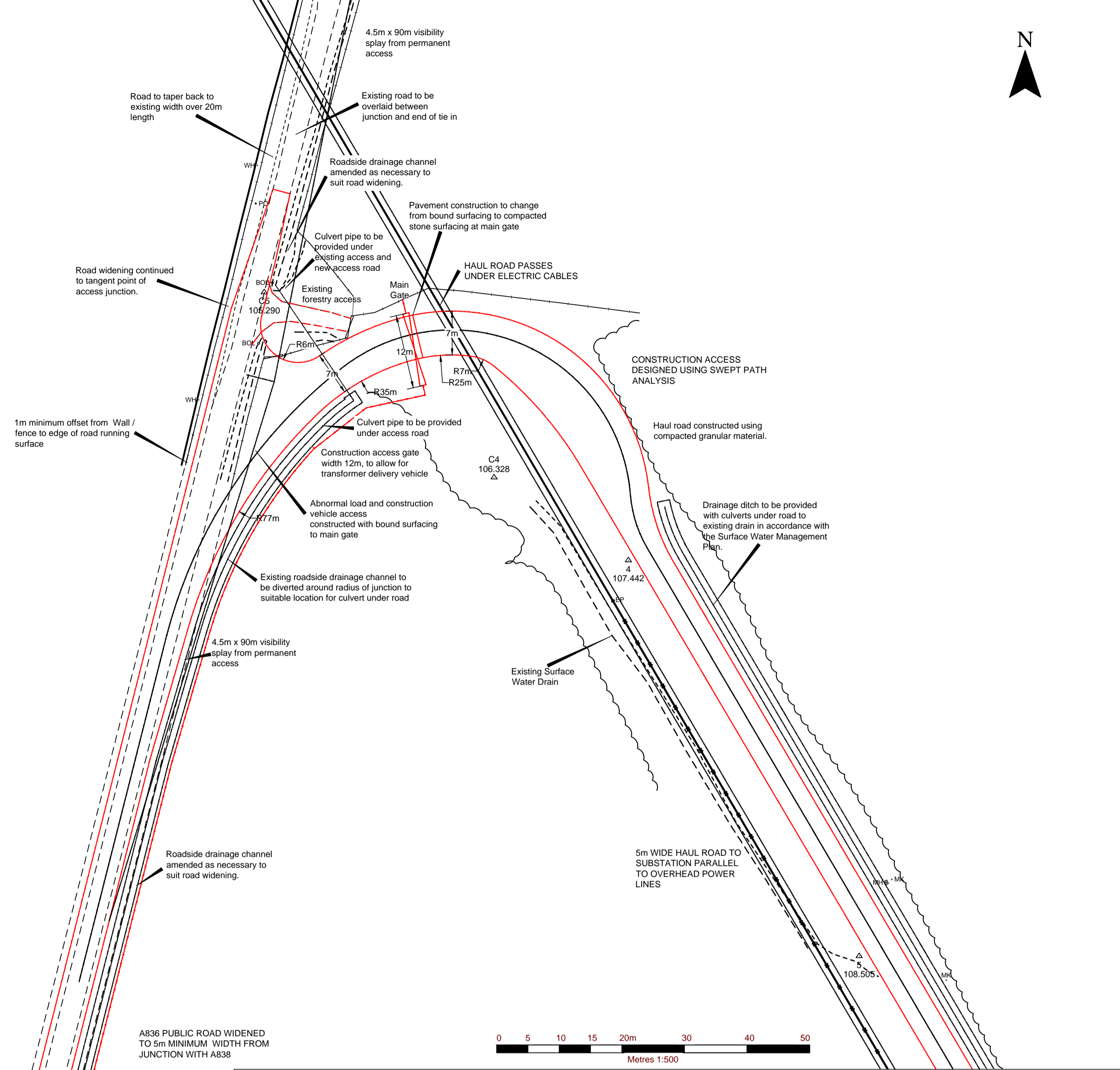
Sub-base plus Capping Foundation		
Measured CBR value	Sub-Base thickness	Capping thickness
CBR 0 - 2.4%	240mm	600mm
CBR 2.5% - 3%	240mm	250mm
CBR 3.1% - 5%	240mm	240mm
CBR 5.1% - 15%	240mm	210mm
Over 15%	240mm	Not Required

