

SWANSEA HYDROGEN REFUELLING STATION

EIA Screening Opinion Request

00294
November 2024

Contents

- 1 SCREENING REQUEST 1**
 - 1.1 Introduction.....1
- 2 SITE LOCATION AND PROPOSED DEVELOPMENT 2**
 - 2.1 Site Location.....2
 - 2.2 Site Context.....2
 - 2.3 Planning History 3
 - 2.4 Proposed Development.....3
 - 2.5 Construction Techniques and Processes 4
 - 2.6 Operation Procedures and Measures 5
- 3 LEGISLATION AND SCREENING CRITERIA.....6**
 - 3.1 EIA Regulations 6
 - 3.2 Schedule 1 Development 6
 - 3.3 Schedule 2 Development 6
- 4 CONCLUSION 7**

1 SCREENING REQUEST

1.1 Introduction

- 1.1.1 This report has been prepared on behalf of Marubeni Europower Limited in respect of a proposed Hydrogen Refuelling Station on land to the east of the Amazon distribution centre (Amazon UK CWL1) in Swansea, South Wales. It is requested that Neath Port Talbot Council (NPTC) provides a formal Screening Opinion as to whether Environmental Impact Assessment (EIA) is required for the Proposed Development. This request is made under Regulation 6 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 as amended.
- 1.1.2 In accordance with Regulation 6 (2) which governs requests for screening opinions, this report includes:
- A plan sufficient to identify the land;
 - A description of the development, including in particular:
 - i. A description of the physical characteristics of the development and, where relevant, of demolition works;
 - ii. A description of the location of the development, with particular regard to the environmental sensitivity of the geographical areas likely to be affected;
 - A description of the aspects of the environment likely to be significantly affected by the development;
 - To the extent the information is available, a description of any likely significant effect of the proposed development on the environment resulting from:
 - i. the expected residues and emissions and the production of waste, where relevant; and
 - ii. the use of natural resources, in particular soil, land, water and biodiversity; and
 - Such other information or representations as the person making the request may wish to provide or make, including any features of the proposed development or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.
- 1.1.3 In accordance with Regulation 6 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 as amended, it is requested that NPTC adopts a Screening Opinion within three weeks beginning with the date of receipt of this request.

2 SITE LOCATION AND PROPOSED DEVELOPMENT

2.1 Site Location

- 2.1.1 The Site is located within the administrative area of NPTC approximately 5km east of Swansea City Centre. It lies immediately east of the Ffordd Amazon Distribution Centre, Skewen, Swansea SA1 8QX. The nearest village, Jersey Marine is approximately 0.5km north of the Site.
- 2.1.2 The Site itself comprises undeveloped land within an allocated 'Employment Area' that forms part of the Fabian Way Innovation Corridor. It is physically bound to the east by the B4290 Ashleigh Terrace and to the west by Ffordd Amazon. An existing self-storage facility (Dainton) lies to the north of the Site and the Swansea University Alternative Fuel Research is being developed to the west.
- 2.1.3 A copy of the Site Location Plan is included at **Appendix 1** and an extract showing the aerial location of the Site is included at Plate 1 below. The site area extends approximately 0.93 hectares.

Plate 1 Aerial Site Location



2.2 Site Context

- 2.2.1 The Site is well located in relation to the strategic highway network. The M4 motorway is within a short distance (1.5km east), providing good access to the major road network. The A483 roundabout lies to the south of the site with connections west into Swansea and east towards the M4 and A48 at Briton Ferry. Vehicular traffic entering and leaving the Site will primarily route from Ffordd Amazon (before the roundabout north-east of Amazon distribution centre) via the A483. Vehicles leaving the site via the A483 would have safe access via the roundabout to the aforementioned roads.
- 2.2.2 Public Rights of Way (PRoW) Route Footpath: 12/271 is located to the west of the site running along Ffordd Amazon. The highway separates the footpath from the Site. Both Crymlyn Burrows and Cors Crymlyn / Crymlyn Bog Sites of Special Scientific Interest (SSSIs) are located approximately 180m to the south of the Site beyond the A483 roundabout and 500m to the northwest, respectively.

