

Agenda Item	6.2
Report No	PLN/041/26

HIGHLAND COUNCIL

Committee: North Planning Applications Committee

Date: 5 August 2026

Report Title: 23/05242/FUL: The Cromarty Hydrogen Project
Land 2480M East of Beinn Tharsuinn Windfarm, Edderton

Report By: Area Planning Manager - North

Purpose/Executive Summary

Description: Erection of a hydrogen production and storage facility (Class 5 - General Industry), road haul tanker loading facility, underground electricity connection, import substation, access road upgrades, site offices, parking, gatehouse, fencing, temporary construction and laydown area, and ancillary infrastructure.

Ward: 04 - East Sutherland and Edderton

Development category: Major Development

Reason referred to Committee: Major 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.

Recommendation

Members are asked to agree the recommendation to **GRANT** the application as set out in section 11 of the report.

1. PROPOSED DEVELOPMENT

1.1 Full planning permission is sought under the Town and Country Planning (Scotland) Act 1997, for the construction and operation of a hydrogen production and storage facility (Class 5 - General Industry). The proposed development is classed as a major development under The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009 whereby the Council are the determining authority. The development comprises:

- A 15MW Hydrogen production and storage facility, this includes a:
 - o hydrogen purification plant;
 - o hydrogen and oxygen processing plant;
 - o compression and cooling equipment;
 - o low and high pressure storage vessels; and
 - o hydrogen flare stack – (approximately 14.15m in height);
- HGV hydrogen filling facilities;
- Power import infrastructure: including underground cabling, substation, transformer(s) and switchgear;
- Water importation from borehole water supply, buffer storage and water demineralisation package;
- A firewater tank;
- Waste water treatment infrastructure: including effluent treatment plant, holding tanks, attenuation pond, and pipeline to discharge location;
- Chemical storage and dosing equipment (if alkaline electrolyser technology is selected);
- Site office, control room, administration and welfare facilities, gatehouse, internal access roads, parking (including EV charging) and hardstanding and perimeter security fencing;
- Improvements to the existing private access track from the public road;
- Temporary construction and laydown area; and
- Ancillary infrastructure, including site drainage, stand by power generation, emergency equipment, CCTV and external lighting.

Technology, Siting and Design Overview

1.2 As outlined in Government's recently published Hydrogen Guidance (2026), hydrogen is a highly versatile, simple and abundant element. Like fossil fuels it can be combusted to create heat in industrial and residential settings. It has multiple applications, such as powering transport (including in fuel cells) or as a feedstock in chemical processes and production of sustainable fuels, and it can be stored and used to generate electricity (hydrogen-to-power). The production of hydrogen involves the splitting of water (H₂O) molecules into its constituent parts of hydrogen (the product) and oxygen (the waste).

1.3 As detailed in the government's guidance (2026), the core components of production include the:

- Electrolyser – electrolyzers produce hydrogen through separating hydrogen and oxygen molecules of water with an electrical current;
- Power Source – direct cable link to renewable energy (on or off-site), in many cases including a transformer / substation on site;

- Water Supply and Treatment – specialist plant to purify (de-mineralise / de-ionise) water prior to utilisation in electrolysis, as well as means of treating and disposing (or reusing) effluent waste water from the production process; and
 - Balance of Plant – Additional plant technology for cooling of the electrolysis process, and separation, compression, and storage of hydrogen prior to utilisation or distribution from site.
- 1.4 Once produced, hydrogen can be distributed through a variety of means, including via compressed tube-trailer (road / rail) shipping (as ammonia, liquefied hydrogen), and via pipeline. Unlike fossil fuels, it does not produce CO₂ emissions when combusted. It therefore has the potential to play a significant role in the de-carbonisation of a wide range of sectors and activities.
- 1.5 The use of hydrogen is not new, with the UK producing nearly two thousand metric tonnes of grey hydrogen per day, which is the equivalent of 23 Terawatt-hours (TWh) per year. The Government's Hydrogen Guidance (2026) acknowledges this and outlines that hydrogen has been produced and utilised at a major scale in Scotland's chemical and industrial sectors for many years and its application and characteristics are well understood.
- 1.6 The production of hydrogen today is almost entirely as "grey hydrogen", which is produced by splitting natural gas and therefore fossil-fuel intensive. The applicant however refers to this project as "green hydrogen", as renewable energy sources are used to power the electrolyser which splits the water molecules. In doing so the production of green hydrogen through electrolysis is classed as zero carbon. Whilst this is a new mode of production, the governments guidance (2026) identifies that it is still based upon well-established technologies and production processes.
- 1.7 So, whilst the technology is proven, there is demand for its production to be scaled up to reduce production costs. As currently, green hydrogen stands at 2-3 times the cost of grey hydrogen. The government anticipates that in the short-medium term many hydrogen projects may be relatively small-scale as operators look to establish pilot, demonstrator, and 'scale-up' facilities with potential to grow over time. These may be co-located with existing renewable energy projects such as constrained onshore wind and look to utilise related land and infrastructure. The proposed development aligns with this with the application site being located adjacent to the operational Beinn Tharsuinn Wind Farm.
- 1.8 This guidance also notes that the overall environmental impacts of green hydrogen production are typically relatively low. Through established measures of planning control and environmental mitigation, production should be capable of being safely and sustainably accommodated in a range of settings across Scotland. Nonetheless, it remains important that any emissions (e.g. noise, odour), discharges (e.g. wastewater), and other activity associated with hydrogen production (e.g. vehicle movements), are clearly detailed and assessed as part of proposals.
- 1.9 For this project it was originally anticipated that the 'green' energy source would come from a direct behind-the-meter arrangement with the nearby Beinn

Tharsuinn Wind Farm. However, Officers queried how the operator would ensure the continuity of a green energy supply in times of low wind or when the permission for Beinn Tharsuinn Wind Farm (03/00784/FULRC) expires in 2032. Whilst repowering of the wind farm maybe advanced there is no formal planning application upon which to base a current assessment. In response, the applicant has confirmed that the power connection model has changed since the application was first submitted.

- 1.10 An underground cable will still link the site to the existing Beinn Tharsuinn Wind Farm substation, which is located c.2.36km to the north west. Whilst the option for a future private-wire power purchase agreement with Beinn Tharsuinn Wind Farm is not precluded, as detailed in the latest Planning Supporting Statement (May 2026), the developments green hydrogen credentials will be secured through multiple routes:
- Grid-connected operation: the plant will connect to the distribution network, enabling it to source renewable electricity through the grid when direct wind generation is unavailable;
 - Additionality and matching: the ‘green’ credentials of grid-sourced electricity will be governed by subsidy scheme requirements, which mandate proof – at half-hourly intervals – that the plant is powered by a qualifying renewable energy source; and
 - Sleeving arrangements: the project team has identified potential sleeve energy options, including from wind farm sites in other locations, to underpin green credentials where required.
- 1.11 Although the sites green power connection model has evolved, the applicant argues that the infrastructure/ environmental efficiency basis for the site’s selection remains. The applicant states that by positioning the electrolyser within the same high-demand, high-generation zone, the proposal reduces the additional grid network infrastructure that would otherwise be needed to bring generation to demand. The applicant argues that this limits environmental effects and avoids unnecessary duplication of infrastructure.
- 1.12 In addition to a power supply, a hydrogen plant must ensure an abundant suitable water supply. As part of the amended details, four onsite borehole (BH) locations have been identified. A pipeline is proposed to connect the boreholes to the proposed hydrogen plant, which would be buried in the road verge of the private access road (BH1, 2 and 3) or direct to the facility in respect of BH6.
- 1.13 A licence for the groundwater abstraction to serve the operational requirements of the development has been granted by SEPA under the Controlled Activities Regulations (CAR licence). Whilst the CAR License regime has since been superseded by the Environmental Authorisations (Scotland) Regulations (EASR), SEPA have confirmed that the consented CAR licence automatically became an EASR permit on 1 November 2025. The EASR permit carries the same conditions as the CAR licence.
- 1.14 Access to the proposed site will be from the existing private Beinn Tharsuinn Wind Farm access track which runs from the B9176 (Struie Road). Sections of the c.2.7km track are likely to require localised resurfacing works, but no

changes to the width of the track. During construction, it is anticipated traffic would originate from the A9 to the south of the B9176 Struie Road. In terms of operation, the hydrogen will be transported offsite by low carbon (such as biodiesel) tube trailers. Operational traffic would approach and depart from the site by travelling south along the B9176 towards the A9 and then continuing the journey east or west along the A9. It is not anticipated that abnormal loads would be required to support the delivery of site infrastructure.

- 1.15 In the operational phase, the applicant outlines that the plant would be capable of operating 24 hours a day and 7 days a week. However, the actual operational routine for the proposed development would be determined by a range of factors, such as demand, available storage capacity, and the contractor's transportation schedules.
- 1.16 The applicant requests a micro-siting allowance of 100m within the extent of the application site. This is to allow flexibility to take into account localised ground conditions and other environmental constraints that may be identified pre-construction. SEPA consider that a more restrictive micro-siting allowance should ensure that there is no micro-siting on deeper peat, or within a 50m buffer for the Allt na Meine or the Habitat Management Area Beinn Thursuinn without further detailed peat probing, if relevant. Any micro-siting would need to be managed and agreed with an Environmental Clerk of Works (ECoW). As the design has been revised through Front End Engineering Design (FEED) process. Officers do not consider that an additional micro-siting allowance is required or justified in this instance.

Pre-Application Engagement and Supporting Information

- 1.17 The applicant utilised the Highland Council's Pre-Application Advice Service for Major Developments (22/02245/PREMAJ). The pre-application advice issued was supportive of the development in principle and highlighted the potential for a limited range of adverse environmental effects. It was requested that:
- The potential benefits of this new source of fuel are clearly explained within any forthcoming submission;
 - There should be a clear rationale for the site's location, how the proposals benefit consumers, the intended market area served by the hydrogen production and how this will serve Highland or businesses in the area;
 - Clear explanation of how this development is regulated through the different consenting regimes;
 - Particular attention should be paid to the water environment, ensuring that any effluent arising from the facility is appropriately managed, and that ecological and water quality interests of the nearby abstraction areas will be safeguarded;
 - Although relatively well contained by the landscape to the north and west, there is scope to further mitigate effects through careful siting, design and materials. Lighting should be minimised;
 - Impacts on habitat/ peatland should be minimised, and peatland restoration should be undertaken near the site;

- Careful construction traffic management is required. During the operational period the impacts of HGV movements were of concern, and mitigation measures would be required; and
 - Water abstraction should be brought forward as part of one application.
- 1.18 The proposed development meets the threshold for screening under Schedule 2 of The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. A screening opinion was sought from the Council (22/06227/SCRE) in which it was determined in February 2023 that an Environmental Impact Assessment (EIA) was not required. However, it was noted that the water abstraction and discharge proposals did not form part of this request. As noted in the pre-application the applicant was requested to include this within any subsequent application.
- 1.19 Despite advice from Officers the applicant did not include the water abstraction and wastewater locations within the original application. As detailed below the application has since been amended to include this information and it has been agreed that the proposed development should be re-screened for EIA. As part of the revised supporting information the applicant included an EIA Screening checklist and was informed by the findings of the applicants Environmental Appraisal. Officers determined that an Environmental Impact Assessment (EIA) was not required, with the main change to the proposal being groundwater borehole abstraction which has been permitted by SEPA.
- 1.20 The application is supported by an Environmental Appraisal Report (EA) which considers the potential impacts that the proposed development could have on the local environment. This includes chapters on: Landscape and Visual effects; Ecology; Hydrology, Hydrogeology, Geology and Soils; and Noise; and is supported by several technical appendices, which includes an outline of the operational processes (Technical Appendix 1.1) and a Schedule of Mitigation (Technical Appendix 1.2). In addition, the application is supported by a Planning Statement, a Pre-application Consultation (PAC) Report, a Design and Access Statement (DAS) and a Transport Statement. Several of these documents have been updated since the application was originally submitted.
- 1.21 The applicant has also undertaken statutory pre-application consultation. A Proposal of Application Notice (PAN) was submitted to Highland Council in October 2022. The PAN (22/04169/PAN) provided an outline of the application details, dates of public events, publicity arrangements, and confirmation of the site location. This included a series of pre-consultation events which were held in September 2022 at Avern Leisure Centre and Edderton Village Hall and November 2022 at Ardross Community Hall. The applicant also raised awareness of these events by contacting local ward members, MSP, and through maildrops, consultation posters, press release, website and newspaper adverts. Further details are provided within the application's Pre-application Consultation (PAC) Report.
- 1.22 The following variations have been made to the application during the course of the application's determination:

- Front End Engineering Design (FEED) has resulted in changes to the siting and layout. A comparison of the two layouts is included on Figure 3a and Figure 3b of the Updated Design and Access Statement;
- Inclusion of four borehole water supply locations (BH1, 2, 3 and 6) (Fig. 5 in Appendix D); and
- A wastewater discharge option (SP2) has been identified along the Allt na Meine (Figure 5 in Appendix D), within the application boundary.

The following additional information has been submitted during the course of the application to address Officers, consultee and third party comments:

- Updated EIA screening checklist;
- Justification statement;
- Response to consultee document;
- Proposed list of conditions;
- LVIA technical note – including cumulative assessment and lighting;
- Updated visualisations, Zone of Theoretical Visibility (ZTV) drawings and 3D visuals;
- Earthworks, surfacing and land grading plan; and
- Traffic technical note – including updates the cumulative traffic scenarios.

2. SITE DESCRIPTION

- 2.1 The 11.9ha application site comprises open moorland. It is located 12km north of Alness and to the east of the operational Beinn Tharsuinn Wind Farm. In the immediate surroundings there are steep slopes, including Cnoc Muigh-bhlàraidh to the north, valleys and numerous watercourses. There is a habitat management area (HMA) associated with Beinn Tharsuinn Wind Farm adjoining the main site area and the access track. Northwest of the main site area there is a restored borrow pit that was in use during the construction of the Beinn Tharsuinn. There are two overhead lines that run largely parallel with the B9176 and cross the proposed access track.
- 2.2 The main site area lies between 325m and 355m AOD, sloping generally down to the southeast. The application site is relatively contained by the elevated landform to the north, west and south and conifer plantation to the south and southeast. The wider area comprises upland moorland, broad rounded hills and forestry plantation, with limited development except for windfarms. The nearest properties are approximately 2km to the east at Aultnamain.
- 2.3 The site is not located within any landscape designations. The nearest is the Dornoch Firth National Scenic Area (NSA) is located 3.5km north. The site lies within Landscape Character Type (LCT) 330 Rounded Hills and Moorland Slopes - Ross and Cromarty. The key characteristics of this LCT are:
- Broad, rounded hills and upland moorlands with smooth, gentle slopes down to broad straths, creating an undulating skyline.
 - Occurs in a large tract which weaves around and between the adjoining Rounded Mountain Massif and Rugged Mountain Massif – Ross and Cromarty and unifies the mountain groups.

- Large areas of uniform moorland vegetation with occasional surface detail of rivers, lochs, riparian woodland, woodland patches, and regenerating trees.
- Large coniferous forests on accessible lower slopes.
- Broad straths with natural, meandering rivers and occasionally highlighted by green, unenclosed, improved pastures and riparian trees.
- Occasional major trunk roads curve through the lowest major straths, with very little associated service development.
- Small groups of mainly traditional buildings around road junctions and at rail stations.
- Man-made structures of pylons, wind farms and reservoirs occur as occasional features within a large scale landscape.
- Many archaeological features on lower ground from prehistoric, medieval and later periods.
- Large, remote interior areas of vast scale with wildness characteristics

2.4 There is no statutory natural heritage designations located within the application site or within 2km. The following are within 5km:

Site Name	Separation Distance (km)	Qualifying Interests
Struie Channels Site of Special Scientific Interest (SSSI)	1.7km, south east	Quaternary geology and geomorphology
Craigroy Burn SSSI	2.6km, north east	Upland birch woodland
Morangie Forest Special Protection Area (SPA)	4.0km from the main site and 3.36km from the access track, south east	Breeding capercaillie
Kinrive –Strathrory SSSI	4.23km, south east	Native pinewood Springs (including flushes)
Easter Fearn SSSI	4.5km, north	Upland birch woodland

2.5 There are no sites designated for features linked to hydrology or water quality within 2km of the proposed development and it is not within a surface water Drinking Water Protection Area. Up to 5km downstream of the proposed development, there is one designated wetland site: the Kinrive-Strathrory SSSI which is located to the south-east of the proposed development, 4.2km downstream of the application boundary. However, there is no hydraulic linkage between this and the site, so is not considered further.

- 2.6 There are no heritage designations or assets within the site boundary. There are 11 non-designated heritage assets within 1km of the site, three listed buildings and six Scheduled Monuments within 5km of the site:
- LB7847 Strathrory Bridge (Category C);
 - LB1809 Bridge over Easter Fearn Burn (Category B);
 - LB1815 Meikle Daan (Category B) – late medieval/early post medieval farmhouse;
 - SM4962 Leachonich, broch 100m SE of;
 - SM4963 Rhamore, settlement and field system 500m NW of;
 - SM476 Bravard, cairn two hut circles and field system 100m N of;
 - SM2390 Leachonich, two chambered cairns 145m N and 265m NNW of;
 - SM5495 Casandamff, settlement and farmstead; and
 - SM4730 Upper Bogrow, settlement and field system.
- 2.7 There are no Core Paths, public footpaths or cycle ways within the application site. The existing Beinn Tharsuinn Wind Farm access track does however provide wider recreational access.

3. PLANNING HISTORY

3.1	01.02.2023	22/06227/SCRE: Erection and operation of electrolyser plant and associated infrastructure	EIA not required
3.2	19.10.2022	22/04169/PAN: Erection and operation of a hydrogen electrolyser plant and associated infrastructure	Reported to NPAC
3.3	10.07.2022	22/02245/PREMAJ: Erection and operation of a hydrogen electrolyser plant with a capacity of up to 50MW, associated buildings, vertical pressure vessels and associated infrastructure.	Pre-application advice issued

4. PUBLIC PARTICIPATION

- 4.1 Advertised: Ross-shire Journal – Schedule 3/ Unknown Neighbour

Date Advertised: 05.12.2025/ 19.01.2024/ 29.05.2026

Representation deadline: 12.06.2026

Representations: 10 objectors from 9 households.

- 4.2 Material considerations raised are summarised as follows:

- Principle of Development / Site location – non-conformity with the Development Plan; should be located on a brown field site adjacent to the A9;
- Road traffic - concerns relating to the use and safety of the B9176 (Struie Road) during both the construction and operational phases of the development; in particular:

- o citing the existing road to be of a poor standard, regarding its surface, geometry, and the structural integrity of two bridges (Dalneich and Strathrory);
- o its capacity, highlight that the road is heavily used by HGVs;
- o accident history and the perceived danger of transporting hydrogen;
- o suitability for intended use during adverse winter conditions, citing frequent road closures;
- o poor driving behaviour and users not adhering to the speed limits (by virtue of design);
- o no commitment for traffic to avoid peak times on the route (e.g. school transport, local community events, and transport rallies);
- o developer funded road improvements are needed;
- Recreational access – adverse for recreational users of the road network;
- Residential amenity - adverse impacts from traffic (construction and operational), adverse health impacts and noise (e.g. fans/ compressors), and risk posed by on site accidents and wildfire owing to water abstraction;
- Lighting - effect on dark skies and residential properties;
- Water environment - water supply to serve the development not being included in the application; impacts upon private water supplies, water tables, water supply to Balblair distillery, and discharging waste water into local watercourses;
- Ecology – loss of local wildlife and risk posed by on site accidents, water abstraction and wildfire;
- Peat impacts;
- Landscape and visual – adverse effects, including cumulative impact;
- Archaeological impacts;
- Technology – query why the oxygen vented cannot also be used as medical gas; and
- Conditions – required to securing speed limits, road widening, routing restriction to prevent usage of the single track road from the B9176 to Edderton (in the event of B9176 closure).

4.3 Non-material considerations raised are summarised as follows:

- Lack of community benefit; and
- Property prices.

4.4 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.

5. CONSULTATIONS

5.1 **Ardross Community Council objects** to the application. It raises concerns about the location of the site and consider that there is a lack of justification for the siting. The proposal should be sited on a brownfield site close to the distilleries where the hydrogen could be piped, not taken by road. Raise concerns about road safety in relation to the B9176 (Struie Road) and consider

that it is unsuitable for the scale and nature of HGV traffic this development would generate over its operational lifetime. It also raises concerns regarding suitability of the road / bridges during the construction phase, impacts on local communities and considers the cumulative construction impacts / accident data has not been considered fully. Also concerned that material will come from quarry sources not included in the assessment.

It also raises concerns about operational arrangements during severe winter weather, including snow gate closures constraining access and the potential northern route identified in the 'technical note' has not been assessed. Increased risk of transporting hydrogen for local communities during icy / adverse road conditions. Also raises concerns about recreational users, such as cyclists. Also requests a binding commitment to ensure that traffic does not coincide with school transport hours. Environmental concerns relating to cumulative effects, light pollution, protected species and effects on water supply. Landscape and visual effects (including cumulative) from the scale and character of the development and effects on tourism.

Also raises concerns with regards to offers for non-binding community benefits. Considers that a condition should be applied and residents most severely affected by the development should, at minimum, receive a hydrogen district heating solution at no cost.

If consented, the following planning conditions are sought: a Construction Traffic Management Plan (CTMP); an Operational TMP (OTMP); an alternative access route assessment in winter; a Pre-Construction Structural Survey; community liaison; a Section 96 Wear and Tear Agreement; forward-facing vehicle movements; provision for cyclists, specific mitigation measures, tracking and speed compliance; co-ordination with current construction projects; lighting scheme; peatland restoration; archaeological recording; protected species mitigation; water supply monitoring; and a financial restoration bond. Also requests appropriate community benefit.

- 5.2 **Edderton Community Council (Host) objects** to the application. The proposed site is not designated as being for industrial or commercial development and is an inappropriate location. Considers that the B9176 Struie Road is unsuitable for the safe transportation of hydrogen, in terms of road safety / bridge conditions and during winter weather. Raises concerns in relation to interactions with tourists and cyclists. Concerns also include impacts on the water table from the proposed abstraction boreholes. This will in turn effect the boreholes of local residents and the water supply to Balblair Distillery. Concerned about the effects of light pollution on 'Dark Skies' and impacts upon wildlife. In terms of waste management, it is concerned about the use of demineralised water, the application contains no detail or proposal for safe disposal of waste concentrate. This could present a risk to the water quality used by local residents.

Concerns are raised in relation landscape and visual effects, protected species, wildlife and designated habitats. An illicit still, iron mill and shielings close to the proposed site are of significant archaeological and historical interest and should not be disturbed.

- 5.3 **Access Officer** does not object to the application. The proposal is unlikely to have a significant impact on recreational access for the public. A Recreational

Access Management Plan (RAMP) is required to be secured by condition. This should include any permanent site signage and if required any, additional access controls such as gates / fencing. The RAMP should detail how the track will be kept open from the B9176 to the hydrogen site and how the track to the wind farm site will be managed during construction. The track is prone to be blocked by snow during the winter months, only accessible by off road vehicle, which makes it suitable cross country skiing. Any winter snow clearance to allow the export of product by HGV should be aware of the possible public use of the track at all times of the year.

- 5.4 **Community Wealth Building Team** were notified of the application and confirmed that it will be contacting the applicant regarding the Highland Social Value Charter.
- 5.5 **Contaminated Land Team** does not object to the application and confirms that there does not appear to be a potential source of contamination onsite, so no further information is required to support the application.
- 5.6 **Development Plans** does not object to the application. Confirms general conformity with the Development Plan, subject to the development being sensitively designed and constructed, and the applicant confirms adequate net biodiversity enhancement, and addresses noise impacts on the community from construction and operational activities.
- 5.7 **Ecology Team** does not object to the application. Requests conditions securing pre-construction surveys, Species Protection Plans, a Habitat Management Plan, a Construction Environmental Management Plan (CEMP), GIS data files and nesting bird survey if the commencement of development coincides with the main bird breeding season (March – August inclusive).
- 5.8 **Environmental Health Team** do not object to the application and note that the nearest residential receptors are around 2.5km from the development. However, Environmental Health recommend that a construction noise assessment is secured by condition, where it is proposed to undertake work which is audible at the curtilage of any noise sensitive receptor, out with the hours of 8am to 7pm, Monday to Fridays and 8am to 1pm on Saturdays. Or in the event that noise levels during the above periods are likely to exceed 75dB(A) for short term works or 55dB(A) for long term works (generally more than 6 months).

In relation to Private Water Supplies, a planning condition is requested to secure a detailed PWS mitigation and monitoring plan.
- 5.9 **Flood Risk Management Team** does not object to the application, subject to a condition securing the finalised drainage design.
- 5.10 **Forestry Team** does not object to the application and confirms that the proposed development does not appear to impact on existing trees or woodland.
- 5.11 **Historic Environment Team (Archaeology)** does not object to the application. Following the submission of further information relating to the potential effects on features near the water pipeline and discharge location, the team are satisfied that the potential effects can be mitigated through a pre-construction survey of

the mill and mill lade, secured by condition. This will inform the finalised routing for the aforementioned pipeline.

5.12 **Landscape Officer** does not object to the application. Considered that the applicant underestimates effects along the Beinn Tharsuinn Wind Farm access track (illustrated by VP1). Concerned about the effects of lighting from VP1 and VP2. Following the submission of further information, generally content with the cumulative effects and the effects assessed during the hours of darkness. There is however potential for adverse effects on a small number of users along recreational routes during the hours of darkness, when they are most likely returning to their destination. Nevertheless, the landscape officer assesses recreational users along the access track where VP1 is located as Moderate Adverse, but not significant. Effects can be mitigated through a suitable lighting strategy.

5.13 **Transport Planning** does not object to the application. Originally raised concerns regarding methodology, potential queuing on the A9 / B9176 junction, on site manoeuvring, how the development would deal with active travel and finally how the development will operate in the adverse winter conditions. Following the submission of further information, Transport Planning have withdrawn its objection.

Some concerns however remain but can be sufficiently mitigated through conditions and developer contributions. Mitigation measures are requested in the form of conditions securing a Construction Traffic Management Plan (CTMP) and an Operational Traffic Management Plan. This will include a risk management plan, specific driver training, protocols regarding adverse weather conditions. Details of the internal access roads and swept paths are also required. Active travel has also been highlighted as the B9176 is popular with cyclists avoiding the A9 as a route to Dingwall or Inverness. Detailed measures to ensure non-motorised users are protected as much as possible from the expected HGV traffic from the site should be secured. Developer contributions are to be secured in relation to improvements at Dalnavie Crossroads, Ardross and Strathroly Bridge.

In terms of cumulative effects, Transport Planning note the temporary increase on the Struie Road and the need for co-ordination measures with other developments. This can be secured through the CTMP.

In addition, an abnormal loads route, pre-construction surveys of the roads and supporting structures, and a Section 96 agreement will be required. Appropriate community liaison is also required and should be secured by condition.

5.14 **Historic Environment Scotland** does not object to the application, confirms that no heritage asset within its remit is present within the site. In addition, it considers that the proposed development would not have any significant impacts on the setting of heritage assets in its remit.

5.15 **Highlands and Islands Airport Ltd (HIAL)** does not object to the application and confirms that the proposed development would not infringe the safeguarding criteria and operation of Inverness Airport.

- 5.16 **Health and Safety Executive (HSE)** does not object to the application. Confirms that the proposed development does not lie within the Consultation Zone of any of the major hazard sites or major accident hazard pipelines considered by HSE. Based on this it has no further comment. It also confirms that threshold for a hazardous substances consent application, which is 2 tonnes of hydrogen. If required, HSE will be a statutory consultee for that application.
- 5.17 **Ministry of Defence (MOD)** does not object to the application and confirms that the proposed development falls outside of MOD safeguarded areas and does not affect other defence interests.
- 5.18 **National Air Traffic Services (NATS)** does not object to the application and confirms that the proposed development does not conflict with its safeguarding criteria.
- 5.19 **NatureScot** does not object to the application, subject to planning conditions. In relation to the Morangie Forest SPA and Novar SPA, in the absence of effective mitigation, the proposal could have a significant effect on the breeding populations of capercaillie. Due to sites European status, the Highland Council is required to carry out an appropriate assessment in view of the site's conservation objective for the qualifying interest. NatureScot recommend mitigation measures in the form of additional survey work with 1.5km of the access track. If the surveys find signs of lekking capercaillie, no vehicles should use the track between sunrise and 0900hrs during the capercaillie lekking season (March to May inclusive). Subject to this, NatureScot consider that the proposal will not adversely affect the integrity of either of these designations.
- In relation to the Dornoch Firth and Morrich More Special Area of Conservation (SAC) it confirms that an appropriate assessment is not required.
- In relation to its landscape, visual or cumulative effects, NatureScot does not consider that the proposal would raise issues of national interest. This is due to the scale of the development and distance from the Dornoch Firth National Scenic Area. Impacts on priority peatland habitats are unlikely to raise issues of national interest and consider that the Council are best placed to advise on and consider potential impacts on peatland arising from this proposal. Refers the applicant to standing advice in relation to protected species.
- 5.20 **Scottish Fire Service** does not object to the application requests further information from the applicant in relation to internal building layouts.
- 5.21 **Scottish Forestry** does not object to the application and confirms that the development boundary does not impact on any woodland.
- 5.22 **Scottish Water** does not object to the application. Confirms there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed development.

- 5.23 **SEPA** does not object to the application. Confirms a change in regulatory authorisation since the application was first submitted. The operational phase will require a permit level Industrial Emissions Authorisation.

SEPA have removed its holding objection in relation to wastewater treatment / discharge and carbon rich soils. It recommends conditions which secure a Peat Management Plan, a finalised water quality monitoring plan, micrositng, a Construction Environmental Management Plan (CEMP) and the use of an Ecological Clerk of Works. It also encourages the applicant to explore the possibility of the oxygen recovery or being collected from the site for alternative uses.

- 5.24 **Transport Scotland** does not object to the application subject to conditions securing the abnormal loads route and details of an abnormal loads' delivery trial run. In addition, prior to any movements, any additional signing or temporary traffic control measures required must be undertaken by a recognised QA traffic management consultant, to be approved by Transport Scotland.

6. DEVELOPMENT PLAN POLICY

- 6.1 Appendix 2 of this report provides details of the documents which comprise the adopted Development Plan, including details of pertinent planning policies as well as adopted supplementary guidance, and other material policy considerations which are relevant to the assessment of the application.

7. PLANNING APPRAISAL

- 7.1 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. 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

- 7.2 The key considerations in this case are:
- a) Development Plan/ Other Planning Policy and Principle of Development
 - b) Energy and Socio-Economic Impact
 - c) Construction Impact
 - d) Operational Impacts (including Noise)
 - e) Site Selection, Layout and Design Evolution
 - f) Landscape and Visual Impact
 - g) Roads, Transport and Access
 - h) Natural Heritage (including Ornithology)
 - i) Habitat Loss and Biodiversity
 - j) Water, Flood Risk, Drainage and Soils
 - k) Built and Cultural Heritage
 - l) Other Material Considerations

Development Plan/ Other Planning Policy and Principle of Development

- 7.3 The Development Plan comprises National Planning Framework 4 (NPF4), the Highland-wide Local Development Plan (HwLDP), the Caithness and Sutherland Local Development Plan (CaSPlan) (2018), the Inner Moray Firth Local Development Plan 2 (IMFLDP2) (small part of the site is covered by the IMFLDP2) and various Supplementary Guidance documents associated with these Local Development Plans.
- 7.4 Appendix 3 of this report provides an assessment of compliance with the Development Plan / Other Planning Policy.
- 7.5 In summary, the principle of development is established by national policy under NPF4 Policy 11 (Energy). This policy aims to encourage, promote and facilitate all forms of renewable energy development. This includes emerging low-carbon and zero emissions technologies including hydrogen. Developments of this type will assist in the Spatial Priorities for the north of Scotland and ensure that Highland can continue to make a strong contribution toward meeting Scotland's ambition for net zero. Alongside these ambitions, the strategy for Highland aims to protect environmental assets as well as to stimulate investment in natural and engineered solutions to address climate change. This aim is not new and will clearly require a balancing exercise to be undertaken, which is reflected throughout NPF4.
- 7.6 At a regional level, the key policy is HwLDP Policy 67. The Council will consider the contribution of the proposed development towards meeting renewable energy generation targets and any positive or negative effects it is likely to have on the local and national economy. It states that the Council will support proposals where it is satisfied that they are located, sited and designed such that they will not be significantly detrimental overall, either individually or cumulatively with other developments, with regard to 11 identified areas, including natural, built and cultural heritage features, species and habitats and visual and landscape impacts.

Energy and Socio-Economic Impacts

- 7.7 The Scottish Government has committed to achieving net zero greenhouse gas emissions by 2045. In order to achieve this target significant innovation and transition to green energy technologies will be required, and hydrogen will be a key component of this. In particular, the Government's new Hydrogen Planning and Consenting Guidance (Feb 2026), highlights that hydrogen is considered especially useful for energy intensive industries, sustainable fuel production and activities which are challenging to fully electrify such as long-distance transport low-carbon dispatchable power and long duration energy storage. It can also provide the renewable energy sector with more resilience and security, through the use of constrained renewable energy which in turn reduces grid curtailment.
- 7.8 The UK currently produces 2.21 metric tonnes (26 GWh) green hydrogen from 14 sites. The Scottish Government's Hydrogen Policy Statement (2020) and Hydrogen Action Plan (2022) set out Scotland's ambition to become a leading hydrogen nation. Its ambition (not target) is to generate at least 5GW of

renewable (electrolytic) and low-carbon hydrogen (produced from natural gas with carbon capture technology) by 2030 and at least 25GW by 2045.

- 7.9 As of November 2025, electrolytic hydrogen production projects totalling 8.4MW capacity were either operational or in the final stages of commissioning in Scotland. There is also 24.23 GW production capacity in the pipeline, but these are at varying stages of development. The proposed development is for a 15MW scheme, which has a predicted capacity for the supply of up to 6,480 kg of hydrogen per day.
- 7.10 The UK Government has a target of delivering up to 6GW of electrolytic hydrogen production capacity by 2030 through the Hydrogen Allocation Round (HAR) process. HAR process is the main UK Government mechanism for allocating financial support to hydrogen production projects. The scheme is designed to bridge the cost gap between low-carbon hydrogen and fossil fuels. Two projects in Scotland were awarded low-carbon hydrogen contracts under the first HAR; this included the current application site. The other was the now consented Whitelee Hydrogen Project, East Ayrshire. A further 8 Scottish sites have been included in the shortlist for the HAR2, which equates to 153MWs.
- 7.11 The Cromarty Firth Area has been identified as a candidate regional hydrogen hub under the Scottish Governments Hydrogen Action Plan (2022). This identifies the North of Scotland Hydrogen Programme aims to develop a state-of-the-art hub to produce, store and distribute renewable hydrogen to the local area, the UK and Europe. This area is considered to be ideally located close to large-scale renewable resources, with local demand from distilleries, industry, transport and domestic applications.
- 7.12 A key early focus for this current application is the whisky industry, which the applicant states is the second largest carbon emitter in Scotland, after energy and fuel production. In this regard, the applicant highlights that the project will provide direct support for the 'Green Distillery' transition, enabling local whisky producers to decarbonise and support their net-zero targets. The applicant identifies distances to key off takers include two distilleries within 15km and a maltings within 45km.
- 7.13 From a decarbonisation perspective, hydrogen is a clean-burning gas that contains more energy per unit of weight than fossil fuels. The operational emissions from the of the proposal are estimated at 0.390 gCO₂e/MJLHVH₂. Any project with emissions lower than 20 gCO₂e/MJLHVH₂ is classed as low-carbon projects, as determined by the UK Low Carbon Hydrogen Standard (2023). This compares to 56.63 gCO₂e/MJLHVH₂ for the natural gas currently used by potential off takers. The applicants Carbon Balance Assessment sets out that by displacing natural gas currently used by potential off-takers, approximately 13,002 tonnes of CO₂e will be abated every year. This is a 99.3% reduction in CO₂e emissions per year compared with natural gas.
- 7.14 Whilst the applicant acknowledges there will be carbon losses associated with the construction works and embedded within the plant and materials used, it considers that losses have been minimised through the design process. In addition, the applicant highlights the peat management measures proposed, with

all excavated peat being re-used and the biodiversity compensation and enhancement measures.

- 7.15 NPF4 Policy 11c) states that development proposals should only be supported where they maximise socio-economic impacts.
- 7.16 Whilst not directly related to this sole development, the applicant highlights the potential socio-economic benefits for the emerging green hydrogen sector. The Scottish Government in their Hydrogen Policy Statement (December 2020) projected that if Scotland becomes an exporter of green energy to Europe this could result in the requirement for green hydrogen production of 126 TWh, a £25bn contribution to Gross Value Added and over 300,000 jobs by 2045. The applicant highlights the importance of developing green hydrogen projects and supply chains locally to ensure these jobs are not lost overseas. In turn, this results in skills and knowledge growth within this emerging sector.
- 7.17 In terms of job creation for this scheme, the applicant highlights that during peak construction, the project will create 57 direct jobs and 30 indirect jobs.
- 7.18 During operation, the proposed development will support up to 29 FTE jobs, and 10 HGV driver roles will be sustained, with additional indirect and induced jobs in supply chains and local services. The applicant also highlights that the decarbonisation of the whisky industry will aid with the long-term global competitiveness of Highland exports.
- 7.19 The application also outlines that the development supports the local economy by maximising local procurement, encouraging supply chain development, and providing opportunities through 'Meet the Developer/Contractor Days'. A condition is recommended to secure details of a local employment scheme; this is in order to ensure compliance with NPF4 Policy 11c) and to maximise the local socio-economic benefits of the development to the wider community.
- 7.20 The Council's position on Community Wealth Building has recently been set out in the Social Values Charter for Renewables Investment (2024). The charter sets out the Highland Council's expectations with regard contributing to the success of local communities for companies wishing to invest in the area. The charter aims to:
- Embed an approach to community wealth building into Highland;
 - Maximise economic benefits from our natural environment and resources;
 - Engage and involve relevant stakeholders to understand how we can continually improve our impact; and
 - Unlock economic opportunities for the area.
- 7.21 The Charter has been brought to the applicant's attention, and a statement has been submitted in response. Officers also understand that the applicant has recently undertaken Community Benefit Workshops in the local area. However, Community Benefit is not considered a material planning consideration, and therefore the Planning Authority does not have the ability to compel developers to sign up to the provisions of the Charter. As such, community benefit can only

be secured by means of a voluntary arrangement between the Council and the Developer, and the Council's Community Wealth Building Team are aware of the proposal and will conduct their own discussions with the developer directly.

- 7.22 Potential negative socio-economic effects relate to tourism and recreational users of the surrounding area. The application includes an assessment on recreational receptors on hills surrounding the site and to the south-west, affected core paths within the study area and key road routes, including The Moray Firth Tourist Route. The assessment considers that whilst there will be some adverse effects, these will be localised and not significant.
- 7.23 Conditions will secure a Recreational Access Management Plan (RAMP) in relation to the Beinn Tharsuinn Wind Farm access track. In addition, Transport Planning have requested that further measures to ensure non-motorised users are protected as much as possible from the expected HGV traffic from the site are secured. Developer contributions are also to be secured in relation to improvements at Dalnavie Crossroads, Ardross and Strathrory Bridge, this should also assist with non-motorised users.

Construction Impact

- 7.24 As detailed above, an 18-month construction phase is anticipated. Community Council and public representations have raised concerns particularly in relation to traffic and impacts upon amenity.
- 7.25 Given the scale of the project, some adverse impacts are anticipated in terms of construction traffic and disruption. Whilst no Abnormal Indivisible Loads (AIL) deliveries are anticipated, Transport Scotland and Transport Planning have recommended a condition which secures further details in the event that AILs are required.
- 7.26 Transport Planning also recommend that a Construction Traffic Management Plan (CTMP) is secured by condition to manage the impacts upon the wider local road network. This will include managing the effects of cumulative developments along the B9176, pre-construction surveys and contingency planning in the event of road closures and adverse winter conditions. The CTMP should also be reviewed throughout the works and be informed by feedback from ongoing engagement with the community, through a Community Liaison Group. This will ensure that the community council and other stakeholders are kept up to date and consulted before and during the construction period.
- 7.27 As detailed later in this report, Transport Planning have also requested developer contributions to mitigate the impact of the development on the B9176 during the construction and operational phases. The financial contribution, or direct physical provision, would support the delivery of targeted road safety improvements on sections of the local road network identified as being affected by the additional development-related traffic. This relates to road safety improvements at the Dalnavie Crossroads, Ardross to reinforce recently introduced speed restriction and a priority traffic management system at Strathrory bridge. The precise mechanism for securing this contribution is yet to be concluded (either an up-front payment, Section 75 or Section 69, or

alternatively direct developer physical delivery), with this to be secured ahead of the issue of any planning permission.

- 7.28 In addition, the Council will also require the developer to enter into legal agreements and provide a financial bond with regard to its use of the local road network (a Section 96 Wear and Tear Agreement). This will address any damage attributable to construction traffic. Subject to the above being secured, Transport Planning have no objection to the application.
- 7.29 In terms of managing environmental effects, a Construction Environment Management Plan (CEMP) would be in place during the construction phase and secured by condition. The CEMP would control potentially polluting activities and prevent adverse environmental impacts. It will outline methods of best practice and any mitigation measures required for the development will also be incorporated. An Environmental Clerk of Works would be appointed to oversee compliance with the CEMP. SEPA welcome the applicant's commitment to providing a CEMP and consider that the finalised version should clearly set out the boundaries of the Clerk of Works and powers to stop works if pollution is occurring or is likely to occur.
- 7.30 In terms of construction noise, developers must comply with reasonable operational practices regarding construction noise so as not to cause nuisance. Section 60 of the Control of Pollution Act 1974 sets restrictions in terms of hours of operation, plant and equipment used and noise levels etc. and is enforceable via Environmental Health and not Planning. The applicant states that construction works that may give rise to audible noise at the properties in the locality and HGV deliveries to the application site would be limited to the hours 07:00 to 19:00 Monday to Friday and 07:00 to 13:00 on Saturdays, unless otherwise approved in advance by the Council (except in case of an emergency). Noise from construction traffic has been assessed and reported as negligible and not significant.
- 7.31 The applicant anticipates that the impacts from construction noise would be assessed and controlled through a Construction Noise and Vibration Management Plan (CNVMP). Environmental Health have no objection. A construction noise assessment is secured by condition, where it is proposed to undertake work which is audible at the curtilage of any noise sensitive receptor, out with the hours of 8am to 7pm, Monday to Fridays and 8am to 1pm on Saturdays. Or in the event that noise levels during the above periods are likely to exceed 75dB(A) for short term works or 55dB(A) for long term works (generally more than 6 months).
- 7.32 A risk assessment of nearby Private Water Supplies was also undertaken to identify potential linkages between the proposed development and Private Water Supply abstractions. EA Figure 4.8 outlines the PWS near the site. Two PWS are located within 2km of the site, however, only one (Aulnamain 0.47km south-east of the site access) is reported as having a potential linkage to the proposed development. However, this supply is a groundwater borehole, and the applicant contends that it is unlikely to be impacted by construction works. Environmental

Health have no objection, subject to a detailed PWS monitoring and mitigation plan being secured by condition.

- 7.33 The temporary construction compound would be fully reinstated once it is removed. There will also be some reinstatement work needed where the slopes around the periphery of the platform batter back to existing levels. Post construction restoration/ grading works can be secured through the CEMP and a landscaping condition.