Sub-Base only Foundation	
Measured CBR value	Sub-base only thickness
CBR 0 - 2.4%	Not Permitted
CBR 2.5% - 3%	450mm
CBR 3.1% - 5%	420mm
CBR 5.1% - 15%	320mm
Over 15%	240mm

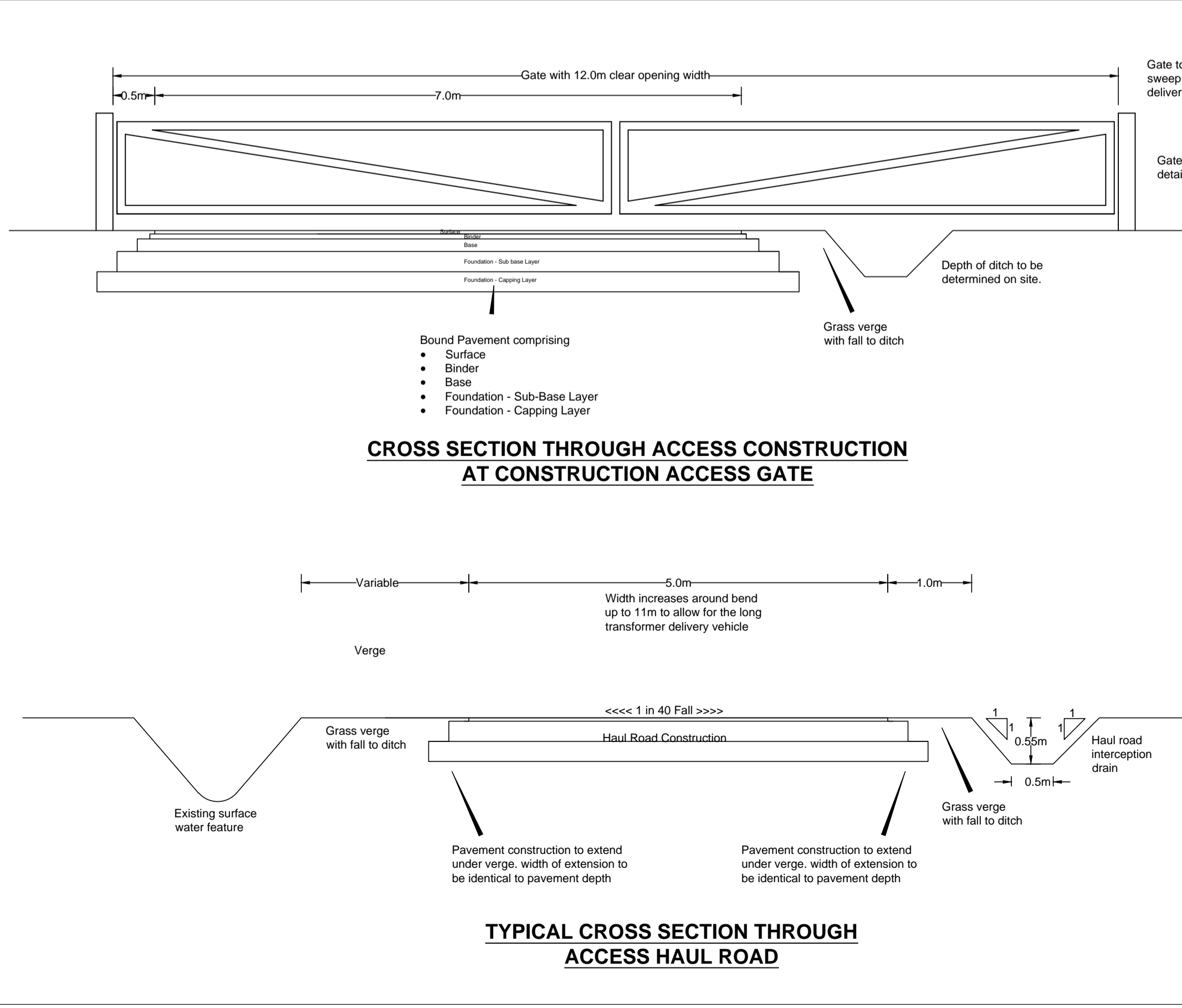
The constructed thickness of the total road pavement (including foundation) is to be agreed with the Highland Council Supervising Agent on site and shall not be less than 450mm in total, with the thickness of the sub-base increased as necessary to achieve the minimum thickness.



