

# Wylfa Newydd Project

## Request for Non-Material Change (RfNMC) no.5

### HGV Delivery Window

PINS Reference Number: EN010007

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## 1 Introduction

### 1.1 Purpose of this report

- 1.1.1 Horizon is currently seeking a Development Consent Order to enable the construction, operation and maintenance of the Wylfa Newydd DCO Project ("DRAFT DCO application"), which was submitted and accepted for examination by the Secretary of State for Business, Energy and Industrial Strategy on 28 June 2018. The DCO application is currently in the examination phase.
- 1.1.2 The purpose of this report is to set out Horizon Nuclear Power Wylfa Limited's ("Horizon") formal written request for a non-material change to the delivery window for Heavy Goods Vehicles (HGVs) during the construction phase of the Wylfa Newydd DCO Project ("the Project"). In summary, Horizon is seeking to extend the weekday delivery window into the evening (between 19:00 and 23:00) and to add a delivery window on Saturday mornings (between 08:00 and 13:00). This change does not propose to amend the profile of HGV deliveries as presented in the Development Consent Order application ("Draft DCO application") but proposes to extend the period available each day to accommodate HGV deliveries thereby supporting a more flexible logistics management arrangement.
- 1.1.3 Further details of the proposed change are provided in section 2.2 of this document and have been assessed against relevant parts of the Draft DCO application to determine whether it would result in any new or different likely significant environmental effects. The details of the proposed change have been carefully considered to ensure that the change can be undertaken with minimal environmental effects. Where there is considered to be potential for new or different effects to occur as a consequence of the proposed change, new and/or enhanced mitigation has been proposed to enable a conclusion of 'no new or different likely significant environmental effects' to be reached.
- 1.1.4 Horizon carried out public consultation on the proposed change between **Thursday 8 November 2018** and **Thursday 6 December 2018**. Following the close of consultation, Horizon considered the responses received and updated this document to have regard to those responses. This updated document is now submitted to the Examining Authority as a formal written request for the non-material change to be considered for acceptance into examination by the Examining Authority.
- 1.1.5 This document uses terms and definitions that are defined in the Draft DCO General Glossary [APP-006].

### 1.2 Scope of this report

- 1.2.1 This report describes the proposed change being sought by Horizon to the Draft DCO application and sets out the justifications and the environmental appraisal of this proposed change. It includes a table (Table 2-6) clearly setting out the implications of the proposed non-material change for the assessments detailed in the Draft DCO application, and a statement on any

new or different likely significant environmental effects (if any) of the proposed change.

- 1.2.2 This report also includes a summary of the consultation undertaken and a 'schedule of engagement' (Table 2.7) listing the parties that were identified as having an interest in this proposed change.
- 1.2.3 Finally, a 'schedule of consequential amendments' (Table 2-8) is provided, listing the original application documents (or parts thereof) which may be amended by Horizon should the Examining Authority accept the proposed change into Examination.
- 1.2.4 Horizon's objective in compiling this report is to ensure that the Examining Authority is provided with sufficient information to consider the merits of the proposed non-material change and the consultation feedback Horizon has received about it from stakeholders. This is to enable the Examining Authority to make a decision on whether or not the proposed non-material change may be accepted and therefore included in the Examination of the Draft DCO application.
- 1.2.5 However, should the Examining Authority require any further relevant additional information in support of this request, Horizon will endeavour to provide it as soon as possible.

### **1.3 Non-materiality of the proposed change**

- 1.3.1 In assessing the proposed change Horizon has had regard to the advice contained in the Planning Inspectorate's Advice Note 16: *How to request a change which may be material* (Version 2, March 2018) [RD1].
- 1.3.2 In determining the materiality of the change, Horizon reviewed the Environmental Statement including the following topics and their associated appendices to determine whether or not there were any new or different likely significant effects resulting from the proposed change in relation to:
  - traffic and transport (chapter C2), [APP-089];
  - public access and recreation effects of traffic (chapter C3), [APP-090];
  - air quality effects of traffic (including those on ecological receptors which are beyond the discrete study areas assessed in volumes D to H of the Environmental Statement) (chapter C4), [APP-091];
  - noise and vibration effects of traffic (chapter C5), [APP-092];
  - combined topic effects (chapter C7), [APP-094];
  - intra-project cumulative effects (chapter I4), [APP-387]; and
  - inter-project cumulative effects (chapter I5), [APP-388].
- 1.3.3 The details of the proposed change have been carefully considered to ensure that the change can be undertaken with minimal environmental effects. Where there is considered potential for new or different effects to occur as a consequence of the proposed change, new and/or enhanced mitigation has been proposed to enable a conclusion of 'no new or different likely significant environmental effects' to be reached.

- 1.3.4 Further consideration has also been given to the potential effect on the Health Impact Assessment Report [APP-429] as well as the Equality Impact Assessment [APP-434] with respect to air quality, noise and transport effects. The conclusions remain unchanged and there are no new or different likely significant effects identified.
- 1.3.5 All other assessments submitted as part of the Draft DCO application (e.g. Welsh Language Impact Assessment [APP-432]; and Water Framework Directive Compliance Assessment [APP-444]) would remain unaffected by the proposed change and have therefore not been considered further.
- 1.3.6 The Shadow Habitats Regulations Assessment Report [APP-050/051] has also been considered in light of the proposed change, and Horizon has concluded that the change would not result in a change to the conclusions on effects in that report.
- 1.3.7 On the basis of the information presented here and in subsequent sections, it is not anticipated that the proposed change alters the Wylfa Newydd DCO Project to such a degree that it is a materially different project.

### ***Cumulative effects***

- 1.3.8 Horizon is seeking a total of five non-material changes to the Wylfa Newydd DCO Project application. Horizon has already consulted upon and submitted the following two non-material change requests, both of which were accepted into examination on 31 October 2018:
  - Request for Non-Material Change no.1 – Blasting Strategy [AS-012]; and
  - Request for Non-Material Change no.2 – Marine Vessel Movements [AS-013].
- 1.3.9 In addition to the non-material change (no.5) described in this document, Horizon has consulted on two further non-material change requests:
  - Request for Non-Material Change no.3 – Worker Shift Patterns; and,
  - Request for Non-Material Change no.4 – Working Hours
- 1.3.10 The implications of each proposed change to the cumulative assessment reported in the Draft DCO application is considered and assessed within each document.
- 1.3.11 The cumulative assessment is summarised in section 2.6 below with further information provided in appendix 1-1. Based on the information presented, it is not anticipated that the proposed change described in this report will interact with any of the non-material changes being sought to produce any new or different likely significant environmental effects resulting from the interaction of these changes either in combination or cumulatively with any other projects.
- 1.3.12 Taking the above factors into account, and the representations received, Horizon therefore considers that the proposed change to the delivery window for HGVs should be regarded as a non-material.

## **1.4 Engagement and consultation on the proposed change**

- 1.4.1 Following notification of its intention to submit written requests for non-material changes on Wednesday 17 October [AS-011] Horizon consulted on the proposed change to ensure that all persons that are potentially affected had sufficient opportunity to provide their views.
- 1.4.2 Consultation on the proposed change ran for a period of **28** days, commencing on Thursday 8 November 2018 and ending on Thursday 6 December 2018.
- 1.4.3 In developing its approach to consultation on the proposed change, Horizon identified a number of parties which it considered would have an interest in the proposed change (including prescribed persons under section 42(1)(a)-(d) of the Planning Act 2008, statutory consultees and Persons with an Interest in Land). These parties are listed in section 2.7 and were specifically notified of the consultation on the proposed change.
- 1.4.4 As the proposed non-material change does not require any 'additional land', Horizon did not consider that the consent of persons with an interest in the relevant land was required under the Infrastructure Planning (Compulsory Acquisition) Regulations 2010.
- 1.4.5 Copies of the consultation documents were made available for public viewing at:
  - The Anglesey Business Centre, Isle of Anglesey County Council, Bryn Cefni Business Park, Llangefni, Anglesey, LL77 7XA, Monday to Friday 9am to 5pm, and
  - Wylfa Newydd Site Office, Cemaes Bay, Anglesey, LL67 0AA, Monday to Friday 9am to 5pm by appointment only, and
  - on Horizon's consultation website, [www.horizonnuclearpower.com/consultation](http://www.horizonnuclearpower.com/consultation).
- 1.4.6 As noted above, consultation on the proposed change was undertaken from Thursday 8 November 2018 until Thursday 6 December 2018. This consultation was a combined consultation with proposed changes 3 and 4, Worker Shift Patterns and Working Hours respectively.
- 1.4.7 Technical Reports (from which formal request for change documents 3, 4 and 5 are derived) and Summary Information Sheets (in English and Welsh) were published on Horizon's consultation website [www.horizonnuclearpower.com/consultation](http://www.horizonnuclearpower.com/consultation), so that they were publicly available to anyone with an interest in the proposed change.
- 1.4.8 During the consultation period, Horizon held an Open Surgery event in Cemaes on 19 November 2018 at the Cemaes Village Hall between 13:00 and 19:00. The purpose of this was to enable members of the public to come and speak to Horizon technical experts about the proposed change and view hard copies of the consultation materials. The Cemaes event was attended by 15 members of the public.

- 1.4.9 In addition to these consultation events, Horizon also undertook a maildrop of its newsletter entitled '*Consultation Update*' to all households within Cemaes, Tregele and along the southern stretch of the A5025 as areas to be potentially affected by the proposed changes 3, 4 and 5. The newsletter included an article which summarised proposed changes 3, 4 and 5, the upcoming open surgery event and how people could have their say on the proposals. A copy of this newsletter is appended to this document as appendix 1-4 and maps of the mailing zones are in appendix 1-5 (five maps total).
- 1.4.10 All parties were asked to provide their responses to Horizon either by mail or email via its freepost address (Freepost WYLFA NEWYDD) or by emailing [wylfaenquiries@horizonnuclearpower.com](mailto:wylfaenquiries@horizonnuclearpower.com). A freephone number (0800 954 9516) was provided for questions. Follow-up calls and meetings were also offered if required but none were requested.