Operational Impacts

- 7.34 It is recognised that hydrogen is highly flammable, with capacity for the supply of up to 6,480 kg of hydrogen per day. It will be compressed and stored at high pressure before being transported by road. However, as detailed, hydrogen production is not a new technology. It has been produced and used on oil refineries, chemical manufacturing and metallurgical sites in the UK for many decades. As such its application, characteristics and risks are well understood, with its production tightly controlled through strict health and safety management and regulations which sit beyond the remit of planning. A summary of which is provided at the end of this section.
- 7.35 Concerns have been expressed in relation to the suitability of the B9176 Struie Road for the movement of hydrogen. Also, the impact on the local road network from the increase in HGV movements and that the area is prone to adverse winter weather and prolonged road closures. Transport Planning shared local concerns but have since withdrawn its objection subject to suitable mitigation measures and conditions. This includes the production and adherence of a site-specific Operational Traffic Management Plan (OTMP), this will include risk management plans and contingency plans in the event of adverse weather, inclusive of the plant's temporary cessation of production.
- 7.36 A key element in minimising risk to human health is the site's location, as the proposed development is considered remote to the majority of sensitive receptors. It is reasonable to infer that in the event of a major accident occurring (however unlikely), risk to human health is much less than if it was located in a more populated and/or urban area. However, it is within a location which is accessible to the general public. To ensure further protection of both component and receptors, the hydrogen production facility will be enclosed by means of security fencing and gated access and will be monitored during their operation via CCTV. Details of this can be secured by condition.
- 7.37 The applicant also outlines that like any fuel hydrogen is flammable, but hydrogen disperses very quickly given it is the lightest and smallest gas molecule in the universe, making it difficult to contain and create a combustible situation. As such, any loss of containment results in the gas rapidly rising into the atmosphere, preventing it from accumulating and reducing the explosion hazard. These matters would be covered in the subsequent Hazardous Consents Application.
- 7.38 The Governments Hydrogen Guidance (2026) outlines the potential impacts on communities and individual dwellings, such as visual impact, odour and noise

linked to hydrogen production operations should therefore be considered and addressed. It also outlines that Planning Authorities may consider applying conditions covering the noise, quantity and timing of deliveries and pick-ups where there are anticipated issues with neighbouring residential amenity.

- 7.39 During the operational phase, the facility would be capable of operating 24 hours a day and 7 days a week. However, the applicant states that hours of operation in reality would be determined by a range of factors, such as customer demand, available storage capacity and transportation schedules. The applicant has also outlined that three HGV tube trailers will be required for overnight storage. Between 11pm and 7am when no movements will be allowed into or from the site, with this to be controlled by planning condition in the interest of minimising light pollution. The plans identify four tube trailer bays this will avoid relocation of tube trailers within the site overnight.
- 7.40 In terms of operational noise, the closest noise sensitive receptor (NSR) is a group of residential dwellings located approximately 2 km east of the proposed development site along the B9176 Struie Road at Aultnamain. The applicant's assessment contends that this separation distance provides significant noise attenuation. Whilst detailed information on anticipated noise emissions from the proposal are unknown, the assessment has assumed worst case point sources with sound power levels of 93 dB(A). It has also assumed that operations are during both daytime 07:00 – 23:00 and night-time, 23:00 – 07:00. Noise contours are presented in EA Appendix B.
- 7.41 The assessment predicts an external noise level of 7 dB(A) at the nearest sensitive receptors to the site. This is considered to be a low noise level and is usually below the noise floor of sound level meters and anticipated to be inaudible in the context of existing ambient noise levels. Due to the separation distance between the site and nearest noise sensitive properties, Environmental Health have no objection and consider that there is unlikely to be any impact from operational noise. No objection has been reiterated in relation to the revised design. Noise from construction traffic has been assessed and reported as negligible, so not significant. Again, Environmental Health has raised no concerns.
- 7.42 The development will also require a permit under the Environmental Authorisations (Scotland) Regulations 2018 (EASR). As such, under this SEPA has a remit to regulate noise pollution from specific categories of industrial and waste management activities if they are subject to an EASR. In the context of EASR, noise can be considered to cause pollution if it results in offence to human senses or impairs or interferes with amenities and other legitimate uses of the environment. Activities which are not controlled by EASR but produce excessive noise impact may be classed as a statutory nuisance and are dealt with by the Council's Environmental Health Team.
- 7.43 The applicant has also stated that the operational process would be odourless. In terms of air quality, the oxygen produced during the process is currently intended to be vented to atmosphere. SEPA have queried whether this could instead be captured and used elsewhere, for instance for medical purposes. The applicant has stated that whilst oxygen capture is possible, it is not currently

economically viable for this scale of project. There is also potential for limited amounts of water vapour to be released, via the flare stack; this is a by-product of the heat created during the electrolysis process. The applicant has confirmed that there will be no chemicals in the water and therefore this will have no detrimental effect on local air quality.

- 7.44 However, in order to deal safely and efficiently with planned and unplanned operations, such as start-up or shut down operations there is a requirement for the controlled combustion of hydrogen, which will then be vented via a flare stack. Unlike fossil fuels, hydrogen does not produce CO₂ emissions when combusted. There is however potential for combustion of hydrogen to produce oxides of nitrogen (NO_x) which is a local air quality pollutant.
- 7.45 The hydrogen will combust cleanly and be visually innocuous (nearly invisible in bright daylight and appearing as a faint pale blue colour in low light conditions). This is unlike carbon- based components, such as methane and ethane, the flame will not glow orange / yellow or give rise to dark smoke. Air quality emission standards are controlled by SEPA through the EASR permit.
- 7.46 Concerns were initially raised by Scottish and Southern Electricity Networks (SSEN) in relation to the access track and its ability to safely access its compound and overhead line. The applicant has confirmed that the upgrade works to the existing access track only relate to localised surfacing works. There will be no raising to the levels along the track, this can be secured by condition.
- 7.47 In addition, SSEN were concerned that potential forthcoming transmission projects could be affected by the siting of this development, with the planned Spittal to Beaulay 400 kV overhead line being 5.2km from the site. In response, the applicant highlights that 'blast radius' are typically localised and there is unlikely to be effects upon SSEN infrastructure. Separation/ safety distances for the hydrogen plant would be calculated based on a formal risk assessment and hazardous zones would be classified in accordance with The Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). These would be submitted in support of the subsequent Hazardous Consents Application. SSEN have subsequently withdrawn its objection, but request that it is an explicit consultee on a finalised Construction Traffic Management; as an interested third party the recommended condition requires consultation with the Community Liaison Group, which SSEN can join.
- 7.48 As detailed, in addition to planning permission, hydrogen developments and activities are controlled by several other consenting, permitting, licensing and compliance processes. These are detailed in the Governments Hydrogen Planning Guidance (2026) and summarised in the following paragraphs. The determination of an application for planning permission should not seek to duplicate other regulatory regimes, and public safety interests are safeguarded extensively and are the subject of other consenting requirements in addition to planning permission.
- 7.49 **Controls of Major Accidents and Hazards (COMAH):** Hydrogen is a 'Named dangerous substance' in Schedule 1 Part 2 of the COMAH Regulations. In addition to the presence of hydrogen, operators must fully consider the presence

of other dangerous substances (DS) potentially involved in green hydrogen production either as inputs, carriers, or waste and by-products. This could include methane, methanol, ammonia, oxygen. These Regulations deal with on-site safety measures, requirements for the preparation of on-site safety management systems and emergency plans and the inspection of sites. COMAH is regulated by the Health and Safety Executive (HSE) acting with SEPA.

7.50 As detailed in the application, the proposed development will require to be constructed and operated in accordance with the regulations for lower tier sites. The threshold being greater than 5 tonnes of storage but less than 50 tonnes, this is akin to distillery bonded warehousing. This includes a requirement to demonstrate an inherently safe design and to show that appropriate design safety principles have been adopted and embedded throughout the planning and design stages. There is a duty for the developer to notify HSE and SEPA at key points prior to construction, the start of operations and certain changes to operations.

7.51 **Hazardous Substances Consent (HSC):** All COMAH establishments require Hazardous Substances Consent. The HSC covers the location of the production facility. This is controlled through the Planning (Hazardous Substances) (Scotland) Act 1997 and The Town and Country Planning (Hazardous Substances) (Scotland) Regulations 2015, with an application for HSC being made to the Planning Authority in line with Part 3 of the 2015 Regulations.

7.52 In addition, the transportation of the hydrogen offsite by tankers is covered by The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009. These implement international directives referred to as ADR. Regulation 5 provides that dangerous goods must not be carried except in accordance with ADR. The 2009 Regulations place a legal duty upon everyone involved in the transportation to ensure that risk of incidents is minimised and effective response planning is in place. This covers matters such as consignment procedures, carriage, loading, unloading and handling, vehicle crews, equipment, operation and documentation. Professional drivers transporting hazardous goods require an ADR Dangerous Goods Safety Adviser (DGSA) qualification. The ADR also requires the operators to appoint a Dangerous Goods Safety Adviser (DGSA). The DGSA's duties and responsibilities include:

- monitoring compliance with rules governing transport of dangerous goods;
- advising their business on the transport of dangerous goods;
- preparing an annual report to management on the business' activities in the transport of dangerous goods;
- monitoring procedures and safety measures;
- investigating and compiling reports on any accidents or emergencies; and
- advising on the potential security aspects of transport.

The HSE, Department for Transport, in conjunction with the police and the Driver and Vehicle Standards Agency (DVSA), are the enforcement authorities in respect of compliance these Regulations.

- 7.53 As highlighted in NPF4 Policy 23 Health and safety, part (h): “Applications for hazardous substances consent will consider the likely potential impacts on surrounding populations and the environment”. The applicant has confirmed that a Hazardous Substances Consent application will be submitted separately to this planning application.
- 7.54 The Health and Safety Executive (HSE) is a statutory consultee for HSC applications, and its advice would consider the compatibility of representative major accidents at the proposed facility with any existing developments in the vicinity. HSE would advise against a hazardous substances consent application, on public safety grounds, if the consented activities are judged to be incompatible with existing neighbouring land uses.
- 7.55 Should an HSC be approved, The Control of Major Accident Hazards Regulations 2015 controls the activities and is enforced by HSE and SEPA. However, the HSC Regulations complement, but do not override or duplicate, the requirements of The Control of Major Accident Hazards Regulations 2015.
- 7.56 In addition to COMAH and HSC requirements there is a range of wider health and safety legislation and regulations relevant to hydrogen production, storage and distribution. These include, but not limited to:
- The Construction (Design and Management) Regulations 2015 – this covers the construction and if the plant was to be decommissioned;
 - The Health and Safety at Work Act 1974;
 - The Pipelines Safety Regulations 1996;
 - Building (Scotland) Regulations 2004;
 - The Fire (Scotland) Act 2005;
 - The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations (2009) – this covers hydrogen being transported in this case by tube containers on the road network; and
 - The Pressure Equipment (Safety) Regulations 2016 would also apply to the design, manufacture and operation of tanks used to transport hydrogen.
- 7.57 **Environmental Authorisations (Scotland) Regulations 2018 (EASR):** Since this application was first submitted, there has been a change in the regulatory framework. Water abstraction, waste management, and industrial activities are now regulated under the EASR. EASR applies an integrated environmental approach to the regulation of certain industrial activities, replacing eight different regulations. Under the new regime, authorisation will be required for both: 1) hydrogen production as an industrial activity (formerly known as a Pollution Prevention and Control (PPC) permit); and 2) for a water activity (formerly known as a Controlled Activities Regulations (CAR)). SEPA remain the regulatory authority. Their duties include the carrying out of routine inspections at EASR authorised sites. It will also respond to public complaints and will take appropriate action if an authorisation condition is not being complied with.

- 7.58 As set out in SEPAs guidance, the main aim of EASR is to achieve a high level of protection of the environment taken as a whole by measures designed to prevent or, where that is not practicable, reduce emissions to air, water and land. Consequentially, the EASR places a duty on SEPA to take appropriate measures to prevent or to minimise environmental harm; to prevent and to limit the consequences of accidents which could have an impact on the environment; and to use resources in a sustainable way. The term environmental harm is defined in the Regulatory Reform (Scotland) Act 2014 and means:
- a) harm to the health of human beings or other living organisms,
 - b) harm to the quality of the environment, including –
 - o harm to the quality of the environment taken as a whole,
 - o harm to the quality of air, water or land, and
 - o other impairment of, or interference with, ecosystems,
 - c) offence to the senses of human beings,
 - d) damage to property, or
 - e) impairment of, or interference with, amenities or other legitimate uses of the environment.
- 7.59 Through the EASR authorisation process developers and operators will need to demonstrate how Best Available Techniques (BAT) have been considered in the selection, design and operation of technologies and plant / equipment to be used in the hydrogen project. This is to ensure that emissions are removed or reduced. These matters are considered by SEPA in determining authorisations and in setting permit conditions.
- 7.60 SEPA have confirmed that there are two phases to the project from a regulatory perspective: a construction phase and an operational phase. Under the EASR the operational phase will require a permit level Industrial Emissions Authorisation under schedule 20 of the EASR. A Schedule 20 permit will regulate emissions to air, water and land, and consider issues such as noise and the best use of raw material, water and energy. Although the regulatory framework has recently changed, SEPA have confirmed that the CAR licence already granted for the water abstraction, automatically became an EASR permit on 1 November 2025.
- 7.61 In summary, the operational impacts of the proposed development are tightly controlled through strict health and safety management and regulations which sit beyond the remit of planning.

Landscape and Visual Impact

- 7.62 The applicant has presented a number of submissions to illustrate the landscape and visual impacts of the development. The applicant's latest assessment is outlined in EA Chapter 2 (November 2025). This is supported by Zone of Theoretical Visibility (ZTV) maps and photomontages from 4 of the 7 assessed representative viewpoints. The Landscape and Visual Appraisal (LVA) and supporting information has been updated during the course of the application. This is following a more detailed design being developed for the site as part of the FEED (front-end engineering design) process. In addition, a further technical

note (May 2026) was submitted in relation to cumulative effects and operational lighting including updated photomontages from Viewpoints 1, 2 and 5.

- 7.63 The aim of the LVA is to identify, predict and evaluate potential effects arising from the proposal. The methodology for the LVA generally follows that set out in Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3). The applicant's methodology is outlined in EA Technical Appendix 2.1. The assessment identifies that the most notable effects are classed as Major or Major/Moderate. Furthermore, it should be noted that the applicant's technical note undertakes a slightly different approach, and their assessment concludes whether an effect is significant or not significant which is inconsistent with that in the LVA.
- 7.64 In terms of potential effects, when compared to other energy technologies such as the nearby wind farms, it is reasonable to anticipate that the distance over which the greatest landscape and visual effects may be experienced is likely to be reduced. This is reflected in the agreed 5km study area. Nevertheless, even with the revised FEED layout, the development will retain a distinctly industrial appearance. As such, careful consideration of its relationship with the surrounding environment remains necessary.
- 7.65 The LVA also considers the cumulative effects from other developments within the study area. The applicants updated assessment in its technical note includes the following schemes within 5km (see EA Figure 2.13). This excludes the Beinn Tharsuinn Wind Farm Repowering scheme, which is at EIA scoping stage, but has been included in the table below for context. A cumulative Zone of Theoretical Visibility (ZTV) has also been submitted (EA Figure 2.13).

Cumulative Developments	Status	Distance to Development
132kV Transmission Network lines	Operational	East of access track
Beinn Tharsuinn Wind Farm Repower	EIA Scoping	1.8km west
Beinn Tharsuinn Wind Farm	Operational	1.9km west
Strathrory Wind Farm	Under construction	2.7km south-west
Beinn nan Oighrean Wind Farm	Operational	3.3km west
Coire na Cloiche	Operational	4.8km west

Site Selection, Layout and Design Evolution

- 7.66 The site selection process is outlined in the application, and additional supporting information has been submitted in this regard. The applicant highlights the following in terms of the wider site selection process:
- Ten sites in the wider area were assessed by the applicant against key criteria including (but not limited to) size of site, health, safety and

environmental (HSE) considerations, site contamination, access to water and electricity. Planning Officers did request further information in relation to the other sites considered – but this was not submitted by the applicant.

- A key consideration was access to electricity and timescales in relation to funding – with new grid connection taking several years to come forward.
- The co-location near Beinn Tharsuinn allows for a short underground cable connection rather than a new overhead line and associated pylons.
- The Cromarty Firth Area is already actively promoting hydrogen production through the Inverness and Cromarty Firth Green Freeport.
- Decentralisation creates opportunities for hydrogen production at a dispersed and relatively small scale to support local decarbonisation. Also, utilises curtailed renewable wind energy.
- Decentralised production can also be an early action and enabler in developing capacity, knowledge and confidence in Scotland's hydrogen economy by providing 'scale-up' projects that demonstrate deliverability and utility of hydrogen.

7.67 It is noted that numerous comments have stated that this type of development should be sited on a brownfield or industrial site. From a policy perspective as outlined in Appendix 3, NPF4 Policy 26 (Business and industry) identifies that development proposals for business and industrial uses outwith identified areas will only be supported in limited circumstances. However, 'green' hydrogen developments are granted in principle support under NPF4 Policy 11 Energy, which is the primary policy.

7.68 Consequentially, in light of the proposed development being of a type expressly supported by NPF4 Policy 11, there is no policy requirement for any further assessment of, or justification for, its rural location within NPF4. This approach was adopted by the Reporter for the green hydrogen plant adjacent to Whitelee Wind Farm, East Ayrshire (2025). Scottish Ministers subsequently in granting consent supported this policy interpretation.

7.69 As identified in the Design and Access Statement (DAS) several potential developable areas were identified along the Beinn Tharsuinn Wind Farm access track. Key design considerations were:

- maintaining an appropriate setback distances from natural watercourses;
- avoiding areas of deepest peat;
- ensuring containment by the landscape to the north and west;
- avoiding the nearby habitat management area;
- avoiding areas of steeper slope; and
- avoiding potential impacts on existing overhead lines.

7.70 In terms of site design and refinement, the applicant identifies a number of key design principles, these included:

- avoiding or minimising impacts on physical constraints on development;
- minimising lifecycle greenhouse gas emissions as far as possible;
- adapting to current and future risks from climate change;
- minimising potential impacts on the natural environment;

- avoid or minimise impacts on communities and individual dwellings, including, residential amenity, visual impact, and noise;
- avoid or minimise significant landscape and visual impacts;
- avoid or minimise impacts on public access; and
- suitably scaling, siting and designing the proposed development to be in keeping with the character of the area.

Layout and Design Evolution

7.71 As detailed, during the course of the application a FEED process was undertaken. This resulted in alterations to the siting and layout of the scheme. Officers also requested that the applicant consider a split-level approach to the design. However, this has since been discounted by the applicant, citing an increase in the plot size by up to 20%, additional earthworks in relation to retaining structures, and operational safety.

7.72 The original design layout is detailed in EA Figure 1.6 (submitted 2023) with the revised design shown on EA Figure 1.6 plan ref 114153-00-GA-L-0002 (submitted 2025). Whilst there has been an increase in the overall footprint of the development, when taking into account elements such as the attenuation pond and land re-grading work, there is a reduction in the size of the main operation platform area of around 1700m². In terms of heights, the original design had:

- a 25m high vent stack;
- a 15m high electrolyser building;
- a 9.5m high compression building; and
- the remaining plant / buildings were between 2m and 8m in height.

By comparison the revised design includes:

- a reduced 14.15m vent stack;
- the electrolyser is now reduced to 7.8m in height;
- the fire water tank and raw water tanks are now the largest structures which will be 11m and 9m in height; and
- the compression building is 8.1m in height.

7.72 The visual reduction in the scale and massing of the proposal is illustrated in the following images taken VP1 (Beinn Tharsuinn Wind Farm access track).



VIEWPOINT 1 - Beinn Tharsuinn wind farm access track (Figure 2.6b)

Camera: Canon EOS 6D MkII Focal Length: 50mm vertical (27") x 28mm horizontal (85.5") Camera height: 1.5m Date: 17/06/2022 Time: 10:22

- 7.74 The image above details the scale and massing of the original scheme. It is particularly noticeable that electrolyser building visually breaks the slope of Cnoc Muigh-bhlaraidh.



VIEWPOINT 1 - Beinn Tharsuinn wind farm access track (Figure 2.6b)

Camera: Canon EOS 6D MkII Focal Length: 50mm vertical (27") x 28mm horizontal (85.5") Camera height: 1.5m Date: 17/06/2022 Time: 10:22

- 7.75 The above image details the revised scheme. This highlights the reduction in the scale and massing of the development. All elements of the proposal now sit visually below the top of the Cnoc Muigh-bhlaraidh slopes, with the exception of the tip of the flare stack.
- 7.76 To reduce the visual presence of the proposal further, the buildings, structures and fencing will have a rendered finish. This could be in the form of a muted hue of grey, green and / or brown. A recessive material palette will be particularly useful in more distant views across the study area. The final and most optimal external finish can be secured by condition, although the applicant has submitted updated visualisations (Viewpoints 1, 2 and 5) to illustrate the rendered finish.
- 7.77 In order to minimise ground disturbance, the cable link to the substation and wastepipe to the intended discharge point will be buried within the verge of the access track.
- 7.78 In addition, the development will involve engineering works (cut and fill) to create the platform area. Following construction, the engineered slopes will be stark. As such, a suitable landscaping condition is recommended to ensure post construction landscaping. This will include the landscaping and re-profiling of the

access track verges and reinstatement of disturbed areas. A condition is also recommended to secure finalised ground levels and profiles, together with cut and fill calculations.

- 7.79 As detailed, any hydrogen vented via the flare stack will be visually innocuous, (nearly invisible in bright daylight and appearing as a faint pale blue colour in low light conditions). This is unlike carbon-based components, such as methane and ethane, the flame will not glow orange /yellow or give rise to dark smoke. In addition, there is also potential for limited amounts of water vapour to be released, via the flare stack. The applicant outlines that this may present as localised plumes, under certain cold atmospheric conditions, and whilst potentially visible in low light conditions, there will be no significant visual effects.

Lighting

- 7.80 Operational night-time lighting is proposed along the perimeter of the site, at the site entrance and access doors to the ISO containers. The applicant highlighted that these would be designed not to contribute to light pollution and it was not considered further in the assessment. However, it is recognised that the site is in a sensitive location in terms of its rural and elevated location. Officers considered that there were potential effects, particularly from VP1 and 2 (Beinn Tharsuinn Wind Farm track and B9176). Protecting dark skies and effects on amenity were also points raised by the local community and the Councils Landscape Officer.
- 7.81 An hour of darkness assessment has now been submitted, together with a high-level lighting strategy which seeks to minimise light spill, glare and glow. The use of night-time visuals would have been beneficial, but these have not been provided by the applicant.
- 7.82 The applicant has highlighted the following measures will reduce light pollution and request that the final details/ strategy is secured by condition:
- the use of motion sensors;
 - the inclusion of Luminaire accessories such as cowl, hood or shield features to minimise obtrusive light;
 - minimal low-level lighting above the access doors to the ISO containers;
 - no deliveries between 11pm and 7am; and
 - the access track would not be lit.

Landscape Impact

- 7.83 There are several aspects to consider in determining whether this development represents an acceptable degree of impact on landscape character, including impacts on landscape designations and impacts on the Landscape Character Type (LCT) as a whole and on neighbouring LCTs.
- 7.84 The site is not located within any landscape designations, The Dornoch Firth National Scenic Area (NSA) is located within the 5km study area and is some 3.4km north of the site. The ZTV (EA Figure 2.5) illustrates that there is no potential visibility from the NSA within the study area, but there are bands of

visibility beyond 5km between the settlements of Ardmore and Edderton, and across and beyond the Dornoch Firth. However, the assessment reports that from this distance the development will have negligible effects and is not considered further. Due to the scale of the development and distance, NatureScot have no objection and consider that the landscape, visual or cumulative effects of the proposal do not raise issues of national interest.

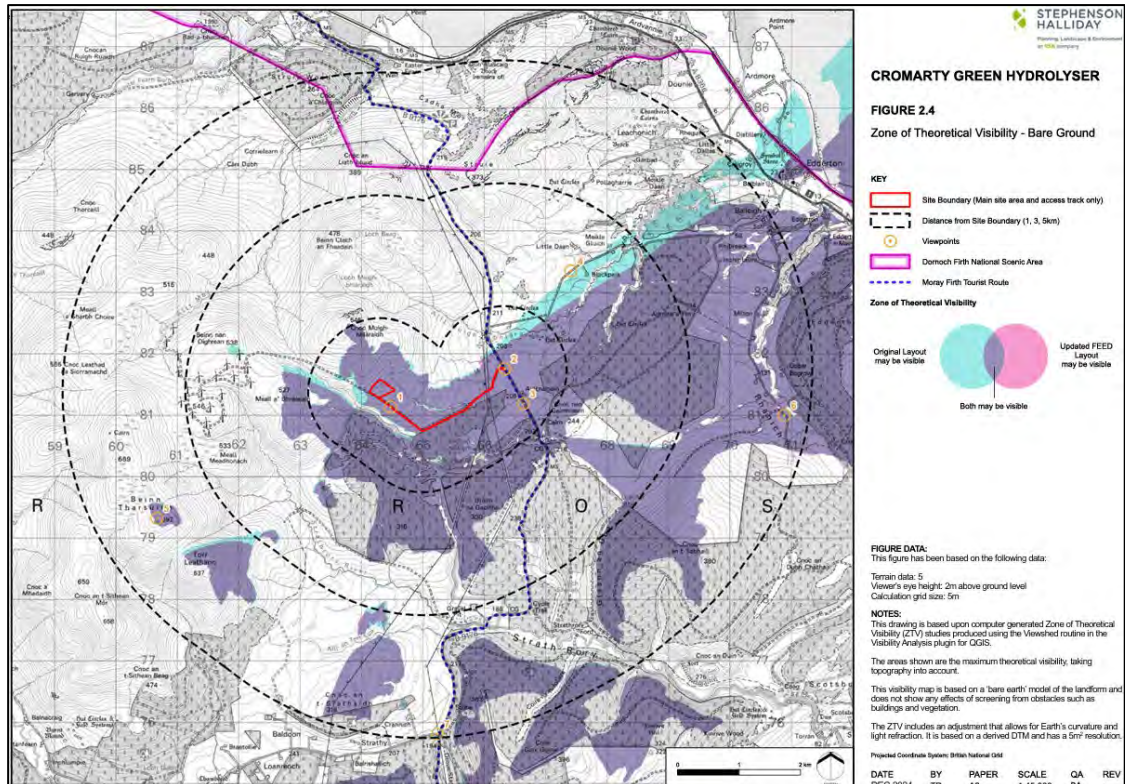
- 7.85 The EA does include an assessment of the Landscape Character Types (LCTs). Landscape character is the distinctive and identifiable pattern of elements that occur consistently in a particular type of landscape and the way that this pattern is perceived. Effects on landscape character can occur both on the site, where the pattern of elements that characterise the landscape would be directly altered by the addition of the proposed development, and outwith the site in the wider study area, where visibility of the proposed development may alter the way in which this pattern of elements is perceived.
- 7.86 The site lies within the Rounded Hills and Moorland Slopes – Ross and Cromarty LCT, which extends across the majority of the study area (EA Figure 2.3). The key characteristics of this LCT are its broad, rounded hills and upland moorlands with smooth, gentle slopes down to broad straths which create an undulating skyline. This LCT occurs in a large tract which weaves around and between the adjoining Rounded Mountain Massif and Rugged Mountain Massif – Ross and Cromarty. Settlement is infrequent and small scale. Main lines of infrastructure are located at the base of hill slopes. Wind turbines occur on high ground in the centre and the east of the area. In views from adjoining mountains, hills and straths they form prominent, moving features on skylines.
- 7.87 In terms of perception, most people experience it from the roadside where there is low-key human activity. From the hill tops, the NatureScot assessment describes the eye as being drawn along the rounded ridges of the hills looking for a dominant focal point, frequently moving to the more distant mountain tops, plains and firths of the surrounding areas. In remote areas away from roads and windfarms, the vast scale of this natural landscape has strong wild character. The sensitivity of the host LCT is reported as high/medium.
- 7.88 The proposal will introduce development on an artificially created platform to the southern slope of Cnoc Muigh-bhlairaidh and interrupt the undulating form on the local landform (see VP1 Beinn Tharsuinn Wind Farm access track). The assessment reports that this would create notable and large-scale effects on the immediate landscape character, with the physical changes being contained to the site.
- 7.89 Whilst the development would alter the continual undulating nature of the hill-scape locally, the applicant contends that it is set down and against rising landform (its prominence is reduced through the FEED layout) so would avoid changing the surrounding upland moorland areas, or parts of the LCT that currently experience a sense of wildness. It would also avoid interrupting views to the hills to the north and distant views to the Dornoch Firth. Consequentially, within the wider LCT the assessment contends that there would be no discernible change.

- 7.90 Overall, with the reduced heights / prominence associated with the revised FEED design, the assessment reports a moderate-minor, adverse level of effect on the receiving landscape LCT. This has been reduced from a moderate, adverse effect for the original scheme. These effects are limited with no notable changes to the key characteristics of the wider LCT.
- 7.91 In relation to cumulative landscape effects, there are two large groups of wind farms within the LCT. The eastern group is located within the study area and includes Beinn Tharsuinn Wind Farm. The assessment identifies that the existing turbines are located towards upper hill slopes and summits with transmission lines running in a north to south direction, mainly set along straths and lower hill slopes, within the study area. Whilst the proposal would extend the influence of manmade development, this would be to a lesser degree than the more prominently positioned wind farms.
- 7.92 In terms of lighting, the applicant identifies that this is a large-scale landscape, of vast scale and remote interiors, which away from wind farms and roads, has a strong wild and dark character. As such any proposed lights during the hours of darkness would represent a change in perception of local landscape character in this LCT by introducing lights to a dark area. However, the applicants contend that the mitigation identified above and secured by condition will ensure that its influence will be very localised, affecting only a limited part of this LCT. This will lead to a slight / negligible magnitude of change and a moderate / minor (adverse) on local landscape character. The applicant concludes this as a not significant effect.
- 7.93 In terms of cumulative lighting effects, the under-construction Strathrory Wind Farm will have visible aviation lighting. This together with the proposed development maybe visible from within parts of this LCT. Overall, the cumulative effects are reported as moderate to moderate / minor, (adverse).
- 7.94 Officers do not dispute the overall findings in relation to the effects on this LCT as a whole, as it would suffer only limited changes and would not result in the greatest effects of Major or Major/Moderate. However, Officers, including the Landscape Officer consider that there will be some greater localised effects of Moderate level on landscape character and host LCT affecting a limited area of the LCT. It is also likely that effects would increase during some hours of darkness due to operational site lighting. However, it is anticipated that these effects from lighting can be mitigated to an acceptable level by condition.

Visual Impact

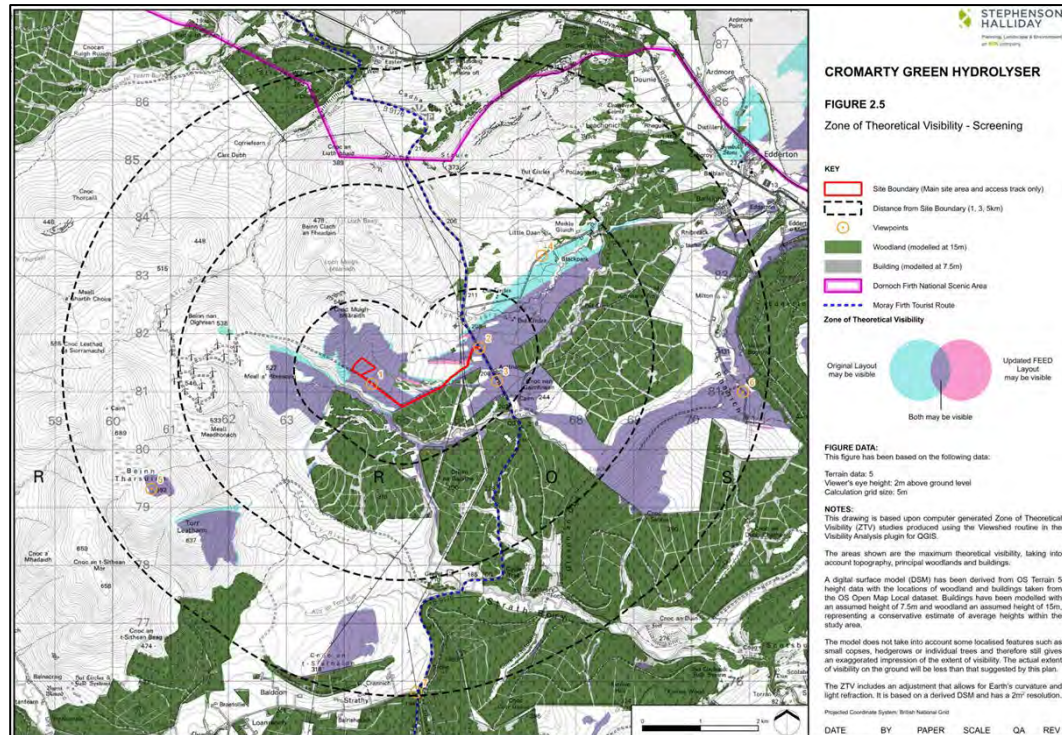
- 7.95 Updated Zone of Theoretical Visibility (ZTV) maps has been submitted which captures the updated FEED design. The ZTV (EA Figure 2.5 – shown in purple below) mapping does not account for any intervening woodland such as the blocks to the south and east or any built structures, thus reflecting the worst-case scenario. It also includes a comparison with the original design (highlighted in light blue), indicating a reduction in the geographical extent of visibility, particularly around Blackpark between 1.5 and 4.5km to the northeast of the main site.

7.96



7.97 The ZTV identifies that the main area of visibility is across hill slopes surrounding the site including Cnoc Muigh-bhlairaidh (development located on its lower slope) and Meall a Bhreacain to the west, and along parts of the B9176 road to the east. Predicted visibility extends further east across forestry plantation. To the southwest and southeast it becomes more fragmented and is restricted to more elevated areas. To the north and beyond Meall a Bhreacain to the west, visibility is restricted due to existing landform.

7.98 An additional ZTV (EA Figure 2.6 - below) has been submitted which includes the potential screening effects of building and trees. A topography and landcover plan have also been submitted (EA Figure 2.2). This 'screened' ZTV identifies that potential visibility is substantially reduced and further fragmented due to the effects of the extensive forestry plantation. Although it is noted that over the operational lifetime of the development commercial tree removal and replanting will occur.



7.99 As detailed above and summarised by the applicant in the following table, seven viewpoints (VPs) were included within the EA (Technical Appendix 2.4), with photomontages at VPs 1, 2, 3 and 5.

VP	Location	Receptors at VP	Distance (km)
1	Beinn Tharsuinn Windfarm access track	Users of the track- to access Beinn Tharsuinn Windfarm and to access surrounding hills slopes	240m, south (0km on access track)
2	B9176	Road users on the B9176 and the Moray Firth Tourist Route	1.8km, east (0km east of the access track)
3	B9176, Aultnamain	Road users on the B9176 and the Moray Firth Tourist Route. Residential properties at Aultnamain.	2.1km, east (570m east of the access track)
4	Unclassified road west of Balleigh	Road users	6.3km, northeast (1.9km, northeast of the access track)
5	Beinn Tharsuinn summit	Recreational receptors	4km, southwest

6	Unclassified road at Rhanich	Road users	6.4km, east (4.6 km, east of the access track)
7	B9176 Strathy junction	Road users	5.6km, south (5 km, south of the access track)

The applicant's VP analysis and visual material have been updated to take account of the design changes made through the FEED process. The applicant's assessment does not identify significant effects at any of the viewpoints or receptor groups.

Road Receptors

- 7.100 The main road within the study area is the B9176. The site access, leading to the main site area immediately adjoins the B9176, with the hydrogen facility located 1.8 km west of the road. The bare-earth ZTV indicates that there is potential visibility for around 1km of this 24km route. Representative views within this 1km are afforded by VP2 (1.8km east of the main site) and VP3 (Aultnamain, 2.1km east of the main site). VP7 (Strathy junction) is also located on this road and at the outer edge of the study area, this confirms that no visibility is available.
- 7.101 Although third parties have raised that this road is being used as a shortcut for the NC500, it does not form part of the designated route. However, the road does form part of the Moray Firth Tourist Route, which is an 80-mile long-distance route between Inverness and Loch Fleet. The ZTV indicates that no visibility of the development is available from the Dornoch Firth Viewpoint (located within the study area to the north) or the Struie Road viewpoint (further north, but out with the study area boundary), both of which are located on this tourist route.
- 7.102 Although set back from the B9176 the main site is in an elevated position in relation to this road. The EA reports that the proposal will appear relatively prominent in views, particularly north bound. However, this will be over a short distance, and the development will be set against the backdrop of an expansive landscape of hills and moorland. Overall, the applicant reports minor (adverse) effects on this road.
- 7.103 Sporadic trees along the roadside and large woodland planting blocks filter the transitory views to various degrees, although it is noted that these will be felled and replanted overtime and so cannot be entirely relied upon. Officers consider that whilst visibility has not been screened completely, the revised FEED layout had reduced the prominence, scale and massing of the proposed plant buildings from views along this route. The developments further integration can be assisted by post construction landscaping, which will ensure that slopes are appropriately re-graded and re-seeded. In addition, the use of an appropriate external material palette, will help to the development to appear more recessive against its wider landscape backdrop. Overall, Officers agree with the level of affect attributed to road-based receptors.

- 7.104 In terms of lighting during the hours of darkness, the applicant's assessment contends that for road users at night there is a reduced amenity and therefore a lower sensitivity rating. The assessment notes that whilst lighting would mark a change to a dark and remote area, this would only be seen over a limited extent and short duration. The applicant reports a slight magnitude of change and minor (adverse) effect. Officers are content with the overall (solus) assessment.
- 7.105 Due to the existing landform, cumulative effects are not reported from VP2 with regards to the operational Beinn Tharsuinn or Beinn nan Oighrean Wind Farms. However, from VP3, the hubs and blades of three turbines from Beinn Tharsuinn Wind Farm are visible between the slopes of Cnoc Muigh-bhlaraidh hill and Meall a Bhreacain. The proposed development will sit in front of this rising land, with existing overhead pylons and plantation woodland as notable existing features within the foreground. However, the in-combination effects are not considered to be significant with the development only affecting a small part of the view.
- 7.106 From both VPs, Strathrory Wind Farm would be seen in views south, at a distance of 5 km. Consequentially, cumulative lighting effects are also possible with the three lit turbines of Strathrory Wind Farm in successive and sequential views over the study area. These effects are reported as moderate to moderate / minor (adverse). Officers are content with the overall assessment relating to road-based receptors.

Residential Receptors

- 7.107 The closest cluster of houses is at Aultnamain some 2km to the east of main site and east of the B9176. Representative views are illustrated by VP3, which is located on the B9176 and just south of these properties. However, unlike road users, outlined above, residential receptors are static and will not experience the development via transitory views. Orientations and boundary treatments associated with this cluster of houses vary. However, the orientation of the most northerly property adjacent to the B9176 looks directly west across the road and towards the host landform.
- 7.108 The assessment reports that the development will be visible above the existing plantation, although this does currently afford some screening effect. However, the extent of the view affected is relatively small and is contained below the height of the rising land to the rear, which de-emphasises the prominence of the development. The applicant reports the level of effect as moderate / minor (adverse) during both construction and operation. This is a reduction from moderate (adverse) level of effect during construction as previously assessed under the original layout. Officers accept that the revised design has reduced the prominence of the development from this location and are content with the overall level of effect.
- 7.109 In terms of operational lighting, it is considered that residents have a higher sensitivity to road-based receptors. The assessment notes that lighting would be a discernible change to a dark area, although these changes would form a very limited part of this area of darkness. Effects of this can be minimised through an

appropriate lighting strategy which can be secured by condition. Through this, Officers are content that the influence of lighting will remain localised.

Recreational Receptors

- 7.110 As outlined in the assessment the area is popular with walkers and visitors to the slopes and hill summits in the area. Existing forestry and wind farm tracks and unclassified roads also provide easy access within lower hill slopes and valleys in the study area. Recreational receptors are considered to have a high sensitivity to development.
- 7.111 In terms of elevated vantage points, the ZTV indicates potential visibility from several hill slopes facing the site. Cnoc Muigh-bhlairaidh to the immediate north and Meall a Bhreacain to the west. More distant slopes to the south are Beinn Tharsuinn, Torr Leathann and Cnoc an t-Strathaidh. Further distant views are represented by VP5 (summit of Beinn Tharsuinn, 4km to the southwest).
- 7.112 As shown in VP5 the development would be visible from longer distance views when looking to the northeast which currently affords largescale views across the rounded hills towards the strath and coastal areas. The applicant contends that the development would add another built feature to the wider views, which currently experiences wind turbines and transmission infrastructure. However, the development would affect a limited extent of the view, and the revised design is also considered to reduce the prominence of the development. The applicant attributes moderate / minor (adverse) effects to elevated recreational views.
- 7.113 Whilst Officers do not contest the overall findings of the assessment, the visualisation emphasises the need to carefully control the external material palette, particularly for the buildings/structures.
- 7.114 There are no Core Paths, public footpaths or cycle ways within the application site. There are, however, several Core Paths within the study area, these are generally located within the northeast and southeast of the area. The applicant states that there is only theoretical bare-earth visibility from RC15.08. However, from the ZTV, Officers consider that there is also potential visibility from RC15.01, 15.02 and 15.03.
- 7.115 Core Path RC15.08 runs in a north to south direction, with views across the strath and towards rugged hills to the northwest. Although not located on the path, VP6 (unclassified road at Rhanich) is located in the area, and the applicant contends that views would be similar. The applicant identifies that views of the proposed development are potentially afforded over a 2km stretch of the path and at a distance of 4.5km to the start of the sites access track. However, any views would be relatively distant, oblique in nature, set beyond existing plantation and extend across a small extent of the available view. Existing wind farms would be evident on the hills to the rear; however, no notable cumulative effects are identified. The EA reports minor/negligible, adverse effects. Officers are content with this assessment.
- 7.116 Although not included in the assessment, Officers are content that effects from Core Paths RC15.01, 15.02 and 15.03 will be limited and whilst there is potential

bare-earth visibility (EA Figure 2.5) these would be distant views. The revised FEED design and plantation screening (EA Figure 2.6) further reduces visibility.