TYPICAL CROSS SECTION THROUGH A836 ROAD WIDENING



ROAD WIDENING FOR PASSING PLACE
8m MINIMUM
20m LENGTH
8m TAPER ON EACH END
TO BE LOCATED CENTRALLY BETWEEN JUNCTIONS



Rev.	Description:
1	

SLR

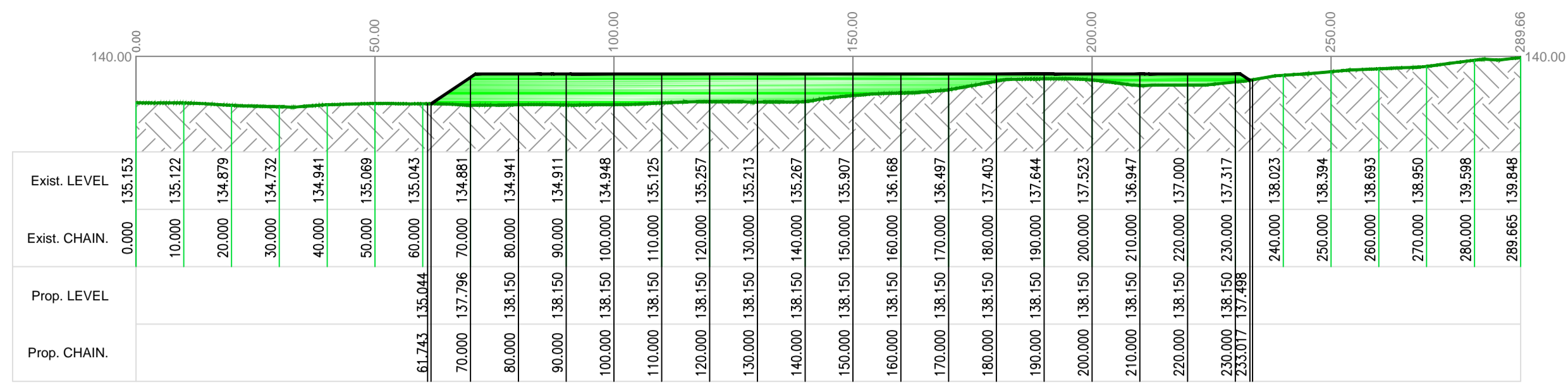
TREENWOOD HOUSE
ROWDEN LANE
BRADFORD-ON-AVON
WILTS. BA15 2AU
T: 01225 309401
F: 01225 309401
www.slrcoupling.com

Suppliers Drawing Number: 405.00660.00024.H200-01	Sheet No: 1	Revision No: R1
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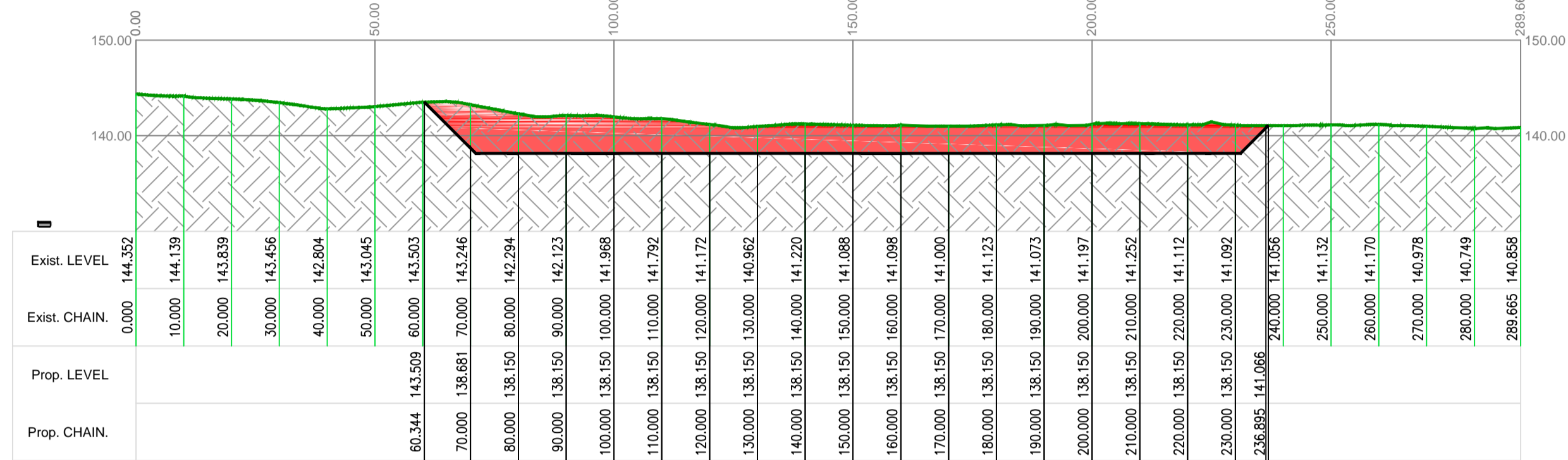
Scottish and Southern Energy
Power Distribution