## **1.5 Summary of responses received**

- 1.5.1 At the end of the consultation period Horizon had received responses from 16 parties in respect of the three proposed non-material changes, including from Isle of Anglesey County Council (IACC), Natural Resources Wales (NRW) and the Welsh Government.
- 1.5.2 This section sets out a summary of the consultation responses received about the proposed non-material change to the HGV delivery window, and a summary of Horizon's response. Full copies of the responses received and Horizon's detailed response have been appended as appendix 1-6.

### **Views on materiality**

- 1.5.3 The nine local residents that made responses about the proposed change to the HGV delivery window did not make direct reference to the materiality of the change; however, their responses stated that they were concerned about additional impacts resulting from the proposed change to the HGV delivery window, particularly with regard to traffic noise, air quality, noise and vibration, and reduced respite. Horizon acknowledges the concerns of local residents but considers that the changes produce no additional impacts outside of those in the Draft DCO application, as set out in section 2 below.
- 1.5.4 NRW did not comment directly on materiality, rather it characterised its responses in relation to "new or different likely significant environmental effects", concluding that such effects were unlikely as a result of the proposed change to the HGV delivery window. Gwynedd County Council (GCC) and North Wales Fire and Rescue Service (NWFRS) took a similar view.
- 1.5.5 IACC accepted that the proposed change to the HGV delivery window did not fundamentally alter the substance of the proposal in the terms of advice note 16. IACC also stated its view that the cumulative effects of the three proposed changes represented a material change to the application that resulted in a material change to the impacts assessed in the Environmental Statement. IACC considered this would require a full assessment of the impacts, including the provision of other environmental information, considering all of the changes together.

1.5.6 With regards IACC's concern over materiality, both individually and cumulatively, Horizon considers the assessments to be robust in their determination of non-materiality for the reasons set out in section 2, and agrees with NRW's view that there will not be new or different likely significant effects arising from the changes individually or cumulatively.

### **The IACC**

1.5.7 IACC (and GCC) requested that the additional limits on HGV movements proposed by Horizon are secured in either Code of Construction Practice (CoCPs) or a requirement in the Draft DCO [APP-029]. Horizon agrees with this proposal.

1.5.8 IACC requested further details about the additional mitigation proposed in respect of the 18 additional residential properties that Horizon identified as being adversely affected by the changes, due to the increase in noise and vibration. Horizon has lowered the eligibility criteria and extended the mitigation measures that may be provided by the Local Noise Mitigation Strategy (LNMS) submitted into examination at Deadline 3 (18 December 2018) (see REP3-050 and REP3-051)..

1.5.9 IACC did not object to the change to the HGV delivery window provided that this did not take effect "unless and until" the A5025 Off-line Highway Improvements are completed and open to traffic, and the limits on HGV movements proposed in the change are secured through the Draft DCO. Horizon is content to secure the limits in the Draft DCO but considers that the early years of construction are critical to project delivery, so extended delivery windows should apply prior to completion of the A5025 Offline Highway Improvements – further detail is provided in this document.

1.5.10 IACC stated that it could not comment on the impact on the A55 Junction 2 until the ARCADY models and assessment are provided. Horizon has committed to providing this through the Statement of Common Ground process. IACC also considered that there was a conflict between the stipulated hours of delivery for the Site Preparation and Clearance Project, and those for the Main Construction. Horizon will work with contractors on both projects to coordinate HGV movements and help minimise effects.

1.5.11 IACC asserted that there was a conflict between Horizon's stated road safety benefits arising from the proposed non-material change to the shift patterns, and the additional five hours of HGV movements that would result from the extension of the HGV travel movements during the evening. IACC suggested that the proposed HGV hours on Saturdays should be consistent with the weekday times, resulting in vehicles travelling during daylight hours. This was dependent on a reduction on HGV movements during the evening on weekdays. Horizon has considered a number of delivery window options in preparing the request for change, and the current proposal minimises any additional adverse environmental effects while balancing the Wylfa Newydd DCO Project's need.

1.5.12 While IACC acknowledged that traffic volumes are lower during the evening period, receptors may be more sensitive to an increase in HGV movements due to the low baseline traffic levels in the evenings, when their own surveys

show that “certain weekday evenings” have zero HGV movements. Horizon has considered sensitivity of receptors in the evening period in reaching its conclusions of non-materiality as set out below.

With regard to the additional limits proposed by Horizon on HGV movements, IACC stated that they required the restriction to be secured in a “meaningful and enforceable manner” in the CoCPs or by requirement, which is agreed. IACC requested further details about the additional mitigation proposed in respect of the 18 additional residential properties that Horizon identified as being adversely affected by the changes, due to the increase in noise and vibration. As noted above, Horizon has lowered the eligibility criteria and extended the mitigation measures that may be provided by the LNMS submitted into examination at Deadline 3 (18 December 2018) (see REP3-050 and REP3-051).

### **NRW**

1.5.13 NRW stated that it was unlikely that the proposed change to the HGV delivery window would result in new or different significant environmental effects.

### **Welsh Government**

1.5.14 The Welsh Government requested that Horizon clarify that the Strategic Transport Model and Environmental Statement assessments have considered the proposed change in order to evidence the stated conclusion that the change to the HGV delivery window would not lead to new or different likely significant environmental effects, taking account of new/enhanced mitigation measures where necessary. This is confirmed by Horizon. Welsh Government also noted that the assessment of deliveries in chapter B3 – Traffic and Transport, table B3-9) [APP-068] had only been undertaken for weekdays (07:00 and 19:00) and not Saturdays. Horizon confirms that deliveries are assumed 07:00 to 19:00 – but the impacts are considered over a 24-hour period in the Draft DCO application.

1.5.15 Welsh Government raised concerns about the proposed change to the HGV delivery window clashing with Holyhead ferry arrivals at 18:20 on weekdays and at 11:50 on Saturdays. It considers the ferry traffic on the A55 will overlap with HGVs travelling to and from the Wylfa Newydd Development Area.

1.5.16 Horizon considers that the traffic leaving the weekday 18:20 ferry will not reach the Britannia Bridge (which is the part of the road network most prone to delays) until at least 19:00 when traffic flows are falling rapidly from their peak between 17:00 and 18:00. In addition, these ferry-related vehicles are travelling eastbound in the non-peak direction of travel across the Britannia Bridge which means that potential cumulative traffic impacts with the Wylfa Newydd Project construction vehicles (also travelling eastbound) are not expected to be an issue.

1.5.17 Horizon also contends that the Saturday sailing arriving at Holyhead at 11:50 is not expected to have an effect on the proposed Saturday morning delivery period for HGVs. Traffic emerging from the ferry at Holyhead Port is unlikely to enter the A55 until at least 12:00, possibly later, and the proposed HGV delivery period will terminate 60 minutes later at 13:00. In addition, traffic flows

on a Saturday are much lower than during the weekend meaning that traffic impacts will be lower.

### **Coal Authority**

1.5.18 The Coal Authority responded to say it had no comment on the proposed non-material changes.

### **Trinity House**

1.5.19 Trinity House responded to say it had no comment on the proposed non-material changes.

### **NWFRS**

1.5.20 NWFRS noted that the proposed change was in line with the HGV profile in the Draft DCO application but queried whether the change would include Abnormal Indivisible Loads (AILs).

1.5.21 The movement of AILs is considered separately to the arrangements for HGVs; details are provided in section 5.4 of the Wylfa Newydd CoCP [APP-414].

### **GCC**

1.5.22 GCC (and IACC) requested that the additional limits on HGV movements proposed by Horizon are secured in either CoCPs or a requirement in the Draft DCO [APP-029]. Horizon agrees with this proposal.

1.5.23 GCC acknowledged that extending the HGV operating window would have the effect of less movements through the day, which the Council welcomed. GCC agreed with Horizon's assessment that the proposed change, individually or cumulatively, was non-material. However, GCC noted that HGV movements would take place during periods when less background traffic is on the network, which could lead to a perception of bigger relative impacts on the network and at junctions. GCC requested further sensitivity testing if things did not go to plan. GCC requested that the further detail related to the proposed change to the HGV delivery window was set out in the Wylfa Newydd CoCP [APP-414] in terms of: limits of all vehicular traffic in terms of volumes, timings, restricted hours and duration of movements; a detailed phasing strategy of the Wylfa Newydd DCO Project; traffic monitoring and management details, with penalties and mitigation set out for exceeding limits, and travel planning details to manage traffic and set out measures of control.

1.5.24 Horizon proposes that travel behaviour will be monitored during the construction of the Wylfa Newydd Project as specified in section 5.10 of the Wylfa Newydd CoCP [APP-414]. The results of this monitoring will be reported to the Transport sub-Group which will be able to access funds to implement additional mitigation measures if required. In addition, it should be noted that the number of HGV movements and the hours when HGV deliveries can be made is specified in the Wylfa Newydd CoCP [APP-414] and details of enforcement measures are specified. Information on the phasing of the Wylfa Newydd Project is provided in the Phasing Strategy [APP-447].

### **Local Resident 1**

- 1.5.25 The local resident makes reference to concern about the night time noise levels referred to by Horizon in the non-material change document and the impacts on local residents in respect of air quality (diesel fuel emissions), which they consider will have a detrimental effect on health. The local resident also raises concerns about traffic flows on Saturdays when residents are likely to do their shopping and tourist accommodation tends to have change over days, with tourists arriving and departing.
- 1.5.26 The proposed change in HGV movements does not increase the number of HGVs assessed in the application, rather it extends the delivery window to allow the same number of HGVs to be spread over a greater timeframe. Traffic flows on Saturdays on the A5025 are lower than on weekdays and so this means that the traffic impact of HGV movements on Saturdays will be lower than the traffic impact on weekdays. This means that the proposed change does not lead to any changes to the conclusions of the air quality or transport analysis presented in the Draft DCO application.