- 7.117 Although not a Core Path nor a defined receptor in the applicant's assessment, the Beinn Tharsuinn Wind Farm access track does provide wider recreational access and access to the surrounding hill slopes. As noted in the Access Officers response, the track is a moderate to well used recreation access route. Use appears to extend throughout the year, with the Access Officer noting the potential for cross country skiing. VP1 is located on the access track and approximately 240m to the south of the main site. The assessment identifies a large-scale visual change during construction, reducing to medium (but adverse) once the development is operational. The applicant also contends that the FEED layout reduces the visual scale and massing of the development from this VP. Officers consider this is particularly noticeable with the relocation and reduction in mass and height of the electrolyser originally positioned to the rear of the site. This visually extended above the Cnoc Muigh-bhlairaidh slopes.
- 7.118 With the revised design all elements of the proposal now sit visually below the top of the Cnoc Muigh-bhlairaidh slopes, with the exception of the tip of the flare stack. Design mitigation in the form of the external colour is also advocated by the applicants. Overall, the EA reports residual effects as moderate / minor (adverse).
- 7.119 Officers consider that whilst the FEED layout has improved prominence when seen against the rising hill slopes and the final external colour palette will assist (secured by condition). The overall residual visual effect is disputed by Officers (including the Council's Landscape Officer). The scale of visual change post construction is considered to be higher than reported and there is potential for operational lighting to effect views and experience from this VP. Officers consider effects would be very localised in extent.
- 7.120 In terms of lighting effects, the assessment outlines that recreational users along these routes are unlikely to be used at night and / or would not have the same amenity value and therefore are not considered further. Officers dispute this assertion as there is potential for a small number of users along these routes during the hours of darkness, most likely returning to their destination. Nevertheless, the landscape officer assesses recreational users along the access track where Viewpoint 1 is located as Moderate Adverse and Not Significant. However, to ensure this remains the case, it is recommended that a suitable lighting strategy be secured by condition.
- 7.121 Overall, Officers acknowledge that it has not been possible to completely screen the proposal from visual receptors. However, it is considered that the revised design has reduced the prominence of the scheme from a number of viewpoints. The scheme also benefits from substantial screening from the landform to the north, west and southwest as demonstrated by the ZTV. In addition, with the exception of the flare stack shown in VP1, the development will be visually contained against rising land to the rear. Further mitigation can be secured by conditions relating to post construction landscaping, external materials and external lighting.

- 7.122 In terms of policy, part (e)(ii) of NPF4 Policy 11 Energy acknowledges that significant landscape and visual effects are to be expected for some forms of renewable energy. It goes on to state that where impacts are localised and/or appropriate mitigation has been applied, they will generally be considered to be acceptable. Officers consider that whilst the industrial form of the development is not entirely compatible with its rural context, the landscape and visual effects are localised and can be mitigated, and as such, the development aligns with part(e)(ii) of NPF4 Policy 11.

Roads, Transport and Access

- 7.123 The EA assesses the expected impact of the proposed development, during both the construction and operational phases. The application is also supported by a Transport Statement (TS). Transport Planning, Community Councils and several third-party representations have raised concerns in relation to both the construction and operational phases of the development.
- 7.124 In particular, concerns have been raised about the standard of the B9176 and supporting structures and its ability to take additional HGV traffic, during both the construction and operation of the development. Impacts upon amenity and recreational users has also been highlighted and poor standard of driving on the road currently. Adequacy of the data in terms of importation of material, traffic counts, accident data and cumulative assessments have also been raised. There should also be a commitment for traffic to avoid on the route (school transport, local community events, transport rallies). Concerns regarding operational arrangements and risk during severe winter weather, including snow gate closures constraining access have also been raised.
- 7.125 In response to consultee and third-party comments relating to the TS, the applicant has submitted an additional Technical Note (May 2026). The purpose of this is to respond to consultation comments and update the proposed assessment year to reflect changes to the anticipated start of the construction programme (now 2027). It also provides responses relating to driver training measures, temporary road closures and traffic management, carriageway structural integrity, updated trip generation and distribution assumptions, and junction capacity assessments at the B9176 and A9. At the request of Officers, the cumulative traffic assessment has been further updated.
- 7.126 The applicant is committed to using a Construction Traffic Management Plan (CTMP) to manage the expected traffic impacts of the development. A framework CTMP has been submitted with the application. An Operational Traffic Management Plan (OTMP) including Risk Management and Mitigation Plans is also proposed to manage the operational effects of the development.
- 7.127 Access to the proposed site will be via an existing private access track which serves the operational Beinn Tharsuinn Wind Farm. The access track joins the public B9176 (Struie Road) to the east of the site. Localised resurfacing works of the access track are likely to be required, but the width of the access track will remain unaltered. The applicants confirm that the visibility splays of 4.8m x 215m will be kept clear of vegetation and obstructions over 600m in height. Transport

Planning have confirmed that the geometry and visibility splays of the existing access onto the B9176 is acceptable. This can be secured by condition.

- 7.128 A road accident review was undertaken covering the whole of the B9176 and A9 / B9176 junction. The assessment covered a 5-year period from 2020-2024, this indicated a total of 10 accidents on Struie Road. Three were recorded as resulting in 'slight' injury, six resulted in 'serious injury and one fatality. The assessment reported that there was no predominant pattern of collisions or causal relationships. It was reported that no heavy Goods Vehicles (HGVs) were involved in any of the 10 recorded accidents. Additionally, the review does not highlight any specific area of concern regarding accident concentrations, within the network, concluding that there are no existing highway design factors contributing to accidents in the vicinity. In addition, more recent Police Scotland data indicates two reported motorbike accidents: in March 2025, injuries were described as less serious; and August 2025, a fatality involving a goods vehicle 7.5 tonnes maximum gross weight (MGW) and over. Again, no information has indicated any accident was due to any highway design factor.

Construction Traffic

- 7.129 The EA reports that the proposed development would lead to a temporary increase in traffic volumes on the road network during the 18-month construction phase. The TS confirms that all of construction trips will be via Light Goods Vehicles (LGVs) (cars and vans associated with workers) and HGVs (deliveries). No abnormal indivisible load (AIL) movements are required to facilitate the development. However, Transport Scotland and Transport Planning have recommended conditions which secure further details in the event that AILs are required.
- 7.130 During construction the anticipated peak traffic flows are 44 two-way HGV movements per day (22 vehicles in each direction), with a similar number of cars/vans associated with workers travelling to/from the site (44 two-way LGV movements per day). Construction traffic will access the site from the A9 and then north up the B9176 to the site. It is anticipated that the majority of the LGV/car traffic will travel along the A9 from the Inverness direction, with all HGVs expected from ports to the east.
- 7.131 When factoring in the proposed developments peak construction traffic against baseline traffic, the assessment indicates an overall increase in vehicle movements on the A9 will be less than 1% (in either direction) with 4% predicted for the B9176 Struie Road. In terms of HGV traffic only, this equates to an increase of 4% on the A9 but 30% on the Struie Road. The applicant's assessment identifies that this impact is high due to the low number of HGVs on the road at present.
- 7.132 The transport statement also identifies potential locations of local sources of materials and their associated access routes, which differ from the main access route and utilise local roads including Ardross Road and Caplich. It is understood that this relates to stone to be used from the access tracks in relation to the site. Local concerns have been raised in relation to this. The applicant has stated that

this is an established access/distribution route for the quarry. It is unlikely that the number of trips will increase compared to the quarry's day to day operation.

- 7.133 In addition, the applicant states that the required materials will be imported from a number of quarries in the vicinity therefore it is not possible at this stage to assign the exact number along the Ardross Road. Transport Planning have not raised an objection noting that the export of materials will be controlled by existing permissions related to each quarry. However, Officers consider it appropriate that the source and routing of materials is secured by condition.
- 7.134 Concerns have also been expressed in relation to the structural integrity of the B9176 and two bridges along the route (Dalneich and Strathrory) in accommodating additional HGV traffic. The applicant highlights that the Struie Road is also part of the Scottish Government's Strategic Timber Transport Scheme with partnership funded improvement works.
- 7.135 Furthermore, Transport Planning have requested that a pre-construction structural condition survey of the relevant road network is secured via a planning condition, with the findings used to inform any necessary mitigation measures. This may include localised widening. In addition, a S96 agreement will need to be prepared for extreme wear and tear of the B9176 due to construction traffic associated with the development. This agreement will apply from the site entrance along the B9176 to its junction with the A9. The applicant accepts these requirements and can be secured through the CTMP.
- 7.136 The applicant notes that the geometry of B9176 Struie Road is a single carriageway with numerous bends which are anticipated to slow traffic. It also acknowledges that the road can be closed during adverse weather events. Transport Planning request that driver training and awareness instructions are included within the CTMP. The applicant accepts this requirement and states that specific measures to ensure that all drivers associated with the construction phases are appropriately briefed and trained in relation to the local road network, including route-specific constraints and sensitivities. Officers also recommend that the marking of vehicles to enable easy identification in the event of problems arising, such as speeding or discourteous driving is secured. An appropriate community liaison strategy will also need to be secured by condition.
- 7.137 Active travel has also been highlighted, as the B9176 is popular with cyclists avoiding the A9 as a route to Dingwell or Inverness. This includes users of the existing wind farm access track. Transport Planning do not object to this aspect but consider that measures required to ensure non-motorised users are protected as much as possible from the expected HGV traffic from the site. This can be secured by condition.
- 7.138 Furthermore, Transport Planning have requested a developer contribution to mitigate the impact of increased Heavy Goods Vehicle (HGV) traffic on the B9176 arising from the proposed development (construction and operational), should planning permission be granted. The contribution would support the delivery of targeted road safety improvements on sections of the local road network identified as being adversely affected by the additional development

related traffic during the construction and operational phases of the development:

- **Dalnavie Crossroads, Ardross:** The road safety mitigation measures comprise the installation of gateway features on both approaches to the crossroads along the B9176. The works would include the provision of appropriate traffic signs and road markings to improve driver awareness and encourage reduced vehicle speeds when approaching the junction. Officers also understand that these measures will further reinforce the recent speed restrictions implemented by the Roads Authority in 2026.
- **Strathroy Bridge:** Traffic management measures are required due to its restricted width, which is insufficient to safely accommodate two-way HGV movements. The mitigation measures will introduce of a priority traffic management system at the bridge. The scheme would provide priority to traffic travelling in one direction and would be implemented through appropriate road signage and road markings, thereby improving operational safety for all road users.

7.139 The works have been costed at £160,000, inclusive of the Council's design, implementation and ongoing maintenance of the mitigation measures. All the land required to facilitate the works is within the control of the Roads Authority. The applicants have agreed to this. The precise mechanism for securing this contribution is yet to be concluded but will be secured ahead of the issue of any planning permission.

7.140 Transport Planning request that the following (but not limited to) matters are also secured through the CTMP:

a) Traffic Management and Routing

- Construction programme and traffic profiles
- Agreed vehicle routing strategy
- Measures to minimise disruption to local communities

b) Abnormal Loads Management (if required)

c) Road Infrastructure Mitigation

- Pre construction structural conditions surveys identifying any required mitigation works, including:
- Localised carriageway widening or strengthening
- Bridge and culvert strengthening
- Passing places
- Road safety improvements

d) Non-Motorised User Protection

- Measures to protect pedestrians and cyclists by providing off road facilities when required and crossing facilities if required
- Temporary signage and traffic management where required

e) Monitoring and Maintenance

- Pre- and post-construction road condition surveys

- Ongoing inspection and maintenance regime
- Agreement under Section 96 of the Roads (Scotland) Act 1984

f) Site Access and Cleanliness

- Details of access upgrades
- Measures to ensure roads are kept free from mud and debris
- All vehicles to enter and leave the site in a forward gear (this includes onto the Beinn Tharsuinn Wind Farm access track and the B9176).

g) Communication and Liaison

- Named point of contact
- Community Liaison Group (CLG)
- Ongoing liaison with the Roads Authority

h) Contingency Planning

- Procedures for road closures and extreme weather events
- Measures to manage operational disruption, including traffic reduction where necessary

Officers also recommend that a timetable for the implementation of the measures detailed in the CTMP.

- 7.141 Subject to the above, Transport Planning are content that the effects of the development on the local road network can be suitably managed. Transport Scotland have not raised concerns in relation to the developments impact upon the A9 Trunk Road.
- 7.142 The applicant also included updated cumulative traffic modelling (May 2026) with other consented / in planning development projects in the area. This was based on the proposed development commencing in 2027 for a period of 18 months. However, following third party concerns and at the request of Officers this assessment has been further updated to include a 2028 scenario (July 2026). The assessment also includes specific modelling of the A9 / B9176 junction as Transport Planning had raised potential concerns relating to queuing at this junction at peak times. Although, this was not raised as a concern in Transport Scotland's response.
- 7.143 The updated cumulative modelling now includes the following worse case scenarios:
- **2027 scenario – start of the construction phase (year 1):** The assessment includes:
 - o Abhainn Dubh Wind Farm (23/02754/S36): with Scottish Ministers to determine, Council raised no objection.
 - o Field Fyrish BESS (25/01620/S36): Scottish Ministers to determine, Council raised no objection.
 - o Contullich Energy Storage Project (23/05999/FUL). Permission granted.

- **2028 scenario – construction phase (year 2):** The anticipated construction phase would extend into 2028, albeit peak construction activities are envisaged within 2027. The assessment includes:
 - o Abhainn Dubh Wind Farm (23/02754/S36).
 - o Field Fyrish BESS (25/01620/S36).
 - o Contullich Energy Storage Project (23/05999/FUL).
 - o Creachan Wind Farm (26/00531/S36): This submission details an anticipated commencement date of 2028. Application is currently under consideration.
 - o Carn Fearna Wind Farm (25/01650/S36). This submission details an anticipated commencement date of 2028. The Council has raised an objection and is currently with the DPEA pending further procedure and determination.

- 7.144 The 2027 modelling of the A9 / B9176 indicates that the junction will continue to operate well within capacity during both construction phase. While minor increases in delay are predicted on the A9/B9176 southern arm, these are small in magnitude (generally within a few seconds) and are not considered to materially affect junction performance, with queue lengths remaining minimal.
- 7.145 The 2028 scenario includes a greater number of cumulative schemes, consequentially the predicted queues and delays are greater than the 2027 modelling. The highest is again predicted on the A9/B9176 southern arm. However, the assessment still concludes that temporary increases in the overall queues and delays remain minimal and are not significant with the junction operating well within capacity.
- 7.146 Overall, the assessment concludes that there is no evidence of significant existing or future queuing, and that the proposed development will not give rise to any material junction capacity issues. Transport Planning have raised no concerns with this junction assessment, also noting that the junction is operated by Transport Scotland who did not object to the development when originally consulted.
- 7.147 In terms of cumulative traffic flows the 2027 and 2028 scenarios indicates an overall worse-case temporary increase in vehicle movements on the A9 of 1.7% (north-east bound) and 2.8% (south-west) in 2027 and 3.2% (north-east bound) and 3.8% (south-west). This compares to an overall temporary increase of less than 1% when only the proposed development is added to the baseline. With regards to HGV traffic only this equates to an increase of 23% (north-east) and 15% on the A9 (south-west bound) in 2027 scenario and 41% (north-east) and 17% on the A9 (south-west bound) in 2028 scenario. This compares to a temporary 4% increase on the A9 when only the proposed development is added to the baseline. Transport Scotland had no objection when originally consulted. They have been re-consulted on this updated cumulative data. No further response had been received at the time of writing.
- 7.148 The greatest potential cumulative effect will be on the B9176 Struie Road with a temporary 32.6% change in all vehicles under the 2027 scenario and 38.2% in

the 2028 scenario. This compares to an overall temporary increase of around 4% when only the proposed development is added to the baseline. However, there could potentially be a temporary 237-266% increase in HGV movements over the 2027/2028 scenarios. This is significantly higher than the 30% predicted for the development in isolation. Demonstrating that impacts of the other cumulative developments in the area will contribute significantly more HGVs than the proposed development.

- 7.149 A road capacity assessment for the B9176 Struie Road has been carried out. This assessment compares the expected daily traffic on Struie Road across all scenarios against the theoretical capacity of the road. This highlights that the temporary traffic across all cumulative construction scenarios remains within the capacity of the road, with a reserve capacity of 85-86% highlighted.
- 7.150 It must be acknowledged that any effects are temporary in nature and based on overlapping peak construction activities. In addition, not all schemes within the cumulative scenario have been consented and may never come forward or anticipated commencement dates may change resulting in no overlap with the proposed development.
- 7.151 The applicant recognises the pressures and proposes to work with other developers to coordinate deliveries to reduce impact. The applicant also details that in order to reduce these construction impacts the HGV arrivals/departures will be managed so that they are outside of peak traffic periods. The regulation of cumulative traffic flow on the B9176 is therefore recommended to be conditioned through the provisions of the CTMP. This will require the appointment of a traffic management coordinator to oversee the construction phase.
- 7.152 Overall, whilst the development will result in an increase in vehicle movements, including HGV, on the road network, these will be temporary and the proposed mitigation measures / developer contributions outlined above will minimise disturbance to road users and surrounding communities. Subject to the recommended conditions and developer contributions, the Council's Transport Planning Team and Transport Scotland do not object to the application.

Operational Traffic

- 7.153 During operation, the hydrogen will be exported via tube trailers, with the transporter driving low emission (such as biodiesel) vehicles to haul the trailers to off-taker sites. The tube trailers would go along the existing Beinn Tharsuinn Wind Farm access track, then turn right onto the B9176 Struie Road and join the A9 before heading to the end user. Within the site there will be a segregation between non-HGV traffic and HGVs (tube trailers). The eastern access/egress point serves tube trailers, and the western access/egress point will be used by non-HGV (staff, visitors and maintenance vehicles).
- 7.154 In terms of traffic generation, the assessment outline that it is anticipated that there will be a workforce of 5 shifts of 5 crew members and 10 HGV drivers working on shift patterns. Therefore, operational traffic will be distributed throughout the day, which avoids a concentrated peak in staff movements.

Based on the plant's maximum capacity, vehicle movements associated with the operational phase traffic flows are anticipated to be 16 trailers per day (so 32 two-way movements per day) and 35 one-way LGV/car movements (so 70 two-way movements per day).

- 7.155 Operational traffic over baseline is anticipated to result in less than 1% overall increase of vehicles on the A9 and 5% on the B9176. The proportion of HGVs on the B9176 will increase by 21% which is notably less than the construction impacts (30%).
- 7.156 An updated cumulative assessment was submitted (May 2026). This outlined anticipated operational traffic flows for this development in-conjunction with potential temporary construction traffic associated with other schemes currently in the planning system. This includes the following schemes, which are pending determination:
- Creachan Wind Farm (26/00531/S36): This submission details an anticipated commencement date of 2028. Application is currently under consideration.
 - Ceislein Wind Farm (26/01226/S36) This submission details an anticipated commencement date of 2029. Application is currently under consideration.
 - Carn Fearna Wind Farm (25/01650/S36). This submission details an anticipated commencement date of 2028. The Council has raised an objection and is currently with the DPEA pending further procedure and determination.
- 7.157 The assessment highlights that the A9 / B9176 junction continues to operate efficiently with marginal changes in delay and queue length. Transport Planning have raised no concerns with this junction assessment, also noting that the junction is operated by Transport Scotland who did not object to the development when originally consulted.
- 7.158 In relation to cumulative traffic rates, operational traffic together with potential construction phases of other projects is estimated to result in a 2% overall increase of vehicles on the A9 and 12% on the on the B9176. The proportion of HGVs on the B9176 would increase by 68%, which is higher than when the developments impact is viewed in isolation (21%). However, as noted above, the additional of construction traffic from other potential schemes is temporary, and none of the schemes included currently have consent, and if consented, their peak construction periods could also be staggered.
- 7.159 Transport Planning have no objection and consider that the developer contributions identified above, will help to maintain safety and mitigate the effects of the development to an acceptable degree. In relation to the A9, Transport Scotland are yet to comment on the updated cumulative assessment.
- 7.160 Third party and Transport Planning have been expressed concerns in relation to the risks associated with transporting hydrogen on the B9176 and the safety implications to users and communities, particularly in relation to severe winter

weather, including snow gate closures constraining access from the site and onto the B9176 and its predilection to subsidence.

7.161 The applicant acknowledges these concerns and further detail of its contingency planning will be submitted by condition. Transport Planning are content that a suitable scheme can be secured by condition and have requested that an Operational Traffic Management Plan includes, (but is not limited to) the following:

- A Risk Management and Mitigation Plan - including consideration of winter road closures, subsidence risk, and the transport of hydrogen. The plan should systematically review when snow fall is predicted which is likely to close the B9176. The developer as and when necessary, will review and stop transporting hydrogen from the site. Therefore, storage on site maybe required or/and the operation reduces production to reflect the weather conditions. Vehicles operated by the site already out on the network should park up in an agree location secured by the developer;
- Measures relating to recreational route users and mitigation measures;
- HGVs from the development during the operational period are not to route along the Ardross and Caplich Roads;
- Driver training and awareness, and livery on vehicles to monitor compliance with speed restrictions;
- Drivers should enter and leave the site in a forward gear – this will provide safer access for road and recreational users; and
- Commitment and actions regarding communicating with THC and local community contacts.

7.162 A potential contingency route along the B9176 to the north has been raised by the applicant. However, this has not been assessed through the EA provided with this application. The applicants have suggested that this could be controlled through a pre-start condition to assess the route north if a northern routing option is needed for contingency planning. Given the lack of assessment of a northern route in the application, and given that northern route follows more challenging terrain, geometry and crossing of the narrow Easter Fearn Bridge, a condition is proposed to restrict all development HGVs movements north of the site.

7.163 **Wider Access:** In terms of wider public access, the Councils Access Officer has confirmed that the existing access track to the Beinn Tharsuinn wind farm is a moderate to well used recreation access route. A Recreational Access Management Plan (RAMP) will be secured by condition. As part of this it will be expected that the track will remain open for public recreational use during the construction period when construction activities are not taking place on the track. When works are proposed on, or near to the existing track (such as installation of the electricity cable), it is expected that where practical the public should be marshalled past these works. Any snow clearance should also be aware of the possible public use of the track for cross country skiing / recreation.

Natural Heritage (including Ornithology)

7.164 The applicant's assessment is supported by several surveys: including protected species, a habitat survey and a National Vegetation Classification (NVC) survey.

Following consultation comments, additional surveys have been undertaken. These encompass the access track to the main site plus a buffer zone of 50m, the locations of four proposed boreholes with buffer zones of 100m, and the proposed location of a wastewater discharge point extending up to 100m upstream and 500m downstream of the wastewater discharge point. The survey areas are shown in Figures 3.3 and 3.8. Biodiversity and enhancement opportunities are also outlined in Figures 3.7 and 3.9. Representations have raised concerns with regards to the ecological and ornithological impacts of the proposal.

- 7.165 The applicant is committed to ensuring that construction practices will be in line with best practise guidance. Environmental protection measures will be fully detailed through a Construction Environment Management Plan (CEMP). Monitoring during the construction / restoration phase will be undertaken by an Ecological Clerk of Works (ECoW). Pre-construction surveys will be undertaken to confirm or update the baseline results and to record any evidence of protected species. Should a new species be identified, the appropriate SPPs would be included within the CEMP and an assessment undertaken to understand the impacts as well as any further mitigation measures which may be required.

Designated Sites – Natural Heritage

- 7.166 The site is not located within any statutory sites designated for its ecological interests and NatureScot and the Councils Ecology Team have no objection to the scheme. However, there are several internationally important sites within the surrounding area. The status of these sites means that the requirements of the Conservation (Natural Habitats, andc.) Regulations 1994 as amended (the 'Habitats Regulations') apply. Consequently, The Highland Council as the competent authority is required to consider the effect of the proposal on the European sites (Special Areas of Conservation and Special Protection Areas) before it can be consented. If significant effects are likely on the qualifying interests, then an Appropriate Assessment is required to be carried out under these regulations.

Morangie Forest Special Protection Area (SPA) and Novar SPA

- 7.167 At the closest points these SPAs are located 3.36km (Morangie SPA) and 8.81km (Novar SPA) from the application site and are protected for their breeding populations of capercaillie. NatureScot advise that in the absence of mitigation the proposal is likely to have a significant effect on the capercaillie populations of both SPAs. Consequently, The Highland Council, as competent authority, is required to carry out Appropriate Assessments. The applicant has outlined information to assist this assessment (section 3.10 of the EA). The Councils Appropriate Assessment are contained within Appendix 4 and 5 of this report. In line with detailed advice from NatureScot, mitigation measures are recommended, in the form of additional survey work with 1.5km of the access track. If the surveys find signs of lekking capercaillie, no vehicles should use the track between sunrise and 0900hrs during the capercaillie lekking season (March to May inclusive). Subject to this, the Appropriate Assessments conclude

that the proposal will not adversely affect the integrity of either of these designations.

Dornoch Firth and Morrich More Special Area of Conservation (SAC)

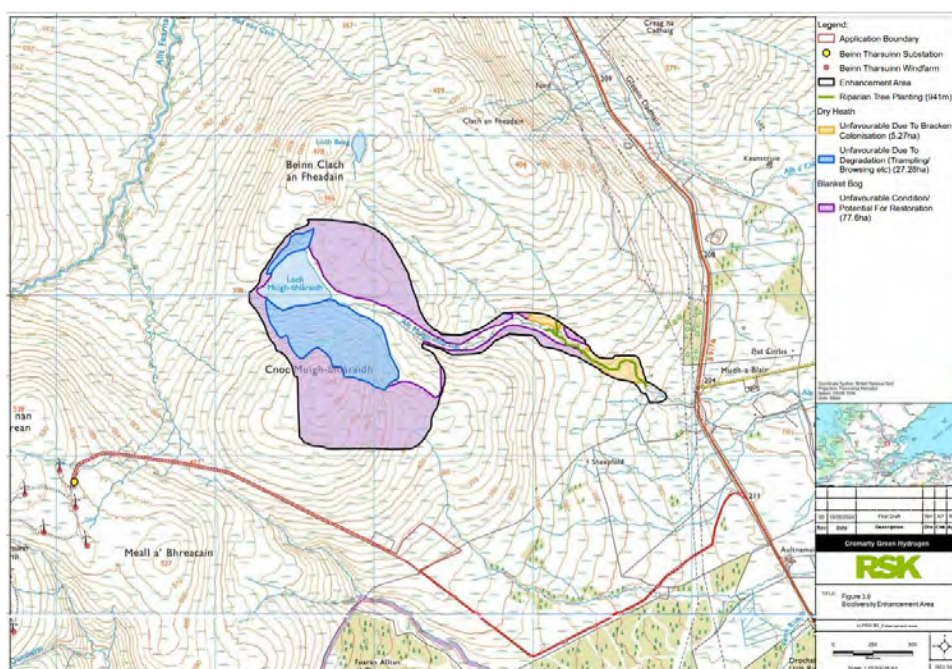
- 7.168 This SAC is protected for a number of coastal and marine habitats, otter and harbour seal and is located approximately 5.08km from the proposal. NatureScot advise that due to the distance between the abstraction and discharge points and the SAC means the proposal is unlikely to affect the quality and flow rate of water entering the SAC. In addition, due to the abundance of suitable supporting habitat for otter between the SAC and the proposed development the proposal is unlikely to affect SAC otter. As such NatureScot advise that it is unlikely that the proposal will have a significant effect on any qualifying interests either directly or indirectly. An Appropriate Assessment is therefore not required. however, the proposed development will need to comply with Environmental Quality Standards (EQS) for the discharge of wastewater. The subsequent EASR permit controlled by SEPA will cover the wastewater discharge standard from the site.

Species Protection

- 7.169 Protected species surveys found no evidence of protected species presence on the main site. However, signs of water vole were recorded near the wastewater discharge point, but outside of the disturbance zone. The Councils Ecology Team note that the water vole survey was undertaken out with the survey period for this species and request that pre-construction survey for this species is secured by condition. An otter spraint was also recorded during this survey therefore the Ecology Team request a condition securing Species Protection Plans (SPPs) for otter and water vole. Hare has been recorded in the nearby Beinn Tharsuinn Wind Farm and therefore may occasionally be present on site. Therefore, hares should be included in the pre-construction survey requirement. If any species are recorded within the development area or appropriate buffer, during the pre-construction survey then an SPP will be required for these species.
- 7.170 In relation to ornithological interests, NatureScot have commented in relation to Capercaillie and have no objection subject to the mitigation measures identified above. No specific breeding bird survey has been undertaken for this site, but a desktop analysis based on the surveys undertaken for the nearby windfarms has been included. The Ecology Team are content that based on this, the limited footprint of the site, and that habitat present that a general breeding bird survey is not required. However, the Ecology Team consider that the assessment should have included records from the Highland Raptor Study Group. However, given the scale of the development, the Ecology Team consider that any disturbance for breeding raptors present could be sufficiently mitigated. This information can be secured by condition and as above, any raptors present will require an SPP.

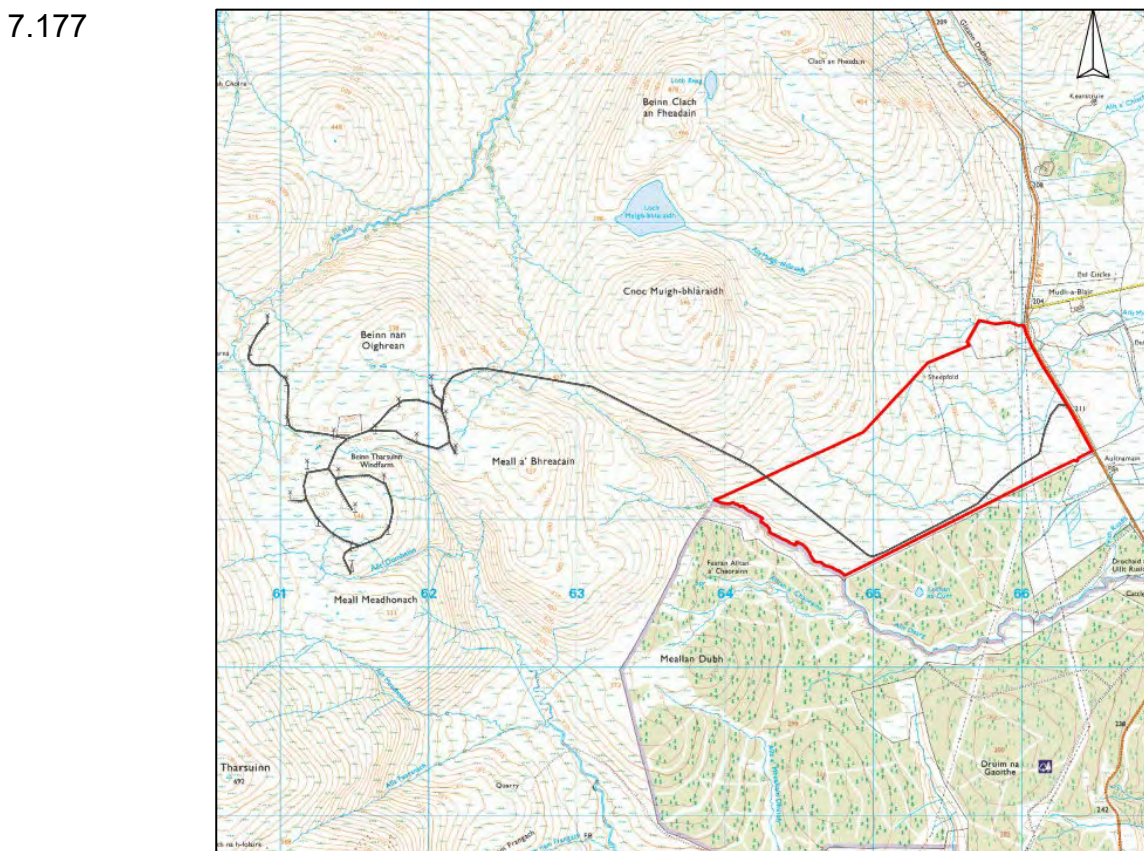
Habitat Loss and Biodiversity

- 7.171 Due to the climate and biodiversity emergency and the provisions of NPF4 Policy 3, the Council seeks to ensure that developments will deliver a positive effect for biodiversity. As a result, this project is expected to contribute towards the delivery of biodiversity enhancements in the vicinity of the site.
- 7.172 The dominant habitats on the main site are blanket bog (46.3%) and marshy grassland (53.7%). The assessment originally included the indirect effects within 10m of the infrastructure, which fell short of the 30m recommended in the NatureScot peatland guidance. The applicant has since increased this to 20m, and the Ecology Team are content with this approach. NatureScot has not raised concerns instead deferring to the Council's Ecology Team for its assessment.
- 7.173 The application states that 1.38ha of marshy grassland will be lost with a further 1.33ha lost indirectly. In addition, 1.64ha of blanket bog (M19a) will be lost as a direct consequence of the development with an additional 0.91ha of lost due to indirect effects of drying out within 20m of the infrastructure, this equates to a total of 2.55ha. The applicant's assessment of the wider area identified that these mire habitats are common and widespread in the wider locality. As noted in NatureScot Peatland Guidance (revised 2026), some peatland habitats are more sensitive to impacts than others. This guidance further outlines, that M19a could be a priority peatland habitat, where impacts have the potential to raise issues of national interest. NatureScot has not raised concerns in relation to this application.
- 7.174 In line with NatureScot Peatland Guidance, to achieve compensation a 1:10 ratio of area of peatland lost, peatland restored is required. As such a minimum of 25.5 ha is required to be enhanced to compensate for the loss of bog. In addition, a further 10% is required for biodiversity enhancement. The applicant has identified large areas of bog habitat in unfavourable condition within the wider estate that could be suitable for restoration (EA Figure 3.7 and 3.9 – see the plan below).



7.175 EA Figure 3.9 – details the large areas of bog habitat in unfavourable condition within the wider estate that could be suitable for restoration.

7.176 There is also a commitment to provide approximately 5ha of heathland in the wider estate and up to 941m of native riparian tree planting along the Allt Muigh-bhlàraidh watercourse. This is indicated in green on the above plan. This would improve connectivity through the wider area, for species such as foraging/commuting bats and otter. Tree planting will also benefit ornithological species, such as black grouse. In addition, there may be opportunities to improve or extend areas of M6 habitats through vegetation management and/or drainage management within the rest of the application site or a designated area off-site as compensation for the unavoidable direct habitat loss as a result of the proposed development. This is detailed further elsewhere in this Report on Handling.



7.178 The potential compensation and enhancement areas identified in EA Figure 3.9 could also provide a link to the existing Habitat Management Area (HMA) for the adjacent Beinn Tharsuinn Wind Farm. This is identified by the red line in the above plan. Importantly, the existing HMA is outwith the site boundary and the enhancement area proposed by this current application.

7.179 Although the habitat compensation and enhancement measures outlined will be off-site, these will be close to the development and within the wider estates' landholding. In addition, as outlined above the site boundary and the area identified for potential enhancement is not covered by the existing Habitat Management Area for Beinn Tharsuinn Wind Farm. As such, Officers are content

that these measures can be delivered through a detailed Habitat Management Plan (HMP) that can be secured by condition, rather than a formal legal agreement. The condition will also require monitoring and management regimes for a minimum of 30 years. Subject to this the Ecology Team have no objection and are content that the proposal meets the enhancement measures required for NPF4 Policy 3.

- 7.180 In relation to trees and woodland, the proposed development does not impact on this resource. Consequentially, Scottish Forestry and the Councils Forestry Team have no objection to the application.
- 7.181 Overall, subject to conditions, this aspect of the proposal raises no significant concerns and is considered to comply with the requirements of NPF4 policies 3, 4 and 5 and policy 57-61 of the HwLDP.

Water, Flood Risk, Drainage and Soils

- 7.182 The applicant's assessment is outlined in Chapter 4 of the EA. A 2km study area has been used and, in some instance, effects up to 5km downstream have been included (study area – Figure 4.1). The application is supported by peat depth surveys, a Peat Management Plan, a Drainage Impact Assessment, water quality monitoring at potential locations for wastewater discharge, GWDTE survey and a Private Water Supply Survey. Mitigation by design measures include the use of the existing access track to Beinn Tharsuinn Wind Farm, cable installation within the existing road verge and the minimisation of peat excavation. As detailed above, the site will be developed in accordance with a CEMP and will be overseen by an Environmental Clerk of Works.
- 7.183 There are no sites designated for any aspect of hydrology, hydrogeology, geology or soils within the application site. The nearest are The Struie Channels SSSI (1.7km) and Kinrive-Strathrory SSSI (4.32km), given the distance and no hydraulic linkage these designations have been scoped out of further assessment.
- 7.184 Flood mapping indicates there is no risk of flooding within any part of the application site. No new or watercourse crossings are required and no existing crossings require upgrading. In line with consultee advice, food risk has been scoped out of further assessment. The Councils Flood Risk Management (FRM) Team has no objection and is content that the flood risk is low and SEPA have not raised flood risk concerns.
- 7.185 In terms of drainage, the application is supported by a high-level Drainage Impact Assessment (Technical Appendix 4.2). The drainage would discharge into the attenuation basin. All drainage infrastructure would be designed to accommodate a 1-in-200-year storm plus allowance for climate change. The Councils Flood Risk Management Team is content with the proposals at this stage but requests that the detailed final drainage design is secured by condition.
- 7.186 Foul drainage from the welfare facilities will be dealt with via a treatment package. This will comprise a septic tank and reed beds. The treated sewage

will infiltrate to ground via a mound soakaway. The remaining solids in the septic tank will be periodically taken offsite via a road tanker.

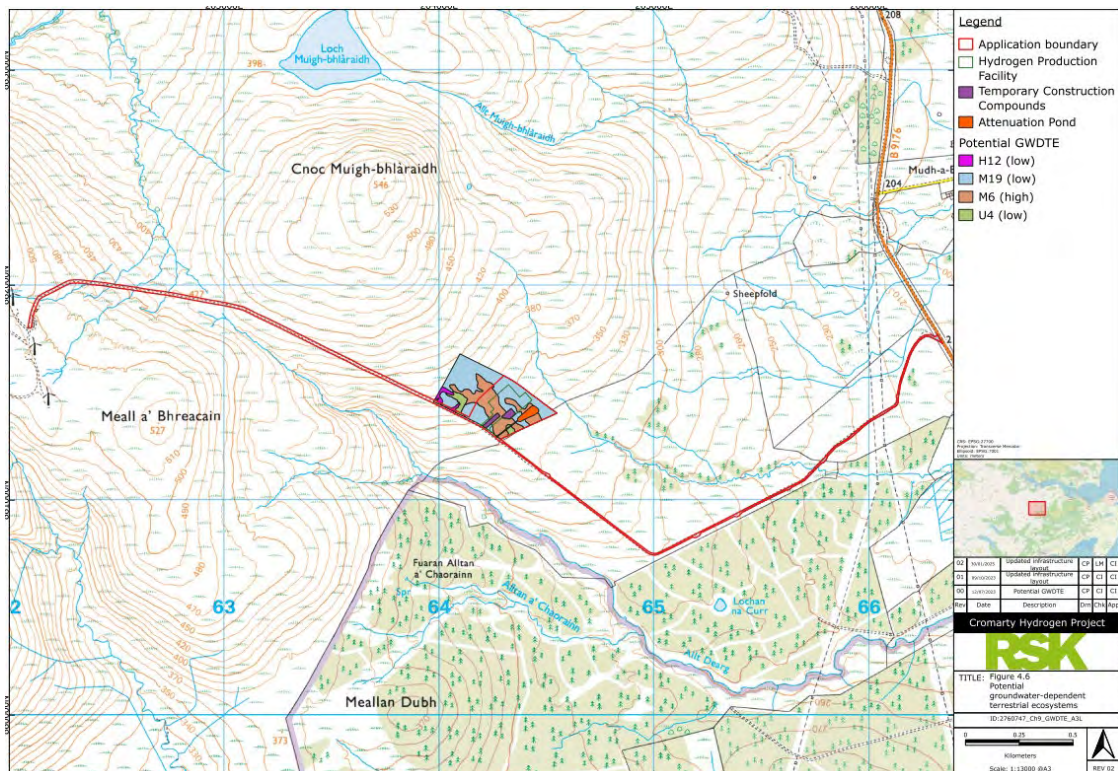
- 7.187 As detailed, the application now includes details of the proposed water supply, which is an essential part of the production process. The applicant has confirmed that 300 cubic metres of water is required per day, this will be abstracted from four boreholes (BH1, BH2, BH3 and BH6). This volume equates to less than one Olympic size swimming pool of water per week.
- 7.188 It is intended that the boreholes will be used in rotation, with one or two working, others resting or on standby, this protects supply if any single borehole underperforms. The applicant has confirmed that there will be ongoing monitoring of the borehole water levels, an hourly abstraction log, and water quality will be checked daily. Automatic alarms will also be installed to provide an early warning monitoring system.
- 7.189 Community Council and third parties have raised concerns, particularly in relation to the abstraction amount, the effects on the water table and surrounding land uses and the quality of the waste water which will be discharged back into the local water environment. Impacts upon the water source for Balblair Distillery was also highlighted in public representations.
- 7.190 Groundwater abstraction can potentially reduce baseflow to local surface water features (streams, wetlands), which could affect features relying on that supply, including other abstractions. To assess this risk, the applicant requested data from SEPA for all abstraction and discharge licences, rainfall, groundwater and surface water levels, and water quality within 5 km of the site. No registered abstraction licence was recorded for Balblair Distillery. Several discharge licences exist in the wider area, mostly for private sewage (e.g. septic tanks) and culvert works. A reduction in baseflow could impact dilution of these discharges, but no direct link to Balblair Distillery is noted.
- 7.191 In terms of baseflow assessment, the applicant has confirmed that in 2024 (Sept/Oct) hydrogeologists tested the four supply boreholes; a fifth borehole was used for monitoring but discounted as an abstraction point. Each was pumped continuously for 48 hours while measuring how far its water level dropped, how quickly it recovered, and any effect nearby. Levels were tracked in the monitoring borehole and in three nearby burns; the Allt Dearg, Alt na Meine and Alt Fearn. No drawdown or reduction in water levels in these streams was observed that could be attributed to the test pumping.
- 7.192 The intended onsite water supply will need to be treated before the water is fed into the electrolyzers. As is common in Highland groundwater, there are naturally occurring substances within the water; iron and manganese. To deal with this the raw water will be filtered, treated and de-ionised in a demineralisation unit. This information was submitted in support of the CAR licence to SEPA.
- 7.193 In terms of effects on Private Water Supplies (PWS), one PWS (Aultnamain) was identified as having potential connectivity. However, the applicant contends that impacts are unlikely as the boreholes for abstraction are located more than 2 km west of this PWS. With consent of the PWS owner the applicant proposes pre-

commencement monitoring of the water level and quality. This will establish a baseline in which monthly post construction monitoring can be assessed against. The applicant identifies that if concerns are raised then abstraction from the boreholes would be stopped immediately and an investigation would be carried out to identify and resolve the issue. Environmental Health have no objection, subject to a detailed PWS monitoring and mitigation plan being secured by condition. This will include mitigation measures in the event of the PWS being disrupted.

- 7.194 SEPA granted a CAR licence for the groundwater abstraction in early 2025. This licence allowed for year-round abstraction but within defined limits; of no more than 300m³ in any day and 109,500m³ in any year across all boreholes combined, with individual daily caps matching the tested rates. The licence also required daily abstraction records and incident report notification to SEPA. As detailed elsewhere, the requirement for a CAR License has since been superseded by the Environmental Authorisations (Scotland) Regulations (EASR). However, SEPA have since confirmed that the CAR licence automatically became an EASR permit on 1 November 2025. The conditions in the EASR permit will be the same as the conditions in the CAR licence.
- 7.195 Scottish Water does not object to the application. It confirms there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed development.
- 7.196 In terms of wastewater, third parties have expressed concerns regarding impacts upon the surrounding water environment, and the quality of water for Balblair Distillery. The applicant states that the manufacturing process does not produce chemical or fossil-fuel-related pollutants. Instead, the wastewater is a more concentrated form of the water extracted, which is produced by purifying the raw water.
- 7.197 To deal with this, an onsite treatment plant is proposed. The treated water will then be discharged to the local water environment via a buried pipeline in the road verge of the existing access track. A wastewater discharge point (SP2) has been identified in Figure 5 in EA Appendix D. The applicant is committed to ensuring that the water quality discharged from the installation will not exceed the pre-development baseline; the existing stream's specification.
- 7.198 In relation to the distillery, the applicant outlines that Balblair Distillery is located near the mouth of Craigroy Burn and sources its water from this burn, which is noted for its high water quality. Following a wastewater discharge study, Allt na Meane was selected to avoid impacts on downstream receptors on the Craigroy Burn. The distillery's water source would therefore not be impacted.
- 7.199 The EASR permit administered by SEPA will cover the discharge of wastewater. Any discharge to surface water must meet strict water quality standards and that further detailed studies and impact assessments are required to ensure there are no significant adverse effects on downstream users as part of the EASR authorisation application. SEPA guidance requires that discharges do not occur

in watercourses with low flow or that dry up, to prevent pollution and ensure adequate dilution.