SSE Inverlorn House, 200 Dunkeld Road
Perth, PH1 3AQ, UK
www.sse.com

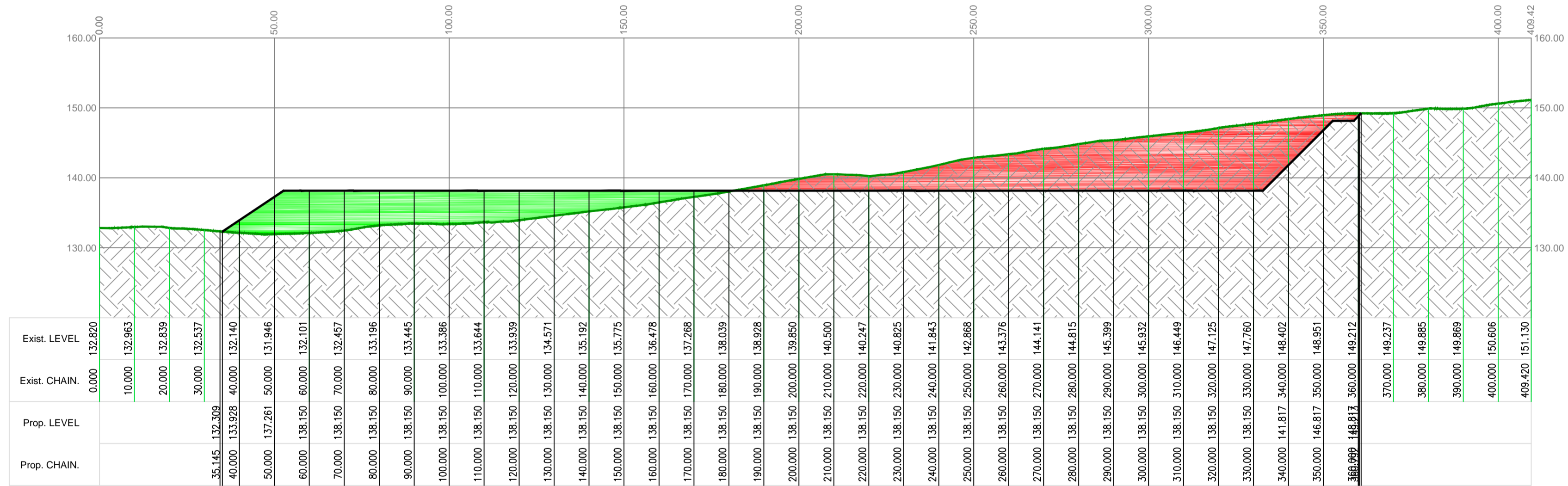
Project: PROPOSED DALCHORK SUBSTATION	
Project Number: LT061_Dalchork	Location:
Title: SITE ACCESS, ROAD WIDENING AND JUNCTION DETAILS	
Drawing Status: For Information	Drawn: DPP
Scale: AS SHOWN @ A1	Checked: DPK
Date: JANUARY 2018	Approved: DPK
SSE Drawing Number: LT061_Dalchork_0804_1100 01	Sheet No: Revision No: 01