### **Local Resident 2**

- 1.5.27 The local resident queries whether the proposed changes to the A5025 at Llanfaethlu and between the village and Llanfachraeth will be sufficient in light of the proposed changes to the HGV delivery window, particularly between October and April.
- 1.5.28 It is expected that online road improvements will substantially improve the operation of the existing A5025 year-round, and support the proposed change to HGV movements.

### **Local Resident 3**

- 1.5.29 The timing of the proposed change to the HGV delivery window in relation to the A5025 Off-line Highway Improvements on the A5025 was raised as a concern, with reference to Llanfachraeth Play Area and the nearby Public Right of Way. The local resident commented that the proposals were based on traffic modelling, not “real conditions” and that there is a lack of detail about the data collected on the A5025 at Llanfachraeth. The resident also commented that there was a lack of acknowledgement about the differing nature of traffic movements on Saturdays during the summer holiday period, with tourist traffic and accommodation change-over days resulting in traffic congestion and heavy traffic flows through the village of Llanfachraeth. The resident is concerned about traffic noise near their house and in particular the deterioration in road surface and the impact on road surface water drains nearby.
- 1.5.30 As noted, the proposed change in HGV movements does not increase the number of HGVs assessed in the application, rather it extends the delivery window to allow the same number of HGVs to be spread over a greater timeframe. There will be no difference in road maintenance demands as a result of the proposed change.
- 1.5.31 Traffic flows on Saturdays on the A5025 are lower than on weekdays and so this means that the traffic impact of the proposed HGV movements on

Saturdays will be lower than the traffic impact on weekdays. The potential variation in traffic flows across the year has been considered as part of the transport analysis of the Wylfa Newydd Project and no substantial additional effects are expected during the summer holiday period because although daily traffic flows could be at the highest these flows are spread across the day and travel during normal peak hours (e.g. 08:00-09:00) is lower. Noise matters are addressed in detail in section 2.5 of this document.

#### **Local Resident 4**

- 1.5.32 The local resident expressed concern about the impact of the changed HGV movements on local roads on Saturdays, with particular reference to the increased risk of accidents in winter months.
- 1.5.33 Traffic flows on Saturdays on the A5025 are lower than on weekdays and so this means that the traffic impact of the proposed HGV movements on Saturdays will be lower than the traffic impact on weekdays.
- 1.5.34 The proposed changes do not change the conclusions of the road safety assessment set out in the Draft DCO application and it should be noted that the A5025 On-line Highway Improvements and A5025 Off-line Highway Improvements provided as part of the Wylfa Newydd DCO Project include measures to enhance road safety.

#### **Local Resident 5**

- 1.5.35 The local resident was concerned about any increase to the number of lorries passing close to their home. – as noted, the proposed change in HGV movements does not increase the number of HGVs assessed in the application, it extends the delivery window to allow the same number of HGVs to be spread over a greater timeframe. The local resident sought information about compensation measures such as triple glazing which will be provided directly.

#### **Local Resident 6**

- 1.5.36 The local resident was concerned that the proposed change to the HGV delivery window would be to increase traffic in Llanfachraeth before road improvements are in place. Reference was made to the increased risk of accidents and historic (2008) IACC speed check data which showed that 28% of vehicles were breaking the speed limit.
- 1.5.37 As noted, the proposed change in HGV movements does not increase the number of HGVs assessed in the application, it extends the delivery window to allow the same number of HGVs to be spread over a greater timeframe. All traffic modelling has been based on a posted speed limit (see the DCO Transport Assessment, Appendix G Strategic Traffic Model [APP-108]) with further adjustments to reflect local conditions.
- 1.5.38 The proposed changes do not change the conclusions of the road safety assessment set out in the Draft DCO application and it should be noted that the A5025 On-line Highway Improvements and A5025 Off-line Highway Improvements provided as part of the Wylfa Newydd DCO Project include measures to enhance road safety.

### **Local Resident 7**

- 1.5.39 The local resident expressed concern about extra traffic movements during the evening and Saturday mornings due to additional noise and pollution that they considered would be generated. They also commented that any additional traffic would further impede access and egress to their property, which was already difficult. As noted, there is no increase in the number of HGVs, only a change in the times in which HGVs will travel.
- 1.5.40 Traffic flows on Saturdays on the A5025 are lower than on weekdays and so this means that the traffic impact of the proposed HGV movements on Saturdays will be lower than the traffic impact on weekdays. Similarly, traffic flows are lower during evenings than during standard working hours and hence traffic impacts during the evening will be lower than during the day.

### **Local Resident 8**

- 1.5.41 The residents expressed concern about the impact of the increased HGV movements on their home, health and well-being. Also, concerns were expressed about the impact on tourism and the environment more generally.
- 1.5.42 Horizon considers that there are no such additional impacts from a change in HGV movement times, as stated above and detailed in this document. The resident posed three questions that were not directly related to the proposed change to the HGV delivery window; these were regarding nuclear waste disposal, climate change and nuclear accidents. The residential sought clarification on when the construction of the new road link at Valley would take place. This element of the A5025 Off-line Highways Improvements is due to be completed by the end of Year 2 of the Wylfa Newydd Project.

### **Local Resident 9**

- 1.5.43 The local resident did not think that there was any good reason to extend the HGV movement period into the night and on Saturdays. They considered this would not provide enough respite for residents. The reasons for the proposed change are as set out in section 2.

## **1.6 Procedure after consultation**

- 1.6.1 Following consultation, Horizon had regard to the responses received and reviewed and updated this document as appropriate. This revised version is now submitted to the Examining Authority as a formal written request for a non-material change to the Draft DCO application. Responses received during consultation are summarised in and appended to this written request for a non-material change to demonstrate how Horizon has had regard to these responses.
- 1.6.2 Horizon acknowledges that the acceptance and procedure for consideration and examination of the proposed changes is entirely at the discretion of the Examining Authority. However, if the Examining Authority is minded to accept this proposed non-material change into the Examination, Horizon considers that the remainder of the Examination would provide sufficient time for Interested Parties to consider and make representations on the published

proposed non-material changes and for any other procedural requirements to be met.

1.6.3 Horizon also considers that, with the proposed change, the Draft DCO application, would still be of a sufficient standard for Examination and any other procedural requirements can still be met.

## 2 Non-Material Change: HGV Delivery Window Changes

### 2.1 Background to the proposed change

2.1.1 During construction of the proposed Wylfa Newydd Power Station, HGVs will be required for the transport of materials and equipment to site. The assessed HGV delivery windows and HGV numbers per month as submitted in the Wylfa Newydd DCO application are presented in Table 1-1 of the DCO Transport Assessment [APP-101] and provided in Table 2-1 below. HGV deliveries are assessed to be undertaken Monday to Friday between 07:00 and 19:00.

**Table 2-1 HGV delivery windows and HGV numbers assessed in the DCO Transport Assessment [APP-101] submitted as part of the DCO application**

Parameter	Assumption value
Construction delivery – days of week	Model assumes Monday to Friday
Construction delivery – hours	Model assumes 07:00 to 19:00 Exception being initial stages of construction when no deliveries would occur at school start/end times.
Number of HGV deliveries during construction period	Peak: maximum of 3,500 HGVs per month at site (35-40 per hour based on 25% of daily flow in peak hour)

2.1.2 The information presented in Table 2-1 forms the basis of the traffic and transport assessment for the road traffic related effects (chapter C2), [APP-089] which states that *“the majority of deliveries to the Power Station by HGVs are expected between 07:00 and 19:00 during weekdays only”* (paragraph 2.4.30).

2.1.1 Since the preparation and submission of the Draft DCO application, Horizon has undertaken additional work to further analyse and understand the practical implications of the proposed delivery programme within the Draft DCO application. This review was necessitated by a number of factors including:

- rationalisation of the preferred delivery model for the Wylfa Newydd DCO Project (shift from a joint venture to project management contract structure which resulted in Horizon becoming responsible for logistical arrangements); and,
- the appointment of, and engagement with, the project management contractor.

2.1.2 This review has highlighted the need for Horizon to seek additional flexibility within the delivery programme in order to ensure that HGV deliveries can be maintained (to the extent possible) in the event of unforeseen delivery delays or traffic incidents.

2.1.3 As a result of these discussions, Horizon has identified that a change to the HGV delivery windows (i.e. an extended window for evening deliveries and an additional window for Saturday deliveries) during the construction phase of the Wylfa Newydd DCO Project.

## 2.2 Description of the proposed change

2.2.1 Horizon is proposing to extend the weekday (Monday to Friday inclusive) delivery window into the evening, to include deliveries between the hours of 19:00 and 23:00. Furthermore, an additional delivery window is proposed on Saturday mornings, between 08:00 and 13:00.

2.2.2 The proposed changes are summarised in Table 2-2 alongside the HGV delivery parameters submitted in the Draft DCO application.

2.2.3 The proposed change to HGV delivery windows would result in a total of 85 hours per week being available for HGV deliveries instead of the currently proposed total of 60 hours per week as per the Draft DCO application.

2.2.4 The total number of HGVs would not change as a result of the proposed changes to HGV delivery windows. Therefore, the daily and monthly peaks and quarterly and annual average HGV delivery numbers presented in the Draft DCO application remain unaltered. As a result, there is also no change to the annual average daily traffic flow (AADT) or proportion of Light Duty Vehicles or Heavy Duty Vehicles, which are key parameters for the air quality modelling of traffic emissions and which have been assessed as part of the Draft DCO application

2.2.5 As a result of increasing the HGV delivery window, Horizon will impose the following additional limits:

- during the weekday evening period 19:00 to 23:00 there will be a maximum of 20 HGV movements in each direction; and
- on Saturday between 08:00 and 13:00 there will be a maximum of 50 HGV movements in each direction.