- 7.200 In relation to the original scheme, SEPA requested further information regarding the proposed source, method and location for fire water. As part of the revised scheme, the applicant has confirmed that fire water will be stored on site in a fire water tank (item 3 on the site layout plan – 114153-00-GA-L-0002). The capacity for this tank will be 1077m³ (net), 1362 m³ (gross) and meet + 10% margin required for the fire water case. The plans also detail the location of a fire/blast wall (6 on the site layout plan) and a firefighting system (item 30). Given its rural nature, and potential wildfire risk, a Fire Risk Management and a fire water containment strategy can also be secured by condition.
- 7.201 The Scottish Fire Service does not object to the application but requests further information from the applicant in relation to internal building layouts. This information would also form part of its consultation through the subsequent building warrant application. This will ensure that the development complies with The Building (Scotland) Regulations 2004 and The Fire (Scotland) Act 2005.
- 7.202 In terms of habitats, groundwater-dependent terrestrial ecosystems (GWDTE) are protected under the Water Framework Directive and potential GWDTE. Surveys identified four potential groundwater-dependent communities within the application site (H12, M6, M19 and U4). Of these only M6 is likely to have high groundwater-dependency. The applicant identifies that the design of the proposal has sought to reduce impacts on potentially GWDTE within the main site area. However, it has not been possible to entirely avoid placing the infrastructure partly within an area of M6 potentially highly groundwater-dependent habitat, as it spans the width of the main site area. This is indicated in brown on EA Figure 4.6.



- 7.203 Further assessment by the applicant considers that due to the presence of peat, no springs or seepage features present and the underlying bed-rock type, it is unlikely that any of the NVC are truly groundwater-dependent, instead relying on a combination of rainfall and surface water. SEPA are content with the applicant's assessment and conclusion which identifies that the M6c and other potential GWDTEs are unlikely to be groundwater dependent due to the hydrogeological settings. SEPA also accept that development on the M6 habitat is unavoidable in order to avoid peatland habitats and the habitat restoration area for Beinn Tharsuinn Wind Farm.
- 7.204 The applicant considers that there may be opportunities to improve or extend areas of M6 habitats through vegetation management and/or drainage management within the rest of the application site or as part of off-site as compensation measures. In addition, the applicant identifies that suitable drainage would be installed on the site provide continuity of flow. This will avoid areas drying out, which will help to maintain M6 habitats downslope of construction areas. Furthermore, the applicant identifies that any required modified or additional drainage within the site would not discharge directly into or upslope of identified sensitive habitat areas. This is to minimise the potential for water and nutrient flushing in these areas. SEPA accept the potential losses of the habitat and support the proposed compensation for these losses through the planned habitat restoration. Consequentially, SEPA do not object subject to the implementation of the outlined mitigation measures and planned habitat restoration. This is required to be agreed through the submission of a finalised Biodiversity Enhancement Plan and secured by condition.
- 7.205 In relation to peat, NatureScot's Carbon and Peatland map identifies that the majority of the site is Class 1. Three small areas of Class 2 are identified on the mapping within the cable route corridor. Class 5 is mapped to the east of the site access, the west of the main site area and at several locations along the cable route corridor. NPF4 Policy 5 c) states that development proposals on peatland, carbon-rich soils and priority peatland habitat will only be supported for: ii) The generation of energy from renewable sources that optimises the contribution of the area to greenhouse gas emissions reductions targets. Part d) goes on to identify that if development is on peatland, carbon-rich soils or priority peatland habitat then a detailed site specific assessment will be required.
- 7.206 Phase 1 and 2 peat depth surveys have been undertaken, additional peat data was collected in 2024. Peat depth surveys indicate that much of the application site is underlain by peat. However, it identified that the blanket peat is not as extensive as the soils mapping indicate, and that peat distribution and thickness are more variable than the mapped extents (EA Figure 4.5). The peat and soil depths recorded ranged from 0.2m to 3.6m. However, within the site the majority of peat is less than 1m in depth, while the southernmost part of the main site area has no peat or less than 0.5m in depth.
- 7.207 The application is supported by an outline Peat Management Plan (PMP) (Technical Appendix 4.1). This anticipates that the 27,722m³ of peat to be excavated (12,683 Acrotelm and 15,039 of Catotelm) will be used in the dressing of edges around the development and for peatland restoration within the vicinity

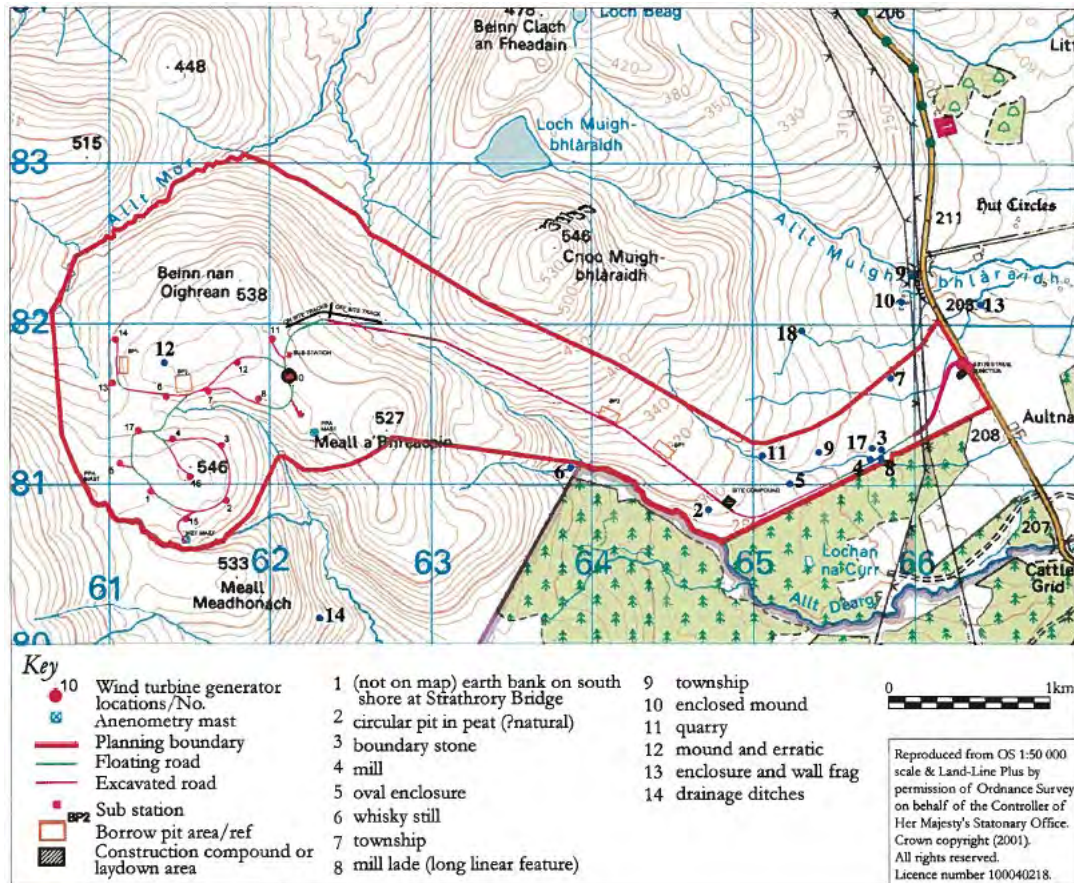
of the application site. Whilst SEPA has no objection, it considers further details are required and recommends that a detailed site-specific Peat Management Plan is secured by condition. SEPA also request that any micro-siting limit ensures that it is not sited on onto deeper peat.

- 7.208 NatureScot consider that impacts on priority peatland habitats are unlikely to raise issues of national interest and have no objection to this aspect of the scheme. Matters relating to peatland compensation and enhancement are outlined in the 'Natural Heritage' section of this report on handling.

Built and Cultural Heritage

- 7.209 Cultural Heritage was scoped out of further assessment in the original EA. However, a further assessment (EA Technical Appendix 1.5) was submitted to take account of the borehole and wastewater discharge points now included within the application. There are no heritage designations or assets within the site boundary. The applicant identifies 11 non-designated heritage assets within 1km of the site, three listed buildings and six Scheduled Monuments within 5km. Of those the one listed building (LB1815) and two Scheduled Monuments (SM5495 and SM4730) are located within the zone of theoretical visibility of the proposed development.
- 7.210 In addition, Edderton Community Council and third parties highlight that there is an illicit still, iron mill and shielings close to the proposed site. These features are of significant archaeological and historical interest and should not be disturbed. In response the applicant highlights that MHG8040 (Meall' A' Bhreacain) relates to shielings which are located 380m to the southwest of the application site. This is included within the applicant's baseline. There is also an iron working site at Blackpark (MHG45367) which is 3.5km to the northeast of the site. Officers have also cross referenced the third party and Community Council response with the Archaeological walkover survey carried out for the operational Beinn Tharsuinn Wind Farm.

7.211



7.212 As detailed above, the Beinn Tharsuinn Wind Farm walkover survey included the current application site boundary. This identified a number of heritage features which included a whisky still (feature 6). These features are not individually recorded on the Councils Historic Environment Record, and not all appear to have been included in the applicants' baseline report.

7.213 However, no heritage assets are recorded within the main site area or near to the existing access track between the site and the Beinn Tharsuinn Wind Farm substation to the northwest. Officers and the Councils Archaeologist are content that development on the main site, borehole 3 and the cable connection to the substation, is unlikely to result in any direct impacts upon any known heritage assets, including those raised by the Community Council and third parties.

7.214 There are however several heritage assets recorded close to the existing access road between the public road and the main site. Works along this route will involve localised resurfacing works to the track. The wastewater pipe will also be buried within the road verge until the proposed discharge point into a watercourse (SP2). As a consequence, Officers have requested further information in relation to potential effects on heritage assets in this area.

7.215 In response, the applicant's archaeology has advised that the Beinn Tharsuinn Wind Farm walkover survey mapping indicates the presence of two heritage assets in the vicinity of the pipeline which may be affected (a mill (feature 4 on the above plan and a mill lade – feature 8). The two features may be related, and a pipeline between them may impact on one or the other. Historic mapping

indicates that the lade runs along the southern redline boundary for the project and would not be impacted. The mill is not shown on historic mapping. The Wind Farm survey indicates that the mill is on the north side of the existing track. Therefore, it should be possible to route the pipeline in the opposite verge, avoiding any impacts.

7.216 The applicant's archaeology advisor recommends that an on-site pre-construction survey of the mill and the lade is undertaken. This will ensure that these features are taken into account in the final pipeline design. The Council's Archaeologist agrees that this survey should be secured by condition. Subject to this it is considered that direct effects on heritage features can be mitigated.

7.217 **Indirect Effects:** as noted above the following designated assets are located within the zone of theoretical visibility of the proposed development:

- SM5495 Casandamff, settlement and farmstead. This comprises three prehistoric hut circles which are defined by stone walls up to 1m in height, entrances are noted to the east. The farmstead comprises a longhouse with ancillary buildings.
- SM4730 Upper Bogrow, settlement and field system. This comprises seven stone walled huts and house platforms with associated field systems. Entrances are noted to be in the northeast and southwest of the structures.
- LB1815 Meikle Daan (B listed) comprises a two storeyed late medieval/early post medieval farmhouse/lairds house with associated walled enclosures and ruinous out-buildings.

Overall, the applicant's assessment considers that the site is unlikely to contribute to the significance of any heritage assets and that the proposed development is unlikely to challenge the prominence of any designated assets.

7.218 In relation to the Scheduled Monuments (SM5495 and SM4730), the applicant's assessment outlines that they are designated for their intrinsic interest, with their physical remains holding the potential to provide greater understanding of a past society. The area surrounding the monuments provides context for the likely site selection, associated land use, and extent of influence of their inhabitants. However, the monuments are neither defensive nor prominent features for which long distance views contribute to its significance. It is also not considered that the monuments setting extends as far as the application site which is over 4km to the west. As such the applicant contends that any visibility of the proposal would not significantly affect their cultural significance. Officers are content with this assessment and Historic Environment Scotland have no objection to the application.

7.219 In relation to the B listed building (LB1815), the applicant's assessment outlines that the building is designated for its architectural and historic interest being an example of later 17th century architecture with 18th century re-modelling. As a farmhouse, the applicant argues that it was not designed to be a defensive or prominent landscape feature from which long-distance views contribute to significance. In addition, as the proposal is located over 4km to the southwest, it is not considered that development site contributes to its cultural significance. As such the applicant contends that any visibility of the proposal would not

significantly affect their cultural significance. Officers are content with this assessment and Historic Environment Scotland have no objection to the application.

- 7.220 Overall, this aspect of the proposal raises no concerns and is considered to comply with the requirements of Policy 11 e) of NPF4 and Policy 57 of the HwLDP.

Other Material Considerations

- 7.221 Given the complexity of major developments, and to assist in discharge of conditions, the Planning Authority usually seeks that the developer employs a Planning Monitoring Officer (PMO). The role of the PMO, amongst other things, would include the monitoring of, and enforcement of compliance with, all conditions, agreements and obligations related to this permission (or any superseding or related permissions) and shall include the provision of a bi-monthly compliance report to the Planning Authority.
- 7.222 The applicant is seeking planning permission in perpetuity for the development. However, to reflect potential changes in technology and production scales within the emerging green hydrogen energy industry, Officers consider it appropriate to time limit the operational consent period for this development to 50 years. An interim outline decommissioning and restoration plan, followed by a more detailed plan can be secured by condition, together with a financial restoration bond.

Non-material considerations

- 7.223 Several third parties have raised that the development may adversely affect property prices in the area and that individuals should be compensated. Private financial interests is not a material planning consideration.
- 7.224 Concerns have also been raised in relation to community benefit. As highlighted in the report this is not a material planning consideration.

8. MATTERS TO BE SECURED BY LEGAL AGREEMENT / UPFRONT PAYMENT

- 8.1 To mitigate the impact of increased Heavy Goods Vehicle (HGV) traffic on the B9176 arising from the proposed development (construction and operational), a financial contribution to the value of £160,000 is required towards delivering local road network mitigation. The precise mechanism for securing this contribution is yet to be concluded (either an up-front payment, Section 75 or Section 69, or alternatively direct developer physical delivery), with this to be secured ahead of the issue of any planning permission. The contribution is to deliver road safety measures at:
- Dalnavie Crossroads, Ardrross: installation of gateway features on both approaches to the crossroads along the B9176; and
 - Strathroy Bridge: introduction of a priority traffic management system at the bridge.

Should a legal agreement be required, 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.

- 8.2 A wear and tear legal agreement will also be required under Section 96 of the Roads (Scotland) Act. This would include the provision of a Road Bond or similar security. The agreement would take account of any neighbouring developments that might progress concurrently with the works proposed and would make provision for a mechanism for apportionment of costs between respective developers.
- 8.3 As outlined above, Officers are content that a suitable off-site scheme that can deliver biodiversity compensation and enhancement in line with NPF4 Policy 3 can be delivered by a planning condition, rather than through a planning legal agreement.
- 8.4 Officers consider it appropriate to time limit the operational consent period for this development to 50 years. At the end of its operational life, or in the event of prolonged plant non-production, usual decommissioning and restoration requirements should be secured. If the decision is made to decommission, all components, track access and associated infrastructure require to be removed from the site. The Planning Authority also requires that any foundations remaining on site; the exposed concrete plinths would also be removed to a depth of 1m below the surface, graded with soil and replanted. Cables also need to be cut away below ground level and sealed. It would be expected that any tracks or areas used for constructing the development would be reinstated to the approximate pre-development condition. An Interim Restoration and Decommissioning Plan (RDP) has been included in the EA (Technical Appendix 1.3). This, together with a restoration bond, can be secured by condition.

9. CONCLUSION

- 9.1 The Scottish Government has committed to achieving net zero greenhouse gas emissions by 2045. As part of this, the Scottish Government in their Hydrogen Policy Statement outlined that hydrogen will play a critical role in decarbonisation of the energy system. The vision is for Scotland to become a leading hydrogen nation in the production of reliable, competitive, sustainable hydrogen. To start with, regional or local production of renewable hydrogen will play an important role in helping to build the domestic hydrogen market with this having the potential to scale up quickly. The policy statement also projected that if Scotland becomes an exporter of green energy to Europe this could result in the requirement for green hydrogen production of 126 TWh, a £25bn contribution to GVA and over 300,000 jobs by 2045.
- 9.2 The statement also confirmed the Governments ambition for at least 5GW of renewable and low-carbon hydrogen by 2030, and at least 25GW by 2045. It sets out how Scotland's abundant natural resources, skills and supply chain offer the potential for large scale production of renewable hydrogen from offshore wind to be a key driver of the longer-term hydrogen economy in Scotland. As

such it recognises the need for pace to capitalise on opportunities within the domestic and global hydrogen market. It outlined a funding commitment towards the development of our hydrogen economy. Also, support for the transition and growth of Scotland's existing supply chain, including in the development of skills and manufacturing capacity, that can play a significant role in the hydrogen economy both domestically and internationally.

- 9.3 The Cromarty Firth Area has been identified as a candidate regional hydrogen hub under the Scottish Governments Hydrogen Action Plan (2022) and through the Inverness and Cromarty Firth Green Freeport. This identifies the North of Scotland Hydrogen Programme aims to develop a state-of-the-art hub to produce, store and distribute renewable hydrogen to the local area, the UK and Europe. This area is considered to be ideally located close to large-scale renewable resources, with local demand from distilleries, industry, transport and domestic applications. This development therefore has the clear potential to be a catalyst for further green hydrogen production in the region which receives strong planning policy support at both the national and regional level.
- 9.4 The proposed development looks to utilise renewable energy generation at source (within Highland), utilising existing grid transmission infrastructure and curtailed renewable wind energy. The operation of the plant would utilise an already consented on site water supply and would be accessed via an established wind farm site access. A key early focus for this current application is the whisky industry, which the applicant states is the second largest carbon emitter in Scotland, after energy and fuel production. In this regard, the applicant highlights that the project will provide direct support for the 'Green Distillery' transition, enabling local whisky producers to decarbonise and support their net-zero targets. The applicant identifies distances to key potential hydrogen users include two distilleries within 15km and a maltings within 45km. In addition to the construction and long-term operational jobs arising from this development, the proposal therefore has the potential to support other existing and potential future businesses in Highland; thereby maximising the socio-economic benefits of renewable resources within the region.
- 9.5 There are clear impacts that might be expected from this development. The site selection has however been well informed to meet the applicant's operational requirements, with the plant being remote from affected communities, with the development being void of any environmental designated sites and would not give rise to any significant adverse environmental effects. The amendments made to the design and layout through the application process have helped to ensure the adverse landscape and visual impacts remain localised and can be appropriately mitigated.
- 9.6 A key operational constraint for the proposal in this location is altitude and susceptibility to plant operation curtailment owing to winter weather conditions resulting in seasonal closures to the B9176 Struie Road (a timber haulage route). Whilst not objecting, this matter has raised Transport Planning concerns and community objections, however, a proposed condition of the plant's operation is strict attendance to an Operational Traffic Management Plan ensuring that safety remains paramount, with conditions also: restricting operational HGV vehicles routing via 1) the northern section of the Struie Road, and 2) the Ardross and

Caplich roads; further road structural integrity survey work to be undertaken; a wear and tear agreement; and proportionate improvements to be funded by the developer to introduce gateway features on both approaches to the Dalnavie Crossroads, Ardross, along the B9176, and priority traffic management system at Strathrory Bridge.

- 9.7 The environmental effects of proposed development would also to be well regulated from an environmental perspective. In addition to the requirement for planning permission, further consents for the safe operation of the facility are required, including Hazardous Substances Consent, as well as an industrial operational environmental consent authorised by SEPA under the Environmental Authorisations (Scotland) Regulations 2018 (EASR) (formerly known as a Pollution Prevention and Control (PPC) permit), with the consented water actives at the site also being regulated by SEPA. No statutory consultees have raised any objection to the application or have indicated that any of the subsequent consents would not be obtainable.
- 9.8 The proposed development as now presented would not be considered significantly detrimental in any respect, and the benefits associated with green hydrogen production and its economic benefit are considered to outweigh all adverse impacts of the proposal. 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.

10. IMPLICATIONS

- 10.1 Resource: Not applicable
- 10.2 Legal: Not applicable
- 10.3 Community (Equality, Poverty and Rural): Not applicable
- 10.4 Climate Change/Carbon Clever: The application is helping to deliver a contribution toward climate change targets.
- 10.5 Risk: Not applicable
- 10.6 Gaelic: Not applicable

11. RECOMMENDATION

**Action required before Y
decision issued**

Conclusion of Section 69 / Y
Section 75 Obligation or Up
Front Payment.

11.1 **Subject to the above actions**, it is recommended to **GRANT** the application subject to:

- A. The Committee granting delegated authority to the Area Planning Manager – North or South to agree the finished condition wording, with any substantive amendments to be subject to prior consultation with the Chair of the North Planning Applications Committee;
- B. The Committee granting delegated authority to the Area Planning Manager – North or South to agree the delivery mechanism for securing the road improvements required at Dalnavie Crossroads and Strathrory Bridge; and
- C. The following conditions and reasons.

RECOMMENDED CONDITIONS AND REASONS

1. Duration of Consent

(1) This consent is for a temporary period comprising: -

- (i) a maximum operational period of 50 years from the date that hydrogen is first produced from the Development (“First Production Date”); or
- (ii) in the event that the facility does not produce hydrogen for a continuous period of 2 years post first production date, unless otherwise first agreed in writing by the Planning Authority; then
- (iii) the development shall be decommissioned and the site restored in accordance with the approved plans and timescales under conditions 31-33; and

(2) Written confirmation of the First Production Date shall be provided to the Planning Authority no later than one calendar month after the occurrence of that date.

(3) The operator shall, at all times after the first commissioning of the development (as required under part (2)), record information regarding the quantity of hydrogen produced on a monthly basis. The information shall be made available to the Planning Authority within one month of any request by them.

Reason: To enable the Planning Authority to calculate the date of expiry of the consent and in recognition of potential changes in technology and production scales within the emerging green hydrogen energy industry.

2. Implementation Period

The development hereby permitted shall be commenced within 3 years from the date of this planning permission.

Reason: To define the duration of this consent and to accord with the provisions of Section 58 of the Town and Country Planning (Scotland) Act 1997, as amended.

3. In Accordance with the Provisions of the Application

The development shall be constructed and operated in accordance with the provisions of the Application and the Environmental Appraisal (EA), except in so far as amended by the terms of this consent.

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

4. Schedule of Mitigation

- (1) No development shall commence until a Schedule of Mitigation has been submitted to and approved in writing by the Planning Authority. This Schedule shall encompass a list of all mitigation measures from the Environmental Appraisal Report, any other commitments made by the applicant and all relevant mitigation secured by conditions attached to this permission with defined timescales for implementation of each mitigation measure.
- (2) Thereafter, the approved Schedule of Mitigation shall be implemented in full unless otherwise approved in writing by the Planning Authority.

Reason: To ensure that the identified mitigation through the and application and supporting Environmental Appraisal Report is carried out in accordance with the approved details.

5. Development Details (levels, external materials and layout)

(1) No development shall commence until full details of the siting and design of the development, including final ground works, and detailed specifications and materials for of all the development infrastructure has been submitted to and approved in writing by the Planning Authority. The development details shall include but shall not necessarily be limited to the following:

- a) Details of the appearance, make and model of all of the infrastructure units to be installed on site, including sound level output where relevant;
- b) The elevations, layouts, external colour and finish materials of the development (including, buildings, structures, lighting, boundary treatments, access tracks and hard standing). The details shall ensure recessive (non-reflective finish) materials and colours are used to reflect the rural nature of the site;
- c) The final layout and dimensions of the servicing, turning and parking areas (including EV charging points);
- d) No element of the development shall have any text, sign or logo displayed on any external surface of the facility, save those required by the applicant's safety systems and law under other legislation; and
- e) Site-wide cross sections, restoration profiles, elevations and levels (to an identified datum point) across the site to accurately show the development and levels throughout the site. This shall demonstrate re-profiling works which is sympathetic the landform. It shall also include cut and fill calculations which demonstrate the anticipated material extraction and placement of the required groundworks.

(2) The infrastructure shall be installed and operated in accordance with the details approved under part (1) and, with reference to part (1)(b), the

infrastructure shall be maintained in the approved colour, free from rust, staining or discolouration for the lifetime of the development.

Reason: In the interests of amenity, including the visual amenity of the area.

6. **Landscaping**

- (1) No development shall commence until details of a scheme of hard and soft landscaping works have been submitted to, and approved in writing by, the Planning Authority. Details of the scheme shall include:
 - a) All earthworks and existing and finished ground levels in relation to an identified fixed datum point;
 - b) A plan showing existing landscaping features and vegetation to be retained;
 - c) The location and design, including materials, of any existing or proposed walls, fences and gates;
 - d) All soft landscaping and planting works, including plans and schedules showing the location, species and size of each individual tree and/or shrub and planting densities. This shall include details showing the final gradient of the embankment and measures used to soften its profile to limit an overly engineered appearance; and
 - e) A programme for preparation, completion and subsequent on-going maintenance and protection of all landscaping works.
- (2) Thereafter, landscaping works shall be carried out in accordance with the approved scheme, with all planting, seeding or turfing as may be comprised to be carried out in the first planting and seeding seasons following the commencement of development, unless otherwise stated in the approved scheme.

Any trees or plants which within a period of five years from the completion of the development die, for whatever reason are removed or damaged shall be replaced in the next planting season with others of the same size and species.

Reason: In order to ensure that the approved landscaping works are properly undertaken on site.

7. **Construction Environment Management Plan (CEMP)**

- (1) No later than three months prior to the Commencement of the Development, a Construction and Environmental Management Plan (CEMP) containing site specific details of all on-site construction works, post-construction reinstatement, drainage and mitigation, together with details of their timetabling, shall have been submitted to, and approved in writing by, the Planning Authority, in consultation with SEPA and NatureScot. The CEMP shall be informed by the site, ground investigation works and best practice guidance.
- (2) The CEMP shall include (but is not limited to):

- (a) An updated Schedule of Mitigation (SM) as it relates to construction, highlighting mitigation set out within each chapter of the Environmental Appraisal Report, subsequent information, and the conditions of this consent, and processes to control / action changes from the agreed SM;
- (b) A phasing plan for the construction works;
- (c) a site waste management plan (dealing with all aspects of waste produced during the construction period other than peat and other carbon rich soils), including details of contingency planning in the event of accidental release of materials which could cause harm to the environment, evidencing all proposals comply with SEPA's guidance and the requirements of the waste management licensing regime as appropriate;
- (d) details of the location, layout, formation of the construction compound, welfare facilities, any areas of hardstanding, turning areas, internal access tracks, car parking, material stockpiles (including heights), oil, fuel and chemical storage, lighting columns, and any construction compound boundary fencing required for the construction period;
- (e) a dust management plan detailing all mitigation/dust suppression measures intended to reduce the impacts of dust on site, including measures to reduce dust on roads;
- (f) site specific details for management and operation of any concrete batching plant (including disposal of pH-rich waste water and substances);
- (g) details of measures to be taken to prevent loose or deleterious material being deposited on the local road network including wheel cleaning and lorry sheeting facilities, and measures to clean the site entrances and the adjacent local road network;
- (h) a Pollution Prevention and Incident Plan incorporating a Pollution Prevention Plan, Pollution Incident Plan and a Pollution Control Monitoring Plan, this shall provide measures to protect watercourses, groundwater, management of natural surface hydrological flows (flushes, springs, etc.) and protection of peatland/soils, arrangements for the storage and management of oil and fuel and other chemicals on the site and sewage disposal and treatment;
- (i) Soil storage and management details including outline quantities, locations and management of long term storage of construction generated top soils required to facilitate future site restoration;
- (j) a drainage management strategy, demonstrating how all surface and waste water arising during and after construction is to be managed and prevented from impacting on the water environment and to mitigate flood risk;

- (k) a surface water and groundwater management and treatment plan, including details of the separation of clean and dirty water drains, and location of settlement lagoons for silt laden water;
- (l) water quality monitoring (refer to condition 9);
- (m) private Water Supply Protection Measures, including a programme of water quality monitoring (refer to condition 10);
- (n) measures to mitigate effects on Groundwater Dependant Terrestrial Ecosystems (GWDTEs), and requirement to identify, mark out and avoid any areas of springs or flushes (this shall be in accordance with measures outline in Table 4.10 of the Environmental Appraisal Report);
- (o) details of temporary site illumination, including measures to ensure light spill/pollution is minimised and avoids habitats within the site and does not extend beyond the immediate working area, and not beyond the site boundary;
- (p) habitat and species protection mitigation to protect the ecological resources on site, including biodiversity protection zones, location and timing of works, also refer to Protected Species Plan (condition 23), Bird Protection Plan (condition 25) and Habitat and Biodiversity Enhancement Measures (condition 20 and 21);
- (q) details of the construction of the access into the site, including associated drainage and the creation and maintenance of associated visibility splays;
- (r) a Peat Slide Risk Assessment;
- (s) construction hours and a Construction Noise Management Plan including details of the management of noise and vibration during construction and post-construction restoration (refer to condition 11);
- (t) site-specific Construction Method Statements ("CMS") for all construction and post-construction elements of the Development; this includes all roads/tracks to be altered/formed within the development site including their means of construction, width, finished ground level, means of drainage (which shall have regard to SUDS principles), and edge reinstatement including verge width;
- (u) post-construction restoration / reinstatement of the working areas, including construction compounds, hardstandings, construction access tracks, storage areas, and any temporary ancillary construction areas not required during the operation of the Development. Primary reinstatement is to be achieved by the careful use, where appropriate, of turves previously removed prior to construction works. Where ground conditions do not allow for successful turf removal, the Construction Method Statement must evidence this from site/ground investigations and provide additional details including all seed mixes and seeding methodologies to be used

for the reinstatement of vegetation, including timetabling of restoration works and any aftercare provision;

- (v) emergency response plans;
- (w) statement of responsibility for the Environmental Clerk of Works (condition 26) and powers to 'stop the job/activity' if a breach or potential breach of mitigation or legislation occurs; and
- (x) methods for monitoring, auditing, reporting, and the communication of environmental management on site and with client, Planning Authority and other relevant parties.
- (y) A written scheme which details the methodology for dealing with any revisions to any of the documents required under this part (3). Any revised documents will require to be submitted to and approved in writing by the Planning Authority prior to the revisions being implemented on site.

(3) The Development shall be implemented in accordance with the CEMP approved under part (1) unless otherwise approved in advance in writing by the Planning Authority.

Reason: To ensure that all construction operations are carried out in a manner that minimises their impact on road safety, amenity and the environment, and that the mitigation measures contained in the Environmental Appraisal Report which accompanied the application, or as otherwise agreed, are fully implemented.

8. Operational Fire Risk Management Plan

No development shall commence until a detailed Fire Risk Management Plan has been submitted to and approved in writing by the Planning Authority. This shall include full details of the

- i) elevation, dimensions and layout of all physical fire related apparatus;
- ii) a fire water containment strategy, including details of any containment tanks including and pollution prevention measures; and
- iii) on-site measures to reduce the risks associated with wildfires.

Thereafter the development shall not be carried out other than in accordance with the approved details.

Reason: In the interests of amenity and to ensure that the surrounding environment is protected in the event of a fire.

9. Water Environment and Quality

- (1) No development shall commence until a detailed water quality monitoring plan (WQMP) has submitted to and approved in writing by the Planning Authority, in consultation with SEPA. The scheme shall include
- a) The provision of water quality sampling pre construction and for a period after construction is complete;
 - b) key hydrochemical parameters (including turbidity and flow data), the identification of sampling locations (including control sites), frequency of sampling, sampling methodology, data analysis and reporting;

- c) Details of triggers for specific action and any necessary contingency actions; and
 - d) Site specific mitigation measures.
- (2) Thereafter, the WQMP shall be implemented in full within the timescales set out in the WQMP.

Reason: To ensure no deterioration of water quality within and downstream of the development area.

10. **Private Water Supplies**

(1) No development shall commence until a scheme for the protection, monitoring and mitigation of Private Water Supplies (PWS) which may be affected by the Development has submitted to and approved in writing by the Planning Authority. The scheme shall include

- (a) all mitigation measures to be taken to secure the quality, quantity and continuity of water supplies to properties which are served by private water supplies at the date of this consent, and which may be affected by the Development;
- (b) Water quality sampling methods and specified abstraction points, with such abstraction points being based on agreed access by the owners and occupiers of any relevant properties;
- (c) a pre and post construction monitoring regime for the PWS;
- (d) how monitoring results will be assessed including the time taken to undertake such assessment and notification procedures on how the Planning Authority and the affected user of the PWS will be notified of the results; and
- (e) the short, and where necessary, long term and/or permanent contingency measures that shall be put in place should the supply be adversely affected by the construction of the Development.

(2) The PWS scheme approved under part (1) shall be implemented and thereafter undertaken and adhered to by the Developer unless otherwise agreed in advance in writing by the Planning Authority.

Reason: To maintain a secure and adequate quality water supply to all properties with private water supplies that may be affected by the Development.

11. **Construction Noise and Vibration Plan**

No development shall commence until a Construction Noise Management Plan (CNMP) which demonstrates how the developer will ensure the best practicable measures are implemented in order to reduce the impact of construction noise and vibration, has been submitted to and approved in writing by the Planning Authority. The CNMP shall include, but is not limited to, the following:

- a) A description of the most significant noise sources in terms of equipment; processes or phases of construction;
- b) The proposed operating hours and the estimated duration of the works for each phase;

- c) A detailed plan showing the location of noise and vibration sources and noise sensitive receptors; and
- d) A description of noise mitigation methods that will be put in place including the proposals for community liaison. The best practice found in BS5228 Code of practice for noise and vibration control on construction and open sites should be followed.

Thereafter the development shall progress in accordance with the approved CNMP with all approved mitigation measures to be in place prior to the commencement of development, or as otherwise agreed in writing by the Planning Authority.

Reason: In the interest of safeguarding residential amenity.

12. **Blasting**

No development shall commence until a blasting method statement, prepared by a suitably qualified and competent person in accordance with PAN 50 Annex D: The Control of Blasting at Surface Mineral Workings, has been submitted to and approved in writing by the Planning Authority. The method statement should include but is not limited to the following:

- a) The best practicable measures to be taken to reduce the impact of air overpressure and vibration at sensitive properties;
- b) The approximate number of blasts on a weekly or annual basis and the periods of the day when blasting will be carried out; and
- c) The methods for providing the public with advance warning of blasting.

Ground vibrations as a result of the blasting operations shall not exceed a peak particle velocity of 6mms-1 in 95% of all blasts within any 6 month period. No individual blast shall exceed a peak particle velocity of 12mms-1 as measured at noise sensitive properties. The measurement shall be the maximum of three mutually perpendicular directions taken at ground surface at any vibration sensitive building.

Thereafter the development shall not be carried out other than in accordance with the approved details.

Reason: In order to safeguard the amenity of neighbouring properties and occupants.

13. **Drainage Details**

(1) No development shall commence unless and until full details of site drainage, including SUDS, have been submitted to and approved in writing by the Planning Authority. The details shall include (but shall not necessarily be limited to) the following:

- (a) Details of all permeable ground surfaces and measures to ensure adequate drainage from the site so as not to increase water runoff from the site;
- (b) Details of the attenuation measures for increased surface water flows resulting from the impermeable surfaces, evidencing compliance with the SUDS Manual;

(c) Measures to ensure no contamination or pollution of site drainage / attenuated water affects water quality or enters the wider environs out with the site;

(d) Full details of the toilet and waste water facilities to be implemented on site for use during the operational life of the development, including waste water from the operation of the hydrogen production facility, and

(e) Details of any temporary waste water / toilet facilities to be implemented on site during the temporary construction period of the development.

(2) The site drainage and water management measures approved under part (1) shall be implemented in full in accordance with the approved details and maintained in an effective condition for the lifetime of the Development.

Reason: In the interests of mitigating impacts on hydrology, to ensure waste water is managed appropriately and to reduce flood risk.

14. Site Access and Visibility Splays

No development shall commence until the access and visibility splays onto the B9176 detailed on drawing number 111192-10-SK01 have been implemented to the satisfaction of the Planning Authority and Local Roads Authority. Thereafter the access and visibility splays shall be maintained for the operational lifetime of the development.

Reason: To ensure that the standard of access layout complies with the current standards and that the safety of the traffic on the public road is not diminished. It will also ensure that drivers of vehicles leaving the site are enabled to see and be seen by vehicles on the public and join the traffic stream safely.

15. Construction Traffic Management Plan (CTMP)

No development shall commence until a Construction Traffic Management Plan (CTMP) has been submitted to and approved in writing by the Planning Authority, in consultation with the Roads Authority and Transport Scotland and affected Community Councils. The CTMP shall include, but not be limited to:

a) Traffic Management and Routing

- i. The routing strategy of all traffic associated with the development, construction programme and traffic profiles;
- ii. Confirmation of quarries and suppliers for bulk materials; accurate imported volumes, including their delivery route to site;
- iii. Measures to minimise disruption to local communities, including the scheduling and timing of construction traffic;
- iv. Road specific driver training and awareness;
- v. No convoying of HGV or site staff vehicles;
- vi. The appointment of a traffic management co-ordinator during the construction phase to co-ordinate and manage traffic movements with other high traffic volume users to minimise and mitigate cumulative traffic impacts;
- vii. A timetable for the implementation of the measures detailed in the CTMP.

b) Abnormal Loads Management (if required)

- i. Abnormal load route assessment;
- ii. Delivery protocol in consultation with the Local Roads Authority, Transport Scotland and Police Scotland;
- iii. Details of any accommodation measures required, including the removal and replacement of street furniture, junction widening and traffic management required on the on the local or trunk road network;
- iv. Details of any additional signing or temporary traffic control measures deemed necessary on the local or trunk road network due to the size or length of any loads being transported must be undertaken by a recognised Quality Assured traffic management consultant
- v. Trial run for abnormal loads prior to delivery;
- vi. Traffic management measures, including escorting where required;
- vii. A detailed delivery programme for abnormal load movements; and
- viii. Advance notification procedures to the public.

c) Road Infrastructure Mitigation

- i. Proposed traffic management and mitigation measures within settlements along the access routes as required.
- ii. Pre construction structural conditions surveys identifying any required mitigation works, including:
 - o Localised carriageway widening or strengthening
 - o Bridge and culvert strengthening
 - o Passing places
 - o Road safety improvements
- iii. Road mitigation measures in the form of road safety improvements at Dalnavie Crossroads and Strathrory Bridge.

d) Non-Motorised User Protection

- i. Measures to protect pedestrians and cyclists by providing off road facilities when required and crossing facilities if required.
- ii. Temporary signage and traffic management where required

e) Monitoring and Maintenance

- i. A wear and tear agreement under Section 96 of the Roads (Scotland) Act 1984 under which the developer will be responsible for the repair of any damage to the local road network attributable to construction related traffic. As part of the agreement, pre-start and post construction road condition surveys must be carried out by the developer to the satisfaction of the Roads Authority. It will also require the submission of an appropriate financial bond acceptable to the Council in respect of the risk of any road reconstruction works;
- ii. A procedure for the regular monitoring of road conditions and the implementation of any remedial works required during the construction period.
- iii. Measures to ensure that the specified routes are adhered to, including monitoring procedures.

- iv. Providers of products and materials to this development (such as aggregate, concrete, staff minibuses) should mark their vehicles with a unique number identifier on the front, sides and rear of vehicles and a project name identifier. This is to enable easy identification in the event of problems arising, such as speeding or discourteous driving;

f) On Site Details, Access and Cleanliness

- i. Details of the access onto the existing Beinn Tharsuinn Wind Farm Track;
- ii. Details of measures to be taken to prevent loose or deleterious materials being deposited on the local road network including wheel cleaning facilities (design and siting shall be detailed) and confirmation that all vehicles transporting loose or deleterious construction material to and from the site shall be sheeted, and measures to clean the site entrance and the adjacent local road network as required.
- iii. Details of the manoeuvring requirements for HGVs on site, including turning areas, vehicle bays and swept paths. This will demonstrate that vehicles can enter and leave the site in a forward gear, including onto the Beinn Tharsuinn Wind Farm Track and onto the B9176.
- iv. Details of adequate parking provision within the site for personnel, construction vehicles, and deliveries.

g) Communication and Liaison

- i. Identification of a nominated person to whom any road safety issues can be referred and measures for keeping the Community Council informed and dealing with queries and any complaints regarding construction traffic;
- ii. The implementation of a Community Liaison Group (CLG); and
- iii. Ongoing liaison with the Roads Authority

h) Contingency Planning

- i. Provisions for emergency vehicle access;
- ii. Procedures for road closures and extreme weather events; and
- iii. Measures to manage disruption, including traffic reduction where necessary during the construction period.

Thereafter, the development shall be carried out in accordance with the approved CTMP.

Reason: To mitigate the adverse impact of construction traffic on the safe and efficient operation of the trunk road and wider local road networks. Also to ensure adequate road safety measures are in place in the interests of road users and local amenity.

16. Operational Traffic Management Plan (OTMP)

No development shall commence until an Operational Traffic Management Plan (OTMP) has been submitted to and approved in writing by the Planning Authority, in consultation with the Roads Authority and Transport Scotland and affected Community Councils. The OTMP shall include, but not be limited to:

- a) A Risk management Plan and Mitigation Assessment, this will include detailed procedures for dealing with winter road conditions and closures;

- b) Measures to manage disruption, including traffic reduction where necessary.
- c) Details of road specific driver training and awareness;
- d) No convoying of HGV vehicles;
- e) HGVs to or from the development shall not to route along the Ardross and Caplich Roads, or when exiting the site entrance route north along the B9716, or when travelling to the site route south along the B9716 from the direction of the A836;
- f) Measures to ensure that the specified routes are adhered to, including monitoring procedures.
- g) Drivers should enter and leave the site in a forward gear; this includes onto the existing Beinn Tharsuinn Wind Farm access track and the B9176 road.
- h) Measures relating to recreational route users and mitigation measures;
- i) Commitment and actions regarding communicating with the Local Roads Authority and local community contacts.

Reason: To mitigate the adverse impact of operational traffic on the safe and efficient operation of the local road networks. Also to ensure adequate road safety measures are in place in the interests of road users and local amenity.

17. **Operational Vehicle Movements**

No vehicles associated with the transportation / export of hydrogen from the Development (which includes vehicles/tankers arriving to receive hydrogen and vehicles/tankers leaving the site with hydrogen) shall arrive to or leave the site before 7am and after 11pm.

Reason: To ensure the ongoing operation of the hydrogen production facility does not result in HGV and associated vehicle movements on a 24-hour basis, and to reduce the effects of operational lighting, in the interests of local amenity.

18. **Recreational Access Management Plan (RAMP)**

- (1) No development shall commence until a Recreational Access Management Plan (RAMP) has been submitted to, and agreed in writing by, the Planning Authority.