- 2.2.3 The Site comprises very poor agricultural land (Grade 5) in the northern portion of the Site and moderate quality agricultural land (Grade 3b) in the southern portion of the Site.
- 2.2.4 The Site is not subject to any flooding restrictions but lies adjacent to areas of Flood Zone 3 according to both the 'Natural Resources Wales (NRW) New Flood Map for Planning' and the NRW Development Advice Map to the south, east and west (separated by Ffordd Amazon and Ashleigh Terrace, respectively). The River Neath flows east-west approximately 350m to the south of the Site where it empties into Baglan Bay.

2.3 Planning History

- 2.3.1 In November 2012, a planning application (P2012/1074) was submitted for '*3 Office Buildings (B1 use) to create up to 20,160sq.m of floor space with ancillary car parking and landscaping (Outline with all matters reserved)*'. The application was subsequently withdrawn in November 2016.
- 2.3.2 In June 2019, a further application (P2019/5148) was submitted for '*Three/Four storey office development plus single storey energy centre and associated parking, access and landscaping*'. The application was subsequently withdrawn in March 2020.
- 2.3.3 The Site has also been subject of pre-application advice reference Q2021/0213 which related to a proposed electric vehicle charging scheme.

2.4 Proposed Development

- 2.4.1 The Proposed Development is for a hydrogen refuelling facility which comprises the following components:
- Hydrogen Buffer Storage (500 and 900 bar).
 - Tube Trailer Unloading
 - HGV, bus and car refuelling dispensers (350 and 700 bar)
 - Hardstanding and demountable/containerised storage and welfare buildings, fire walls and boundary fences and gates.
 - Ancillary infrastructure (Chiller, high pressure compressors, air compressor, valve panel, nitrogen cylinders, electrical infrastructure and critical spares storage).
- 2.4.2 There is likely to be a small amenity building located on-site which will contain facilities for use by staff. All other equipment on-site will be secured in containerised units where necessary.
- 2.4.3 The Proposed Development is for hydrogen gas storage and vehicle re-fuelling only – there is no production of hydrogen gas proposed on-site. It is intended that the facility will be supplied with hydrogen from various sources including (but not limited to) the University of South Wales (USW) Hydrogen Centre in the nearby Baglan Energy Park (operated by the green hydrogen company Protium). It is also anticipated that the HyBont Green Hydrogen production facility proposed at Brynmenyn Industrial Estate, in Bridgend, could also supply the facility, should planning permission be granted for that scheme.
- 2.4.4 The proposed Site Layout Plan is enclosed at **Appendix 2**.

Operating Hours and Staff

- 2.4.5 It is intended that a booking system will allow access to the refueller on a 24/7 basis.
- 2.4.6 The hydrogen refuelling facility does not have a high staffing requirement. Daily facility inspections will be undertaken by a single member of operations and maintenance staff and there may be some activities which will require two operators. Where multiple operators are required, staff from the wider network will be called in. Therefore, the site will accommodate 1 full-time equivalent (FTE) employee.

Access and Parking

- 2.4.7 Access to the Site will be taken from Ffordd Amazon. It is anticipated that during the construction period, vehicles will access and egress the Site utilising the same access that is to be retained for permanent use. It is anticipated that the existing road will be upgraded to an adoptable standard and it will be adopted by the Highway Authority.
- 2.4.8 During operation, vehicular traffic entering and leaving the Site will primarily route from Ffordd Amazon (before the roundabout north-east of Amazon distribution centre) via the A483. Ffordd Amazon is lightly trafficked by existing trips associated with the operation of the wider industrial site.
- 2.4.9 The proposed layout comprises three parking spaces which will accommodate on-site staff. The applicant intends to accommodate cycle parking facilities on-site.

Water Supply

- 2.4.10 The water supply to the Site is expected to be via an extension of the existing water supply system, managed by Welsh Water. Water supply is necessary for domestic purposes and equipment cleaning only – the operation of the facility itself is not a water intensive activity.