**Table 2-2 HGVs numbers and delivery windows as submitted in the DCO application and the proposed change**

Parameter	DCO application	Proposed change
Weekday delivery periods (daytime)	5 days per week (07:00 – 19:00)	No change
Weekday delivery period (evening)	n/a	5 days per week (19:00 – 23:00) with a limit of 20 HGV movements in each direction
Saturday delivery period	n/a	Saturday deliveries (08:00 – 13:00) with a limit of 50 HGV movements in each direction

## 2.3 Justification for the proposed change

### *Improving the efficiency and resilience of the delivery programme*

2.3.2 Following appointment of the project management contractor, it was identified that the delivery programme would benefit from further flexibility to accommodate delays or unforeseen disruptions (i.e. bad weather or traffic incidents).

2.3.3 For example, if the Marine Offloading Facility became temporarily unavailable due to adverse weather conditions, Horizon may need to redirect some of the Marine Offloading Facility deliveries via the road network. To enable this, longer delivery periods will be required; although Horizon would still need to operate within the HGV profiles provided in the Draft DCO application. Similarly, if there was a traffic incident which affected movement along key routes, Horizon would be unable to release HGVs up to the Site until it had been cleared. The consequence of both these events would be that both the delivery and construction programme would be impacted.

2.3.4 The proposed extension to the delivery window provides two key benefits:

- it will ensure that an appropriate level of flexibility and resilience can be built into the delivery programme so Horizon can better accommodate unforeseen events or accidents, as deliveries can be rescheduled within these extended hours; and
- it enables Horizon to overcome logistical restrictions on-site (i.e. security, processing and unloading) and provides opportunities for Horizon to better manage and secure the current delivery programme and volumes at key points of construction.

### *Urgent need for new nuclear*

2.3.5 By improving the resilience and frequency of HGV deliveries and opportunities to accelerate the construction programme, the proposed changes will enable Horizon to assist the UK Government in meeting its energy security and carbon reduction objectives through the delivery of this nationally significant infrastructure project. The urgent need for new nuclear has been firmly established in National Policy Statements EN-1 [RD2] and EN-6 [RD3] and the recent Ministerial Statement on Energy Infrastructure (December 2017) [RD4] which confirms the Government's continued support for new nuclear power generation post-2025.

### *Reduces the frequency and length of effects on the local community*

2.3.6 The extension of the delivery window for HGV deliveries will enable Horizon to spread HGV movements into weekday evenings and Saturday mornings,

thereby reducing the hourly frequency of HGVs travelling through local communities as well as congestion on the road network. Although the proposed change does not seek to increase the maximum HGV movements, it provides opportunities for Horizon to accelerate the current delivery programme and potentially deliver the Wylfa Newydd DCO Project ahead of schedule, thereby potentially reducing the length of time that the local community is exposed to construction-related effects.

## 2.4 Summary of environmental appraisal

2.4.1 The proposed change has been reviewed and assessed in order to identify any potential likely significant effects that would be new or materially different to those assessed in the Draft DCO application. This information is summarised in Table 2-6; where relevant, and further discussion is provided below.

### ***Environmental Statement***

2.4.2 This review identified that the proposed change could potentially have implications for the following assessments outlined in the Environmental Statement:

- traffic and transport (chapter C2), [APP-089];
- public access and recreation effects of traffic (chapter C3), [APP-090];
- air quality effects of traffic (including those on ecological receptors which are beyond the discrete study areas assessed in volumes D to H of the Environmental Statement) (chapter C4), [APP-091];
- noise and vibration effects of traffic (chapter C5), [APP-092];
- combined topic effects (chapter C7), [APP-094];
- intra-project cumulative effects (chapter I4), [APP-387]; and
- inter-project cumulative effects (chapter I5), [APP-388].

2.4.3 The proposed change to the HGVs delivery windows only relates to expanding the timeframe of deliveries and therefore has implications specifically to assessments outlined in volume C (project-wide effects) of the Environmental Statement. The change does not affect the HGV delivery profile presented in the DCO application and therefore does not change the maximum daily or monthly peak HGV number, or the quarterly or annual average HGV numbers and therefore there are no effects predicted on any receptors assessed in volumes D to H of the Environmental Statement and the conclusions remain as reported in the Draft DCO application for those volumes.

2.4.4 The proposed change does not affect the socio-economics or tourism assessment completed in volume C [APP-088] of the Environmental Statement and has also been scoped out of further consideration.

### ***Other Assessments***

2.4.5 Further consideration has also been given to the potential effect on the Health Impact Assessment Report [APP-429] and the Equality Impact Assessment

[APP-434] via air quality, noise and transport effects. The conclusions remain unchanged and there are no new or different likely significant effects identified.

- 2.4.6 Consideration has also been given to the potential effect of the proposed change to the appropriate assessment for habitats and species detailed in the Shadow Habitats Regulations Assessment Report [APP-050 and APP-051] via effects to air quality and noise. As the peak noise and air quality effects are not predicted to change significantly as a result of the proposed change compared to those presented in the Draft DCO application, the assessments reported in the Shadow Habitats Regulations Assessment Report [APP-050 and APP-051] would remain unchanged.
- 2.4.7 All other assessments submitted as part of the Draft DCO application (e.g. Welsh Language Impact Assessment [APP-432]; and Water Framework Directive Compliance Assessment [APP-444]) would also remain unaffected by the proposed change and have therefore not been considered further.

## 2.5 Topic assessments

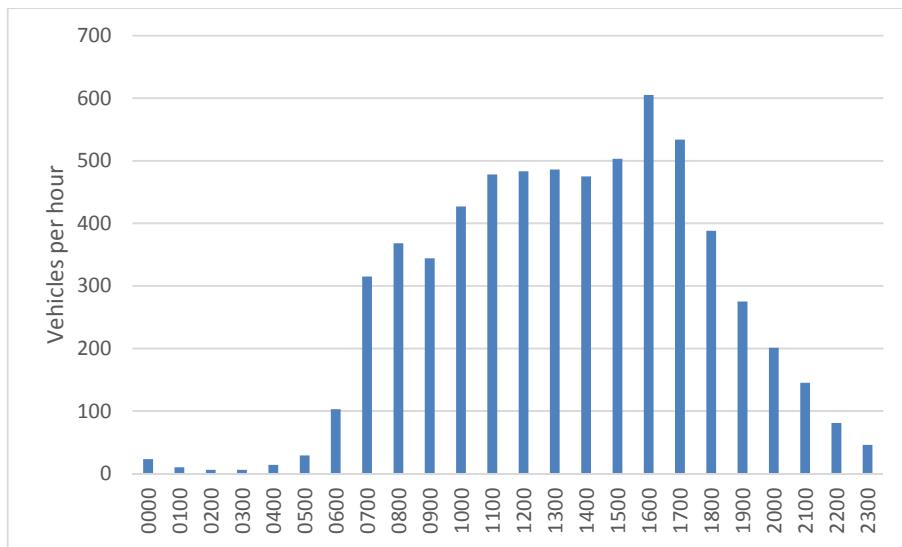
- 2.5.1 The effects of the proposed change to the assessments listed in paragraphs 2.4.2 and 2.4.5 above are summarised in Table 2-6, with further discussion provided below where relevant.

### ***Traffic and transport***

#### ***Weekday evening (19:00 – 23:00)***

- 2.5.2 Additional traffic will be generated in the weekday evening period (19:00-23:00) as a result of the proposed change to HGV delivery windows. Figure 2-1 shows the current traffic volumes on the A5025 in Llanfachraeth (without the Wylfa Newydd Project), represented by an Automatic Traffic Counter count on the A5025, and shows the low levels of traffic between 19:00-23:00. These hours are therefore considered off-peak and no modelling was included in the DCO Transport Assessment [APP-101] which assesses this time period. The DCO Transport Assessment [APP-101] provides a wide range of traffic data and the survey data presented in Figure 2-1 has been used as it is based on a survey which covers all hours of the day and is on the construction route to the Wylfa Newydd Development Area. This site has a reference number 95 and details of this and other traffic surveys are provided in appendix D of the DCO Transport Assessment [APP-105].

**Figure 2-1 Weekday average two-way hourly traffic flow – A5025,  
Llanfachraeth (Junction reference 95); August – September 2015.**



2.5.3 Therefore, given the relatively low numbers of vehicles expected on the road network during this off-peak time, the change associated with the introduction of an HGV delivery window in the evening is small (20 HGV movements in each direction per evening which is equivalent on average to an additional five HGV movements in each direction per hour). For example, Figure 2-1 shows that the two-way traffic flow from 20:00 to 21:00 is approximately 200 vehicles per hour and hence an increase by an average of five HGV movements in each direction (and hence an average two-way increase of ten HGVs per hour) is a 5% increase in traffic flows. This means that the proposed change would not affect the outcome of the assessment currently presented in chapter C2 [APP-089] and the DCO Transport Assessment [APP-101] of the Environmental Statement.

2.5.4 Allowing for the movement of HGVs during the evening period (19:00-23:00) will mean that fewer HGV movements are required during the day (07:00-19:00) as the total number of daily HGV movements is not changing. This means that traffic impacts during the day will be lower than that stated in the submitted DCO Transport Assessment [APP-101].