The RAMP should detail how the track will be kept open from the B9176 to the hydrogen site and how the track to the wind farm site will be managed during the installation of the export electric cable and water pipelines.

- (a) Identified limitations on access rights during the construction phase;
- (b) Full details of appropriate access management during both the construction and operational periods of the Development, this should also take account of winter snow clearance and the potential for the track to be used recreationally during the winter months;
- (c) Warning/management signage which is appropriate and takes account of both the operational needs and access rights during both the construction and the operational periods of the Development; and
- (d) Opportunities for enhancement of recreational routes / access.

(2) The RAMP approved under part (1) shall be implemented in full, unless otherwise agreed in advance in writing by the Planning Authority.

Reason: In the interests of maintaining public access rights.

19. **External Site Lighting**

(1) No development shall commence unless and until full details of all site lighting have been submitted to and approved in writing by the Planning Authority. The details shall include (but shall not necessarily be limited to) the following:

(a) The location of all temporary and permanent site lighting, including full details including elevation plans of any lighting columns and units proposed;

(b) Lux levels of all site lighting and details of the specific lighting units for temporary and permanent site lighting, and

(c) Measures to be implemented to minimise site lighting (temporary or permanent) spill beyond the confines of the site boundary.

(2) For the avoidance of doubt, all permanent external site lighting shall be motion-activated in nature (within health and safety limits), and the site shall not be otherwise lit during the hours of darkness, save for being activated by movement within the site area.

(3) The lighting shall be implemented on site in accordance with the details approved under part (1) during the construction period with regards to temporary lighting, and for the lifetime of the development with regards to permanent lighting, unless otherwise agreed in advance in writing by the Planning Authority.

Reason: To ensure appropriate lighting is operated on site with mitigation to protect amenity and in the interests of ecology and the environment.

20. **Habitat Management Plan**

(1) There shall be no Commencement of Development unless and until a Habitat Management Plan (HMP) has been submitted to and approved in writing by the Planning Authority in consultation with NatureScot and SEPA.

(2) The HMP shall set out proposed habitat management of the site including all mitigation, offsetting and enhancement measures, and shall provide for the maintenance, monitoring and reporting of the habitat on site for a minimum period of 30 years.

The provision for regular monitoring and review to be undertaken against the HMP objectives and measures for securing amendments or additions to the HMP in the event that the HMP objectives are not being met.

The submission of GIS Shapefiles of the biodiversity loss, compensation and enhancement areas

(3) Unless and until otherwise agreed in advance in writing with the Planning Authority, the approved HMP (as amended from time to time with written approval of the Planning Authority) shall be implemented in full.

Reason: To secure biodiversity enhancement and allow the compensation and enhancement areas to be mapped to ensure no developments occur on these sites for a minimum of 30 years.

21. **Biodiversity Enhancement Plan**

- (1) No development shall commence until a Biodiversity Enhancement Plan (BEP) has been submitted to and approved in writing by the Planning Authority in consultation with NatureScot and SEPA.

The Biodiversity Enhancement Plan shall provide evidence to demonstrate that it will deliver significant biodiversity enhancement measures on, and where appropriate, off site. Such that the site biodiversity value will be left in a demonstrably better state than the pre-development baseline. It shall include (but not necessarily be limited to)

- a) details of all proposed planting and biodiversity enhancement measures to be implemented across the site and any wider areas out with the application site, including delivery of nature networks;
 - b) The mitigation and compensation measures relating to Ground Water Dependent Terrestrial Ecosystems (GWDTE);
 - c) The provision of peatland, heathland habitat and native riparian tree planting, and
 - d) GIS Shapefiles of the biodiversity loss, compensation and enhancement areas
- (2) The BEP shall provide the provision and details for regular monitoring and review to be undertaken against the restoration and management objectives and reasonable measures for securing amendments or additions to the BEP in the event that the BEP objectives are not being met.
 - (3) Unless otherwise approved in advance in writing by the Planning Authority, the approved BEP shall be implemented in full in line with the timescales set out in the approved plan.

Reason: To secure effective biodiversity enhancement for the lifetime of the development in compliance with the requirements of Policy 3 of NPF4.

22. **Pre-Construction Ecological Survey**

- (1) A pre-construction survey (including hares) is required to been undertaken not more than 3 months (unless otherwise first agreed in writing by the Planning Authority) prior to works commencing and a report of the survey has been submitted to, and approved in writing by, the Planning Authority. The survey shall cover both the application site and an appropriate buffer from the boundary of application site. The survey report shall include mitigation measures where any impact, or potential impact, on protected species or their habitat has been identified.
- (2) Development and work shall progress in accordance with any mitigation measures contained within the approved report of survey and the timescales contain therein.

Reason: To ensure that the site and its environs are surveyed and the development does not have an adverse impact on protected species or habitat.

23. Species Protection Plans (SPPs)

- (1) No development shall commence until Species Protection Plans (SPPs) have been submitted to and approved in writing by the Planning Authority. The SPPs shall be for otter and water vole and any species identified during pre-construction surveys (or as required by condition 24). The SPPs should also include appropriate mitigation measures and timescales for implementation.
- (2) Thereafter, the approved Species Protection Plans shall be implemented in full and in accordance with the timescales set out in the approved SPPs.

Reason: To ensure that all construction and operation of the proposed development have a limited impact on the aforementioned protected species.

24. Raptor Study

- (1) No development shall commence until a desk based study of raptors which includes records from the Highland Raptor Study Group has been submitted to and approved in writing by the Planning Authority.
- (2) If this study identifies the presence of any raptors within the disturbance distance of the site, then specific a Species Protection Plan (SPP) will be required to be submitted to and approved in writing by the Planning Authority prior to the commencement of development. If SPPs are required, then these should also include appropriate mitigation measures and timescales for implementation.
- (3) Thereafter, the approved Species Protection Plans shall be implemented in full and in accordance with the timescales set out in the approved SPPs.

Reason: To ensure that all construction and operation of the proposed development have a limited impact on the aforementioned protected species.

25. Bird Protection Plan

- (1) There shall be no Commencement of Development until a Bird Protection Plan has been submitted to and approved in writing by the Planning Authority in consultation with NatureScot. This shall require:
 - i. A lekking capercaillie survey to be carried out within a 1.5km buffer area around the access, this shall include the area of forestry immediately to the south of the track;
 - ii. If the survey required under ii) finds signs of lekking capercaillie then no vehicles should use the track between sunrise and 9:00am during the capercaillie lekking season (March to May inclusive). This will apply during the construction and operational period of the development. Unless otherwise first agreed in writing by the Planning Authority; and
 - iii. A nesting bird survey to be undertaken no more than 24 hours prior to the Commencement of Development in the event that this coincides with the main bird breeding season (March – August inclusive) and throughout the

breeding bird season if new areas are being developed or there has been a break in construction.

- (2) Thereafter, the approved Bird Protection Plan Construction Bird Disturbance Management Plan shall be implemented in full within the timescales set out in the approved Construction Bird Disturbance Management Plan.

Reason: In the interests of protecting ornithological interests in respect of nesting birds and capercaillie through all stages of the development.

26. Environmental Clerk of Works (EnvCoW)

No development shall commence unless and until the terms of appointment of an independent Environmental Clerk of Works (EnvCoW) by the Company have been submitted to, and approved in writing by, the Planning Authority. This must include a EnvCoW schedule, detailing when the EnvCoW shall be present on site. For the avoidance of doubt, the EnvCoW shall be appointed as a minimum for the period from the commencement of development to the final commissioning of the development and their remit shall, in addition to any functions approved in writing by the Planning Authority.

The terms of appointment shall include (but not be limited to):

- a) Impose a duty to monitor compliance with the environmental commitments provided in the EIA Report as well as the following (the EnvCoW works):
 - i. the Pre-Construction Ecological Survey under Condition 22;
 - ii. the Construction Environmental Management Plan under Condition 7;
 - iii. the Peat Management Plan under Condition 27;
 - iv. the Habitat Management Plan under Condition 20;
 - v. the Biodiversity Enhancement and Planting under Condition 21;
 - vi. the Species and Bird Protection Plans under Conditions 23 and 25;
 - vii. the landscape and planting plans under Conditions 5 and 6.
- b) providing training to the developer and contractors on their responsibilities to ensure that work is carried out in strict accordance with environmental protection requirements;
- c) Require the EnvCoW to report to the nominated construction project manager, developer and Planning Authority any incidences of noncompliance with the EnvCoW works at the earliest practical opportunity;
- d) Undertake a pre-construction survey not more than 3 months prior to commencement of construction and as required throughout the duration of the project to protect the ecological resources within the site;
- e) maintains a Register of all inspections and audits, to include an inventory of all measures on the site, their effectiveness, as well as any advice provided; and

Require the EnvCoW to submit a monthly report to the construction project manager, developer and Planning Authority summarising works undertaken on site.

Reason: To secure effective and transparent monitoring of and compliance with the environmental mitigation and management measures associated with the

Development during the construction, decommissioning, restoration and aftercare phases.

27. Peat Management Plan

(1) No development shall commence until a detailed Peat and Carbon Management Plan (PMP) has been submitted to and approved in writing by the Planning Authority, in consultation with SEPA. The PMP shall draw upon the findings of the Environmental Appraisal and consider the findings of any additional ground investigations carried out prior to development commencing. The PMP shall:

- a) take account of site and ground investigations to minimise the loss of peat and other carbon rich soil and minimise carbon loss;
- b) include actions to minimise excavated peat and other carbon rich soils volumes;
- c) encourage use of excavated peat and other carbon rich soils in an appropriate manner;
- d) a peat slide assessment and mitigation plan; and
- e) follow good practice for handling, storing and reinstating peat and other carbon rich soils.

(2) Thereafter, the development shall be implemented in accordance with the Peat Management Plan approved under part (1).

Reason: To ensure the appropriate handling and management of peat on site, to reduce adverse environmental impacts and to protect the habitats identified in the Environmental Appraisal.

28. Local Employment Scheme

(1) Prior to the Commencement of Development, a Local Employment Scheme for the construction and operation of the development shall be submitted to and agreed in writing by The Highland Council. The Scheme shall include the following:

- a) details of how the staff/employment opportunities at the development will be advertised and how liaison with the Council and other local bodies will take place in relation to maximising the access of the local workforce to information about employment opportunities;
- b) details of how sustainable training opportunities will be provided for those recruited to fulfil staff/employment requirements including the provision of apprenticeships or an agreed alternative;
- c) a procedure setting out criteria for employment, and for matching of candidates to the vacancies;
- d) measures to be taken to offer and provide college and/or work placement opportunities at the development to students within the locality;
- e) details of the promotion of the Local Employment Scheme and liaison with contractors engaged in the construction of the development to ensure that they also apply the Local Employment Scheme so far as practicable

having due regard to the need and availability for specialist skills and trades and the programme for constructing the development;

f) a procedure for monitoring the Local Employment Scheme and reporting the results of such monitoring to The Highland Council; and

g) a timetable for the implementation of the Local Employment Scheme.

(2) Thereafter, the development shall be implemented in accordance with the approved scheme.

Reason: In order to ensure compliance with NPF4 Policy 11c) and to maximise the local socio-economic benefits of the development to the wider community. To make provision for publicity and details relating to any local employment opportunities.

29. **Planning Monitoring Officer**

No development shall commence until the Planning Authority has approved in writing the terms of appointment by the applicant of a suitably qualified environmental specialist to assist the Planning Authority in monitoring compliance with the planning permission and conditions attached to this consent. The terms of Planning Monitoring Officer (PMO) appointment shall:

- a) Impose a duty to monitor compliance with the planning permission and conditions attached to this consent;
- b) Require the PMO to submit a report at least every three months to the Planning Authority, or monthly at the further written request of the Planning Authority, summarising works undertaken on site; and
- c) Require the PMO to report to the Planning Authority any incidences of non-compliance with the planning permission and conditions attached to this consent at the earliest practical opportunity.

The PMO shall be appointed on the approved terms throughout the period from the commencement of development to completion of post construction restoration works.

Reason: To enable the Development to be suitably monitored to ensure compliance with the deemed planning permission and conditions attached to this consent.

30. **Community Liaison Group**

No development shall commence until a Community Liaison Plan has been approved in writing by the Planning Authority after consultation with the relevant local community councils.

The plan shall include the arrangements for establishing a Community Liaison Group to act as a vehicle for the community to be kept informed of project progress by the developer.

- i. The group shall act as a forum for the community to be kept informed of project progress and, in particular, should allow advanced dialogue on the provision of all transport related mitigation measures and to keep under review the timing of the delivery of abnormal loads (if required) and performance of the Construction Traffic Management Plan.

- ii. This should also ensure that local events and tourist seasons are considered and appropriate measures to co-ordinate deliveries and work with these and any other major projects in the area to ensure no conflict between construction traffic and the increased traffic generated by such events / seasons / developments.

The liaison group shall be maintained until the construction of the development, and all site infrastructure becomes fully operational.

The approved Community Liaison Plan shall be implemented in full unless otherwise approved in writing by the planning authority.

Reason: To assist with the provision of mitigation measures to minimise potential hazards to road users, including pedestrians, travelling on the road networks

31. **Decommissioning, Restoration and Aftercare**

The Development will cease to produce hydrogen by no later than the date falling 50 years from the First Production Date or in the event that the facility does not produce hydrogen for a continuous period of 2 years post first production date, unless otherwise first agreed in writing by the Planning Authority (required under condition 1); thereafter the Development shall be decommissioned and the site restored to its former condition or such other condition as agreed by the Planning Authority.

The total period for the decommissioning and restoration of the Site in accordance with this condition shall not exceed three years from the expiration of the 50-year operational period, or intended date of decommissioning, whichever is the earlier, with the exception of 5 years of aftercare as required by the Decommissioning, Restoration and Aftercare Plan approved under Conditions 33.

Reason: To ensure the decommissioning and removal of the development and restoration of the site in a timely manner.

Outline Decommissioning and Restoration Plan

32. (1) No development shall commence unless and until an Outline Decommissioning and Restoration Plan ("ODRP") has been submitted to, and approved in writing by, the Planning Authority. The ODRP shall include (but shall not necessarily be limited to) details of:

- (i) Works for the decommissioning and removal of the Development (including the removal of any foundations and support structures to a depth of 1m below ground level) and all above ground ancillary buildings and infrastructure;
- (ii) The treatment of ground surfaces including access tracks, hardstanding areas, and any sub-surface elements including cabling to restore the site to its former condition, or other such condition as is agreed in writing by the Planning Authority;
- (iii) Indicative details of the way the site will be decommissioned and restored including environmental management provisions, the

incorporation of relevant matters from the CEMP, BPP, WQMP, Species Protection Plans, a decommissioning and restoration timetable, justification for the proposed retention of any elements of the Development, a Traffic Management Plan, the treatment of disturbed ground surfaces and appropriate aftercare following the site restoration; and

(iv) How and when the ODRP will be reviewed, and if necessary updated, during the operational lifetime of the Development.

(2) Any updated version of the ODRP, upon undertaking a review, shall be submitted for the written approval of the Planning Authority.

Reason: To provide an Outline Decommissioning and Restoration Plan that informs the level of financial guarantee required to decommission and restore the site, to ensure that a decommissioning plan is available throughout the duration of the consent, should it be required in the interests of safety, amenity and environmental protection.

Detailed Decommissioning and Restoration Plan

33. (1) No later than 12 months prior to decommissioning of the Development or the expiration of the 50 year period of operation (as required by condition 1) (whichever is the earlier), a detailed Decommissioning, Restoration and Aftercare Plan that takes account of the latest version of the Outline Decommissioning and Restoration Plan (approved under Condition 32), shall be submitted to the Planning Authority for its written approval.

The detailed Decommissioning, Restoration and Aftercare Plan shall provide updated and detailed proposals for the removal of the Development and the treatment of ground surfaces to return the site to its former condition or such other condition as agreed by the Planning Authority, the management and timing of works and environmental management provisions which shall include (but shall not necessarily be limited to) the following:

(i) A site waste management plan (dealing with all aspects of waste produced during the decommissioning, restoration and aftercare phases and, including details of measures to be taken to minimise waste associated with the Development and promote the recycling of materials and infrastructure components);

(ii) Details of the formation of the decommissioning construction compound, welfare facilities, any areas of hardstanding, turning areas, internal access tracks, car parking, material stockpiles, oil storage, lighting columns, and any construction compound boundary fencing;

(iii) A dust management plan;

(iv) Details of measures to be taken to prevent loose or deleterious material being deposited on the local road network including wheel cleaning facilities (design and siting shall be detailed) and confirmation that all vehicles transporting loose or deleterious construction material to and from the site shall be sheeted, and measures to clean the site entrances and the adjacent local road network;

- (v) A pollution prevention and control method statement, including arrangements for the storage and management of oil and fuel on the site;
- (vi) Details of measures for soil storage and management;
- (vii) A surface water and groundwater management and treatment plan, including details of the separation of clean and dirty water drains, and location of settlement lagoons for silt laden water;
- (viii) Details of measures for sewage disposal and treatment;
- (ix) Temporary site illumination;
- (x) A traffic management plan;
- (xi) Details of the 5 years of aftercare to be undertaken on site post-restoration works;
- (xii) A timetable for the decommissioning, restoration and aftercare works, and
- (xiii) Species protection plans based on surveys for protected species carried out no later than 3 months prior to submission of the Decommissioning, Restoration and Aftercare Plan.

(2) The Development shall be decommissioned, the site restored and aftercare thereafter undertaken in accordance with the plan approved under part (1) of this condition.

Reason: To ensure the decommissioning and removal of the Development in an appropriate and environmentally acceptable manner and the restoration and aftercare of the site, in the interests of safety, amenity and environmental protection.

34. **Financial Guarantee**

(1) No development shall commence until full details of a guarantee, bond or other financial provision to be put in place to cover all of the decommissioning and site restoration and aftercare obligations referred to in conditions 32 and 33 of this permission have been submitted to, and approved in writing by, the Planning Authority. For the avoidance of doubt the bond must be able to be called upon by The Highland Council and be enforceable against the operator and landowner and/ or leaseholder; and

(2) Confirmation in writing by a suitably qualified independent professional that the amount of financial provision proposed under part (1) above is sufficient to meet the full estimated costs of all decommissioning, dismantling, removal, disposal / recycling, site restoration, remediation and incidental work, as well as associated professional costs, has been submitted to, and approved in writing by, the Planning Authority; and

(3) Documentary evidence that the guarantee, bond or other financial provision approved under parts (1) and (2) above is in place has been submitted to, and confirmation in writing that the financial provision is satisfactory has been issued by, the Planning Authority.

(4) Thereafter, the Operator, and Leaseholder and/or Landowner, shall:

- a) Ensure that the guarantee, bond or other financial provision is maintained throughout the duration of this permission; and
- b) Pay for the guarantee, bond or other financial provision to be subject to a review five years after the commencement of development and every five years thereafter until such time as the development is decommissioned and the site restored.

(5) Each review shall be:

- a) conducted by a suitably qualified independent professional; and
- b) published within three months of each five year period ending, with a copy submitted upon its publication to both the landowner(s) and the Planning Authority; and
- c) approved in writing by the Planning Authority without amendment or, as the case may be, approved in writing by the Planning Authority following amendment to their reasonable satisfaction.

Where a review approved under part (c) above recommends that the amount of the guarantee, bond or other financial provision should be altered (be that an increase or decrease) or the framework governing the bond or other financial provision requires to be amended, the Operator, and Leaseholder and/or Landowner shall do so within one month of receiving that written approval, or another timescale as may be agreed in writing by the Planning Authority, and in accordance with the recommendations contained therein.

Reason: To ensure there are sufficient funds available for the full costs of site restoration at all times.

35. **Programme of Archaeological Works**

No works in connection with the development hereby approved shall commence unless an archaeological Written Scheme of Investigation (WSI) has been submitted to and approved in writing by the planning authority and a programme of archaeological works has been carried out in accordance with the approved WSI.

The WSI shall relate to the wastewater pipeline corridor and wastewater discharge location, identified between the main site area and the B9176 public road. The WSI shall include details of how survey, the recording and recovery of archaeological resources found within the aforementioned part of the application site shall be undertaken, and how any updates, if required, to the written scheme of investigation will be provided throughout the implementation of the programme of archaeological works.

Should the archaeological works reveal the need for post excavation analysis the development hereby approved shall not be [occupied/brought into use] unless a Post-Excavation Research Design (PERD) for the analysis, publication and dissemination of results and archive deposition has been submitted to and approved in writing by the planning authority. The PERD shall be carried out in complete accordance with the approved details.

Reason. In order to protect the archaeological and historic interest of the site.

REASON FOR DECISION

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.

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.

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.

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.

Protected Species – Halting of Work

You are advised that work on site must stop immediately, and NatureScot 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 NatureScot:

<https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species>

Signature:	Bob Robertson
Designation:	pp. Area Manager North
Authors:	Peter Wheelan

Background Papers: Documents referred to in report and in case file.

Relevant Plans:	Plan 1 - Figure 1.1 (2023) - Location Plan
	Plan 2 - Figure 1.2a REV 05 (2025) – Application Site Boundary
	Plan 3 - Figure 1.5 REV 04 (2025) – Site Components
	Plan 4 - Figure 1.6 (2025) – 114153-00-GA-L-0002 Site Layout Plan
	Plan 5 - Figure 1.7 (2025) – 114153-MMD-00-GA-A-1100 - Site Elevations
	Plan 6 - Figure 1.8b (2025) – 114153-00-GA-A-0002 REV 1 - Warehouse/Workshop Plans
	Plan 7: Figure 1.9 (2025) - 114153-00-BLD-E-0001 Electrical Equipment Layout Plan

Plan 8: Figure 1.10B (2025) - 114153-00-GA-A-1001 REV 1 Control and Admin Building

Plan 9: Figure 1.12 (2025) - 114153-00-GA-S-0011 REV 1- Compressor Building Elevations

Plan 10 - Figure 1.13a (2025) - 114153-00-DET-C-002 REV 1 - Drainage

Plan 11 - Figure 1.13b (2025) - 114153-00-GA-C-0004 Rev 1 - Surface Water Drainage

Plan 12 - Figure 1.13c (2025) - 114153-00-GA-C-000 REV 2: Foul Water Drainage

Plan 13: 114153-00-GA-C-0008 REV 2 (2026): Site Layout Plan – Grading

Plan 14: 114153-00-GA-C-0001 REV 2 (2026): Site Layout Plan - Surfacing

Appendices

Appendix 1 - Letters of Representation

Appendix 2 - Development Plan and Other Material Policy Considerations

Appendix 3 - Compliance with the Development Plan / Other Planning Policy

Appendix 4 - Appropriate Assessment: Morangie Forest Special Protection Area

Appendix 5 - Appropriate Assessment: Novar Special Protection Area

Appendix 2: Development Plan and Other Material Policy Considerations

DEVELOPMENT PLAN

National Planning Framework 4 (2023) (NPF4)

- A2.1
- 1 - Tackling the Climate and Nature Crises
 - 2 - Climate Mitigation and Adaptation
 - 3 - Biodiversity
 - 4 - Natural Places
 - 5 - Soils
 - 7 - Historic Assets and Places
 - 11 - Energy
 - 13 - Sustainable Transport
 - 20 - Blue and Green Infrastructure
 - 22 - Flood Risk and Water Management
 - 23 - Health and Safety
 - 25 - Community Wealth Building
 - 26 – Business and Industry
 - 29 - Rural Development
 - 33 – Minerals

Highland Wide Local Development Plan 2012 (HwLDP)

- A2.2
- 28 - Sustainable Design
 - 29 - Design Quality and Place-making
 - 30 - Physical Constraints
 - 31 - Developer Contributions
 - 36 - Development in the Wider Countryside
 - 41 – Business and Industrial Land
 - 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
- 67 – Renewable Energy Developments
- 72 - Pollution
- 73 - Air Quality
- 74 - Green Networks
- 77 - Public Access

Caithness and Sutherland Local Development Plan (2018) (CaSPlan)

- A2.3 The majority of the application site is covered by the CaSPlan. A very small area of the northern most part of the application site is located in an “Area for Coordinated Tourism Connections” on the Strategy Map on page 3 of CaSPlan. The CaSPlan focuses on employment with the spatial strategy, in part through “promoting and supporting tourism” within the Area for Coordinated Tourism Connections. The CaSPlan also confirms the boundaries (including any refinements) of the Special Landscape Areas (SLAs) within the plan area.

Inner Moray Firth Local Development Plan 2 (IMFLDP2) (2024)

- A2.4 A small part of the Proposed Development is covered by the IMFLDP2. This is limited to part of the cable route to the Beinn Tharsuinn Windfarm and one of the Boreholes (BH3). The relevant policies are:
- Policy 2 Nature Protection, Restoration and Enhancement

Highland Council Supplementary Planning Policy Guidance

- A2.5
- Developer Contributions (Nov 2018)
 - Flood Risk and Drainage Impact Assessment (Jan 2013)
 - Green Networks (Jan 2013)
 - Highland Historic Environment Strategy (Jan 2013)
 - Highland's Statutorily Protected Species (Mar 2013)
 - Physical Constraints (Mar 2013)
 - Roads and Transport Guidelines for New Developments (May 2013)
 - Special Landscape Area Citations (June 2011)
 - Standards for Archaeological Work (Mar 2012)
 - Sustainable Design Guide (Jan 2013)
 - Trees, Woodlands and Development (Jan 2013)
 - Biodiversity Enhancement Planning Guidance (May 2024)

OTHER MATERIAL POLICY CONSIDERATIONS

- A2.6
- Scottish Government's Hydrogen Policy Statement (2020), Scottish Hydrogen: assessment report (2020)
 - Hydrogen Action Plan (2022).

- Hydrogen Sector Export Plan (2024).
- UK Hydrogen Strategy Update to the Market: December 2024
- Hydrogen Planning and Consenting Guidance (Feb 2026)
- 3/2015: Planning Controls for Hazardous Substances.
- Climate Change (Emissions Reduction Targets) (Scotland) Act 2024
- Climate Change Committee Report to UK Parliament (July 2024)
- UK Government Clean Power Action Plan (Dec 2024)
- The Draft Energy Strategy and Just Transition Plan (2023)
- Scottish Energy Strategy (2017)
- 2020 Routemap for Renewable Energy (2011)
- Energy Efficient Scotland Route Map, Scottish Government (2018)
- Flood risk: planning advice 2015.
- PAN 1/2011: planning and noise 2011.
- PAN 3/2010: community engagement 2010.
- PAN 79: water and drainage 2006.
- PAN 75: planning for transport 2005.
- PAN 68: design statements 2003.
- PAN 60: natural heritage 2000.
- Historic Environment Policy for Scotland (2019)
- Developing with Nature Guidance (NatureScot 2023)
- THC Construction Environmental Management Process for Large Scale Projects (2010)
- Scottish Government Planning Guidance: Biodiversity (2025)
- Advising on peatland, carbon-rich soils and priority peatland habitats in development (NatureScot, Feb 2024)

Appendix 3 - Compliance with the Development Plan / Other Planning Policy

National Policy

- A.3.1 National Planning Framework 4 (NPF4) forms part of the Development Plan and was adopted in February 2023. NPF4 comprises three distinct parts.
- Part 1 – sets out an overarching spatial strategy for Scotland in the future. This includes spatial principles, national and regional spatial priorities, and action areas;
 - Part 2 – sets out policies for the development and use of land to be applied in the preparation of local development plans; local place plans; masterplans and briefs; and for determining the range of planning consents. This part of the document should be taken as a whole in that all relevant policies should be applied to each application; and
 - Part 3 – provides a series of annexes that give the rationale for the strategies and policies of NPF4. It also outlines how the document should be used and sets out how the Scottish Government will implement the strategies and policies. With Annex A: 'How to use this document' noting that the policies within Part 2 should be read as a whole and '...it is for the decision maker to determine what weight to attach to policies on a case-by-case basis....' It goes on to state that '...where a policy states that development will be supported, it is in principle, and it is for the decision maker to take into account all other relevant policies....'.
- A.3.2 **Part 1 - The Spatial Strategy** outlines that Scotland is facing unprecedented challenges and that we need to reduce greenhouse gas emissions and embrace and deliver radical change so we can tackle and adapt to climate change, restore biodiversity loss, improve health and wellbeing, and build a wellbeing economy while striving to create great places. Therefore, NPF4 sets out that choices need to be made about how we can make sustainable use of our natural assets in a way that benefits communities.
- A.3.3 The spatial strategy reflects existing legislation by setting out that decision making requires to reflect the long-term public interest. However, in doing so, it is clear that the decision maker must make the right choices about where development should be located, ensuring clarity is provided over the types of infrastructure that need to be provided and the assets that should be protected to ensure they continue to benefit future generations. To that end, the Spatial Priorities support the planning and delivery of sustainable places, which will reduce emissions, restore and better connect biodiversity; create liveable places, where residents can live better, healthier lives; and create productive places, with a greener, fairer, and more inclusive wellbeing economy.

- A.3.4 Page 26 of NPF4 outlines that northern Scotland can continue to make a strong contribution towards meeting our ambition for a net zero and nature positive country by demonstrating how natural assets can be managed and used to secure a more sustainable future. By guiding Regional Spatial Strategies and Local Development Plans, the strategy aims to:
- “Protect environmental assets and stimulate investment in natural and engineered solutions to climate change and nature restoration, whilst decarbonising transport and building resilient connections.
 - Maintain and help to grow the population by taking a positive approach to rural development that strengthens networks of communities.
 - Support local economic development by making sustainable use of the areas’ world-class environmental assets to innovate and lead greener growth”.
- A.3.5 The spatial planning priorities for this area are further detailed in Part 3, Annex C of NPF4. This reiterates the above aims but also highlights that “Through Opportunity Cromarty Firth and other projects, new facilities and infrastructure will help ports to adapt, unlocking their potential to support the transition from fossil fuels through oil and gas decommissioning, renewable energy (including the significant opportunities for marine energy arising from Scotwind) and low carbon hydrogen production and storage, and the expansion of supply chain and services. This will in turn benefit communities by providing employment and income for local businesses”.
- A.3.6 **Part 2 – Policies:** sets out the National Planning Policy which cover three themes: Sustainable Places, Liveable Places, and Productive Places; within which there are a total of 33 policies and many of these consist of distinct sub-policies. These 33 national planning policies form part of the development plan and will be assessed along with the Council's LDP policies for development management decisions. Many of NPF4's policies are relevant to consideration of this proposal, but attention is particularly drawn here to the following key policies.
- A.3.7 **NPF4 Policies 1 (Tackling the climate and nature crises), 2 (Climate mitigation and adaption) and 3 (Biodiversity).** The aims of policy 1 is to encourage, promote and facilitate development that addresses the global climate emergency and nature crisis. When considering developments 'significant weight' is to be given to those crises in decision making. To that end, development proposals are to be sited and designed to minimise lifecycle greenhouse gas emissions, as far as is practicably possible, in accordance with NPF4 Policy 2, while contributing to the enhancement of biodiversity, as required by NPF4 Policy 3.
- A.3.8 A key component of responding to the climate crisis is securing renewable, low carbon and zero emission energy generation, which includes hydrogen. Although the end users are not currently identified in detail, the early off takers are likely to be the whisky producers within the area. This will help this sector decarbonise in line with net zero requirements. The proposal would also support the renewable energy sector in making use of renewable energy sources in the production of hydrogen.

A.3.9 Significant weight is equally to be given to the nature crisis, in parallel with the climate crisis. However, the policy does not require proposals to respond equally to both of these policy strands. Whilst the proposed development will result in the direct and indirect loss of bog and flush habitats. The applicant's assessment identifies that within the wider area these mire habitats are common and widespread. Compensation and biodiversity enhancements are also proposed, which will target bog and heath habitats and include native riparian planting, within the wider landholding. It is envisaged that these measures can provide a linkage and strengthen the nature network with the Habitat Management Area developed under the Beinn Tharsuinn Wind Farm consent. Compensation and Habitat enhancement can be secured by condition. This will include a requirement for ongoing management and monitoring. There are no outstanding objections from SEPA, NatureScot or the Councils Ecology Team.

It is therefore considered the proposal is supported and is in accordance with these policies.

A.3.10 **Policy 4 - Natural Places** aims to protect, restore and enhance natural assets making best use of nature-based solutions. It also seeks to protect European, National and International designations. It sets out that proposals with likely significant effects on European sites (SACs or SPAs) require appropriate assessment, and that development proposals that will affect a National Park, NSA or SSSI will only be supported where: the objectives of designation and the overall integrity of the areas will not be compromised; or any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance.

A.3.11 Similarly, sites designated in Development Plans for local nature conservation or Special Landscape Areas (SLAs) are protected in NPF4 Policy 4 unless the development will not result in significantly adverse effects on its qualities or its integrity, or these effects are clearly outweighed by social, environmental, or economic benefits of at least local importance.

A.3.12 The site is not located within any natural heritage or landscape designation. However, NatureScot advise that the proposal is likely to have a significant effect on the capercaillie populations of both the Morangie Forest Special Protection Area (SPA) and Novar SPA. Consequentially, the Council have carried out Appropriate Assessments, these are contained within Appendix 3 and 4 of this report. In line with detailed advice from NatureScot and subject to the mitigation outlined, the Appropriate Assessments conclude that the proposal will not adversely affect the integrity of either of these designations.

A.3.13 In terms of protected species, subject to the mitigation outlined in this 'Natural Heritage' in section 7 of this report, NatureScot and the Councils Ecology Team have no objection to the application.

- A.3.14 The Dornoch Firth NSA is located 3.5 km from the application site, but the ZTV indicates no potential visibility from the NSA and was scoped out of further assessment. At a local level there were no Special Landscape Areas (SLAs) within the Landscape and Visual Assessment study area. SLAs were also scoped out as there were unlikely to be any significant adverse effects.

The proposal is considered to accord with NPF4, policy 4.

- A.3.15 **Policy 5 (Soils)** intends to protect carbon-rich soils, restore peatlands and minimise disturbance to soils from development. It states that development proposals will only be supported if they are designed and constructed in accordance with the mitigation hierarchy. In accordance with the mitigation hierarchy, Phase 1 and 2 peat depth surveys were undertaken as part of the site selection process and informed site design. See EA Figure 4.5. The site is not located on prime agricultural land (criterion b) but will result in the direct loss of 1.64ha of blanket bog (M19a) will be lost to the development with an additional 0.91ha of lost due to indirect effects of drying out within 20m of the infrastructure, this equates to a total of 2.55ha. The blanket bog did not meet the indicator criteria for 'near-natural and of high quality' blanket bog

- A.3.16 Under Criterion c) Development proposals on peatland, carbon-rich soils and priority peatland habitat will only be supported for:

- i. Essential infrastructure and there is a specific locational need and no other suitable site;
- ii. The generation of energy from renewable sources that optimises the contribution of the area to greenhouse gas emissions reductions targets;
- iii. Small-scale development directly linked to a rural business, farm or croft;
- iv. Supporting a fragile community in a rural or island area; or
- v. Restoration of peatland habitats.

The proposed development is considered to benefit from support under criterion c) ii. As detailed in outline Peat Management Plan (PMP), the applicants intend to use any excavated peat for peatland restoration within the wider landholding. There are no outstanding consultee objections in this regard effects on peat. A detailed PMP will be secured by condition, this will ensure further ground investigations and construction techniques are employed to minimise the loss of peat and other carbon rich soil and minimise carbon loss.

- A.3.17 In line with NatureScot peatland guidance, to achieve compensation a 1:10 ratio of area of peatland lost:area of peatland restored is required. As such a minimum of 25.5 ha is required to be enhanced to compensate for the loss of bog. In addition, a further 10% is required for biodiversity enhancement. Peatland restoration and enhancement measures will also be secured by condition.

The proposal is considered to accord with NPF4, policy 4.

A.3.18 **Policy 11 (Energy)** aims to encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes emerging low-carbon and zero emissions technologies including hydrogen. The policy outcome is to see the expansion of renewable, low-carbon and zero emissions technologies. Consequentially, the proposed development receives in principle support under this policy.

A.3.19 Criterion c) confirms development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.

In terms of job creation for this scheme, the applicant highlights that during peak construction, the project will create 57 direct jobs and 30 indirect jobs. During operation, the proposed development will support up to 29 FTE jobs, and 10 HGV driver roles will be sustained, with additional indirect and induced jobs in supply chains and local services. The applicant also highlights that the decarbonisation of the whisky industry will aid with the long-term global competitiveness of Highland exports. The applicant also highlights the importance of developing green hydrogen projects and supply chains locally to ensure these jobs are not lost overseas. In turn, this results in skills and knowledge growth within this emerging sector. A socio-economic planning condition is recommended.

Further measures out with the remit of planning can be developed with the Councils Community Wealth Building Team.

A.3.20 Criterion e) sets out 13 areas, where project design and mitigation are required to demonstrate how impacts upon them have been addressed. However, it goes on to state that in considering these impacts, significant weight will be placed on the contribution of the proposal to renewable energy generation targets and on greenhouse gas emissions reduction targets.

i. impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;

Subject to the recommended conditions securing matters such as; operational lighting; external materials; landscaping; a CTMP; a CEMP and developer contributions for road safety measures. It is considered that the effects identified can be mitigated to an acceptable level. There are no outstanding consultee objections including those from roads or environmental health.

ii. significant landscape and visual impacts, recognising that such impacts are to be expected for some forms of renewable energy. Where impacts are localised and/or appropriate design mitigation has been applied, they will generally be considered to be acceptable;

Officers consider that whilst the industrial form of the development is not entirely compatible with its rural context, the adverse effects identified are localised and as such the development aligns with part(e)(ii) of NPF4 policy 11. Further mitigation can be secured by conditions relating to post construction landscaping, external materials and external lighting.

iii. public access, including impact on long distance walking and cycling routes and scenic routes;

There are no core paths, public footpaths or cycle ways within the application site. The existing Beinn Tharsuinn Wind Farm access track does however provide wider recreational access. The assessment also considers recreational receptors on hills surrounding the site and to the south-west and road routes, including The Moray Firth Tourist Route. The assessment considers which there will be some adverse effects, but these will be localised. Conditions will secure a Recreational Access Management Plan (RAMP) and further measures to ensure non-motorised users are protected as much as possible from the expected HGV traffic from the site are secured.

iv. impacts on aviation and defence interests including seismological recording;

No aviation concerns have been raised by the MOD, NATS or HIAL.

v. impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;

No concerns have been raised.

vi. impacts on road traffic and on adjacent trunk roads, including during construction;

Following the submission of further information, there are no outstanding objections in relation to roads from Transport Planning or Transport Scotland. Whilst Transport Planning still have some concerns, they consider that subject to the conditions and developer contributions outlined in the report that the effects of the development can be mitigated to an acceptable level.

vii. impacts on historic environment;

No concerns have been raised by Historic Environment Scotland or the Councils Historic Environment Team.

viii. effects on hydrology, the water environment and flood risk;

Neither SEPA nor the Councils Flood Risk Management Team have objected to the application, subject to the recommended planning conditions. An EASR permit has been granted by SEPA for the water abstraction. Other matters waste water and pollution control will also be controlled by other regulations and legislation beyond planning.

ix. biodiversity including impacts on birds;

No objections have been raised in relation to ornithological interests from the NatureScot or the Councils Ecology Team, subject to the recommended planning conditions.

x. impacts on trees, woods and forests;

No impacts on trees are anticipated; additional native riparian woodland is proposed as part of the biodiversity enhancement measures.

xi. proposals for the decommissioning of developments, including ancillary infrastructure, and site restoration;

A decommissioning plan and site restoration, including a financial bond will be secured by condition.

xii. the quality of site restoration plans including the measures in place to safeguard or guarantee availability of finances to effectively implement those plans;

A decommissioning plan and site restoration, including a financial bond will be secured by condition. Post construction restoration will be secured through the CEMP and overseen by the ECoW.

xiii. cumulative impacts.

Where appropriate cumulative effects have taken into account and considered to be acceptable, subject to the recommended planning conditions.

A.3.21 **Policy 23 (Health and Safety)** aims to protect people and places from environmental harm, mitigate risks arising from safety hazards. For example, criterion d) refers to air quality and criterion e) covers noise. In relation to criterion g) HSE have confirmed that the development is not located within the vicinity of a major accident hazard site or major accident hazard pipeline. The Health and Safety, Construction and Operational Impacts sections of this report set out how the applicant has mitigated (subject to conditions) the risk to human and environmental health to an acceptable level. A subsequent application for hazardous substances consent will consider the likely potential impacts on surrounding populations and the environment. In addition, the applicant will also need to comply with other legislation which is outwith planning.

- A.3.22 **Policy 25 (Community wealth building)** aims to encourage, promote and facilitate a new strategic approach to economic development that also provides a practical model for building a wellbeing economy at local, regional and national levels. While NPF4 considers national developments as a focus for delivery, they should also be exemplars of the community wealth building approach to economic development. A socio-economic planning condition is recommended. Further measures out with the remit of planning can be developed in conjunction with the Councils Community Wealth Building Team.
- A.3.23 **Policy 26 (Business and industry)** Development proposals for business, general industrial and storage and distribution uses outwith areas identified for those uses in the Local Development Plan will only be supported in limited circumstances. In particular, under this policy it would need to be demonstrated that there were no suitable alternative allocated sites, as well as considering the appropriateness of the nature and scale of the proposed development in the location proposed. However, it is considered that as 'green' hydrogen developments are granted an in principle support under NPF4 Policy 11, it is considered more appropriate to assess this development policy 11 energy proposal, rather than as a more conventional industrial development.
- A.3.24 Consequentially, in light of the proposed development being of a type expressly supported by NPF4 Policy 11, there is no policy requirement for any further assessment of, or justification for, its rural location within NPF4. This approach was advocated by the Reporter for the green hydrogen plant adjacent to Whitelee Wind Farm, East Ayrshire (Jan 2025). Scottish Ministers subsequently in granting consent supported this interpretation of policy.

Highland wide Local Development Plan (HwLDP)

- A.3.25 The principal HwLDP policy against which the application requires to be determined is the Policy 67 (Renewable Energy Developments). This states that renewable energy developments should be well-related to the source of the primary renewable resources that are needed for their operation. For hydrogen the natural resource is from water abstraction, with the power in this case coming from the renewable energy resources already feeding into the grid. However, there is also potential for a behind the meter agreement with the adjacent wind farm. These resources will be derived from boreholes, and the electric connection will be to the existing Beinn Tharsuinn Wind Farm substation, which is located further down the access track.

- A.3.26 Under this policy, the Council will consider the contribution of the proposed development towards meeting renewable energy generation targets and any positive or negative effects it is likely to have on the local and national economy. It states that the Council will support proposals where it is satisfied that they are located, sited and designed such that they will not be significantly detrimental overall, either individually or cumulatively with other developments, with regard to 11 identified areas, including natural, built and cultural heritage features, species and habitats and visual and landscape impacts. Policy 28 relates to sustainable design and supports developments which promote and enhance the social, economic and environmental wellbeing of the people of Highland. It introduces the concept of achieving the right development in the right place and not to allow development at any cost.

As detailed in the report with development will have some adverse effects on the local area and receiving environment. However, the adverse effects are considered to be sufficiently mitigated through the use of planning condition.