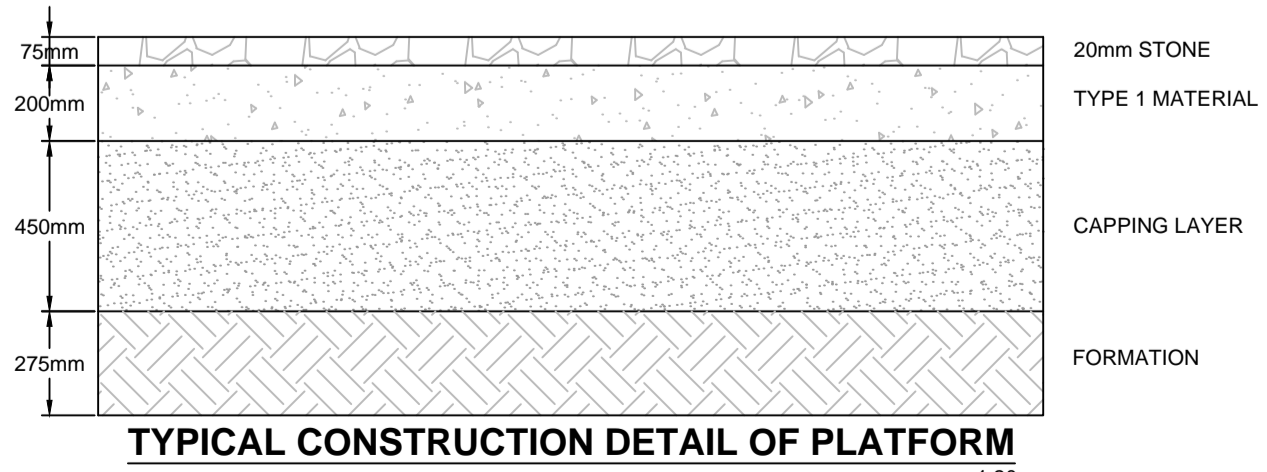
SECTION A-A'
1:1000H
1:500V



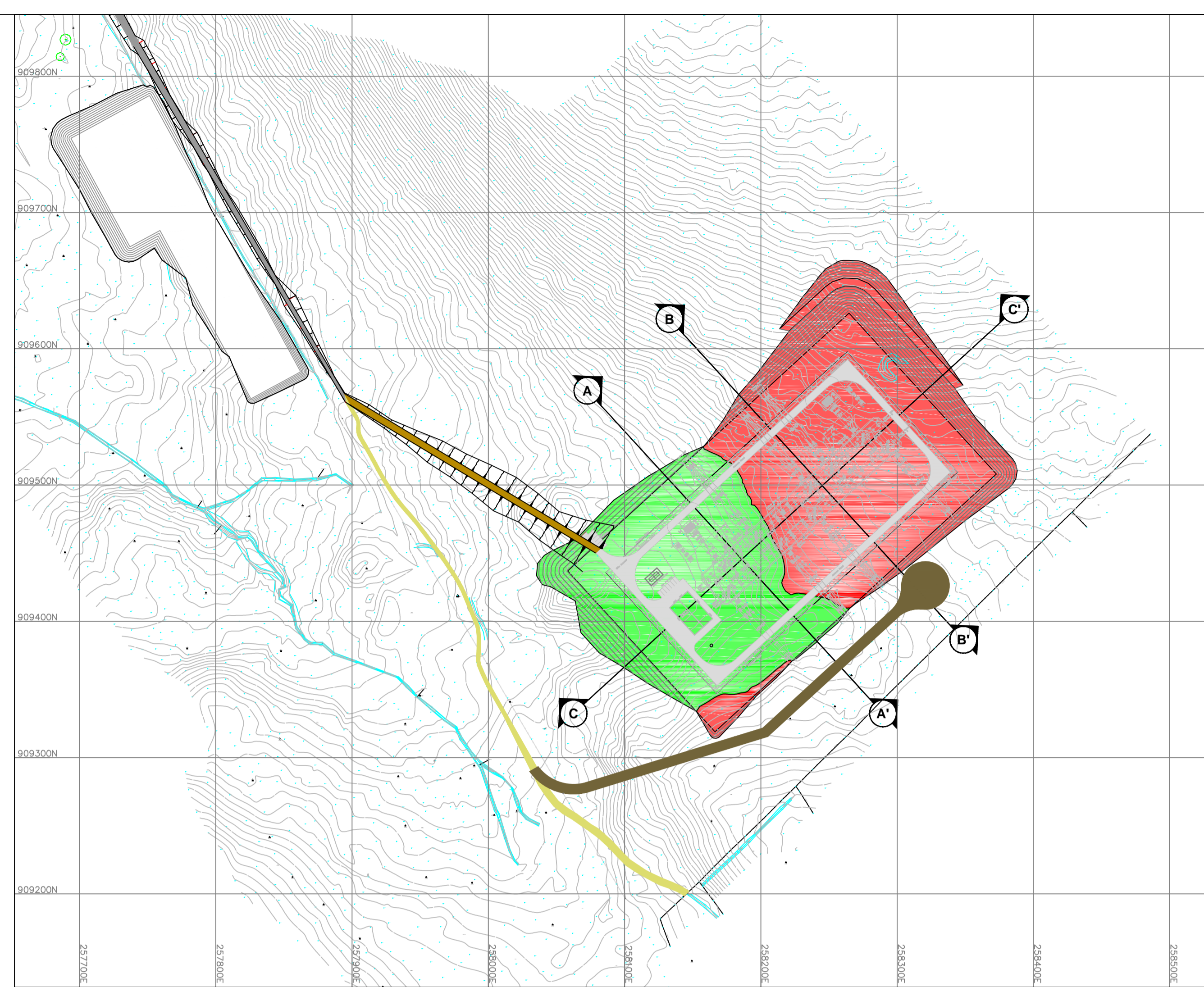
SECTION B-B'
1:1000H
1:500V



SECTION C-C'
1:1000H
1:500V



TYPICAL CONSTRUCTION DETAIL OF PLATFORM
1:20



PLATFORM CUT/FILL PLAN
SCALE 1:2500

EXCAVATE	VOLUME (m3)
TOPSOIL, PEAT AND OTHER NON-ENGINEERING MATERIAL	29,007
SAND & GRAVEL WEATHERED ROCK	16,047
ROCK	117,973
TOTAL EXCAVATION	163,027
FILL	VOLUME (m3)
FILL TO FORMATION	72,298
FILL TO TOP OF PLATFORM (PLUS 20m BUFFER)	
20mm STONE	2,214
TYPE 1	5,905
CAPPING	13,286
FORMATION	8,119
TOTAL FILL	101,822
BALANCE	61,205 CUT
BALANCE LESS TOPSOIL/PEAT (I.E. SUITABLE)	32,198
BALANCE OF UNSUITABLE MATERIAL	29,007

PLATFORM (NGR 258216E 909473N)	
PLATFORM DIMENSIONS	280m length, 160m width
ELEVATION OF PLATFORM	138.15m AOD
AREA OF LAND IMPACTED*	58,015m ²
Details of Extraction	Combination of drilling and blasting
Overburden type and depth	Limited soil cover ~0.50m, with no glacial cover.
Extent of Cut/Fill to level the site	An approximate volume of 118,000m ³ of rock between elevations of 138.15m AOD to 162.7m AOD
Bedrock Composition	Glacial till over rock

List of all relevant drawings or documents that directly relate to the current revision of the drawing