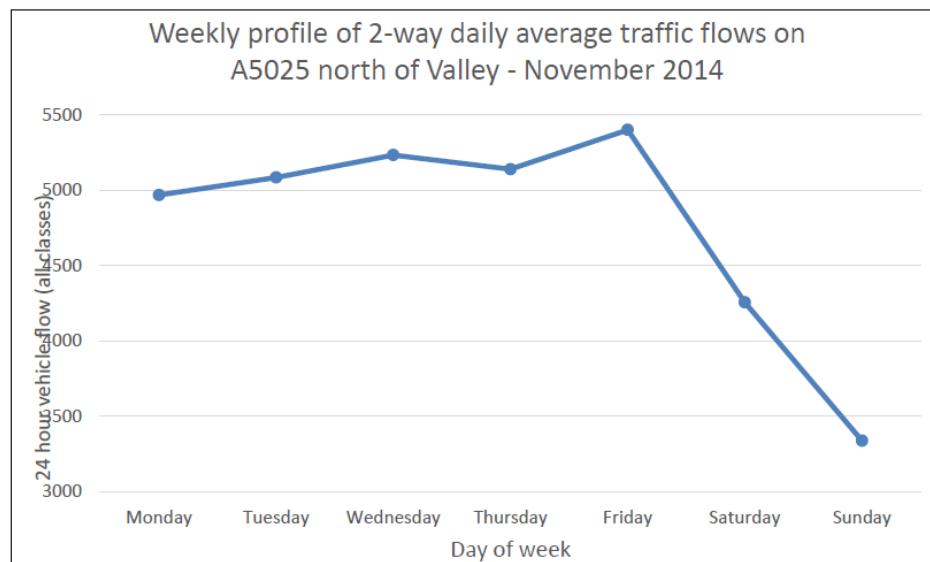
### **Saturday (08:00 – 13:00)**

2.5.5 As a result of the proposed change to the HGV delivery windows, additional traffic will be generated in the weekend period on Saturdays in the hours between 08:00 and 13:00.

2.5.6 The variation of traffic flows across a week on the A5025 north of Valley was presented in figure 5-2 of appendix L of the DCO Transport Assessment [APP-113]. This figure is repeated as Figure 2-2 below.

2.5.7 Figure 2-2 shows that flows on a Saturday are approximately 4,250 vehicles per day compared to between 5,000 and 5,500 vehicles per day on a weekday i.e. flows on a Saturday are approximately 20% lower than traffic flows on a typical weekday.

**Figure 2-2 Traffic flow profile over a week on the A5025 – November 2014**



- 2.5.8 This difference meant that Saturdays were considered off-peak and no modelling was included in the DCO Transport Assessment [APP-101] to assess Saturdays, except for the Junctions 9 ARCADY modelling undertaken for Junction 2 of the A55. This modelling was undertaken for the period 12:00 and 13:00 as the area around Junction 2 is predominantly retail and leisure, thus Saturday lunchtimes are considered to be a peak time for this particular junction. Full details of the modelling undertaken at Junction 2 for the Draft DCO application are contained in appendix H of the DCO Transport Assessment [APP-109].
- 2.5.9 The ARCADY models for Junction 2 of the A55 were updated to include on average an additional ten HGV movements per hour travelling from the A55 westbound to the Logistics Centre and to the A55 eastbound from the Logistics Centre as a result of the proposed change described in section 2.2 above. The value of ten HGVs per hour on average is based on the daily worst case movement on a Saturday of 50 HGV movements in each direction being divided evenly across each of the five hours of operation. Full details of this updated ARCADY model and assessment are provided in [RD5].
- 2.5.10 No capacity issues were identified as a result of the additional HGV movements on Saturdays at Junction 2.
- 2.5.11 The lower traffic flows on a Saturday compared to a weekday mean that the change associated with an HGV delivery window on a Saturday is small and would not affect the outcome of the assessment currently presented in chapter C2 [APP-089] and the DCO Transport Assessment [APP-101] of the Environmental Statement.

## Conclusion

2.5.12 The change in traffic flows associated with the proposed HGV delivery windows on weekday evenings plus Saturday mornings is small and would not affect the outcome of the assessment currently presented in chapter C2 [APP-089] and the DCO Transport Assessment [APP-101]. Therefore, there would be no new or different likely significant environmental effects than those reported in the Draft DCO application.

## *Public access and recreation*

2.5.13 The proposed change to HGV delivery windows would result in an increased duration of HGV movements within two of the public access and recreation study areas:

- Junction 2 of the A55 to the Logistics Centre; and
- Junction 3 of the A55 to the Off-Site Power Station Facilities and the Wylfa Newydd Development Area using the A5 and A5025.

2.5.14 The embedded and good practice mitigation measures presented in chapter C3 [APP-090] of the Environmental Statement remain unchanged and have been taken into account for the assessment of effects as a result of the proposed change. Apart from the proposed change to HGV delivery windows described in section 2.2, all other assumptions set out in section 3.4 of chapter C3 [APP-090] of the Environmental Statement would remain the same.

2.5.15 Two scenarios were initially considered in the assessment of effects as a result of the proposed change:

- traffic flows in the opening year of the A5025 Off-line Highway Improvements; and
- traffic flows in the year of peak construction.

2.5.16 However, the potential changes to effects as a result of the proposed change would be the same in both scenarios and therefore these have not been split in the sections below. This is because there would be no change in the total number of HGV movements in either scenario, with only the delivery window changing. Therefore, the peak flows considered in each scenario in chapter C3 [APP-090] of the Environmental Statement would remain the same.

## Public Access

2.5.17 There would be no effect on users of Public Rights of Way (PRoW) within the Junction 2 of the A55 to the Logistics Centre study area as a result of the proposed change as a result of no PRoWs that link to the road in this section.

2.5.18 There would also be no change in effect from that assessed in the Chapter C3 of the Environmental Statement on users of PRoWs within Junction 3 of the A55 to the Off-Site Power Station Facilities and the Wylfa Newydd Development Area using the A5 and A5025 study area. Taking into account HGV deliveries extending into weekday evenings and on Saturday mornings there would only be a negligible effect predicted on users of the PRoW and therefore no new or different likely significant effects have been identified.

### Onshore Recreation

2.5.19 In chapter C3 [APP-090] of the Environmental Statement a residual minor adverse effect on the Lôn Trefignath cycle route was identified between 07:00 and 19:00 as a result of the HGV movements in and out of the Logistics Centre. The duration of this effect would increase into weekday evenings and on Saturday mornings, as a result of the proposed change which has the potential to affect a small number of recreational users. However, despite the duration of effect, extending it is not considered sufficient to dissuade use of the cycle route and with the current embedded mitigation, including a zebra crossing, no new or different likely significant effects are predicted, and the assessment made in chapter C3 [APP-090] remains the same.

2.5.20 The assessment of effects on walkers and cyclists on the A5 and A5025 between Junction 3 of the A55 and Wylfa Newydd Development Area set out in chapter C3 [APP-090] of the Environmental Statement identified that there would be a moderate adverse effect on these recreational users during weekdays, a minor adverse effect on weekends at shift change times and a negligible effect during the evenings and during the weekend outside of shift changes. The proposed change would result in a potential increase in HGV traffic both in weekday evenings and on Saturday mornings although the maximum daily peak or monthly and annual average HGV numbers will remain unchanged, potentially resulting in a spreading out of HGVs in a greater window and reducing the effects during 07:00 to 19:00 weekdays. However, the period of time where there could be a reduction in recreational amenity would be extended into the weekday evening and Saturdays. Typically, recreational journeys are more likely to be undertaken in the evening and at weekends, and therefore extending traffic from HGV movements into these time periods could change assessments. However, Horizon would limit the number of HGV movements in each direction between 19:00 and 23:00 on weekdays to 20, and a maximum of 50 between 08:00 and 13:00 on Saturdays. As a result, the assessment would change from negligible to minor adverse effects on weekday evenings and Saturdays (outside of shift pattern changes) but still remain not significant. An assessment of moderate adverse effect remains during weekdays 07:00 to 19:00 due to the number of HGV movements predicted during this timeframe. A minor adverse effect on recreational users of the other sections of the A5025 is also predicted and therefore no new or different likely significant effects are predicted for onshore recreation.

2.5.21 The effect on walkers and cyclists crossing the A5025 assessed in chapter C3 [APP-090] of the Environmental Statement and would not change as a result of the extension of HGV delivery windows as the number of HGVs is not changing.

### Active Travel

2.5.22 In chapter C3 [APP-090] of the Environmental Statement a residual minor adverse effect on users of the Lôn Trefignath cycle route undertaking active travel journeys was identified between 07:00 and 19:00 as a result of the HGV movements in and out of the Logistics Centre. The duration of this effect

would extend into weekday evenings and on Saturday mornings, as a result of the proposed change.

2.5.23 The assessment of effects on walkers and cyclists on the A5 and A5025 between Junction 3 of the A55 and Wylfa Newydd Development Area set out in chapter C3 [APP-090] of the Environmental Statement identified that there would be a moderate or minor adverse effect on active travel during weekdays, but that in the evenings and on weekends there would be a negligible effect on active travel outside the shift change times when buses would be using the route. As a result of the proposed change of additional HGV movements on late weekday evenings and Saturday mornings there would be an additional adverse effect on people undertaking active travel journeys during these time periods. However, the majority of active travel journeys that take place along the A5025 are unlikely to be in order to access recreational facilities (such as leisure centres and playgrounds) due to the distance that needs to be travelled or the location of facilities within communities, where journeys would not include a section of the A5025. The community of Caergeiliog would continue to use the A5 as part of active travel journeys to Holyhead and these are more likely to take place in the evenings and at weekends, they are also more likely to access Valley for local services than the communities along the A5025. Extending traffic movements associated with operation of the Logistics Centre, or the routeing of HGVs directly to the WNDA into weekday evenings and Saturday mornings would result in a minor adverse effect on active travel walkers and cyclists on the A5 and sections of the A5025 which have been assigned a medium value during these time periods also, and a negligible effect on active travel walkers and cyclists on the other sections of the A5025 including NCN Route 5. Therefore, no new or different likely significant effects are predicted for active travel.