Caithness and Sutherland Local Development Plan (2018) (CaSPlan)

- A.3.27 The majority of the application site is covered by the CaSPlan. A very small area of the northern most part of the application site is located in an "Area for Coordinated Tourism Connections". It is not considered the proposed development would have an impact on this area.
- A.3.28 In relation to climate change, paragraph 80 states: "The Council is committed to working with communities, businesses and partners to mitigate our impact on climate change by reducing greenhouse gas emissions, maximising renewable energy contributions, taking steps to adapt to the unavoidable impacts of a changing climate and to working with communities to respond to climate change." Paragraph 83 also states that "peatland is a vital carbon store and Caithness and Sutherland's peatland resource is of international importance. Through the policies in the Highland-wide Local Development Plan (HwLDP) we can help safeguard important peatland resources".

Inner Moray Firth Local Development Plan 2 (IMFLDP2) (2024)

- A.3.29 A small part of the proposed development is covered by the IMFLDP2. This is limited to part of the cable route to the Beinn Tharsuinn Wind Farm and one of the Boreholes (BH3). The site is not located within any IMFLDP2 land allocations or designations.

In relation to the renewable energy sector, paragraph 43 refers specifically to hydrogen and states:

"The transition to alternative fuels, such as hydrogen, is accelerating and within the timescales of this Plan will likely become an integral part of our everyday lives. A number of proposals are emerging across the region, including the "North of Scotland Hydrogen Programme", which forms a core part of the Inverness and Cromarty Firth Green Freeport Vision. It aims to develop a state-of-the-art hydrogen hub in the Inner Moray Firth and would produce, store and distribute "green" hydrogen to Highland, Scotland, other parts of the UK and Europe."

- A.3.30 Under Policy 2 Nature Protection, Restoration and Enhancement, major developments proposals will only be supported where it is demonstrated that the proposal will conserve and enhance biodiversity, including nature networks within and adjacent to the site, so that they are in a demonstrably better state than without intervention, including through future management. As detailed above, the effects upon the receiving environment have been considered in this report. Subject to conditions, including a scheme for habitat compensation and enhancement the proposal is considered to accord with this requirement.

Scottish Government Hydrogen Policy Statement (2020)

- A.3.31 The Scottish Government has committed to achieving net zero greenhouse gas emissions by 2045, as set out within the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. As part of this Scottish Government in their Hydrogen Policy Statement outlined that hydrogen will play a critical role in decarbonisation of the energy system. It also sets out a vision for Scotland to become a leading hydrogen nation in the production of reliable, competitive, sustainable hydrogen. To start with regional or local production of renewable hydrogen will play an important role in helping to build the domestic hydrogen market and these have the potential to scale up quickly. The policy statement also projected that if Scotland becomes an exporter of green energy to Europe this could result in the requirement for green hydrogen production of 126 TWh, a £25bn contribution to GVA and over 300,000 jobs by 2045.
- A.3.32 The statement also confirmed the Governments ambition for at least 5GW of renewable and low-carbon hydrogen by 2030 and at least 25GW by 2045. It sets out how Scotland's abundant natural resources, skills and supply chain offer the potential for large scale production of renewable hydrogen from offshore wind to be a key driver of the longer-term hydrogen economy in Scotland. As such it recognises the need for pace to capitalise on opportunities within the domestic and global hydrogen market. It outlined a funding commitment and towards the development of our hydrogen economy. Also support the transition and growth of Scotland's existing supply chain, including in the development of skills and manufacturing capacity, that can play a significant role in the hydrogen economy both domestically and internationally.

Scottish Governments Hydrogen Action Plan (2022)

- A.3.33 The Hydrogen Action Plan reiterates that hydrogen is considered to be a key component part in the drive towards net-zero, particularly for energy intensive industries, sustainable fuel production and activities which are challenging to fully electrify such as long-distance transport, low carbon dispatchable power and long duration energy storage. It sets out the actions that will be taken over the next five years to support the development of a hydrogen economy, these are as follows:
- “Scaling up hydrogen production in Scotland
 - Facilitating the development of a domestic market
 - Maximising the benefits of integrating hydrogen into our energy system
 - Enabling the growth and transition of Scotland’s supply chain and workforce
 - Establishing and strengthening international partnerships and markets
 - Strengthening research and innovation”
- A.3.34 The proposed development would form part of the North of Scotland Hydrogen programme. The aim of which is “to develop a state-of-the-art hub to produce, store and distribute renewable hydrogen to the local area, the UK and Europe. Ideally located close to large-scale renewable resources, there is a driving ambition for the region to become a hydrogen economy, with huge local demand for renewable hydrogen from distilleries, industry, transport and domestic applications”.
- A.3.35 The document also references the proposed development site directly, stating that it “will initially supply renewable hydrogen to local distilleries operated by Diageo, Glenmorangie and Whyte and Mackay, and the supply chain supporting those distilleries, before expanding into a broader Cromarty regional solution for heat and transport needs whilst also enabling hydrogen export via the Port of Cromarty Firth.”

Appendix 4 – Appropriate Assessment: Morangie Forest Special Protection Area

APPROPRIATE ASSESSMENT

MORANGIE FOREST SPECIAL PROTECTION AREA (SPA)

23/05242/FUL

CONSIDERATION OF PROPOSALS AFFECTING EUROPEAN SITES

The status of the Morangie Forest Special Protection Area (SPA) means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the 'Habitats Regulations') or, for reserved matters the Conservation of Habitats and Species Regulations 2017 as amended apply.

This means that where the conclusion reached by the Council on a development proposal unconnected with the nature conservation management of a Natura 2000 site is that it is likely to have a significant effect on those sites, it must undertake an Appropriate Assessment of the implications for the conservation interests for which the areas have been designated. The need for Appropriate Assessment extends to plans or projects out with the boundary of the site in order to determine their implications for the interest protected within the site.

This means that the Council, as competent authority, has a duty to:

- Consider whether the proposal is directly connected with or necessary to the management of the SPA for conservation; and, if not,
- Consider, on a precautionary basis, whether the proposal is likely to have a significant effect on the SPA either alone or in combination with other plans or projects.
- Make an Appropriate Assessment of the implications (of the proposal) for the SPA in view of the SPA conservation objectives.

The competent authority can only agree to the proposal after having ascertained that it will not have an adverse effect on the integrity of the SPA. If this is not the case and there are no alternative solutions, the proposal can only be allowed to proceed if there are imperative reasons of overriding public interest, which in this case can include those of a social or economic nature.

APPROPRIATE ASSESSMENT

While the responsibility to carry out the Appropriate Assessment rests with the Council, advice contained within Circular 6/1995 is that the assessment can be based on the information submitted from other agencies. In this case, the Appropriate Assessment is informed by information supplied by NatureScot in its consultation response dated (12th February 2026) and the applicant.

HIGHLAND COUNCIL APPRAISAL OF THE PROPOSAL

- The proposal is not connected with or necessary to the management of the SPA for conservation.
- The proposed development is not located within the Morangie Forest SPA but is located some 4.04 km from the main site area and 3.36 km from the closest part of the site access.

The SPA is designated for its breeding populations of capercaillie. The applicant's assessment identifies that the habitats within the application site are unsuitable for capercaillie. In addition, the desk top survey also found no evidence of capercaillie within 1km of the proposal. However, as recognised by the applicant and NatureScot the forest block immediately to the south of the access track may provide suitable habitat. This area of forestry has not been included in the applicant's survey. NatureScot also note that the land is not controlled by Forestry and Land Scotland (FLS), so will not have been surveyed. RSPB have also confirmed to NatureScot that they are not aware of this area being monitored. As such, there is uncertainty regarding the presence of capercaillie in this area.

Lekking capercaillie are highly sensitive to disturbance within 1 km of a lek site and may be spread out. Consequentially, there is a risk of disturbance to lekking capercaillie as a result of the predicted use of the access track. Furthermore, the meta-population structure (network of small, isolated groups) of capercaillie in Easter Ross means that effects on capercaillie within undesignated woods in Easter Ross could also affect the populations of the SPAs.

- In view of the SPAs conservation objectives of its qualifying interests, NatureScot advise that the Council, as competent authority is required to undertake an Appropriate Assessment (AA) of the implications of the proposal on the Morangie Forest SPA.

Appraisal Summary

It is the view of the Planning Authority, when considering the baseline results reported in the applicants Environmental Appraisal and following the receipt of advice (which included mitigation measures) from NatureScot that this proposal will not adversely affect the integrity of the SPA designation.

The baseline survey results do not suggest that the proposed development site is suitable for capercaillie. In addition, the desk top survey also found no evidence of capercaillie within 1km of the proposal. However, there is some uncertainty with regards to the spread of local populations. The only area which may offer suitable habitat is an area of woodland near the access track. As noted above, Lekking capercaillie are highly sensitive to disturbance within 1 km of a lek site. As this area has not been included in the survey, NatureScot recommend the following measures to mitigate the risk of disturbance.

- Mitigation: Surveys should be conducted within a 1.5 km buffer of the access track to include the area of forestry immediately to the south of the track. If surveys find signs of lekking capercaillie, no vehicles should use the track between sunrise and 9:00 during the capercaillie lekking season (March to May inclusive). This should be

applied during the construction and operation period. If surveys are not completed, the same restriction should be applied.

- If surveys confirm the absence of lek sites and the habitat is deemed unsuitable for capercaillie, no restriction on use of the track during construction and operation would be required.

Overall, it is considered that subject to the identified mitigation measures outline above, the development would not have an adverse effect on the integrity of the SPA. This mitigation can be secured by a planning condition.

The Highland Council (25/06/2026)

Appendix 5 – Appropriate Assessment: Novar Special Protection Area (SPA)

APPROPRIATE ASSESSMENT

NOVAR SPECIAL PROTECTION AREA (SPA)

23/05242/FUL

CONSIDERATION OF PROPOSALS AFFECTING EUROPEAN SITES

The status of the Novar Special Protection Area (SPA) means that the requirements of the Conservation (Natural Habitats, & c.) Regulations 1994 as amended (the 'Habitats Regulations') or, for reserved matters the Conservation of Habitats and Species Regulations 2017 as amended apply.

This means that where the conclusion reached by the Council on a development proposal unconnected with the nature conservation management of a Natura 2000 site is that it is likely to have a significant effect on those sites, it must undertake an Appropriate Assessment of the implications for the conservation interests for which the areas have been designated. The need for Appropriate Assessment extends to plans or projects out with the boundary of the site in order to determine their implications for the interest protected within the site.

This means that the Council, as competent authority, has a duty to:

- Consider whether the proposal is directly connected with or necessary to the management of the SPA for conservation; and, if not,
- Consider, on a precautionary basis, whether the proposal is likely to have a significant effect on the SPA either alone or in combination with other plans or projects.
- Make an Appropriate Assessment of the implications (of the proposal) for the SPA in view of the SPA conservation objectives.

The competent authority can only agree to the proposal after having ascertained that it will not have an adverse effect on the integrity of the SPA. If this is not the case and there are no alternative solutions, the proposal can only be allowed to proceed if there are imperative reasons of overriding public interest, which in this case can include those of a social or economic nature.

APPROPRIATE ASSESSMENT

While the responsibility to carry out the Appropriate Assessment rests with the Council, advice contained within Circular 6/1995 is that the assessment can be based on the information submitted from other agencies. In this case, the Appropriate Assessment is informed by information supplied by NatureScot in its consultation response dated (12th February 2026) and the applicant.

HIGHLAND COUNCIL APPRAISAL OF THE PROPOSAL

- The proposal is not connected with or necessary to the management of the SPA for conservation.
- The proposed development is not located within the Novar SPA but is located some 9.12km from the main site area and 8.81km from the closest part of the site access.

The SPA is designated for its breeding populations of capercaillie. The applicant's assessment identifies that the habitats within the application site are unsuitable for capercaillie. In addition, the desk top survey also found no evidence of capercaillie within 1km of the proposal. However, as recognised by the applicant and NatureScot the forest block immediately to the south of the access track may provide suitable habitat. This area of forestry has not been included in the applicant's survey. NatureScot also note that the land is not controlled by Forestry and Land Scotland (FLS), so will not have been surveyed. RSPB have also confirmed to NatureScot that they are not aware of this area being monitored. As such, there is uncertainty regarding the presence of capercaillie in this area.

Lekking capercaillie are highly sensitive to disturbance within 1 km of a lek site and may be spread out. Consequentially, there is a risk of disturbance to lekking capercaillie as a result of the predicted use of the access track. Furthermore, the meta-population structure (network of small, isolated groups) of capercaillie in Easter Ross means that effects on capercaillie within undesignated woods in Easter Ross could also affect the populations of the SPAs.

- In view of the SPAs conservation objectives of its qualifying interests, NatureScot advise that the Council, as competent authority is required to undertake an Appropriate Assessment (AA) of the implications of the proposal on the Novar SPA.

Appraisal Summary

It is the view of the Planning Authority, when considering the baseline results reported in the applicants Environmental Appraisal and following the receipt of advice (which included mitigation measures) from NatureScot that this proposal will not adversely affect the integrity of the SPA designation.

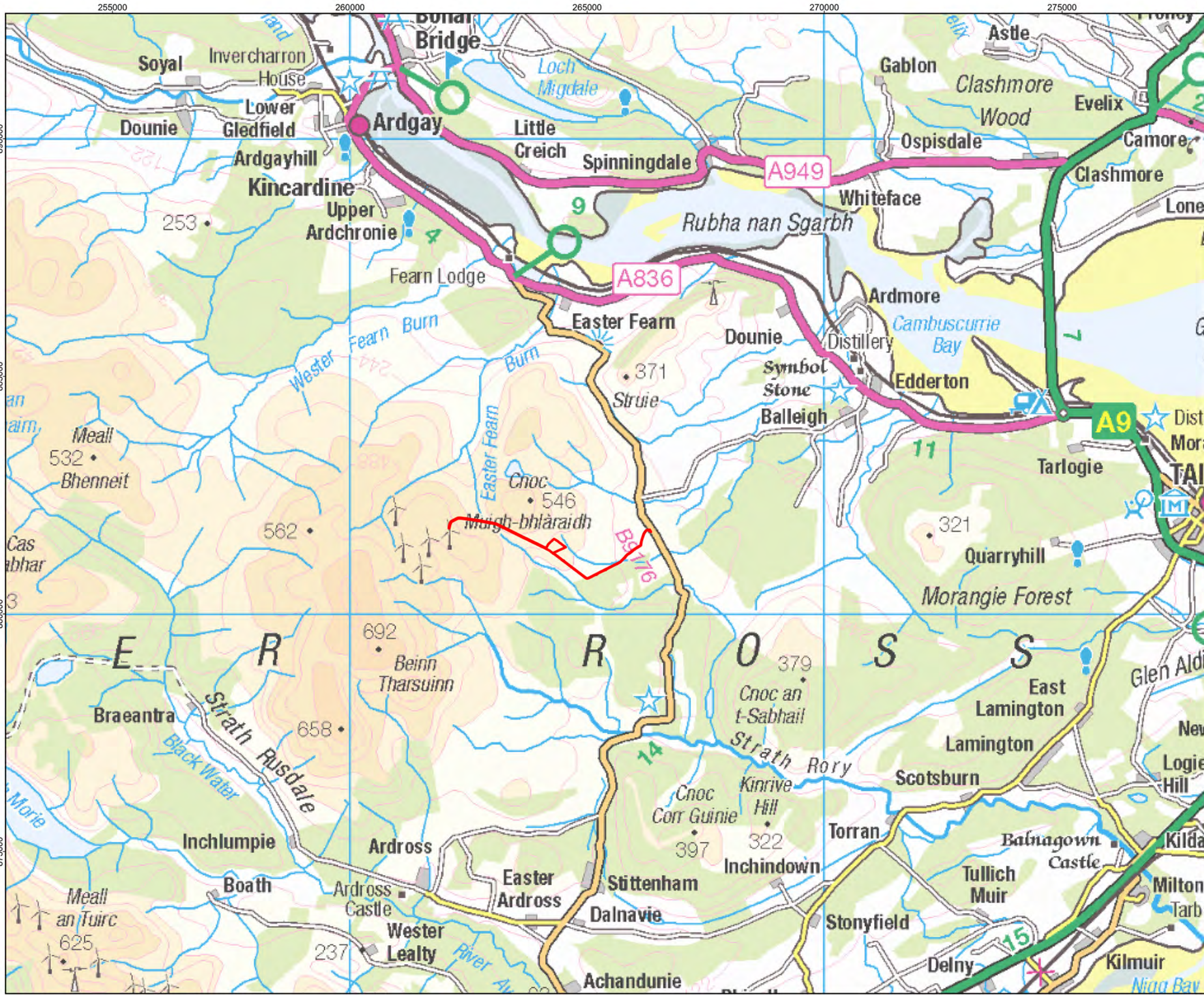
The baseline survey results do not suggest that the proposed development site is suitable for capercaillie. In addition, the desk top survey also found no evidence of capercaillie within 1km of the proposal. However, there is some uncertainty with regards to the spread of local populations. The only area which may offer suitable habitat is an area of woodland near the access track. As noted above, Lekking capercaillie are highly sensitive to disturbance within 1 km of a lek site. As this area has not been included in the survey, NatureScot recommend the following measures to mitigate the risk of disturbance.

- Mitigation: Surveys should be conducted within a 1.5 km buffer of the access track to include the area of forestry immediately to the south of the track. If surveys find signs of lekking capercaillie, no vehicles should use the track between sunrise and 9:00 during the capercaillie lekking season (March to May inclusive). This should be applied during the construction and operation period. If surveys are not completed, the same restriction should be applied.

- If surveys confirm the absence of lek sites and the habitat is deemed unsuitable for capercaillie, no restriction on use of the track during construction and operation would be required.

Overall, it is considered that subject to the identified mitigation measures outline above, the development would not have an adverse effect on the integrity of the SPA. This mitigation can be secured by a planning condition.

The Highland Council (25/06/2026)



Legend:

Application Boundary

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

Rev	Date	Description	Drn	Chk	App
02	30/10/2023	scale change	NH	AP	RB
01	20/07/2023	Boundary update	NH	AP	RB
00	21/11/2022	First Draft	NH	AP	RB

Cromarty Green Hydrogen

TITLE: Figure 1.1:
Location Plan

ID:P663356_Layout_1.1 Location Plan

0

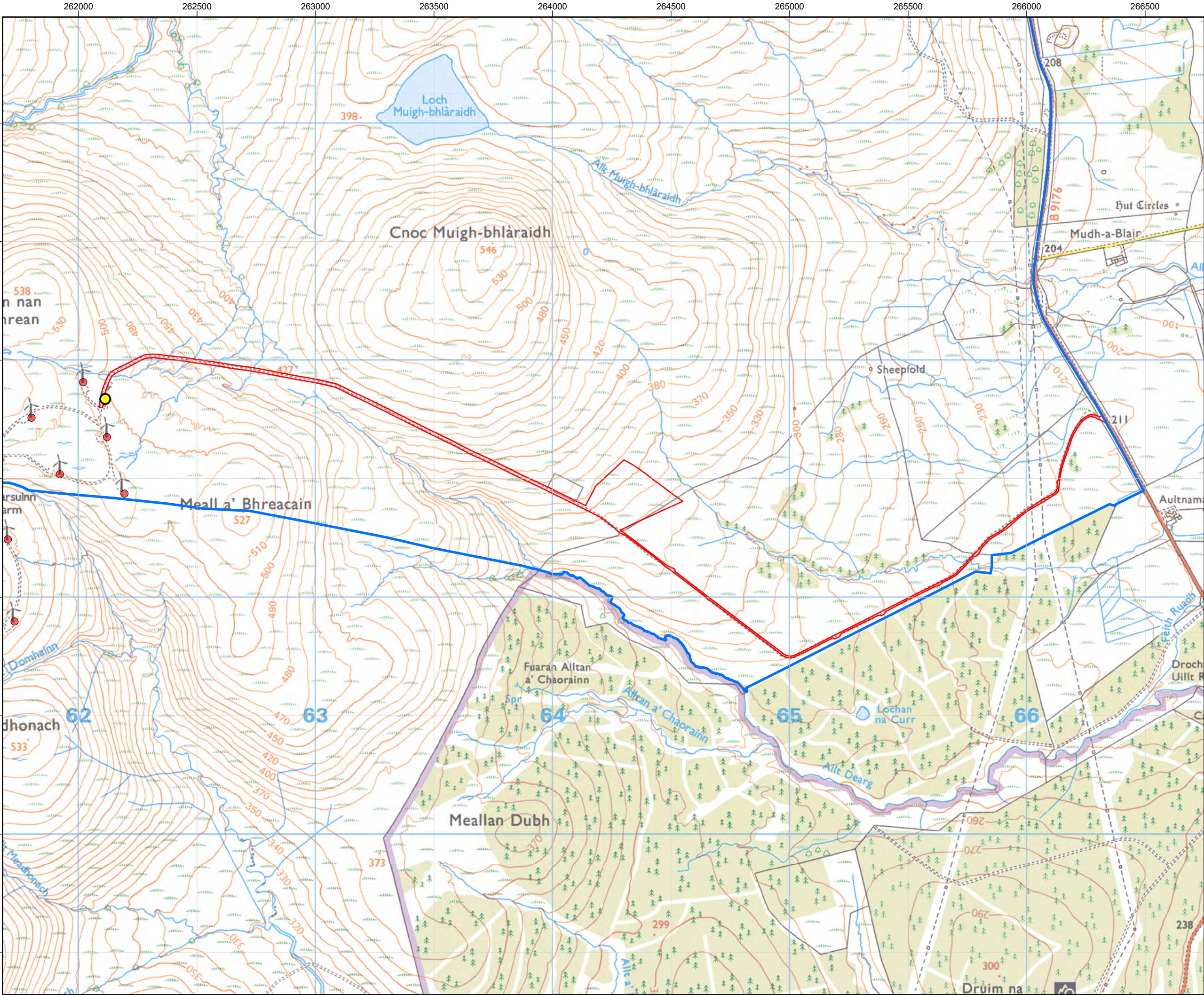
1.5

3

Kilometres

Scale: 1:75,000 @ A3

REV 02



- Legend:**
- Application Boundary
 - Land Under Applicant Control
 - Beinn Tharsuinn Substation
 - Beinn Tharsuinn Windfarm

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter



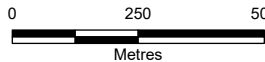
05	17/02/2025	Renamed to 1.2a and changed layer name	AW	AP	AP
04	24/01/2025	Added Landowner Property Boundary	AW	AP	AP
03	30/10/2023	'Main site' bdy removed	NH	AP	RB
Rev	Date	Description	Drn	Chk	App

Cromarty Green Hydrogen

RSK

TITLE:
Figure 1.2a:
Application Boundary

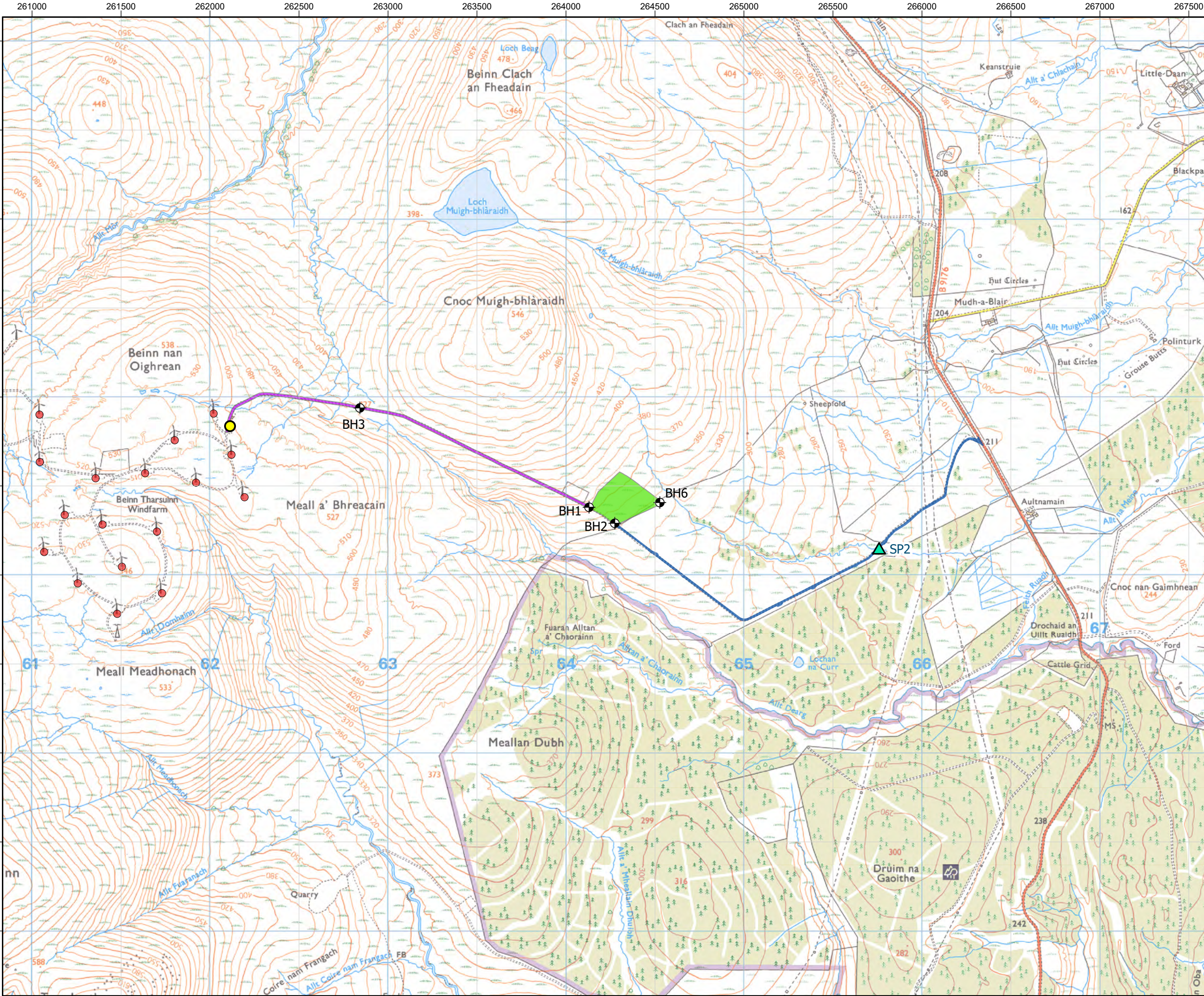
ID:P663356_Layout_1.2a Application Boundary



Scale: 1:15,000 @ A3

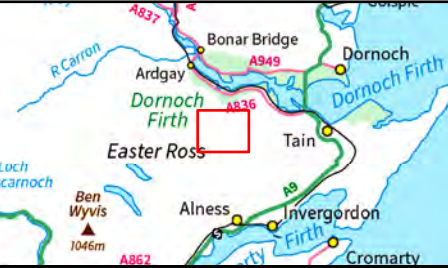


REV 05



- Legend:**
- Beinn Tharsuinn Substation
 - Beinn Tharsuinn Windfarm
 - Cable Route and BH3 Pipeline Corridor
 - Main Site Area and BH1,2 and 6 Pipelines
 - Site Access and Wastewater Pipeline Corridor
 - Wastewater Discharge Location
 - Borehole Locations

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter



Rev	Date	Description	Drm	Chk	App
04	28/04/2025	Updated Legend	AW	AP	AP

Cromarty Green Hydrogen

RSK

TITLE:
Figure 1.5:
Site Components

ID:P663356_Figure 1.5 - Site Components REV04

0 250 500
Metres

Scale: 1:20,000 @ A3



REV 04



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M M MOTT MACDONALD Mott MacDonald Mott MacDonald House 8-10 Sydenham Road Croydon CR0 3EE T: +44 (0)20 8774 2000 W: www.mottmac.com		CLIENT	KEY TO SYMBOLS	<table><tr><td colspan="2">TITLE</td><td colspan="2">STATUS</td></tr><tr><td colspan="2">CROMARTY HYDROGEN PLANT FEED PROJECT</td><td colspan="2">IFR</td></tr><tr><td colspan="2" rowspan="2"></td><td colspan="2">SECURITY</td></tr><tr><td colspan="2">STD</td></tr><tr><td>0</td><td>13/11/24</td><td>S.K.</td><td>Issued for Review</td><td>F.B.</td><td>G.G.</td><td>R.R.</td><td>M.Y.</td><td>SHEET</td><td>1</td><td>OF</td><td>1</td><td>SCALE</td><td>1:500</td><td>A0</td><td>REV</td></tr><tr><td>REV</td><td>DATE</td><td>DRN</td><td>DESCRIPTION</td><td>ORIG</td><td>CHKD</td><td>ENG APPD</td><td>PM APPD</td><td>DRG NO</td><td colspan="4">114153-00-GA-L-0002</td><td colspan="3">0</td></tr></table>																TITLE		STATUS		CROMARTY HYDROGEN PLANT FEED PROJECT		IFR				SECURITY		STD		0	13/11/24	S.K.	Issued for Review	F.B.	G.G.	R.R.	M.Y.	SHEET	1	OF	1	SCALE	1:500	A0	REV	REV	DATE	DRN	DESCRIPTION	ORIG	CHKD	ENG APPD	PM APPD	DRG NO	114153-00-GA-L-0002				0		
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REV	DATE	DRN	DESCRIPTION	ORIG	CHKD	ENG APPD	PM APPD	DRG NO	114153-00-GA-L-0002				0																																																				

TERMINAL POINT	
ITEM	DESCRIPTION
TP-1A	RAW WATER
TP-2	HV ELECTRIC CABLE
TP-3	DRAINAGE
TP-4A	ROAD CONNECTION
TP-4B	MAINTENANCE ACCESS
TP-5	COMMUNICATION
TP-6	RAIN WATER

EQUIPMENT AND FACILITIES IDENTIFICATION LIST	
ITEM	DESCRIPTION
1	ELECTROLYSER AREA
2	COMPRESSION BUILDING
3	FIRE FIGHTING TANK
4	WAREHOUSE/ WORKSHOP
5	ELECTRICAL HV/LV BUILDING
6	FIRE/BLAST WALL
7	ADMINISTRATION AND CONTROL BUILDING
8	WATER TREATMENT PLANT
9	HYDROGEN LOADING BAYS
10	COMPRESSED AIR SYSTEM
11	WASTE STORAGE
12	HAZARDOUS MATERIAL STORAGE
13	DIESEL GENERATOR
14	NITROGEN PACKAGE
15	CHEMICAL STORAGE AND DOSING SYSTEM
16	ANALYZER CONTAINER
17	HYDROGEN TUBE TRAILERS PARKING
18	TRUCK LOADING PANEL
19	SECURITY GATE HOUSE
20	SUBSTATION
21	PEDESTRIAN CROSSING
22	FIRE FIGHTING PUMPS
23	FEED WATER TANK
24	HYDROGEN FLARE STACK
25	RAW WATER TANK
26	HYDROGEN COOLING SYSTEM
27	PARKING AREA
28	ATTENUATION POND
29	LAYDOWN AREA
30	FIRE FIGHTING SYSTEM
31	PIPE RACK
32	ELECTROLYSER FEED WATER PUMPS
33	FEED WATER PUMPS
34	RAW WATER PUMPS
35	COMPRESSORS KO DRUMS
36	HYDROGEN VENT KO DRUM
37	BIO-DIESEL TANK AND BIO-DIESEL TRANSFER PUMPS
38	POTABLE WATER PAKAGE
39	33kV BURIED
40	SAFETY SHOWER / EYEWASH
41	AIR RECEIVER
42	BARRIER
43	WATER COOLING SYSTEM
44	CLOSED COOLING WATER TANK
45	CLOSED COOLING WATER PUMPS
46	OIL INTERCEPTOR
47	SEPTIC TANK
48	TREATED WATER ANALYSER
49	WASTEWATER TANK FROM ELECTROLYSER

— BOUNDARY

CONSTRUCTION COMPOUND

GENERAL NOTES

1. All dimensions are in millimeter and elevations in meter.

2. The " ZERO REFERENCE POINT " is located at SouthWest of the plant and corresponds to the Coordinate System of the British National Grid

E = 264228.9147 m

N = 881454.5759 m

Z= 0.00 Corresponds to +345.00 m AOD.

Is referred to finish floor level of all Buildings, except otherwise indicated.

3. Zero reference point will also be marked on site as a reference for construction.

4. This drawing is to be read in conjunction with all relevant documents and drawings.

NOTES

1. ALL EQUIPMENT / UNIT DIMENSIONS ARE BASED ON PRELIMINARY INFORMATION.

2. 15MW HYDROGEN PRODUCTION FACILITY CONSISTS OF 3 X 5MW CONTAINERISED ELECTROLYSER PACKAGES.

3. IT SHOULD BE NOTED THAT CERTAIN COMPONENTS WITHIN THE ELECTROLYSER PACKAGE CANNOT BE ATEX RATED AND THEIR LOCATION SHOULD BE REVIEWED IN LINE WITH THE HAZARDOUS AREA CLASSIFICATION DRAWING. THIS EQUIPMENT WITHIN THIS PACKAGE IS PART OF THE ELECTROLYSER VENDORS SCOPE.

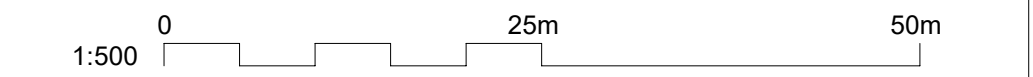
4. EXTERNAL PARKING IS ESTIMATED. INTERNAL PARKING ASSUMES 9 PEOPLE:

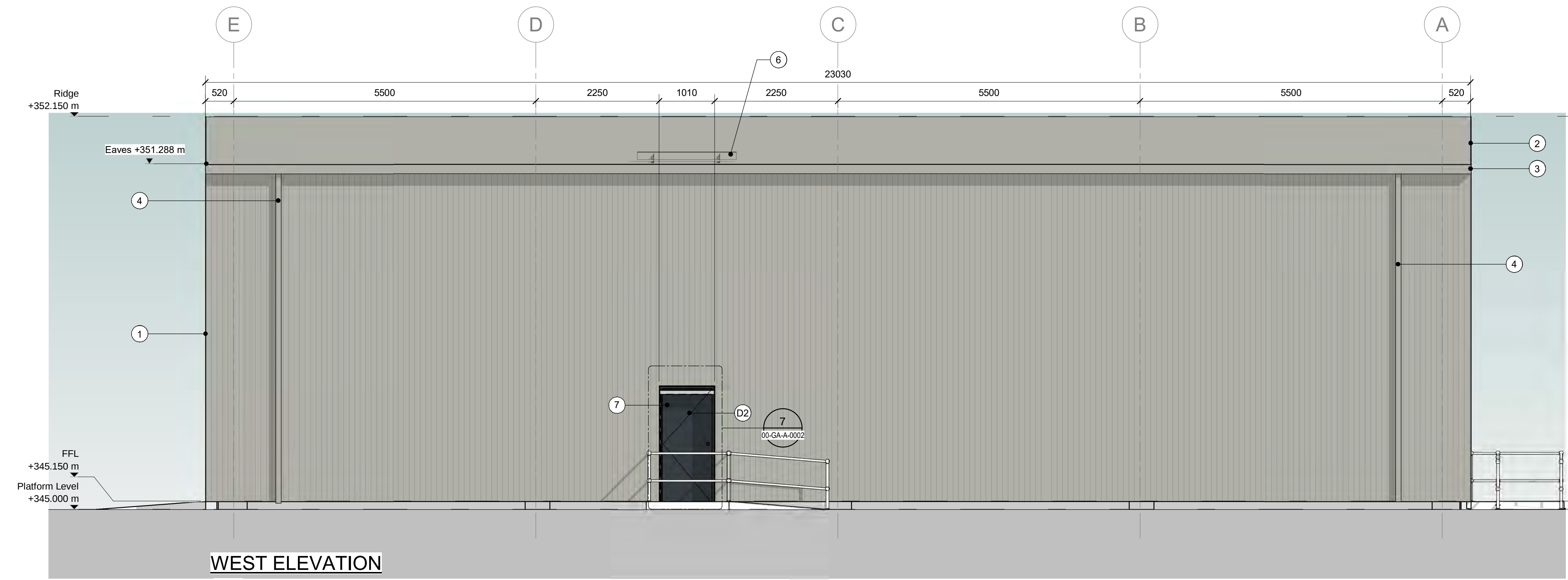
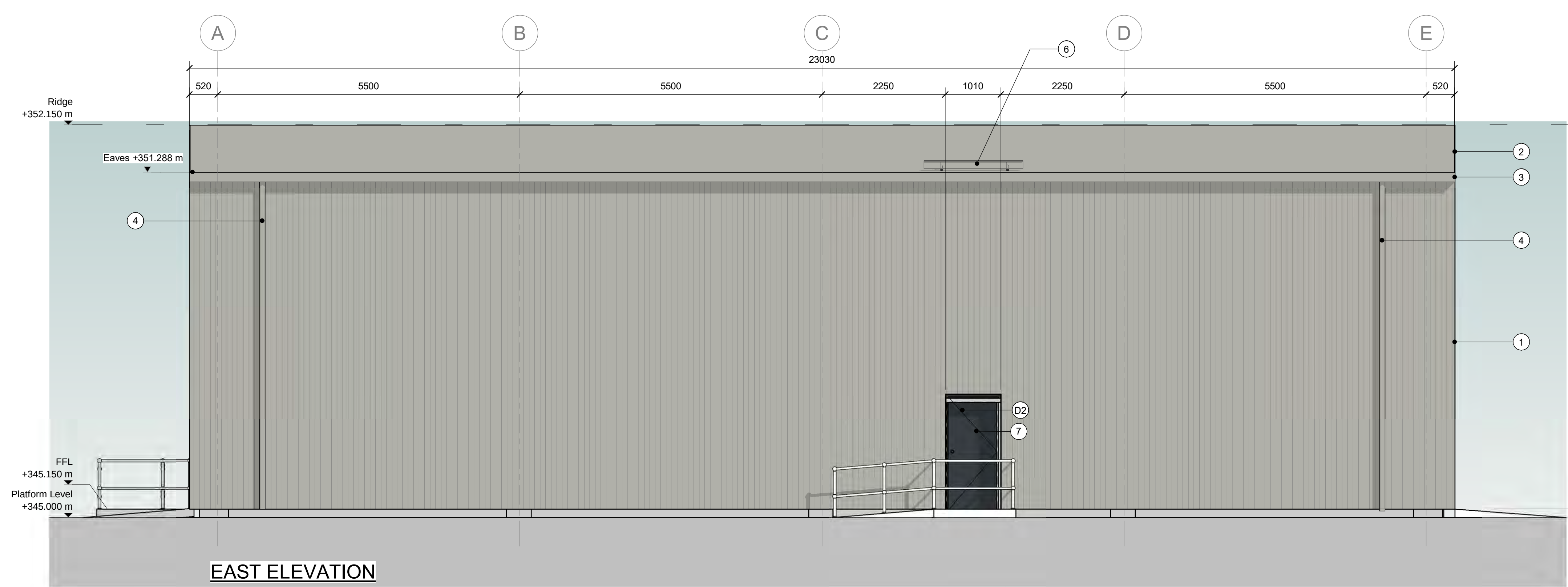
- 2 x Operators
- 1 x Security Guard
- 1 x Day E. C&I Technician
- 1 x Day Mechanical Technician
- 1 x Day Driver Handyman
- 1 x Admin
- 1 x Site Manager
- 1 x Visitors

HOLDS

REFERENCE DRAWINGS

- 114153-00-BFD-P-0001 - BLOCK FLOW DIAGRAM (BFD)
- 114153-00-GA-C-0002 - EARTHWORKS GENERAL ARRANGEMENT





- GENERAL NOTES
- DO NOT SCALE FROM THIS DRAWING.
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NOTES

These drawings form design intent only. The Workshop Building is to be fully designed by the Cladding Contractor at the next design stage. The Contractor is responsible for ensuring compliance with Part 6 of the Scottish Building Standards and Technical Handbook. The following U-Values should be considered as a backup, with the contractor aiming to improve on these requirements in line with national U-Values outlined within Part 6 of the Building Standards and Technical Handbook.

Walls: 0.21W/m²K
Roof: 0.16W/m²K
Windows: 1.6W/m²K
Doors: 1.4W/m²K

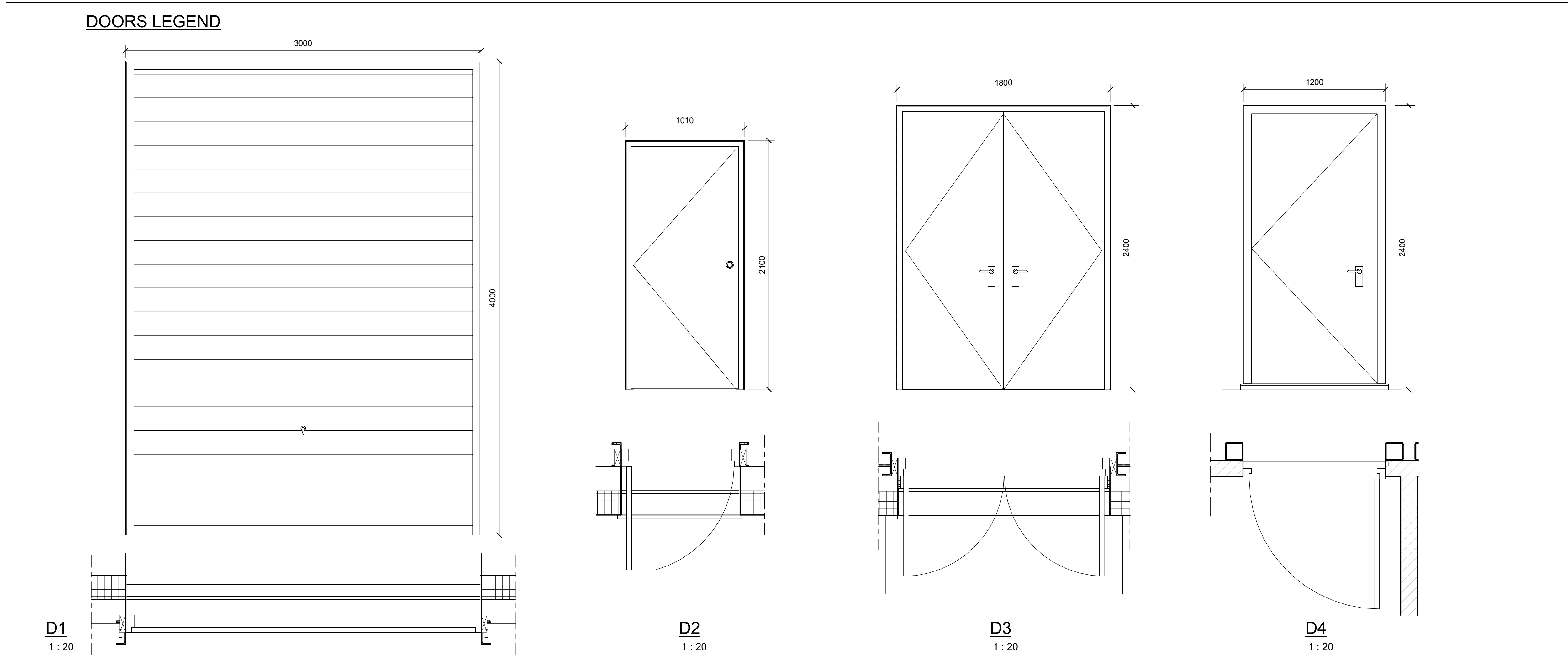
All external doors and windows must conform to the relevant security criteria as stipulated in the contract documents.
All external doors to be fully weather sealed and rated for severe conditions. All doors to be supplied with integral low level (DDA Compliant) threshold weather bars. All emergency escape doors to be provided with full width panic bars and relevant statutory signage.
All doors to be fitted with overhead closures, suitable for the door leaf weight and geographical exposure rating of the site.
Light reflectance value differential from frames to Ironmongrey to be at least 30 points.
Double leaf doors to have rebated door leaf check or gap guard as per manufacturer's details.
Slave leaf to all double doors to be installed with shoot bolts top and bottom. Panic hardware to active leaf only.