Document Reference:

1. No topo survey available. Existing ground level modelled as 10-15m below from DTM data to account for mature forest canopy.

Legend

- PLATFORM SEARCH AREA
- CONTOURS
- AREAS OF CUT
- AREAS OF FILL
- PROPOSED NEW SITE ACCESS ROAD (AREA: 0.37ha)
- PROPOSED ACCESS ROAD UPGRADE (AREA 0.68ha)
- PROPOSED PYLON ACCESS (AREA 0.31ha)
- PLATFORM ROAD
- EXISTING ROAD

Rev:	02	Description:
Date:	01/18	Updated Site Boundary and general amendments to access roads and drainage.
Drawn:	IG	
Checked:	RL	
Approved:	DPK	

Revisions:

4/5 LOCHSIDE VIEW
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EDINBURGH
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www.slrconsulting.com

Suppliers Drawing Number:	2	Sheet No:	0	Revision No:	02
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Power Distribution

SSE Inverlorn House, 200 Dunkeld Road
Perth, PH1 3AQ, UK
www.sse.com

Project:	LT61 Dalchork Substation
Project Number:	405.00660.00024
Location:	Lairg
Title:	Platform Earthworks

Drawing Status:	For Information	Drawn:	IG
Scale:	As shown@A1	Checked:	RL
Date:	January 2018	Approved:	DK
SSE Drawing Number:	LT061_Dalchork_0806_1001	Sheet No:	00
		Revision No:	02