### **Conclusion**

2.5.24 The proposed changes to HGVs delivery windows would extend the periods during which there would be adverse effects on onshore recreation and active travel. When weekday evenings and/or Saturday deliveries occur, there would be an expected decrease of HGV numbers during weekdays 07:00 to 19:00 as a result of the HGV profiles not changing. Combined with existing embedded mitigation measures already secured in the Draft DCO application, and the limits imposed for weekday evenings and Saturday as part of the proposed change, there would be no new or different likely significant environmental effects predicted and presented in chapter C3 [APP-090] of the Environmental Statement.

### **Air quality**

2.5.25 The proposed change to HGV delivery windows is not anticipated to change the main input parameters to the air quality modelling of road traffic emissions used in the Draft DCO application, for example the AADT or proportion of Light Duty Vehicles or Heavy Duty Vehicles. However, it would lead to modifications to the time of day or night, or day of the week upon which vehicles would arrive and depart from the Wylfa Newydd Development Area during construction.

2.5.26 The air quality modelling undertaken for chapter C4 [APP-091] of the Environmental Statement was based on a modelling method which distributed the AADT for each road link equally across each hour of the day and for each day of the week (i.e. the AADT was divided by 24 and the average hourly flow used to represent the traffic flows). Consequently, this approach did not take account of any diurnal variation in flows by hour of the day or day of the week.

2.5.27 In order to assess the effects of the proposed change (i.e. the re-distribution of daily vehicle movements due to the proposed changes to HGV delivery windows), diurnal variations in traffic flows need to be considered. Recognising that this approach would deviate from that which was used within the Draft DCO application, a sensitivity analysis has been carried out to understand the following:

- how the model which considers the diurnal variation in vehicle flows, compares to the original modelling method used in the Draft DCO application; and
- how the proposed change and resulting variations to the diurnal profile of vehicle flows would affect the assessment conclusions presented in chapter C4 (APP-091) of the Environmental Statement.

### Comparison of modelling approaches

2.5.28 A description of the method used to model the vehicle flows using a diurnal approach for the sensitivity analysis is set out in appendix 1.2. This appendix also contains details of the revised verification process and comparison of the modelled results for the two modelling approaches. In summary, the model verification process was repeated using a diurnal profile for one of the verification zones used in the original assessment (RAF Valley verification area). This zone was used as it contained the human receptor for which the greatest changes in nitrogen dioxide (NO<sub>2</sub>) concentrations were predicted as a result of the Wylfa Newydd Project (receptor R20, receptor model ID Hum\_1964). This verification zone also contained five receptor locations used as the verification points (referred to as receptors B, C, D, E and F in appendix 1-2).

2.5.29 The model verification process showed that using a diurnal profile for modelling road traffic emissions, leads to higher differences between the raw modelled (i.e. before any adjustment) and monitored oxides of nitrogen (NO<sub>x</sub>) concentrations at the roadside monitoring locations compared to the non-diurnal verification modelling reported in appendix C4-1 [APP-114] of the Environmental Statement. This essentially means that although a more realistic representation of the traffic flows, the model does not perform as well when using a diurnal profile compared to when traffic flows were averaged across a 24-hour period. Consequently, this leads to the application of a higher model adjustment factor to the predicted raw NO<sub>x</sub> concentrations at receptor locations within 200m of the modelled road links before conversion of the NO<sub>x</sub> to NO<sub>2</sub>.

2.5.30 As shown in appendix 1-2, the final adjusted total modelled NO<sub>2</sub> concentrations at the verification points vary in comparison to those presented

in appendix C4-1 [APP-114] of the Environmental Statement. As noted in appendix 1-2, using the diurnal profile leads to some instances where the modelled total NO<sub>2</sub> concentrations are lower and one instance where the total concentrations are higher.

- 2.5.31 At receptor R20, the modelling using a diurnal profile was undertaken for the future baseline and future with Wylfa Newydd Project scenarios for the 2020 (representative of early years construction) and 2023 (representative of peak construction) assessment years to allow direct comparison to the results presented in chapter C4 [APP-091] of the Environmental Statement. This showed that at receptor R20, the predicted NO<sub>2</sub> concentrations using a diurnal profile were slightly higher for both the future baseline and future with Wylfa Newydd Project scenarios for both assessment years, compared to those presented in chapter C4 [APP-091] of the Environmental Statement.
- 2.5.32 Initial observations could conclude that for higher concentrations, the diurnal profile method leads to higher total concentrations; however, for some of the verification points, the total concentrations for no diurnal profile are very similar to those for receptor Hum\_1964 for the future 2020 and 2023 baseline and yet the diurnal profile method concentration is lower for these receptors and higher for receptor Hum\_1964. From the comparison of the modelled concentrations in appendix 1-2, it is concluded that for receptors which are very close to the edge of the modelled road source (i.e. less than 1m from the kerb), the diurnal profile method leads to higher total NO<sub>x</sub> and NO<sub>2</sub> concentrations (the verification point at A5025 Valley (diffusion tube D) and receptor Hum\_1964 are both approximately 0.5m from the edge of the road), and for the other receptors further from the road source the method without diurnal profile leads to higher concentrations (all other verification points, diffusion tubes B, C, E and F range from 1.2m to 1.7m from the kerbside).
- 2.5.33 On this basis, it is unlikely that use of a diurnal method would change the outcome and conclusions of the air quality assessment presented in chapter C4 [APP-091] of the Environmental Statement.

### **Assessment of effects of proposed change on air quality**

- 2.5.34 Although the change at the worst-case long-term receptor for annual mean concentrations (i.e. Hum\_1964, the human receptor closest to the road source, at 0.5m from the edge of the road, which experiences the highest predicted change in concentrations) is slightly higher for the diurnal method, this would potentially only change the effect descriptor for the 2023 scenario from small adverse to medium adverse for this one receptor. As the vast majority of receptors are more than 1m from the edge of the roads, the total concentrations and change in concentrations due to the proposed change to HGV delivery windows are unlikely to be any higher than those presented in chapter C4 [APP-091] of the Environmental Statement.
- 2.5.35 The balance of effects at human receptors would remain predominantly negligible with some beneficial effects due to the A5025 Offline Highway Improvements.
- 2.5.36 As the distances from the modelled road sources to ecological receptors are generally further than the very close locations (less than 1m) discussed above,

using a diurnal profile would not alter the assessment of effects at ecological receptors presented in chapter C4 [APP-091] of the Environmental Statement. The total concentrations and deposition rates and change in concentrations or deposition rates due to the proposed change to HGV delivery windows are unlikely to be any higher than presented in chapter C4 [APP-091] of the Environmental Statement.

2.5.37 Given that there is unlikely to be any significant difference between using a diurnal method and the average hourly flow method used for the Draft DCO application, the proposed change in HGV delivery windows would not alter the conclusions of the air quality assessment presented in chapter C4 [APP-091] of the Environmental Statement, with the balance of effects at human receptors remaining predominantly negligible and no change to the assessment of effect at ecological receptors also assessed in chapter C4 [APP-091] of the Environmental Statement. Therefore, there would be no new or different likely significant environmental effects than those reported in the Environmental Statement.

### ***Noise and vibration***

2.5.38 The traffic modelling described in chapter C2 [APP-089] of the Environmental Statement is based upon annual average weekly total construction HGV traffic operating on the local and wider road network between 07:00 and 19:00 on weekdays. Some of the outputs from this traffic modelling are used as inputs to the noise and vibration assessment as reported in chapter C5 [APP-092] of the Environmental Statement. The assessment of the change described above has been undertaken using the same methodology as the assessment in chapter C5 [APP-092] of the Environmental Statement. With this in mind, the information for the methodology of which this assessment has been undertaken can be found in chapter B6 [APP-071] of the Environmental Statement.

2.5.39 To investigate the potential effects from a change in HGV delivery windows, further noise modelling was conducted and additional noise and vibration assessments undertaken.

2.5.40 For weekdays, the noise modelling was based on the same annual average number of HGVs during weekdays as used in the Draft DCO assessments, but with the additional constraint that 20 HGV movements in each direction would occur in the evening period between 19:00 and 23:00. For Saturday mornings, noise modelling was based on a maximum of 50 HGV movements in each direction between the hours of 08:00 and 13:00; this results in a conservative assessment as a result of using a maximum rather than an annual average value.

2.5.41 The proposed changes relate to the construction phase only. As the proposed A5025 Off-line Highways Improvements will not be completed when HGV deliveries first start, two scenarios have been reassessed; these are the existing A5025 route in 2020 (the early years without bypass and with On-Line Highway Improvements which include sections of pavement reconstruction and widening, and sections of new surface dressing) and the A5025 in 2023

with the completed Off-line Highways Improvements. The 2023 scenario also represents the peak construction traffic year.

2.5.42 For each situation the following four periods are considered; this allows the effects of the delivery periods to be assessed both individually and cumulatively. The Draft DCO application scenario is included and form the benchmark against which changes to effects are established:

- Draft DCO application - Weekday (07:00 to 19:00), assessed using the daytime road traffic noise assessment criteria set out in the Environmental Statement chapter C5 [APP-092]. These criteria include the change in the daytime noise level in the short-term using the  $L_{A10,18h}$  noise metric, and whether the free-field noise level exceeds a value of 50 dB  $L_{Aeq,16h}$  which is the threshold below which the World Health Organization Guidelines for Community Noise [RD6] consider that the majority of the adult population will be protected from becoming moderately annoyed.
- Period 1 – Weekday + Weekday Evening (19:00 to 23:00), using Draft DCO average annual HGV numbers with the additional constraint of 20 HGV movements in each direction in the weekday evening period. The effects of this period are determined by considering the change in noise levels over the 19:00 to 23:00 period using the  $L_{A10,4h}$  noise metric and whether a value of 50 dB  $L_{Aeq,16h}$  is exceeded over the period 07:00-23:00
- Period 2 – Weekday + Saturday (08:00 to 13:00), using a maximum of 50 HGV movements in each direction to ensure that the worst-case effects during the Saturday (08:00 to 13:00) period are identified. The effects of this period are determined by considering the change in noise levels over the 08:00 to 13:00 period using the  $L_{A10,5h}$  noise metric and whether a value of 50 dB  $L_{Aeq,16h}$  is exceeded over the period 07:00-23:00.
- Period 3 – Weekday + Weekday Evening (19:00 to 23:00) + Saturday (08:00 to 13:00), which represents the worst case cumulative situation arising from Period 1 (evenings) and Period 2 (Saturday mornings) in combination at each receptor.