To ensure the correct compression of fixings and prevent distortion of the panel face, depth gauges must be used on fixing guns in accordance with cladding manufacturer's installation instructions.

Fire Strategy to be developed by the Contractor to meet all relevant regulations.

Design intent drawings to be read in conjunction with Basis of Design document.

Refer to drawing 114153-00-GA-S-0037 for structural general notes for design information on building structural elements. All secondary steelwork by Cladding Contractor and shown indicatively.



MATERIALS KEY LEGEND	
1	Wall cladding Material = Insulated metal wall cladding panel Colour = RAL 7038 Agate Green
2	Roof cladding Material = Insulated metal wall cladding panel Colour = RAL 7038 Agate Green
3	Metal gutter Material = Aluminium Colour = RAL 7038 Agate Green
4	Metal downpipe Material = Aluminium Colour = RAL 7038 Agate Green
5	Internal masonry Structural material = Dense concrete blockwork Thickness = 100 mm Finish = Painted white
6	Snow Guard Material = Aluminium Colour = RAL 7038 Agate Green
7	Doors Material = Metal Colour = RAL 7016 Anthracite Grey

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CLIENT

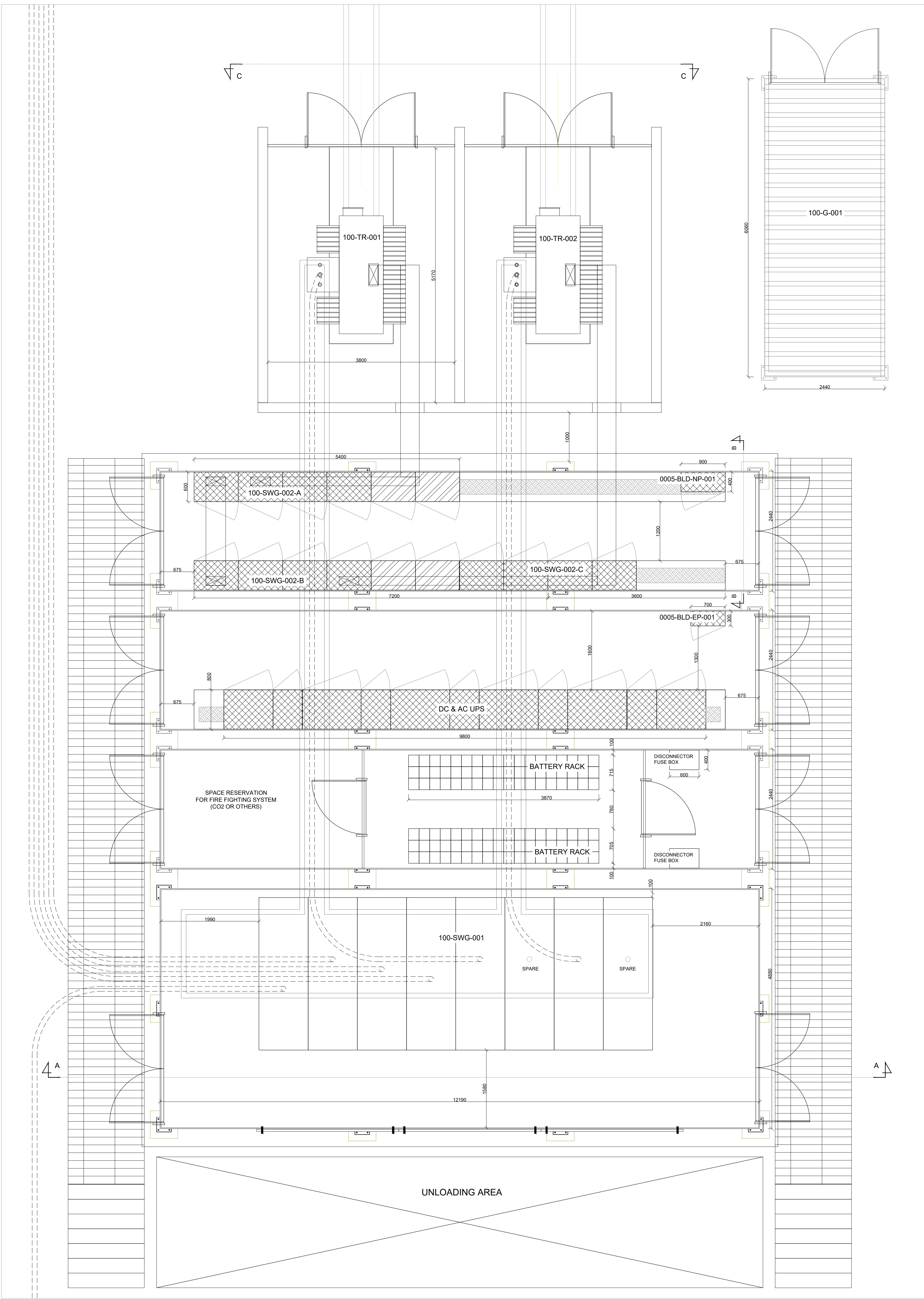
KEY TO SYMBOLS

- T.O.C - TOP OF CONCRETE
- T.O.S - TOP OF STEEL

TITLE										CROMARTY HYDROGEN PLANT										
										WAREHOUSE & WORKSHOP										
										ARCHITECTURAL DRAWINGS										
										STATUS										
										IFD										
										SECURITY										
										STD										
										REV										
1	19.07.24	FK	ISSUED FOR DESIGN							MF	SS	LA	MY	SHEET 1 OF 1				SCALE As indicated	A1	
0	28.06.24	MF	ISSUED FOR REVIEW							MF	SS	LA	MY							
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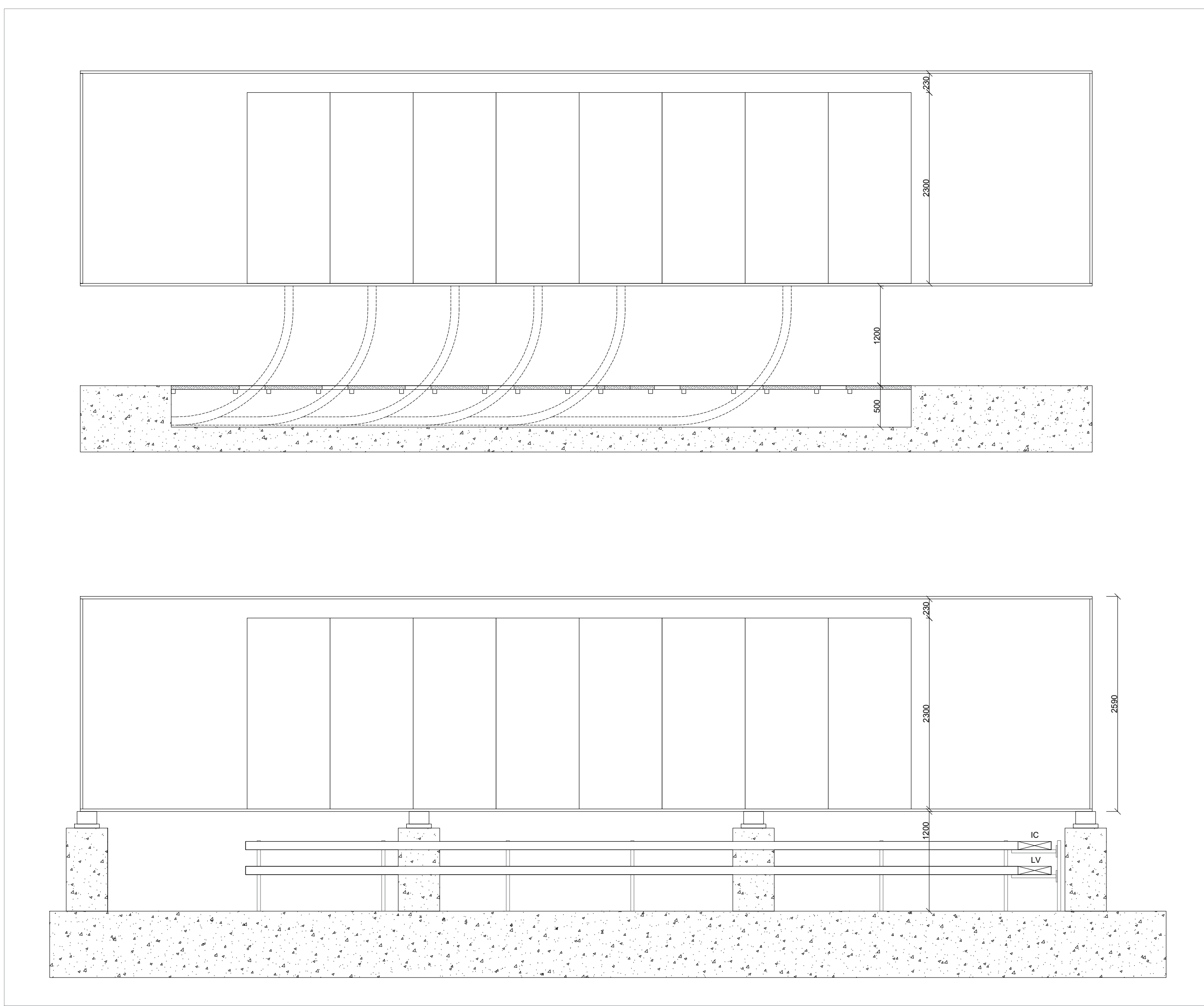
CLIENT DOC NO CRHY-PR-GD-00XX

PLAN VIEW



1:40

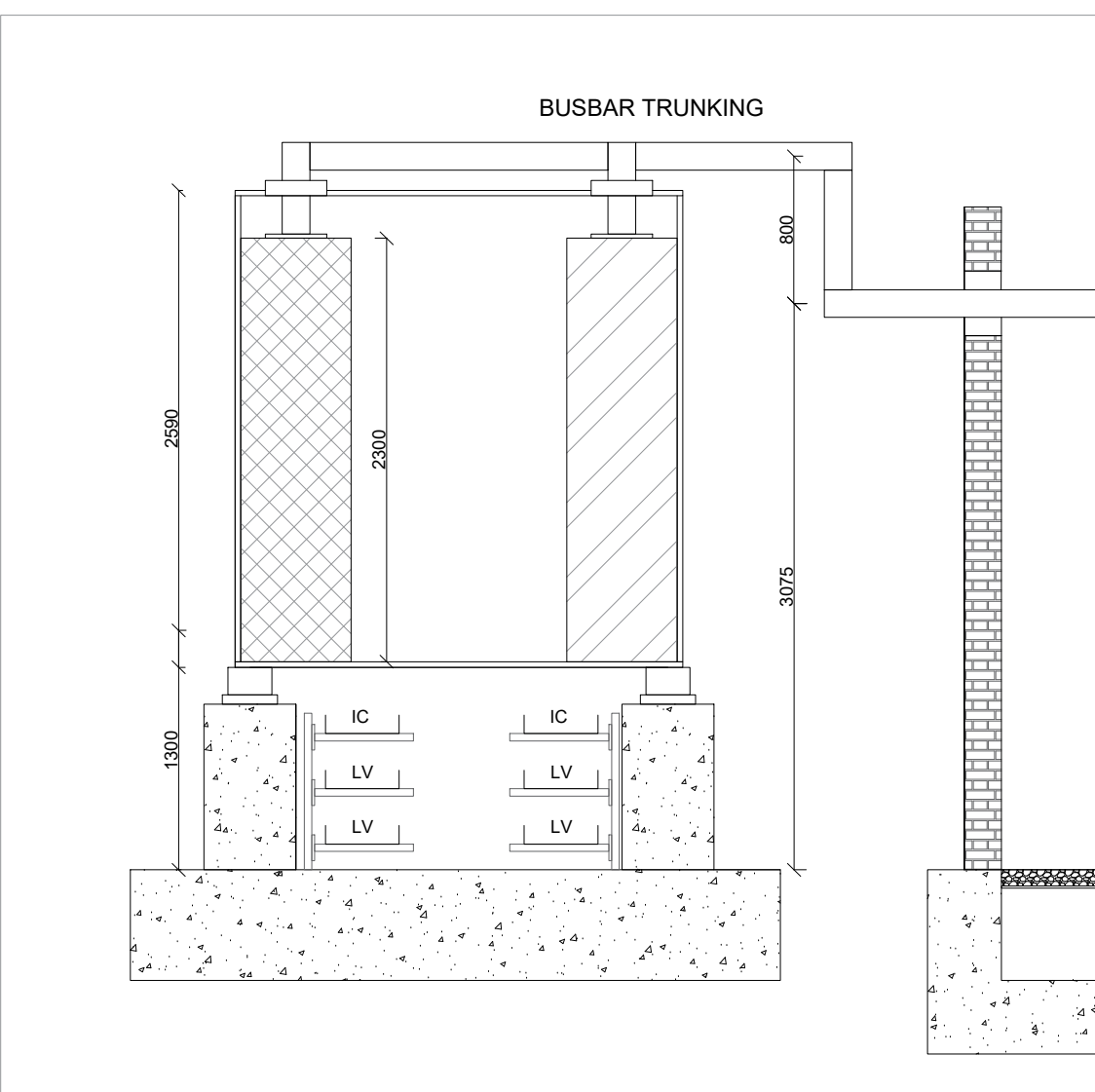
SECTION A-A



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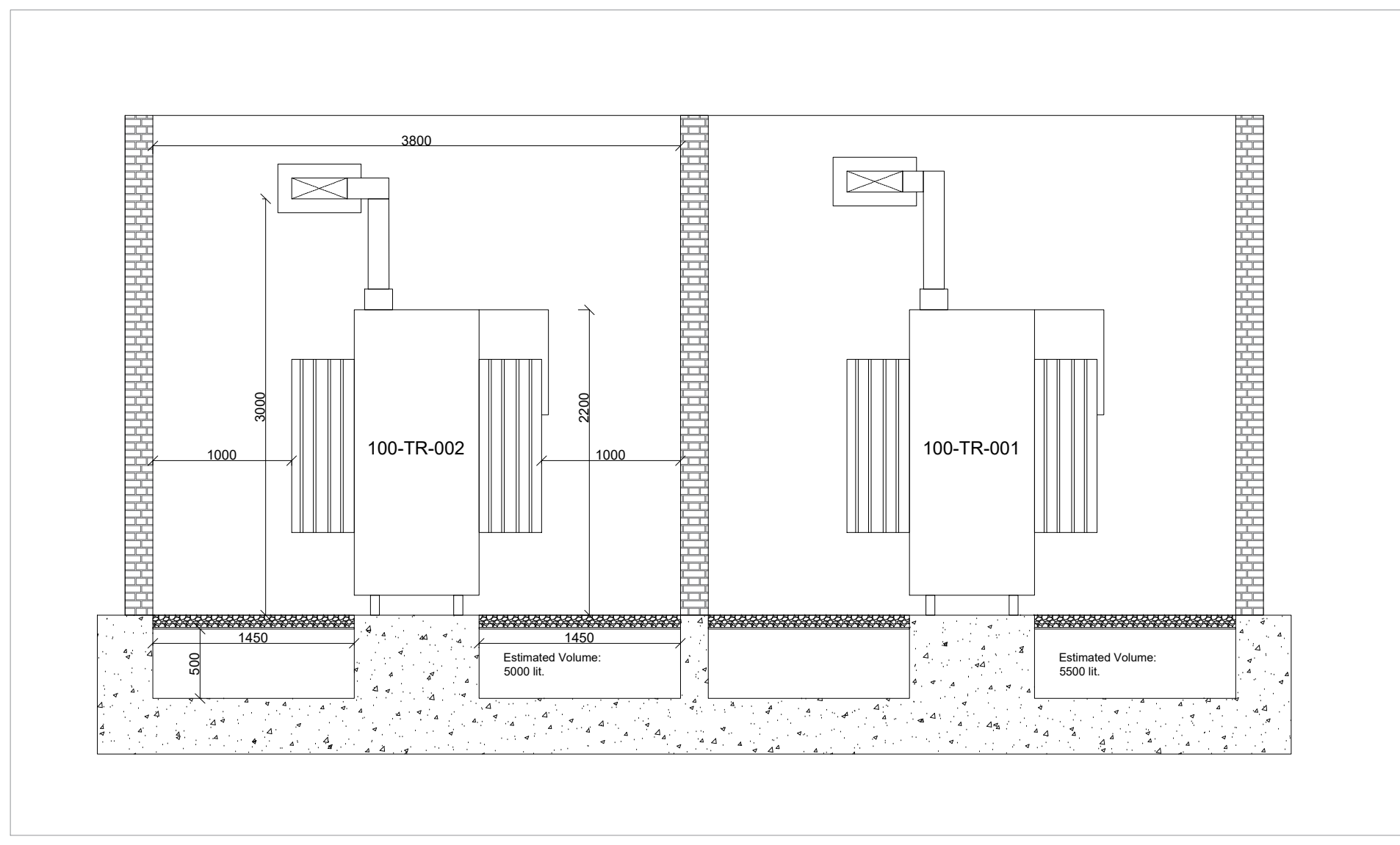
SECTION B-B

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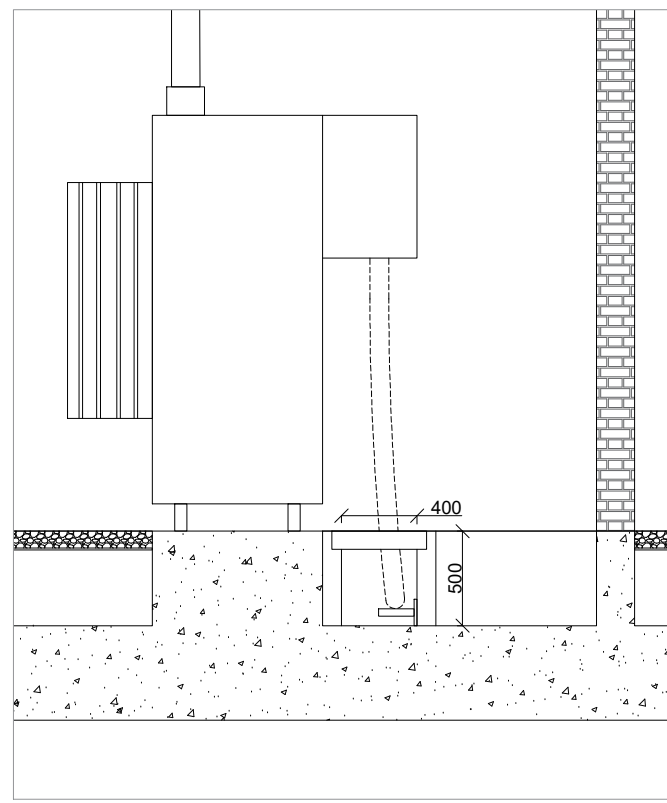
SECTION C-C

1:40



HV CABLE

1:40



NOTES

- The Electrical Equipment Layout is based on preliminary data at FEED Stage, and may be subject to variations.
- HV/LV transformers are connected to the LV switchgears via busbar trunking.
- Foundations, firewalls and pedestals are indicative and shall be defined by Civil engineer during Detail Design.
- Arrangement of the HV and LV containers and number of cells will be finalised at Detail Design stage by the selected vendor.
- Thickness and details of transformer walls to be determined by Architecture Civil Structural during Detail Design.
- Additional details for the FEED stage on the represented electrical equipment are listed in the Electrical Equipment List document.
- Cable Trays are indicated as typical installation. The complete cable ways system is not scope of the present document and will be depicted in the cable ways layout documentation.
- The height of the switchgears and container height will be checked with selected vendor at Detail Design stage.

TAGS LEGEND:

- | | |
|-----------------|--|
| 100-SWG-001 | HV 33 kV Switchgear |
| 100-TR-001 | HV/LV Transformer |
| 100-TR-002 | HV/LV Transformer |
| 100-SWG-002-A | LV Main Switchgear Bus Section A |
| 100-SWG-002-B | LV Main Switchgear Bus Section B |
| 100-SWG-002-C | LV Main Switchgear Bus Section C |
| 100-SWG-001 | Emergency Standby Generator |
| 0005-BLD-NP-001 | Electrical Building Lighting Panel (Normal) |
| 0005-BLD-EP-001 | Electrical Building Lighting Panel (Emergency) |

- | | |
|--|---------------------|
| | LV Switchgear |
| | LV Switchgear (VFD) |

HOLDS

- Equipment dimension is indicative and based on available data for FEED stage, and it is to be validated in Detail Design.
- Foundations, firewalls and pedestals are indicative and shall be defined by Civil engineer during Detail Design.

REFERENCE DRAWINGS

- | | |
|----------------------|-------------------------------------|
| 114153-00-SH-E-0001 | Electrical Load List |
| 114153-00-SO-C-0001 | Electrical Equipment List |
| 114153-00-DC-PM-0001 | Basis of Design and Design Criteria |

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CLIENT		KEY TO SYMBOLS		TITLE								STATUS	
 MOTT MACDONALD				CROMARTY HYDROGEN PRODUCTION FACILITY ELECTRICAL EQUIPMENT LAYOUT								PRE	
												SECURITY	
												STD	
												REV	
0		28/06/2024		S.L.		ISSUED FOR REVIEW		S.L.		S.B.		R.R.	
REV		DATE		DRN		DESCRIPTION		ORIG		CHKD		ENG APPD	
												PM APPD	
												DRG NO	
												114153-00-BLD-E-0001	
												0	
												CLIENT DOC NO	
												CRHY-PR-DR-0037	

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NOTES

These drawings form design intent only. The Control and Administration Building is to be fully designed by the Modular Contractor at the next design stage. The Contractor is responsible for ensuring compliance with Part 6 of the Scottish Building Standards and Technical Handbook. The following U-Values should be considered as a backstop, with the contractor aiming to improve on these requirements in line with notional U-Values outlined within Part 6 of the Building Standards and Technical Handbook.

Walls: $0.21 \text{ W/m}^2\text{K}$

Roof: $0.16 \text{ W/m}^2\text{K}$

Floor: 0.18W/m²K

Windows: 1.6W/m²K

Doors: $1.4 \text{ W/m}^2\text{K}$

Modular contractor

Modular contractor to ensure a ventilation provision below module floors of 1500mm² per metre run of external wall, or 500mm² per m² of floor area, whichever is greater.

All external doors and windows must conform to the relevant security criteria as stipulated in the contract documents

All external doors and windows to be fully weather sealed and rated for severe conditions. All doors to be supplied with integral low level (DDA Compliant) threshold weather bars.

All emergency escape doors to be provided with full width panic bars and relevant statutory signage.

All doors to be fitted with overhead closures, suitable for the door lead weight and geographical exposure rating of the site.
Light reflectance value differential from frames to Ironmongrey to be at least 30 points.

Double leaf doors to have rebated door leaf check or gap guard as per manufacturer's details.

Slave leaf to all double doors to be installed with shoot bolts top and bottom. Panic hardware to active leaf only.

Low level glazing within 800mm of finished floor level to be 6mm toughened glass in accordance with BS 6262 : Part 4 2018.

All opening lights to be fitted with lockable restrictors to prevent the passage of a 100mm DIA sphere.

All trickle vents and window drains to be coloured to match the window frame colour - RAL 7016.

All window modules to be fitted with easy clean hinges. New windows to allow safe

All window modules to be fitted with easy clean hinges. New windows to allow safe cleaning in accordance with the relevant clauses of BS8213:Part 1 : 1991.

Flat roof design to be in accordance with current best practice as defined in BS 6229:2018.

Fire Strategy to be developed by Contractor to meet all relevant regulations

Fire Strategy to be developed by Contractor to meet all relevant regulations

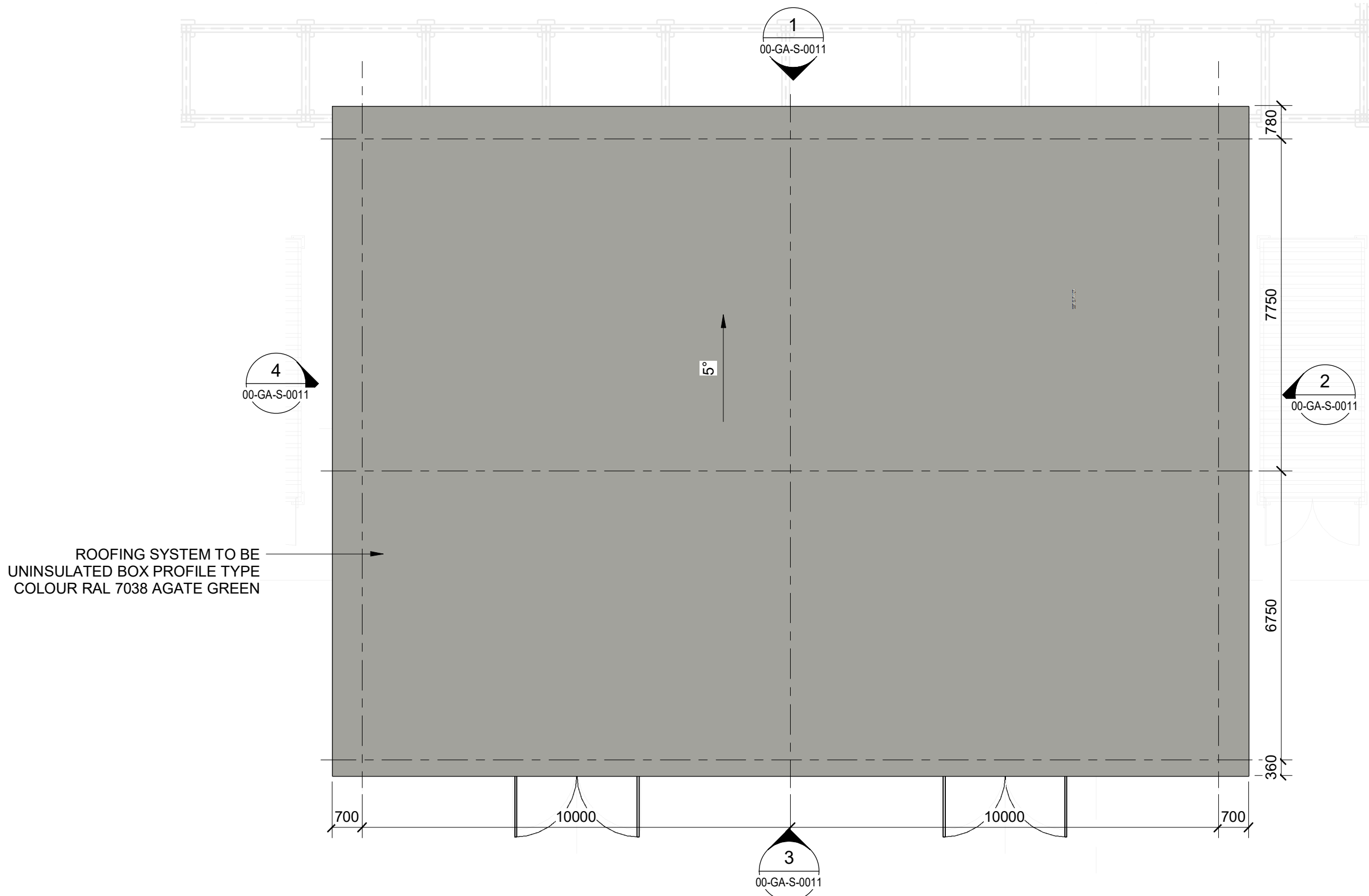
Design intent drawings to be read in conjunction with Basis of Design document.

HOLDS

REFERENCE DRAWINGS

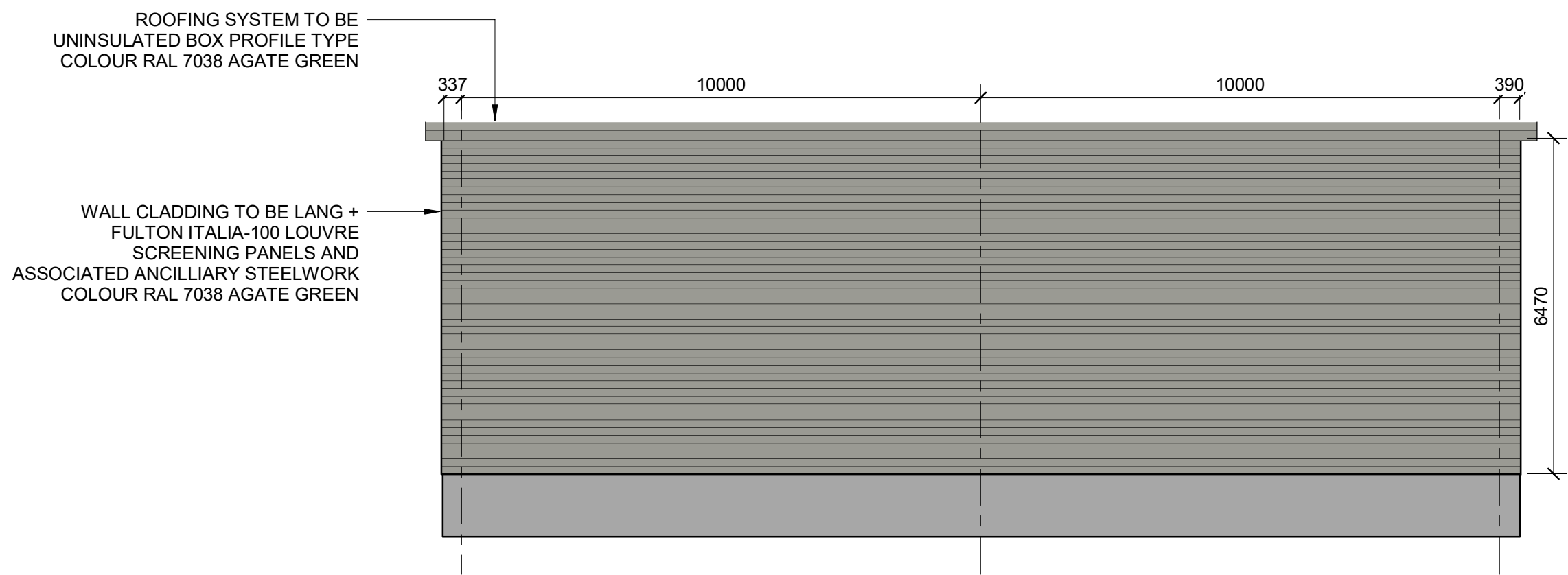
M M MOTT MACDONALD	Mott MacDonald Mott MacDonald House 8-10 Sydenham Road Croydon CRO 2EE T: +44 (0)20 8774 2000 W: www.mottmac.com		CLIENT	KEY TO SYMBOLS										TITLE CROMARTY HYDROGEN PLANT FEED PROJECT CONTROL & ADMIN BUILDING GENERAL ARRANGEMENT SECTIONS & ELEVATIONS										STATUS IFD SECURITY STD	
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	0	24.06.24	MF	ISSUED FOR REVIEW				MF	SS	LA	MY														
	REV	DATE	DRN	DESCRIPTION				ORIG	CH'KD	ENG APP'D	PM APP'D	DRG NO 114153-00-GA-A-1001				1									

CLIENT DOC NO CRHY-PR-DR-00XX



ROOF PLAN

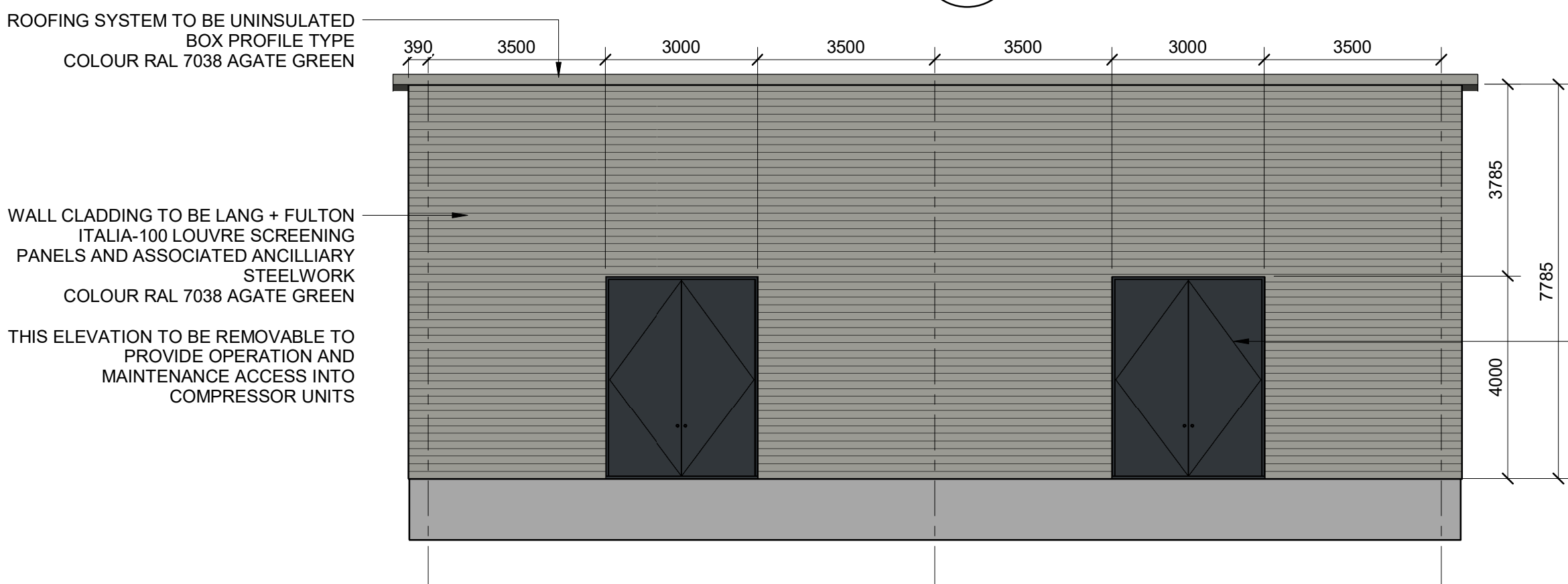
1 : 100



ELEVATION 1

1 : 100

00-GA-S-0011

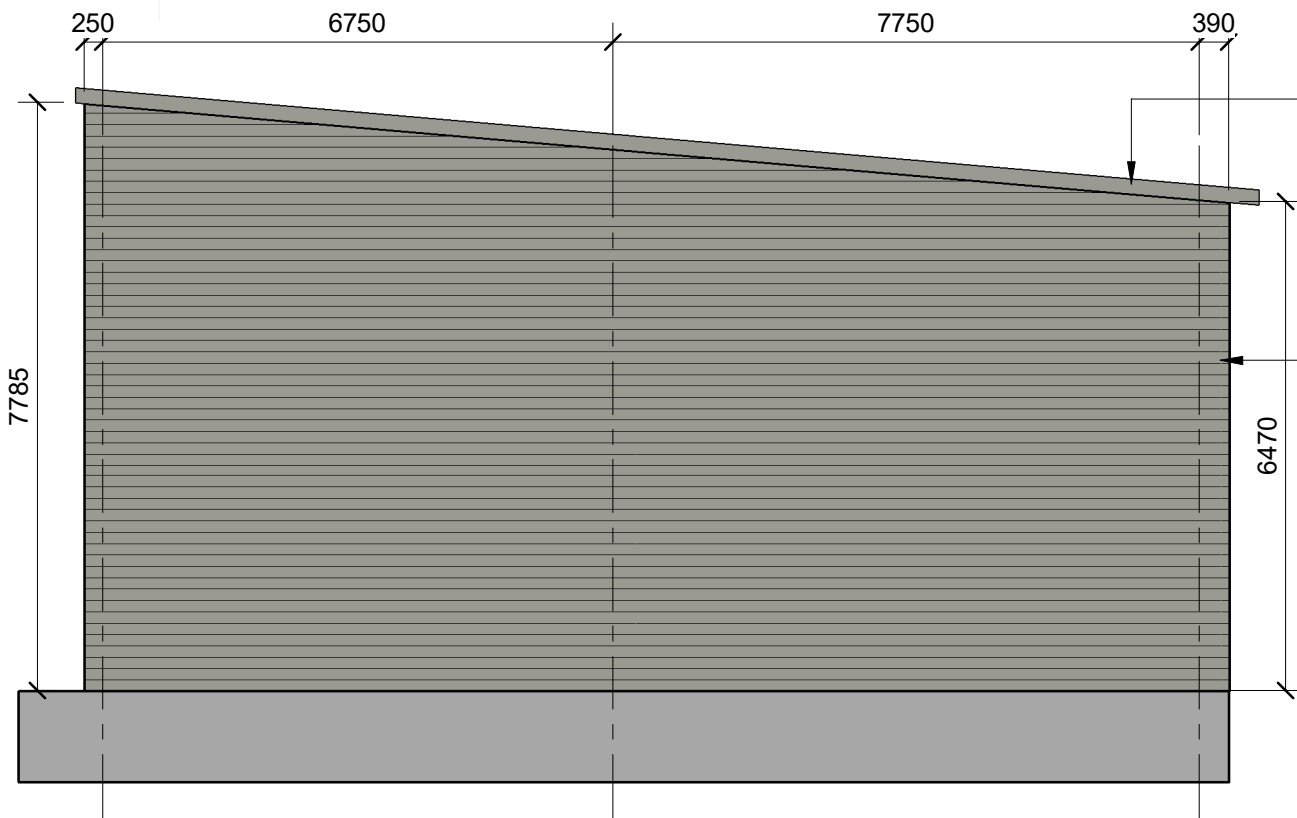


ELEVATION 3

1 : 100

00-GA-S-0011

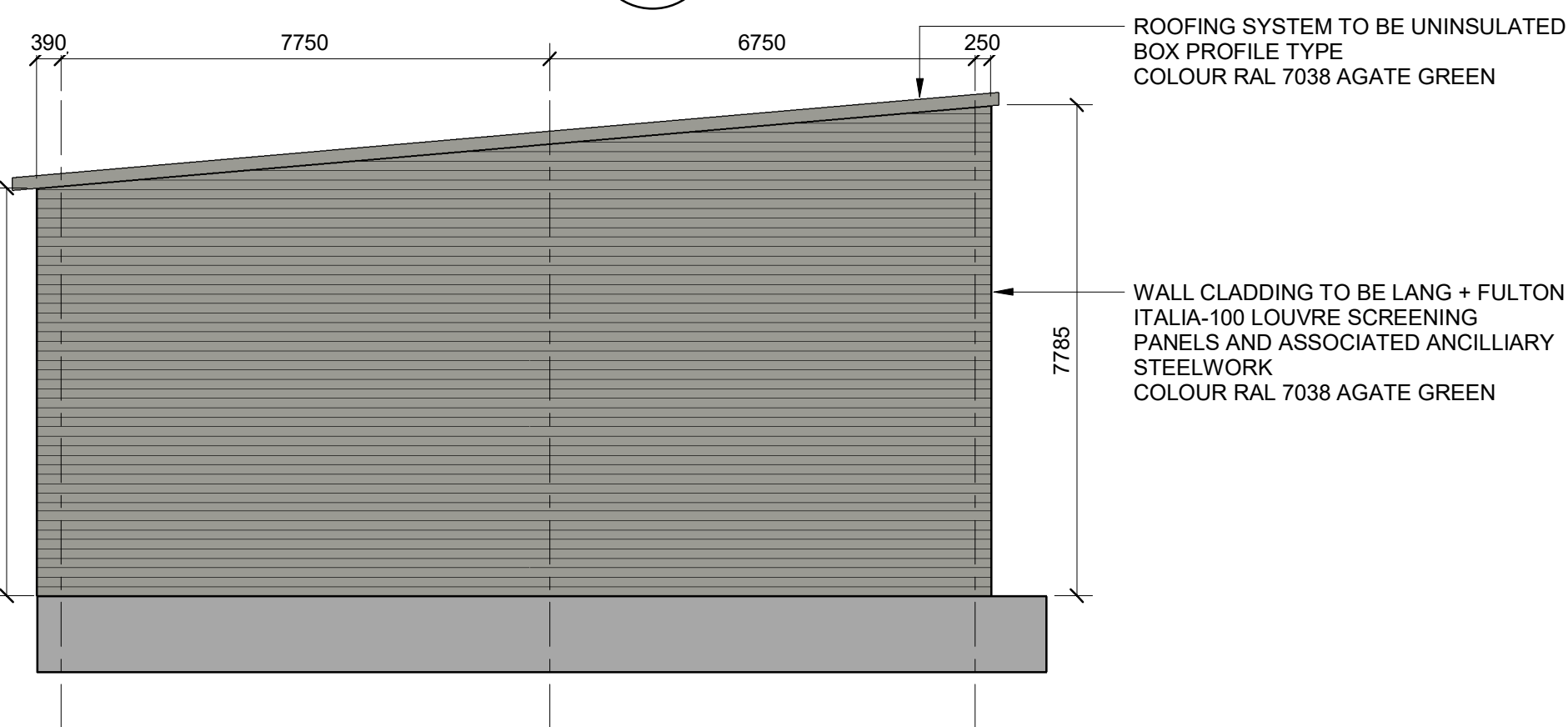
METAL DOUBLE DOORS
COLOUR RAL 7016 ANTHRACITE
GREY



ELEVATION 2

1 : 100

00-GA-S-0011



ELEVATION 4

1 : 100

00-GA-S-0011

GENERAL NOTES

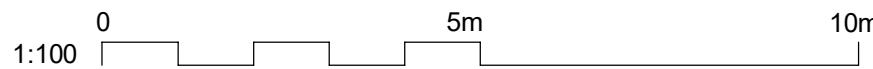
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL COORDINATES AND LEVELS ARE SHOWN IN MAOD UNLESS NOTED OTHERWISE.
3. LEVELS ARE BASED ON CIVIL ENGINEERING EARTHWORKS GENERAL ARRANGEMENT DRAWING 114153-00-GA-C-0002.
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER DISCIPLINE, CONTRACTOR AND VENDOR INFORMATION.
5. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE BASIS OF DESIGN DOCUMENT REF: 114153-00-BOD-PM-001.