Drainage

- 2.4.11 The site is currently undeveloped and therefore the development of the refuelling facility will result in an increase in impermeable area of approximately 0.5 ha.
- 2.4.12 During construction, a comprehensive Construction Management Plan (CMP) will be implemented to control surface water runoff during construction. The CMP will include sediment and pollution prevention control measures to mitigate against any construction related surface water impacts.
- 2.4.13 During operation, surface water will be managed through the implementation of sustainable urban drainage systems (SuDS). An initial Conceptual Drainage Strategy has identified that storage within open features is not feasible given the limited size of the site, and infiltration methods are not appropriate given the underlying geology and potential for contamination. Accordingly, it is proposed that storage will be provided within geocellular attenuation crates for gradual release. This will ensure that runoff is managed as closely to the source as possible. Runoff will be treated via bio-remediation channels and a petrol / silt interceptor prior to discharging into the drainage ditch adjacent to the site. All proposed surface water drainage will be suitable to attenuate flows up to and including the 1 in 100 year + 40% climate change rainfall event.
- 2.4.14 A SuDS Approval Body (SAB) application will be secured prior to the commencement of any construction on-site to approve the drainage strategy.

2.5 Construction Techniques and Processes

- 2.5.1 Construction would be undertaken strictly in accordance with a Construction Management Plan (CMP) which would be submitted and approved by the Local Planning Authority in order to control the impacts of construction works. Further detail is included in the relevant sections below regarding specific construction control measures.

Best Practice Measures

- 2.5.2 The selected contractor will be encouraged to be a member of the 'Considerate Constructors Scheme' which is an initiative open to all contractors undertaking building work.
- 2.5.3 NRW Guidance for Pollution Prevention and construction industry guidance (e.g. from the Construction Industry Research and Information Association (CIRIA)) will be adopted as far as reasonably practicable to assist in reducing the potential for pollution and nuisance. This will be achieved by employing best practice measures.

- 2.5.4 Dust suppression and wheel washing equipment would be used in accordance with the CIRIA SuDS Manual to reduce the spread of sediment within the Site, so that any dust created during construction is diverted into specific drainage systems equipped with sediment interceptors.
- 2.5.5 Construction material and / or spoil within construction compounds would be positioned away from surface watercourses / significant ecological areas and no environmentally hazardous substances would be stored within close proximity of the drainage network. The main construction compounds and storage areas would where possible, be positioned away from surface watercourses and any sensitive ecological areas if identified.
- 2.5.6 Any area at risk of spillage, such as vehicle maintenance areas and hazardous substance stores (including fuel, oils and chemicals) would be bunded and carefully sited to minimise the risk of hazardous substances entering the drainage systems, the local watercourses. Additionally, the bunded areas would have impermeable bases to limit the potential for migration of contaminants into surrounding watercourses and significant ecological habitats following any potential leakage/spillage event.

Excavation and Piling Mitigation Measures

- 2.5.7 Mitigation measures would be incorporated into the construction techniques to ensure the continued protection of groundwater flow and quality. During any piling and / or foundation excavation the area would be isolated from surface water until completed. Should any groundwater be encountered during excavation, appropriate dewatering methods would be considered. Any water arising from excavations would be disposed through the temporary drainage system (if uncontaminated) and following removal of silt or any other appropriate method.
- 2.5.8 Should contamination be encountered during excavation, work would be stopped until appropriate measures are in place to prevent mobilisation. Best practice construction techniques and design would be used for any excavations during the installation of foundations.

2.6 Operation Procedures and Measures

- 2.6.1 The operator of the facility will be required to undertake operations in strict accordance with specified operational procedures. These procedures will prevent any pollution to the environment as a result of the operation of the facility and will provide procedures to deal with any emergencies.
- 2.6.2 An emergency spill response procedure and a site storage procedure would outline how a spill would be cleaned when the project is operational and where any potential pollutants would be stored. This would be available within an operational management plan which would be kept in the main office with technical notes of important procedures available within each area of the Site. Such procedures would likely be required as part of an Environmental Permit for surface water discharge.

Hydrogen Storage

- 2.6.3 The site will be operated in accordance with the Control of Major Accident Hazards Regulations 2015. Whilst the total storage quantity of hydrogen on-site has not yet been confirmed, it is the applicant's intention to operate the facility as a lower tier Control of Major Accident Hazards (COMAH) site with a maximum quantity of 1.99 tonnes of hydrogen.
- 2.6.4 The hydrogen storage will comprise buffer storage with a mix of 500 bar and 900 bar storage. The majority of hydrogen storage will comprise mobile tube trailers.