The paragraphs below provide a summary of the effects from the proposed changes.

### Residential receptors

2.5.43 The predicted noise levels at residential properties for the Draft DCO and Period 1 (both on-line and off-line) scenarios are shown in appendix 1-3

2.5.44 Table 2-3 and Table 2-4 provide a comparative summary of the overall balance of significant adverse effects at residential receptors as detailed in chapter C5 [APP-092] of the Environmental Statement, and for each Period for the proposed change to HGV delivery windows. The results are presented for the day effects at each receptor since this is where the variation in effects arises due to the additional HGV scenarios in relation to the Draft DCO application. Tables 2-3 and 2-4 present the balance of worst case effects (by

offsetting adverse effects with beneficial effects) and shows the total number of significant adverse effects at residential receptors with the given scenario and in the absence of any mitigation.

**Table 2-3 Summary of significant effects pre-mitigation at residential receptors for the 2020 without bypass assessment year.**

	Adverse	Beneficial	Balance	Change in balance	Percentage change
DCO ES	273	0	273	-	-
Period 1 (DCO + Weekday evening)	285	0	285	+12	+4%
Period 2 (DCO + Saturday)	277	0	277	+4	+1%
Period 3 (DCO + Weekday evening + Saturday)	289	0	289	+16	+6%

2.5.45 In 2020 prior to the bypass completion there would be significant adverse effects at 12 additional residential receptors during the day with the HGV movements extending into the weekday evening (Period 1) compared to the Draft DCO application. The overall balance would increase by four significant adverse effects when considering the Draft DCO application plus HGV movements on Saturday mornings only (Period 2). This indicates that conducting 20 HGV movements in each direction on the weekday evening would have greater effects compared with 50 HGV movements in each direction during Saturday mornings. This is due to one of the assessment criteria which is a test against the 50 dB L<sub>Aeq,16h</sub> threshold which is calculated over the whole daytime period (07:00 to 23:00) and which is exceeded at a greater number of properties on weekdays than on Saturdays as average traffic flows (including all vehicles, not just HGVs) are higher on weekdays than Saturdays.

2.5.46 Examining the combined effects, if deliveries occur on weekday evenings and on Saturday mornings (Period 3), there would be, pre-mitigation, significant adverse effects at 289 properties compared to 273 properties in the Draft DCO application, an increase of 16 properties.

**Table 2-4 Summary of significant effects pre-mitigation at residential receptors for the 2023 with bypass assessment year.**

	Adverse	Beneficial	Balance	Change in balance	Percentage change
DCO ES	152	26	126	-	-

	Adverse	Beneficial	Balance	Change in balance	Percentage change
Period 1 (DCO + Weekday evening)	166	26	140	+14	+11%
Period 2 (DCO + Saturday)	154	26	128	+2	+2%
Period 3 (DCO + Weekday evening + Saturday)	167	26	141	+15	+12%

2.5.47 In the peak construction year there would be significant adverse effects at 14 additional residential receptors during the day with the HGV movements extending into the weekday evening (Period 1) compared to the Draft DCO application. The overall balance would increase by two significant adverse effects when considering the Draft DCO application plus HGV movements on Saturday mornings only (Period 2). This demonstrates that the introduction of 20 HGV movements in each direction on the weekday evenings would have greater effects compared with the introduction of 50 HGV movements in each direction during Saturday mornings. This is due to one of the assessment criteria which is stated as an absolute noise level over the whole daytime period (07:00 to 23:00) being met at a greater number of properties during weekdays than on Saturdays.

2.5.48 Examining the combined effects, if HGVs are operated on weekday evenings and on Saturday mornings (Period 3), there would be, pre-mitigation, a significant adverse balance of effects at 141 properties compared to 126 properties in the Draft DCO application, an increase of 15 properties.

2.5.49 When considering the cumulative effects for both 2020 and 2023 it has been derived that for the Draft DCO application there would be 307 significant adverse effects. Broken down by delivery period with the proposed change this would be:

- 321 for Period 1;
- 312 for Period 2; and,
- 325 for Period 3.

2.5.50 This demonstrates that there would be an increase in significant adverse effects of 18 properties when compared to the Draft DCO application.

2.5.51 The additional mitigation applied in the Draft DCO application for the cumulative effects for both 2020 and 2023 resulted in 103 properties being eligible for noise insulation. Using the same DCO criteria for the proposed change results in the following eligibility:

- 104 for Period 1;

- 108 for Period 2; and,
- 109 for Period 3.

2.5.52 This demonstrates that there would only be a maximum increase in properties qualifying for noise insulation of six properties when compared to the Draft DCO application.

### Non-residential receptors

2.5.53 Chapter C5 [APP-092] of the Environmental Statement identified two potential significant adverse effects. These were investigated further and were deemed to be not significant [see APP-092]. A similar two stage process has been undertaken here, with potential significant adverse effects identified and reported in Table 2-5, and then examined further in paragraphs 2.5.56 to 2.5.58.

2.5.54 In chapter C5 [APP-092] of the Environmental Statement the assessment criteria were exceeded at a number of PRoWs, but these were not assessed to be significant due to the relatively short duration that users of the PRoWs would be subject to road traffic noise effects while traversing the walking routes towards and away from the roads. In addition, a single significant beneficial effect was identified at the Llanfachraeth Play Area.

2.5.55 Table 2-5 presents a summary of the numbers of non-residential receptors expected to experience potential significant effects for each assessment period in the absence of any mitigation. This table includes all PRoWs presented in the Draft DCO application where the threshold for the onset of a significant effect was expected to be exceeded (but later excluded due to the short duration of exposure for users).

**Table 2-5 Potentially significant adverse effects for each period for the proposed change to HGV delivery windows for non-residential receptors**

Period	Number of potentially significant adverse effects, with potentially significant beneficial effects shown in parentheses				
	Educational	Places of Worship	Commercial	Industrial	Other
DCO ES	0 (0)	0 (0)	0 (0)	0 (0)	2 (2)
Period 1 (DCO + Weekday evening)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0)
Period 2 (DCO + Saturday)	1* (0)	0 (0)	0 (0)	0 (0)	16 (2)
Period 3 (DCO + Weekday evening + Saturday)	1* (0)	0 (0)	0 (0)	0 (0)	16 (2)

\* Noise levels at Rhyd Y Llan school in Llanfaethlu exceed the potential onset of significant effects on Saturday mornings, but the school is typically not open at this time.

2.5.56 Table 2-5 shows for the weekday evenings (Period 1), there would potentially be significant adverse effects at two 'other' receptors. Both of these are PRoWs and, as set out in the DCO application, the noise effects at these are

not assessed to be significant. It is noted that in the 2023 assessment there would be significant beneficial effects at two 'other' receptors (Llanfachraeth Play Area and a PRoW adjacent to Section 7 (Cefn Coch)) but these benefits would not occur until after the A5025 Off-Line Highway Improvements have been completed; as they are not present in both the 2020 and 2023 assessments they have been omitted from the table.

2.5.57 With Saturday morning deliveries (Period 2) there would potentially be a significant adverse effect at one school, significant adverse effects at 'other' receptors, and significant beneficial effects at two 'other' receptors. Considering the potential adverse effects in detail:

- Schools are typically not open on Saturday mornings, and any potential effects would only be until the A5025 Off-Line Highway Improvements are completed; therefore, no adverse effect is concluded for this receptor.
- Fifteen (15) of the 'other' receptors are PRoWs, and as set out in the Draft DCO application the noise effects at these are not assessed to be significant; this is due to the relatively short duration that users would be subject to road traffic noise effects while traversing the PRoWs. It is also noted that these would only be affected after the A5025 Off-Line Highway Improvements are completed.
- The remaining 'other' receptor is Dronwy Caravan Park, which operates from 1 March to 31 January each year. The Saturday day-time free-field noise level at this receptor is expected to increase by 3dB from 38dB  $L_{Aeq,16h}$  to 41dB  $L_{Aeq,16h}$ . The Draft DCO application does not set out minimum thresholds for significance at caravan parks, but in relation to new buildings, BS 8233: 2014 [RD7] suggests that for steady external noise sources, during the day, an internal noise level of 35 dB  $L_{Aeq,16h}$  is appropriate for resting conditions within living rooms and bedrooms. While it is not possible to be precise regarding the sound insulation offered by different caravan constructions, research by Napier University [RD8] suggests that a partially open window will provide 12-18 dB(A) reduction in road traffic noise from the outside to inside. It is reasonable to assume that the sound insulation performance of a caravan would not be worse than that of a partially open window, and therefore internal daytime noise levels within caravans will remain below 35 dB  $L_{Aeq,16h}$ . In relation to the outdoors space within the caravan park, the noise levels will remain within the range at which the World Health Organization Guidelines for Community noise [RD6] consider the majority of the adult population will be protected from becoming moderately annoyed. In summary, no adverse effects are expected within or outside caravans as a result of the proposed change in HGV delivery times, and therefore it is concluded that no significant adverse effects will occur at this receptor.