NOTES

HOLDS

REFERENCE DRAWINGS

- 114153-00-GA-L-0001 - PLANT LAYOUT
- 114153-00-GA-S-0009 - COMPRESSOR FOUNDATION DETAILS
- 114153-00-GA-S-0011 - COMPRESSOR SUPERSTRUCTURE SHEET 1 OF 2



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0	21/06/24	CM	ISSUED FOR REVIEW	MG	SS	DS	MY		
REV	DATE	DRN	DESCRIPTION	ORIG	CH'K'D	ENG APP'D	PM APP'D	DRG NO	

TITLE

CROMARTY HYDROGEN PLANT
FEED PROJECT
COMPRESSOR
SUPERSTRUCTURE DETAILS
SHEET 2 OF 2

STATUS

IFD

SECURITY

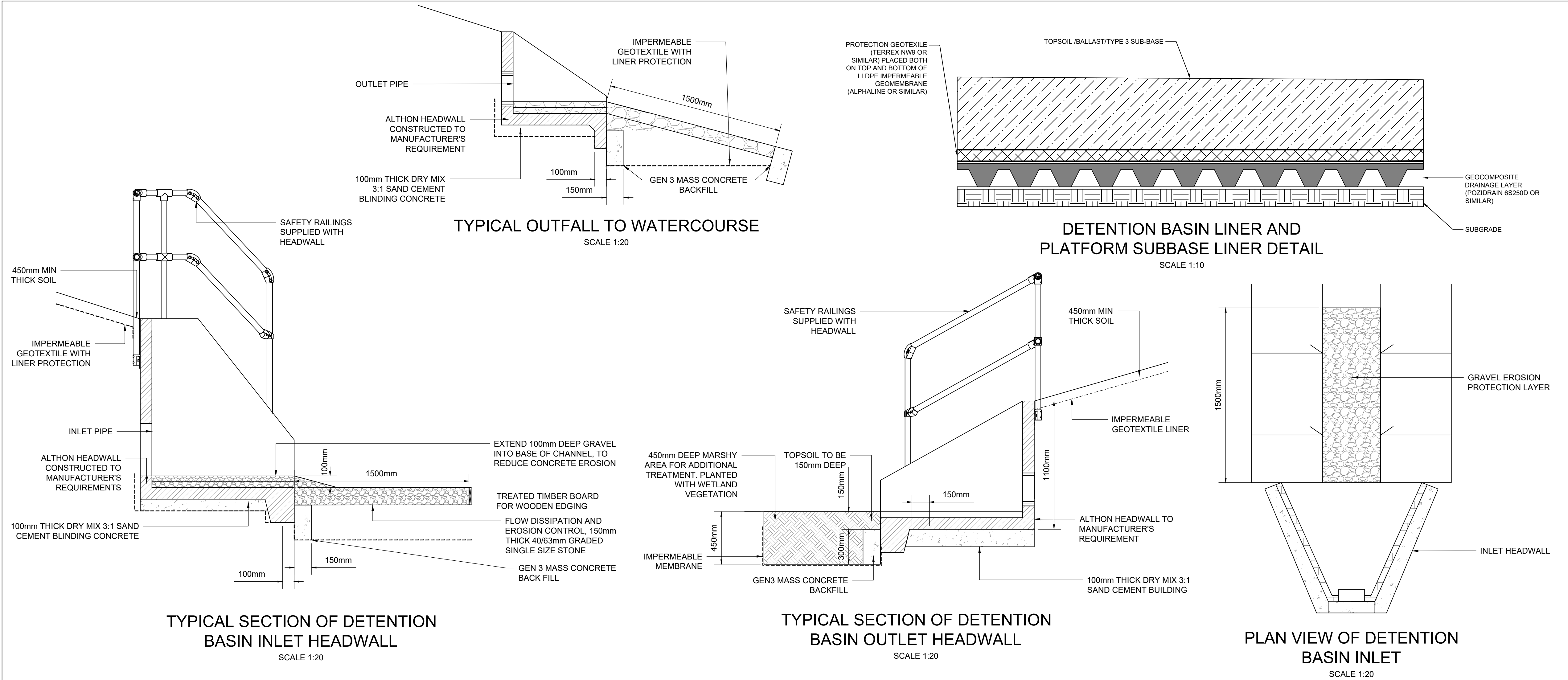
STD

SHEET 1 OF 1 SCALE 1 : 100 A1

114153-00-GA-S-0011

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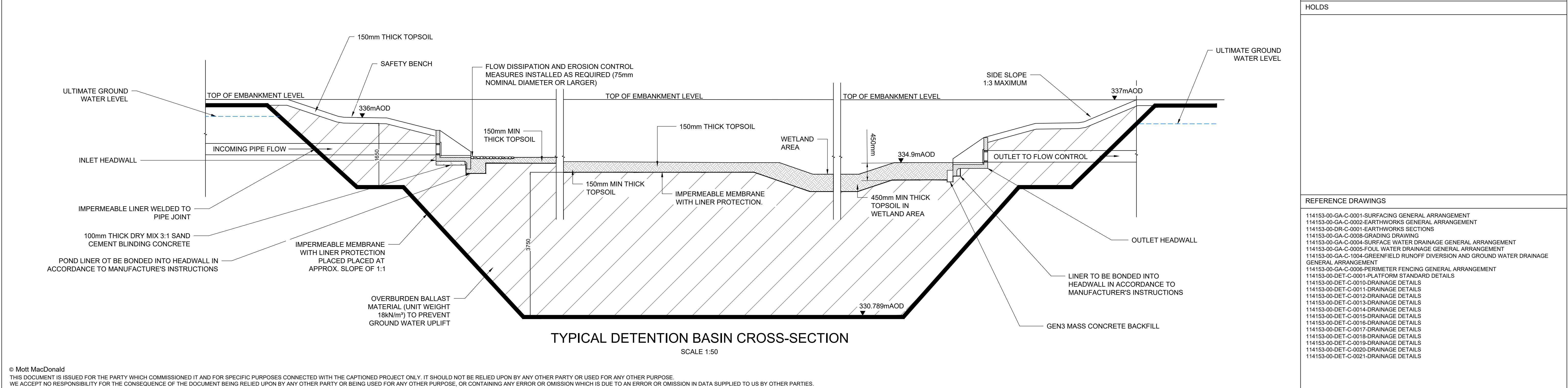
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NOTES

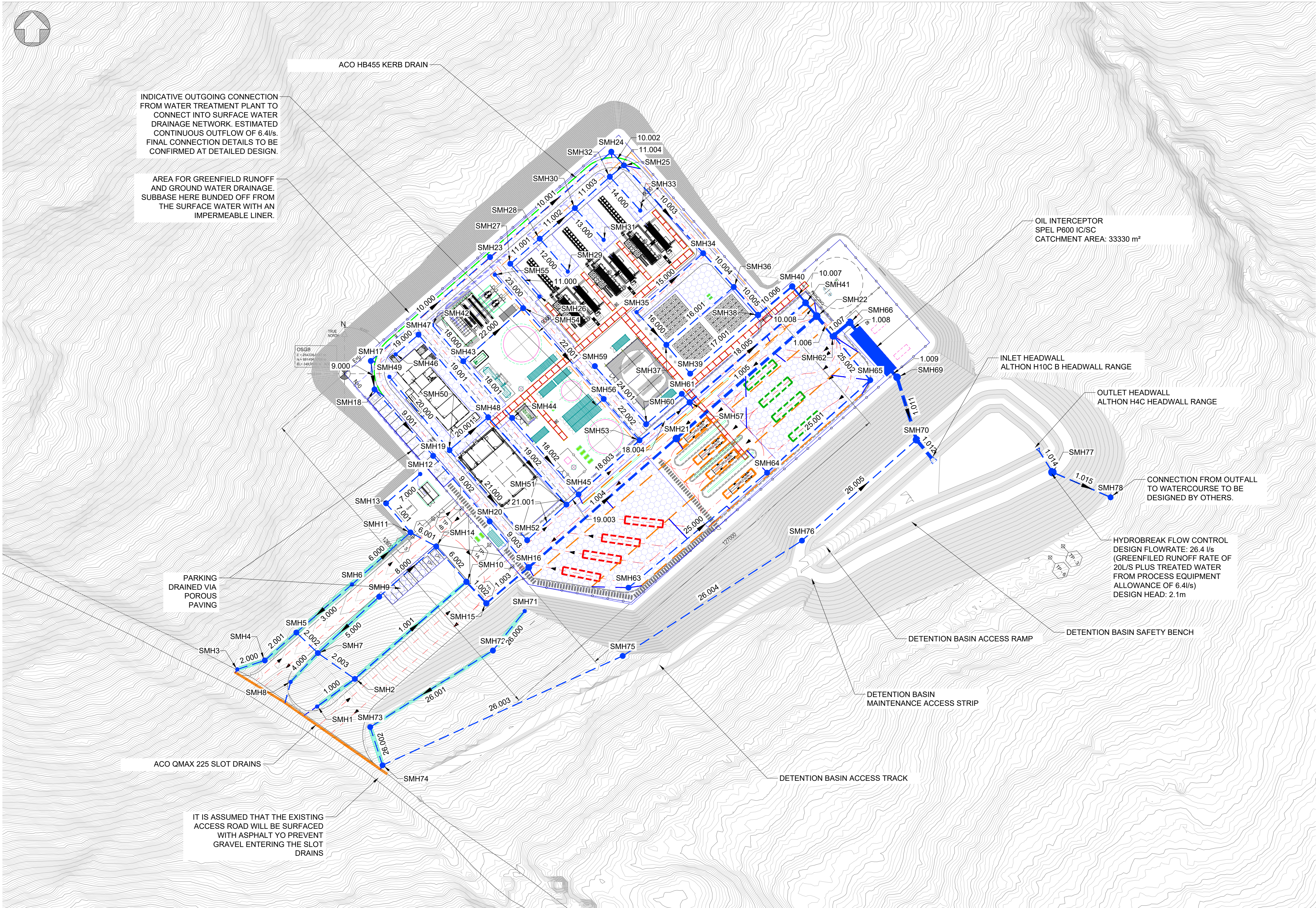
ALL PROPRIETARY DRAINAGE PRODUCTS TO BE INSTALLED AS PER THE MANUFACTURERS INSTRUCTIONS.



- REFERENCE DRAWINGS
- 114153-00-GA-C-0001-SURFACING GENERAL ARRANGEMENT
 - 114153-00-GA-C-0002-EARTHWORKS GENERAL ARRANGEMENT
 - 114153-00-DR-C-0001-EARTHWORKS SECTIONS
 - 114153-00-GA-C-0008-GRADING DRAWING
 - 114153-00-GA-C-0004-SURFACE WATER DRAINAGE GENERAL ARRANGEMENT
 - 114153-00-GA-C-0005-FOUL WATER DRAINAGE GENERAL ARRANGEMENT
 - 114153-00-GA-C-0004-GREENFIELD RUNOFF DIVERSION AND GROUND WATER DRAINAGE GENERAL ARRANGEMENT
 - 114153-00-GA-C-0006-PERIMETER FENCING GENERAL ARRANGEMENT
 - 114153-00-DET-C-0001-PLATFORM STANDARD DETAILS
 - 114153-00-DET-C-0010-DRAINAGE DETAILS
 - 114153-00-DET-C-0011-DRAINAGE DETAILS
 - 114153-00-DET-C-0012-DRAINAGE DETAILS
 - 114153-00-DET-C-0013-DRAINAGE DETAILS
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 - 114153-00-DET-C-0017-DRAINAGE DETAILS
 - 114153-00-DET-C-0018-DRAINAGE DETAILS
 - 114153-00-DET-C-0019-DRAINAGE DETAILS
 - 114153-00-DET-C-0020-DRAINAGE DETAILS
 - 114153-00-DET-C-0021-DRAINAGE DETAILS

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M M MOTT MACDONALD Mott MacDonald Mott MacDonald House 8-10 Sydenham Road Croydon CRO 2EE T: +44 (0)20 8774 2000 W: www.mottmac.com	CLIENT	KEY TO SYMBOLS 05m10m 1:10 012.5m25m 1:20 025m50m 1:50								TITLE CROMARTY HYDROGEN PLANT FEED PROJECT DRAINAGE DETAILS SHEET 12			STATUS	
													IFD	
														SECURITY
														STD
	</													



DRAINAGE GENERAL ARRANGEMENT
SCALE 1:750

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- NOTES
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 2. EARTHWORKS SHOWN IS INDICATIVE AND IS BASED ON LIDAR INFORMATION.

- HOLDS
1. EMERGENCY SHOWER AND ASSOCIATED DRAINAGE SYSTEMS.
 2. RAIN WATER DOWNPIPE CONNECTIONS. TO BE CONDUCTED AT DETAILED DESIGN.

- REFERENCE DRAWINGS
- 114153-00-GA-C-0001-SURFACING GENERAL ARRANGEMENT
 - 114153-00-GA-C-0002-EARTHWORKS GENERAL ARRANGEMENT
 - 114153-00-DR-C-0001-EARTHWORKS SECTIONS
 - 114153-00-GA-C-0008-GRADING DRAWING
 - 114153-00-GA-C-0004-SURFACE WATER DRAINAGE GENERAL ARRANGEMENT
 - 114153-00-GA-C-0005-FOUL WATER DRAINAGE GENERAL ARRANGEMENT
 - 114153-00-GA-C-1004-GREENFIELD RUNOFF DIVERSION AND GROUND WATER DRAINAGE GENERAL ARRANGEMENT
 - 114153-00-GA-C-0006-PERIMETER FENCING GENERAL ARRANGEMENT
 - 114153-00-DET-C-0001-PLATFORM STANDARD DETAILS
 - 114153-00-DET-C-0010-DRAINAGE DETAILS
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 - 114153-00-DET-C-0019-DRAINAGE DETAILS
 - 114153-00-DET-C-0020-DRAINAGE DETAILS
 - 114153-00-DET-C-0021-DRAINAGE DETAILS

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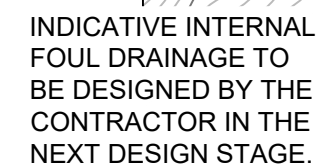
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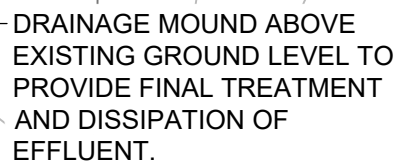
- SURFACE WATER DRAINAGE PIPEWORK
- SURFACE WATER DRAINAGE MANHOLE
- SURFACE WATER CHANNEL DRAIN
- SURFACE WATER KERB DRAIN
- TYPE 3 SUBBASE CONTRIBUTING TO ATTENUATION STORAGE. WRAPPED WITH AN IMPERMEABLE LINER
- FILTER DRAIN

								TITLE CROMARTY HYDROGEN PLANT FEED PROJECT SURFACE WATER DRAINAGE GENERAL ARRANGEMENT	STATUS	
									IFD	
									SECURITY	
									STD	
2	16.07.2024	MM	ISSUED FOR DESIGN	MM	LW	KC	MY			
1	21.06.2024	MM	ISSUED FOR REVIEW	MM	LW	KC	MY			
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REV	DATE	DRN	DESCRIPTION	ORIG	CH'K'D	ENG APP'D	PM APP'D	DRG NO 114153-00-GA-C-0004	2	

CLIENT DOC NO CRHY-PR-DR-0043



FOUL WATER DRAINAGE GENERAL ARRANGEMENT
SCALE 1:1000



FOUL WATER TREATMENT SYSTEM ARRANGEMENT
SCALE 1:500

FOUL WATER MANHOLE SCHEDULE																	
NAME	MH DIAMETER/SIZE (mm)	TYPE	COVER LOAD CLASS	CL (mAOD)	DEPTH (m)	X (m)	Y (m)	INCOMING PIPE	INCOMING PIPE DIA (mm)	INCOMING PIPE INVERT (mAOD)	INCOMING PIPE SLOPE	INCOMING PIPE BEDDING	OUTGOING PIPE	OUTGOING PIPE DIA (mm)	OUTGOING PIPE IL (mAOD)	OUTGOING PIPE SLOPE	OUTGOING PIPE BEDDING
DRAINAGE MOUND	N/A	DIFFUSER	N/A	339.332	N/A	264449.467	881465.715	1.013	150	338.816	1:100	Type S					
FMH01	1200	TYPE B	D400	345.000	1.500	264242.635	881449.324						1.000	150	343.500	1:102	Type S
FMH02	1200	TYPE B	D400	345.000	2.229	264291.300	881393.132	1.000	150	342.771	1:102	Type S	1.001	150	342.771	1:93	Type S
FMH03	1200	TYPE B	D400	345.000	2.477	264308.768	881408.123	2.000 1.001	150 150	342.523 342.523	1:84 1:93	Type S Type S	1.002	150	342.523	1:96	Type S
FMH04	1200	TYPE B	D400	345.000	2.500	264256.216	881471.105						2.000	150	343.500	1:84	Type S
FMH05	1200	TYPE B	D400	345.000	2.878	264337.931	881433.544	1.002	150	342.122	1:96	Type S	1.003	150	342.122	1:100	Type S
FMH06	1200	TYPE A	D400	345.000	3.586	264392.587	881478.568	1.003	150	341.414	1:100	Type S	1.004	150	341.414	1:95	Type S
FMH07	1200	TYPE A	D400	345.000	3.688	264399.192	881471.562	1.004	150	341.312	1:95	Type S	1.005	150	341.312	1:103	Type S
FMH08	1200	TYPE A	D400	345.000	4.000	264420.828	881459.977	1.006	150	341.000	1:100	Type S	1.007	150	341.000	1:100	Type S
FMH09	1200	TYPE A	D400	345.000	3.770	264405.558	881477.166	1.005	150	341.230	1:103	Type S	1.006	150	341.230	1:100	Type S
FMH10	1200	TYPE B	B125	341.143	0.954	264439.837	881476.089	1.009	150	340.189	1:24	Type S	1.010	150	340.189	1:91	Type S
FMH10(a)	1350	TYPE A	D400	345.000	4.201	264428.570	881466.513	1.008	150	340.799	1:100	Type S	1.009	150	340.799	1:24	Type S
FMH11	600	INSPECTION CHAMBER	B125	339.687	0.553	264448.773	881469.383	1.011	150	339.134	1:3	Type S	1.012	150	339.134	1:9	Type S
FMH12	600	INSPECTION CHAMBER	B125	339.596	0.757	264447.422	881467.030	1.012	150	338.840	1:9	Type S	1.013	150	338.840	1:100	Type S
REED BEDS INLET	N/A	N/A	N/A	340.766	N/A	264441.614	881474.657	1.010	150	340.164	1:91	Type S					
REED BEDS OUTLET	N/A	N/A	N/A	339.923	N/A	264447.225	881470.390						1.011	150	339.773	1:3	Type S
SEPTIC TANK	N/A	200 SERIES 6000L	N/A	345.000	N/A	264424.673	881463.089	1.007	150	340.951	1:100	Type S	1.008	150	340.851	1:100	Type S

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M M MOTT MACDONALD Mott MacDonald Mott MacDonald House 8-10 Sydenham Road Croydon CRO 2EE T: +44 (0)20 8774 2000 W: www.mottmac.com	CLIENT	KEY TO SYMBOLS FOUL WATER DRAINAGE PIPEWORK FOUL WATER DRAINAGE MANHOLE FOUL WATER SEPTIC TANK 1:500 025m50m 1:1000 050m100m								TITLE CROMARTY HYDROGEN PLANT FEED PROJECT FOUL WATER DRAINAGE GENERAL ARRANGEMENT	STATUS			
												IFD		
													SECURITY	
			2	16.07.2024	MM	ISSUED FOR DESIGN	MM	LW	KC		MY		STD	
			1	21.06.2024	MM	ISSUED FOR REVIEW	MM	LW	KC	MY				
			0	30.04.2024	LW	ISSUED FOR REVIEW	LW	SS	KC	MY	SHEET1 OF 1	SCALEAS SHOWN	A1	REV
REV	DATE	DRN	DESCRIPTION	ORIG	CH'K'D	ENG APP'D	PM APP'D	DRG NO114153-00-GA-C-0005				2		

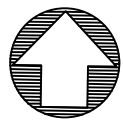
GENERAL NOTES	
1.	THIS DRAWING IS FOR INFORMATION ONLY AND IS NOT INTENDED FOR CONSTRUCTION.
2.	ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
3.	ALL LEVELS ARE IN mAOD UNLESS STATED OTHERWISE.

NOTES	
1.	ALL PROPRIETARY DRAINAGE PRODUCTS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
2.	EARTHWORKS SHOWN IS INDICATIVE AND IS BASED ON LIDAR INFORMATION.
3.	FOUL TREATMENT SYSTEM DESIGN IS BASED ON A POPULATION OF 16.

HOLDS

REFERENCE DRAWINGS	
114153-00-GA-C-0001-SURFACING GENERAL ARRANGEMENT	
114153-00-GA-C-0002-EARTHWORKS GENERAL ARRANGEMENT	
114153-00-DR-C-0001-EARTHWORKS SECTIONS	
114153-00-GA-C-0008-GRADING DRAWING	
114153-00-GA-C-0004-SURFACE WATER DRAINAGE GENERAL ARRANGEMENT	
114153-00-GA-C-0005-FOUL WATER DRAINAGE GENERAL ARRANGEMENT	
114153-00-GA-C-1004-GREENFIELD RUNOFF DIVERSION AND GROUND WATER DRAINAGE GENERAL ARRANGEMENT	
114153-00-GA-C-0006-PERIMETER FENCING GENERAL ARRANGEMENT	
114153-00-DET-C-0001-PLATFORM STANDARD DETAILS	
114153-00-DET-C-0010-DRAINAGE DETAILS	
114153-00-DET-C-0011-DRAINAGE DETAILS	
114153-00-DET-C-0012-DRAINAGE DETAILS	
114153-00-DET-C-0013-DRAINAGE DETAILS	
114153-00-DET-C-0014-DRAINAGE DETAILS	
114153-00-DET-C-0015-DRAINAGE DETAILS	
114153-00-DET-C-0016-DRAINAGE DETAILS	
114153-00-DET-C-0017-DRAINAGE DETAILS	
114153-00-DET-C-0018-DRAINAGE DETAILS	
114153-00-DET-C-0019-DRAINAGE DETAILS	
114153-00-DET-C-0020-DRAINAGE DETAILS	
114153-00-DET-C-0021-DRAINAGE DETAILS	

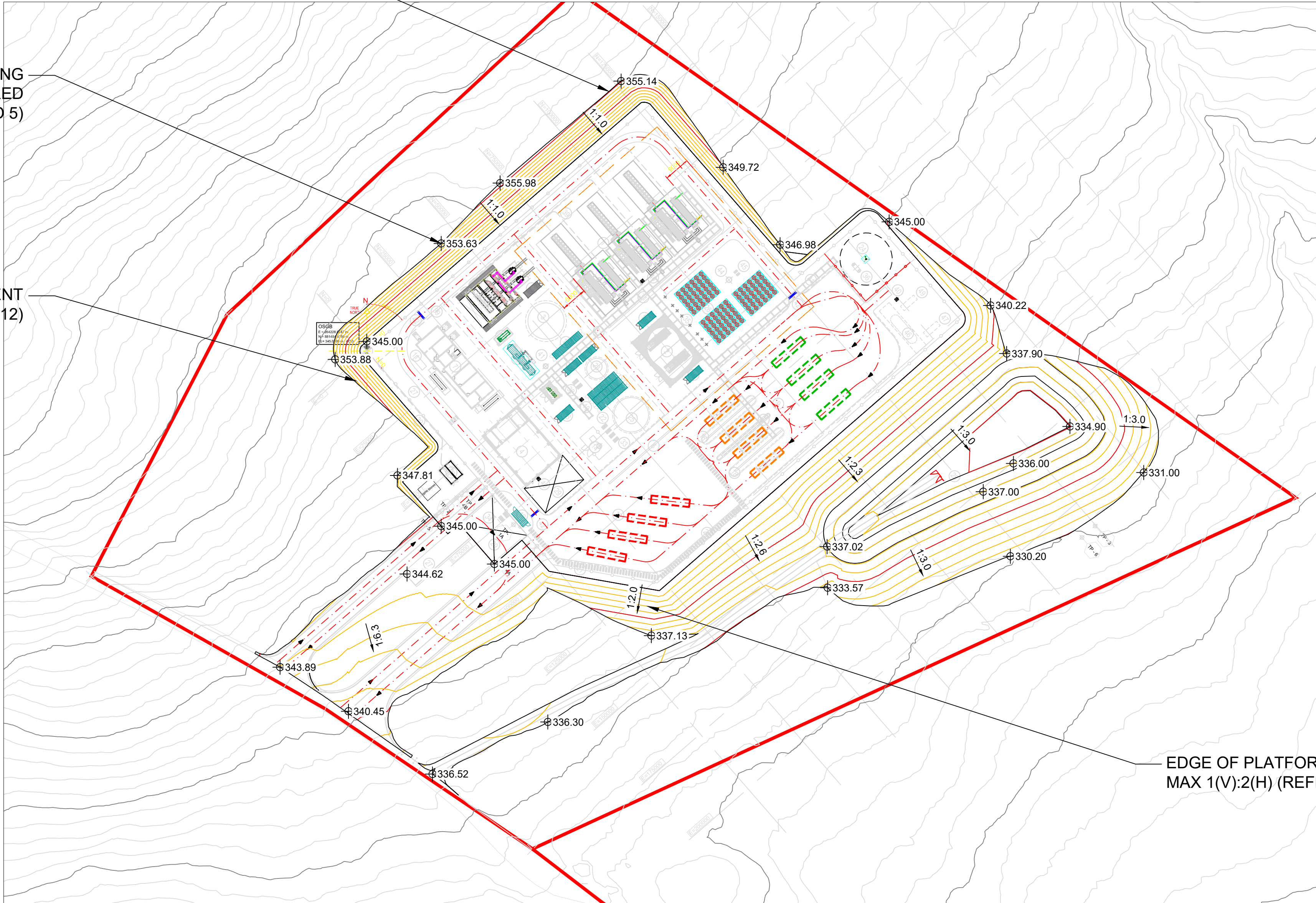
CLIENT DOC NO CRHY-PR-DR-0044



SLOPE CREST DRAINAGE AND
BENCHING REQUIREMENTS
(REFER TO NOTE 6)

GROUND RETAINING
STRUCTURE MAY BE REQUIRED
(REFER TO NOTE 4 AND 5)

ROCK CUT SLOPE GRADIENT
1(V):1(H) (REFER TO NOTE 12)



EDGE OF PLATFORM FILL SLOPE GRADIENT
MAX 1(V):2(H) (REFER TO NOTE 11)

GENERAL NOTES

- EXISTING GROUND SURFACE IS BASED ON LIDAR DATA, IN THE ABSENCE OF TOPOGRAPHICAL SURVEY INFORMATION. TOPOGRAPHICAL SURVEY SHALL BE COMPLETED AT THE PROJECT SITE BY THE EPC CONTRACTOR TO INFORM DETAILED DESIGN OF THE SCHEME.
- THIS DRAWING REFERS TO THE OUTLINE EARTHWORKS DESIGN FOR THE PROJECT SITE AND SHOULD BE READ IN CONJUNCTION WITH PROJECT DRAWINGS AND 'DRAINAGE AND EARTHWORKS STRATEGY' DOCUMENT 114153-00-RP-C-0002 (CLIENT REFERENCE CRHY-PR-GD-0058). THE SCOPE OF FINAL EARTHWORKS SHOULD BE DETERMINED AND OPTIMISED BY THE EPC CONTRACTOR AS PART OF THE DETAILED DESIGN OF THE SCHEME.
- GROUND MODEL BENEATH THE SITE IS SHOWN INDICATIVELY, BASED ON THE INTERPRETATION OF AVAILABLE INFORMATION FOR THE SITE, NAMELY RSK 'BEINN THARSUINN PHASE 2 GEO-ENVIRONMENTAL AND GEOTECHNICAL SITE INVESTIGATION', REPORT NO. CRHY-PR-RP-0036_R01, DATED MARCH 2024 AND EXCEL FILE 'PEAT_PROBING_ALL_221117_TABLE.CSV' CONTAINING PHASE 1 AND PHASE 2 PEAT PROBING DATA. FINAL GROUND MODEL TO BE UPDATED BY THE EPC CONTRACTOR BASED ON SUPPLEMENTARY SITE INVESTIGATION WHEN AVAILABLE.
- PEAT UP TO 3.2M IN THICKNESS HAD BEEN RECORDED BENEATH THE SITE, WHICH MAY POSE STABILITY RISKS. CURRENTLY, PEAT STABILITY RISK ASSESSMENT IS NOT AVAILABLE FOR THE SITE. EXISTING AND POTENTIAL FUTURE PEAT STABILITY RISKS FOR THE PROJECT ARE YET TO BE EVALUATED.
- AT FEED STAGE, A FORM OF RETAINING STRUCTURE IS CONSIDERED NECESSARY ALONG THE NORTH-WESTERN EXTENT OF THE EARTHWORKS (ABOVE THE ROCK CUT SLOPE) DUE TO THE EXISTING SLOPE GRADIENTS, TO HELP STABILISE PEAT/ORGANIC/SOFT SOILS AND TO ADDRESS PEAT SLIDE RISK OUTWITH THE RED LINE BOUNDARY. LOCATION, TYPE, HEIGHT, AND DETAILING OF A POTENTIAL RETAINING STRUCTURE SHALL BE DETERMINED BY THE EPC CONTRACTOR AS PART OF DETAILED DESIGN OF THE SCHEME, TAKING COGNISANCE OF THE OUTCOME OF A PEAT STABILITY RISK ASSESSMENT WHEN AVAILABLE.
- REQUIREMENTS FOR ROCK CUT SLOPE CREST DRAINAGE AND BENCHING ARE TO BE DETERMINED BY THE EPC CONTRACTOR AT DETAILED DESIGN STAGE, IN ACCORDANCE WITH ANY RETAINING STRUCTURE DESIGN, IF REQUIRED.
- ALL EARTHWORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE LATEST VERSION OF THE 'SPECIFICATION FOR HIGHWAY WORKS' (SHW) SERIES 600 AND PROJECT-SPECIFIC REQUIREMENTS STATED HEREIN. ALL FILL MATERIALS ARE TO COMPLY WITH SHW SERIES 600 TABLE 6/1.
- THE EXCAVATION AT THE SITE SHALL BE UNDERTAKEN TO THE FORMATION LEVEL AND TO THE OUTLINED EARTHWORKS EXTENT AS SHOWN ON THE PROJECT DRAWINGS AND SUBSEQUENTLY UPFILLED TO THE PROPOSED FINISHED PLATFORM LEVEL AS SHOWN ON PROJECT DRAWINGS. ALL PEAT AND SUPERFICIAL SOILS SHALL BE EXCAVATED FROM WITHIN THE DEVELOPMENT FOOTPRINT OF THE SITE. PEAT AND SOFT DEPOSITS ARE NOT CONSIDERED SUITABLE FOUNDING STRATA DUE TO THEIR COMPRESSIBLE AND LOW STRENGTH NATURE AND REQUIRE FULL REMOVAL FROM THE FOOTPRINTS OF THE PROPOSED ENGINEERED SITE PLATFORM. THESE MATERIALS ARE NOT CONSIDERED TO BE SUITABLE FOR RE-USE AS ENGINEERED / STRUCTURAL FILL WITHIN THE EARTHWORKS PLATFORM, HOWEVER, THEY SHALL BE RE-USED ELSEWHERE ON SITE (TO REINSTATE TEMPORARY CONSTRUCTION WORKS, PEATLAND RESTORATION) AS FAR AS PRACTICABLE TO MINIMISE ENVIRONMENTAL IMPACT AND OFF-SITE DISPOSAL COSTS. IT IS CONSIDERED HOWEVER DUE TO OUTLINED EARTHWORKS FOOTPRINTS, THAT THE VAST MAJORITY OF PEAT VOLUMES WILL REQUIRE OFF SITE DISPOSAL FOR PEATLAND RESTORATION OFF SITE. ALL NECESSARY PEAT ASSESSMENTS AND CONSTRUCTION PLANS, INCLUDING PEAT MANAGEMENT PLAN SHALL BE COMPLETED BY THE EPC CONTRACTOR IN ACCORDANCE WITH DETAILED DESIGN REQUIREMENTS FOR THE SCHEME.
- THE EARTHWORKS PLATFORM FORMATION LEVEL IS ASSUMED TO BE AT THE WEATHERED ROCK HORIZON- MEDIUM DENSE SAND AND GRAVEL OR BETTER. EXCAVATION FORMATION LEVEL SHALL BE BENCHED AND PREPARED IN ACCORDANCE WITH SHW AND TO BE INSPECTED BY QUALIFIED GROUND PROFESSIONAL ON SITE PRIOR TO UPFILLING WORKS. IF REQUIRED, VERIFICATION PLATE LOAD TESTING SHALL BE COMPLETED AT EQUAL INTERVALS ACROSS THE FOOTPRINTS OF THE EARTHWORKS.
- EXCAVATION OF BEDROCK WILL BE REQUIRED IN PLACES, TO FORM A LEVELED, SUITABLY STABLE AND ROBUST PLATFORM. IT IS ASSUMED THAT 90% OF EXCAVATED BEDROCK WILL BE SUITABLE FOR RE-USE ON SITE UPON SCREENING AND PROCESSING AS CLASS 6F1, 6N AND CLASS 1A FILL. IT IS ASSUMED WITHIN OUTLINE EARTHWORKS DESIGN THAT PLATFORM FILL MATERIAL OF A MINIMUM FRICTION ANGLE OF 36DEG AND UNIT WEIGHT OF 19 KN/M3 IS USED TO BUILD UP THE ENGINEERED PLATFORM ON SITE, AND THAT THE FILL IS SUITABLY PLACED AND COMPACTED IN LAYERS TO ACHIEVE 95% RELATIVE COMPACTION. DETAILED ASSESSMENT OF ROCK EXCAVATABILITY AND RE-USABILITY AS AN ENGINEERED FILL ON SITE SHALL BE CARRIED OUT BY THE EPC CONTRACTOR AS PART OF DETAILED DESIGN FOR THE SCHEME, BASED ON EXISTING AND SUPPLEMENTARY SITE INVESTIGATION DATA.
- ROCK CUT SLOPE PROFILES WITHIN THE NORTH-WESTERN EXTENT OF EARTHWORKS ARE SHOWN INDICATIVELY, BASED ON 1 (V): 1 (H) SLOPE GRADIENT ASSUMED DUE TO LIMITED GI INFORMATION (BOREHOLES LOCATED OUT WITHIN THE FOOTPRINTS OF PROPOSED ROCK CUTTING, THE CLOSEST BOREHOLES BH05 HAVE NO ROTARY DRILLING DATA AND BH01 HAS LIMITED CORE RECOVERY, BOREHOLES DO NOT RECORD ROCK DISCONTINUITY DIP DIRECTION, THERE IS LIMITED ROCK STRENGTH INFORMATION). FINAL ROCK CUT SLOPE GRADIENTS ARE TO BE ASSESSED BY THE EPC CONTRACTOR AT DETAILED DESIGN STAGE, TAKING COGNISANCE OF EXISTING AND SUPPLEMENTARY SITE DATA.
- SUPPLEMENTARY PEAT PROBING AND GROUND INVESTIGATION IS CONSIDERED REQUIRED TO ADDRESS LIMITATIONS OF AVAILABLE SITE DATA AND TO INFORM DETAILED DESIGN AND PLANNING OF CONSTRUCTION WORKS. THE EPC CONTRACTOR SHALL REVIEW THE AVAILABLE INFORMATION FOR THE SITE AND SHALL DETERMINE THE SCOPE OF SUPPLEMENTARY TARGETED GROUND INVESTIGATIONS TO MEET DETAILED DESIGN REQUIREMENTS.

REFERENCE DRAWINGS

114153-00-GA-C-0002 EARTHWORKS GENERAL ARRANGEMENT
114153-00-DR-C-0001 EARTHWORKS SECTIONS
114153-00-GA-C-0008 GRADING GENERAL ARRANGEMENT

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CLIENT



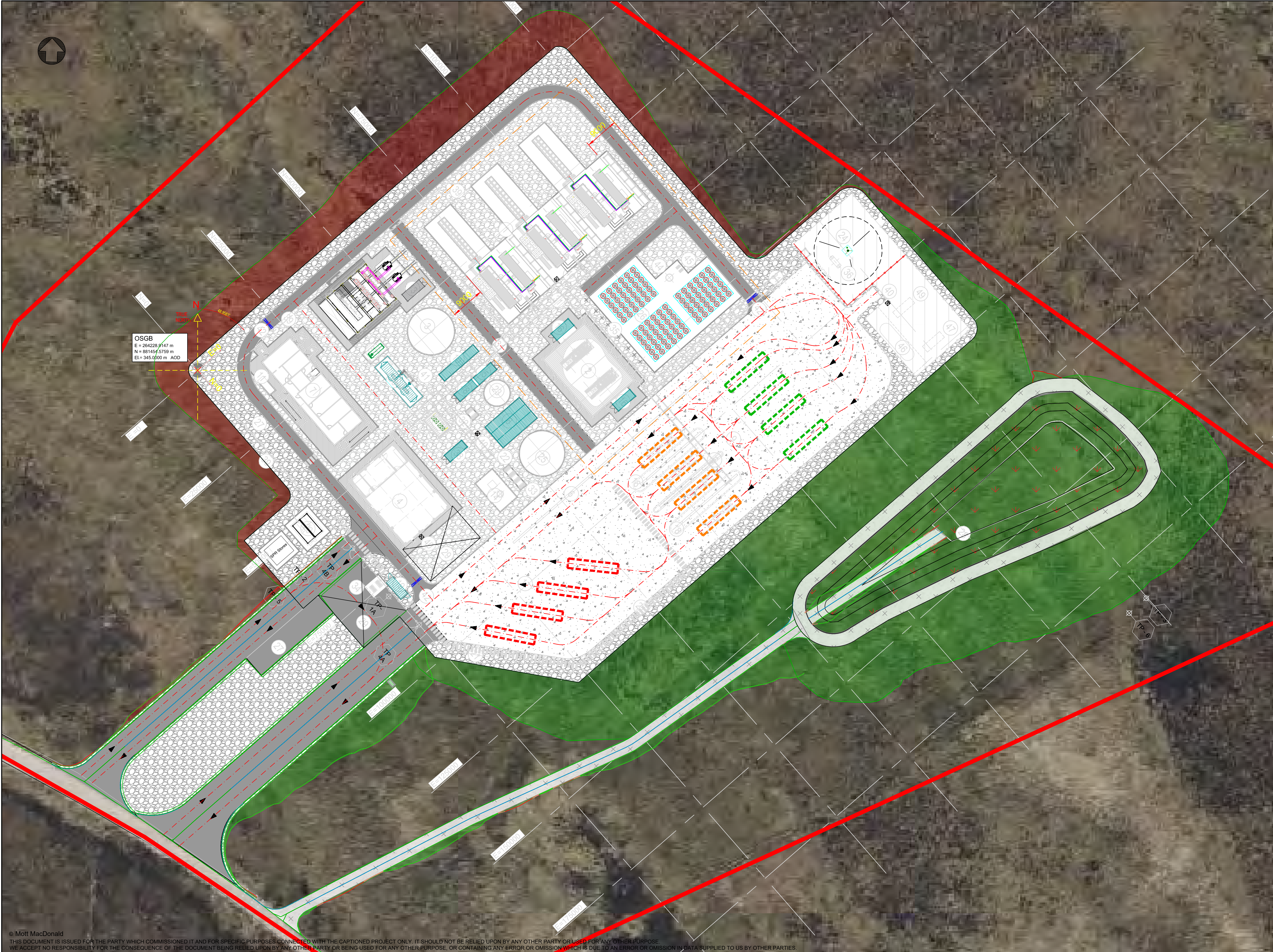
KEY TO SYMBOLS

— RED LINE BOUNDARY

REV	DATE	DRN	DESCRIPTION	ORIG	CH'K'D	ENG APP'D	PM APP'D	DRG NO
2	16.07.24	MG	ISSUED FOR DESIGN	LW	SS	KC	MY	
1	21.06.24	MG	ISSUED FOR REVIEW	LW	SS	KC	MY	
0	17.05.24	MG	ISSUED FOR CLIENT COMMENTS	LW	SS	KC	MY	

TITLE					STATUS	
CROMARTY HYDROGEN PLANT FEED PROJECT GRADING GENERAL ARRANGEMENT					IFD	
					SECURITY	
					STD	
SHEET	1	OF	1	SCALE	1:1000	A1
114153-00-GA-C-0008						2

CLIENT DOC NO CRHY-PR-DR-0058



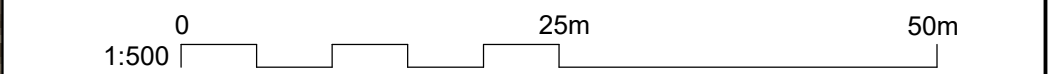
GENERAL NOTES

1. THIS DRAWING SHOULD NOT BE USED FOR CONSTRUCTION.
2. DETAIL DRAWINGS TO BE PRODUCED OF SURFACE BUILD UPS.
3. PROPOSED EQUIPMENT AND FACILITIES CONTAINED WITHIN THE SITE ARE SUMMARISED IN THE TABLE BELOW. THEIR LOCATIONS ARE NOTED WITHIN THE DRAWING BY THE CORRESPONDING ITEM NUMBER.
4. SURFACING ASSOCIATED WITH SUDS HAS NOT BEEN SHOWN AT THIS STAGE. SUDS PROVISION TO BE CONFIRMED.
5. EXISTING GROUND SURFACE IS BASED ON LIDAR DATA, IN THE ABSENCE OF TOPOGRAPHICAL SURVEY INFORMATION. TOPOGRAPHICAL SURVEY SHALL BE COMPLETED AT THE PROJECT SITE BY THE EPC CONTRACTOR TO INFORM DETAILED DESIGN OF THE SCHEME.
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EQUIPMENT AND FACILITIES	
ITEM	DESCRIPTION
1	ELECTROLYSER AREA
2	COMPRESSION BUILDING
3	FIRE FIGHTING TANK
4	WARE HOUSE/ WORKSHOP
5	ELECTRICAL MV/LV BUILDING
6	FIRE/BLAST WALL
7	ADMINISTRATION AND CONTROL BUILDING
8	WATER TREATMENT PLANT
9	H2 LOADING BAYS
10	COMPRESSED AIR SYSTEM
11	WASTE STORAGE
12	HAZARDOUS MATERIAL STORAGE
13	DIESEL GENERATOR
14	N2 GENERATION SYSTEM
15	CHEMICAL STORAGE AND DOSING SYSTEM
16	ANALYZER CONTAINER
17	HYDROGEN TUBE TRAILERS PARKING
18	TRUCK LOADING PANEL
19	SECURITY GATE HOUSE
20	SUBSTATION
21	PEDESTRIAN CROSSING
23	FEED WATER TANK
24	H2 VENT STACK
25	RAW WATER TANK
26	H2 COOLING SYSTEM
27	PARKING AREA
28	ATTENUATION POND
29	LAYDOWN AREA
30	FIRE FIGHTING SYSTEM
31	PIPE RACK
32	ELECTROLYSER FEED WATER PUMPS
33	FEED WATER PUMPS
34	RAW WATER PUMPS
35	COMPRESSOR KO DRUM
36	HYDROGEN VENT KO DRUM
37	BIO-DIESEL TANK AND TRANSFER PUMPS
38	POTABLE WATER PACKAGE
39	33KV BURIED
40	SAFETY SHOWER / EYEWASH
41	AIR RECEIVER
42	BARRIER
43	WATER COOLING SYSTEM
44	CLOSED COOLING WATER TANK
45	CLOSED COOLING WATER PUMPS
46	OIL INTERCEPTOR
47	SEPTIC TANK
48	TREATED WATER ANALYSER
49	WASTEWATER TANK FROM ELECTROLYSER

REFERENCE DRAWINGS

114153-00-DET-C-0001 PLATFORM AND STANDARD DETAILS SHEET 1
114153-00-DET-C-0002 PLATFORM AND STANDARD DETAILS SHEET 2



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M M MOTT MACDONALD Mott MacDonald Mott MacDonald House 8-10 Sydenham Road Croydon CRO 2EE T: +44 (0)20 8774 2000 W: www.mottmac.com	CLIENT STOREGGA	KEY TO SYMBOLS BUILDING/STRUCTURE OUTLINE BUILDING/STRUCTURE ASPHALT PEDESTRIAN APRON ASPHALT CONCRETE LOADING BAY TYPE 3/SINGLE SIZED GRAVEL FREE DRAINING SUBBASE TYPE 1 SURFACING CUT SLOPE FILL SLOPE 6F2 OR HOGGING MATERIAL CLASS 1A WITH 150MM TOPSOIL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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