3 LEGISLATION AND SCREENING CRITERIA

3.1 EIA Regulations

- 3.1.1 The applicable EIA legislation in Wales for the proposed development is the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (the EIA Regulations).

3.2 Schedule 1 Development

- 3.2.1 A list of projects for which EIA may be required is set out in Schedules 1 and 2 of the EIA Regulations. Schedule 1 developments require EIA to be undertaken in all cases.
- 3.2.2 The proposed development is not described within Schedule 1 and there is no category within which the proposed development could be reasonably considered to fall. The proposal therefore does not comprise Schedule 1 development.

3.3 Schedule 2 Development

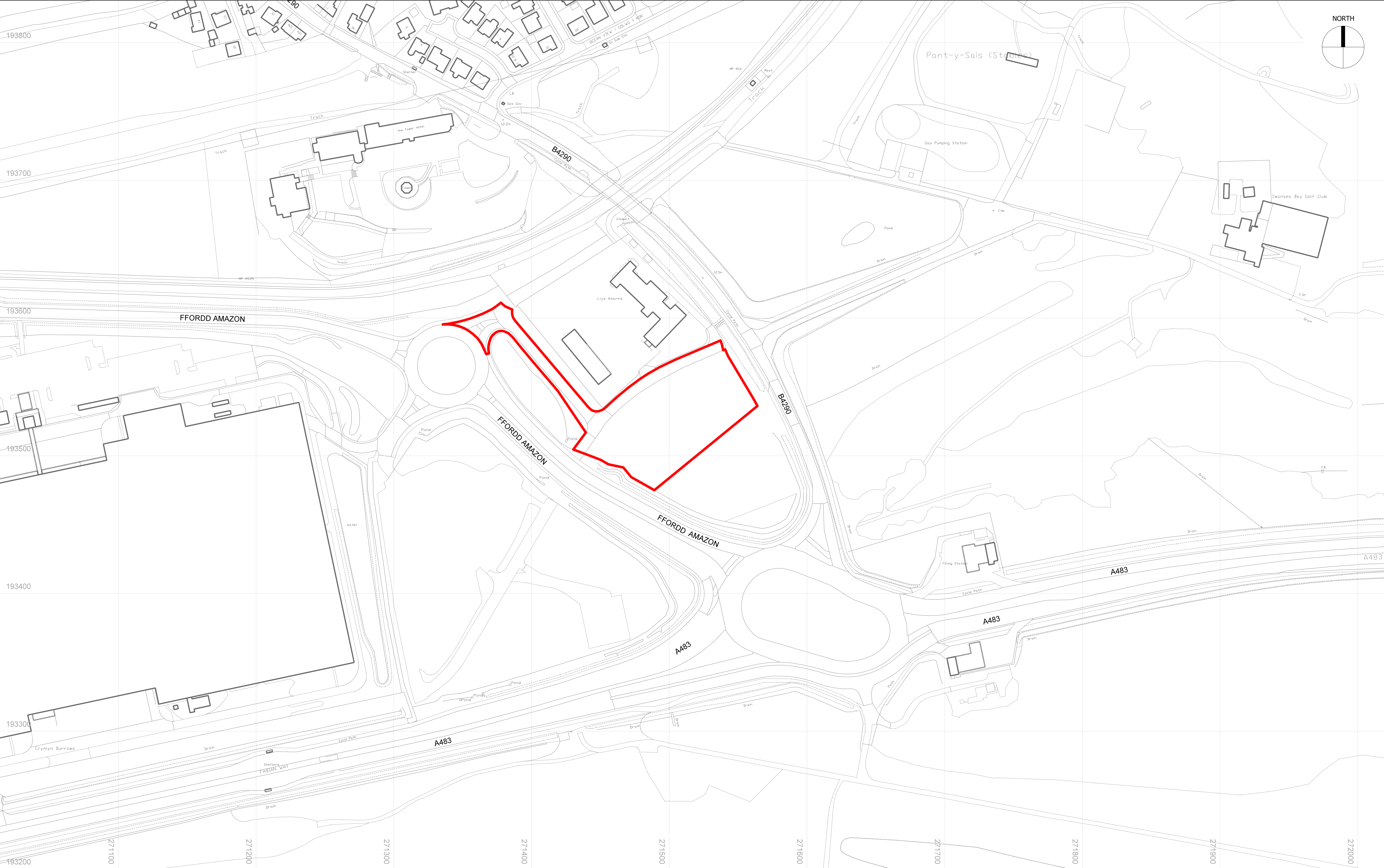
- 3.3.1 Schedule 2 development is defined by the EIA Regulations as development of a description mentioned in Column 1 of the table in Schedule 2 where:
- any part of that development is to be carried out in a sensitive area; or
 - any applicable threshold or criterion in the corresponding part of Column 2 of that table is respectively exceeded or met in relation to that development.
- 3.3.2 The proposed development is not within a sensitive area as defined by the EIA Regulations. Therefore, the proposed development does not meet the first criterion.
- 3.3.3 Given that hydrogen refuelling is a new and emerging technology, it does not neatly fit into any of the categories defined in Schedule 2 of the EIA Regulations. In applying the regulations, it is therefore a matter of interpretation in terms of the relevant category of development to be applied.
- 3.3.4 The most relevant category that the proposed development could be considered to fall under in Schedule 2 is **(6) Chemical industry (c) Storage facilities for petroleum, petrochemical and chemical products**.
- 3.3.5 Schedule 2 (6) (c) sets the following threshold to define Schedule 2 development:
- *“The area of any new building or structure exceeds 0.05 hectare; or more than 200 tonnes of petroleum, petrochemical or chemical products is to be stored at any one time.”*
- 3.3.7 Should a broad application of Schedule 2 be applied, it would not be unreasonable to consider that hydrogen storage may fall under **(3) Energy Industry (c) surface storage of natural gas**.
- 3.3.8 Schedule 2 (3) (c) sets the following threshold to define Schedule 2 development:
- *“(i) The area of any new building, deposit or structure exceeds 500 square metres; or (ii) a new building, deposit or structure is to be sited within 100 metres of any controlled waters.”*
- 3.3.9 The proposed development does not comprise any individual building/structure for the purposes of hydrogen storage exceeding either 0.05 ha or 500sqm. The proposed hydrogen storage quantity will not exceed 5 tonnes and the Site is not located within 100m of any controlled waters.
- 3.3.10 The proposed development therefore does not meet the criterion for Schedule 2 (6) (c) or Schedule (3) (c) and consequently does not require EIA.

4 CONCLUSION

- 4.1.1 Based on the assessment herein of environmental impacts and the information available at this pre-application stage, we conclude that the proposed development should not be considered EIA development, and therefore an EIA is not required. This is because its nature, scale and location are unlikely to give rise to significant environmental effects.
- 4.1.2 In accordance with Regulation 6 of the EIA Regulations, it is requested that NPTC adopts a Screening Opinion within three weeks beginning with the date of receipt of this request.

Appendix 1

Site Location Plan



NOTE

1. THIS DRAWING IS COPYRIGHT GSDA LTD.
2. THE CONTRACTOR MUST NOT SCALE FROM THE DRAWING
ALL DIMENSIONS TO BE TAKEN FROM DIMENSION STRINGS.
3. WHERE ANY DISCREPANCIES ARE FOUND BETWEEN
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OF THE ARCHITECTS FOR RESOLUTION.
4. WHERE DISCREPANCIES EXIST BETWEEN REFERENCE OR
ASSEMBLY DRAWINGS & DETAIL DRAWINGS, THE LATTER
TAKE PREFERENCE.

LEGEND

RED LINE APPLICATION BOUNDARY

0 10 50 100 250m

PROJECT					
SWANSEA HYDROGEN					
DRAWING					
Location Plan					
FOR PLANNING		-	24/09/25	Issued for Planning	
SCALE 1:1250@A1	24/10/02	A	24/10/02	Issued for Planning	
1463 PL001	A				
DWG. NO.	REVISION				

GSDA

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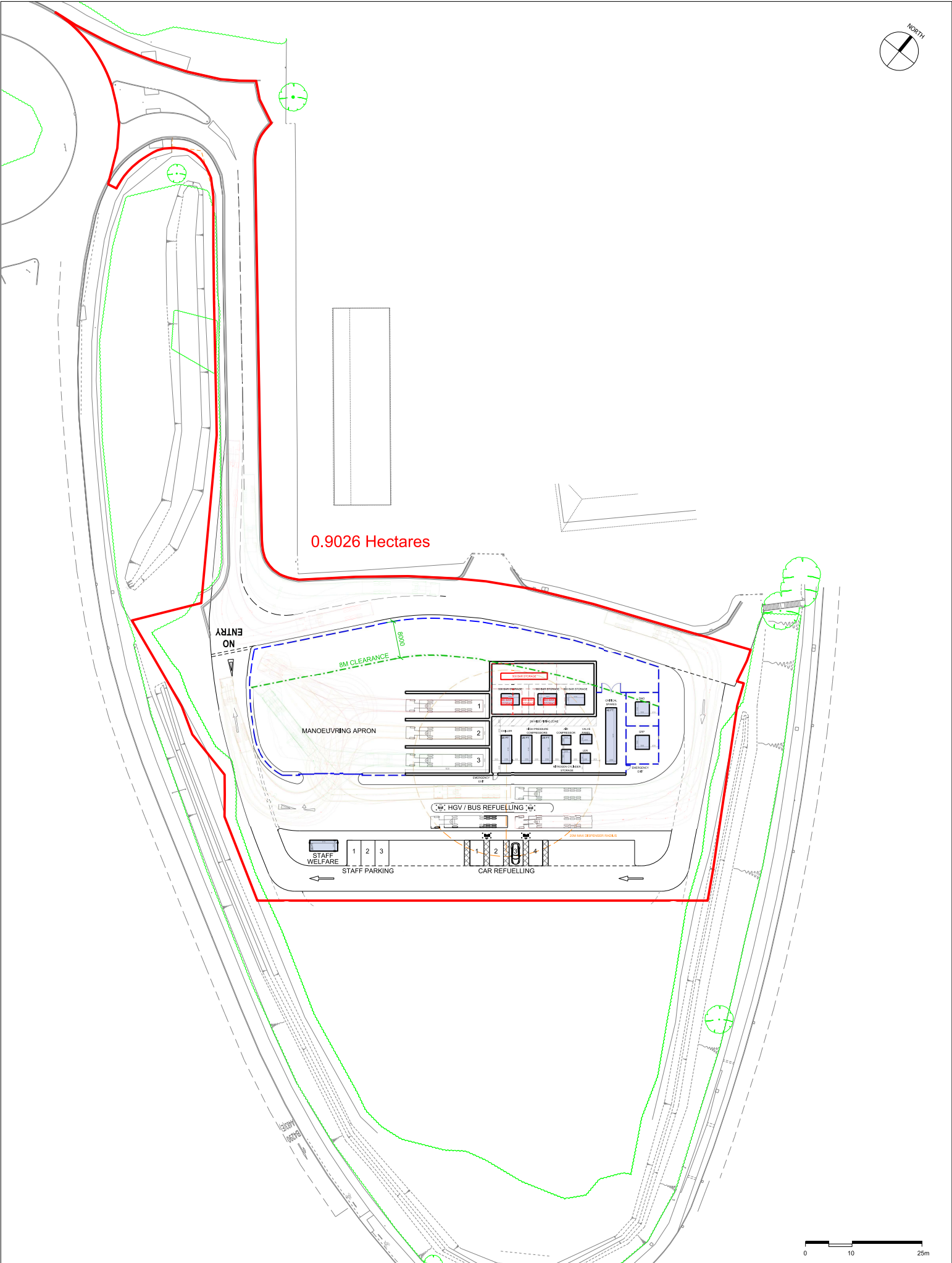
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Appendix 2

Site Layout Plan



NO
ENTRY

8M CLEARANCE

MANOEUVRING APRON



STAFF
RELEASE

STAFF PARKING

⚠ HGV / BUS REFUELLING ⚠

CAR REFUELLING

20M MAX. DISPENSER RADIIUS

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PROJECT	SWANSEA HYDROGEN
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DRAFTING Site Layout

FOR INFORMATION		-	24/07/31	Issued for Information
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