2.5.58 In Period 3, which is the worst-case combination of weekday evening and Saturday morning deliveries, the number of potential significant adverse effects at non-residential receptors would increase from two to 17 when compared with the Draft DCO application, while the number of significant

beneficial effects would decrease to zero as no benefits would exist in both the 2020 and 2023 assessments. The potentially significant effects are as detailed above for Period 1 and 2 and, after detailed consideration of the situation at each receptor, there will be no new or different likely significant effects expected to occur as a result of the combined changes to HGV delivery times on non-residential receptors.

### **Groundborne and airborne vibration**

2.5.59 The proposed change does not introduce new types of vehicles or effect the delivery profile stated in the Draft DCO application and therefore instantaneous peak particle velocity and airborne vibration would not be expected to change with an extension of the HGV delivery window. As such the assessments made in chapter C5 [APP-092] of the Draft DCO application on vibration remain the same.

### **Mitigation arising from the proposed change**

#### ***Additional mitigation secured in the Draft DCO application***

2.5.60 The use of low noise road surface secured in the Design and Access Statement – volume 3 [part 2 of 2; APP-410] of the Draft DCO application would reduce some of the effects arising from the proposed change.

2.5.61 In consideration of the benefits of this it should also be noted that the guidance within the Design Manual for Roads and Bridges [RD9] states that below the speed of 75km/h a low noise surface only delivers a reduction of 1dB(A)<sup>1</sup> (compared with a reduction of 3.5dB(A) for speed above 75km/h). Recent work which has been presented at a 2018 Institute of Acoustics (IOA) conference suggests that the noise reduction from a low noise surface does not suddenly reduce from 3.5dB(A) to 1dB(A), and it is in fact a gradual drop-off. The paper presented provides a method to quantify this reduction for speeds less than 75km/h. With several locations along the A5025 having speeds between 60km/h and 65km/h, the paper suggests the potential benefit in terms of noise reduction at such locations could be greater than the 1dB(A) which has been assumed within the Environmental Statement calculations. It is therefore possible that this assessment underestimates the beneficial effects of Low Noise Surfaces, and this should be borne in mind when considering the value of this mitigation.

2.5.62 The implementation of a LNMS [REP3-050] for the Wylfa Newydd Project, which is secured in the Wylfa Newydd CoCP [APP-414], will also provide reduced effects arising from the proposed change. Eligibility for noise insulation under the LNMS [REP3-050] as set out in section 8.3 of the Wylfa Newydd CoCP [APP-414] is based on multiple criteria, including whether the predicted noise level at properties exceeds 68 dB L<sub>A10,18 hours</sub>.

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<sup>1</sup> “A-weighting” refers to the noise level that represents the human ear’s response to sound. The dB(A) unit is internationally accepted and has been found to correspond well with people’s subjective reaction to noise.

2.5.63 When considering the cumulative effects of both 2020 and 2023, there would be six properties additional qualifying for noise insulation when compared to the Draft DCO application as presented in paragraph 2.5.51.

#### ***Enhanced mitigation for the proposed change***

2.5.64 With the potential for a small increase in significant adverse effects during the construction period, a number of options for enhanced mitigation have been considered:

- a reduction in speed limit on part or all of the A5025;
- lowering the daytime threshold of eligibility for the LNMS contained within the Wylfa Newydd CoCP [APP-414] from 68 dB  $L_{A10,18h}$  to 63 dB  $L_{A10,18h}$ ; and,
- direct deliveries to site rather than the current position which requires all deliveries to be routed through the Logistics Centre.

2.5.65 A reduction in speed will cause a reduction in noise, and so there is the possibility to use this measure as noise mitigation. Potential benefits could be up to a 1dB reduction in noise for every 10km/h reduction in speed. However, it is considered that such a mitigation measure is likely to be unpopular and could potentially cause delays to those using the A5025, which would include the Wylfa Newydd DCO Project construction traffic. This measure for enhanced noise mitigation is therefore not proposed for further consideration.

2.5.66 Given the increase in significant adverse noise effects at up to 18 properties as a result of this proposed change, and as a result of the number of significant effects identified in the Draft DCO application, feedback through Relevant Representations and ongoing Statement of Common Ground discussions, Horizon will extend the commitments made in the LNMS set out in section 8.1 of the Wylfa Newydd CoCP [APP-414] irrespective of this proposed change. This would involve reducing the noise threshold at which properties would be eligible for noise insulation (secondary glazing and acoustic ventilation) from road traffic noise by 5 dB from 68 dB  $L_{A10,18h}$  to 63 dB  $L_{A10,18h}$ . Doing this will result in an additional 50 properties being potentially eligible for noise insulation in the cumulative situation when the Period 3 extended operating hours for HGVs in the cumulative 2020 and 2023 situation is considered (159 properties potentially eligible compared to 109 in the Draft DCO application).

#### **Conclusion**

2.5.67 The findings of the revised noise assessment show that the proposed change would slightly increase the overall number of significant adverse effects pre-mitigation compared to those reported in chapter C5 [APP-092] of the Environmental Statement for residential and non-residual receptors. As a result of this and the number of significant effect in the Draft DCO application, enhanced mitigation is being proposed to mitigate all effects further which will be secured through an update to the Wylfa Newydd CoCP [APP-414]. These measures will reduce the significant adverse effects from weekday evening and Saturday morning deliveries below the significant effects reported in the Draft DCO application. It is therefore concluded that the proposed change would not introduce any new or different likely significant environmental effects

other than those reported in the Environmental Statement and a greater number of residential receptors will benefit from being eligible for noise insulation.

### ***Health impacts***

2.5.68 This section discusses the implications for the Health Impact Assessment Report [APP-429] arising from the proposed change to HGVs delivery windows.

### ***Scope of health analysis***

2.5.69 The proposed revisions to HGV delivery windows discussed here relate only to issues associated with vehicles transporting materials on the local road network. The relevant geographical population is predominantly the population near the local road network.

2.5.70 It is assumed that the HGV delivery windows describe all movements of HGVs, including those travelling to or from the Wylfa Newydd Development Area (laden or unladen).

2.5.71 The proposed changes to HGV delivery windows are relevant to the following topics discussed in the Health Impact Assessment Report [APP-429]:

- air quality (section C.2 Air quality, emissions from vehicles transporting materials and people on the local road network during construction);
- noise (section C.3 Noise, noise from vehicles transporting materials and people on the local road network during construction); and
- traffic (section C.5 Transport, road safety during construction and health trip journey times (e.g. to a hospital) during construction).

2.5.72 Physical activity effects discussed in section D.5 of the Health Impact Assessment Report [APP-429] relate to changes to the network of footpaths and cycleways near the Wylfa Newydd Development Area. As discussed in paragraphs 2.5.13 to 2.5.24 above (Public access and recreation), the proposed changes to HGV delivery windows would have a limited effect on locations where this network crosses the A5025, with no new or different likely significant environmental effects predicted. Health effects relating to changes in HGV movements where pedestrian and cycle routes use or cross the A5025 are discussed in under 'traffic: road safety' (road safety being one factor relevant to decisions around active travel and physical activity).

2.5.73 The proposed change to HGV delivery windows would not affect how the Logistics Centre at Parc Cybi would be used or its operating practices. On this basis it is not expected that the proposed change would affect the rapid Health Impact Assessment conclusions set out in volume H of the Health Impact Assessment Report [APP-429]. Similarly, it is not expected that the Logistics Centre's contribution as an embedded mitigation of the Wylfa Newydd DCO Project would be reduced.

2.5.74 With regard to physical activity, no new or different likely significant effects are predicted in relation to recreational users on footpaths or cycleways around the Logistics Centre.

### **Summary of the proposed change**

2.5.75 The changes to the HGV delivery windows broadly result in two types of potential effect:

- Firstly, as the HGV profile is not changing, the extended HGV delivery times could result in a spreading out of HGVs across a longer time period. This would generally reduce the magnitude of effects at particular locations as the frequency of exposure would decrease.
- Secondly, there would be more vehicle movements at sensitive times. Generally, compared to the Draft DCO application HGV delivery windows, a greater number of activities may be taking place that can be considered to be sensitive to traffic movement, e.g. a higher frequency of walking or cycling for leisure on Saturday mornings and greater potential to disturb sleep or rest during evenings and Saturday mornings.

### **Air quality related health effects**

2.5.76 Sensitivity testing of air quality models presented in the Draft DCO application is discussed above in paragraphs 2.5.25 to 2.5.37. The results indicate that the effect of the proposed HGV delivery window changes on average concentrations of air pollutants associated with the Wylfa Newydd DCO Project's vehicle movements along the road network would not alter the conclusions presented in chapter C4 [APP-091] of the Environmental Statement. This includes the Environmental Statement concluding that effect of changes to long and short-term concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> at human receptors would be negligible and concentrations would be well within the relevant UK Air Quality Objectives.

2.5.77 On the basis of the air quality sensitivity testing it is considered that the conclusions reached in the Health Impact Assessment Report [APP-429] in relation to potential air quality effects on population health from the Wylfa Newydd DCO Project's HGVs on the local road network during construction would also remain unchanged. As described in paragraphs C.2.22 and C.2.23 of the Health Impact Assessment Report [APP-429] this would be a negligible effect on the health of the general population and up to a minor adverse effect on the health of particularly sensitive groups. These conclusions continue to take account of the potential for non-threshold effects of some pollutants. It is therefore concluded that there would be no new or different likely significant air quality related health effects from the proposed change.

### **Noise related health effects**

2.5.78 Relevant health outcomes for road traffic noise relate to cardiovascular health, mental health (e.g. relating to annoyance) and for the evening period, sleep disturbance (with the potential to affect day-time functioning, physical health

and mental health). Cognitive performance in children is unlikely to be reduced by this change (the changes being outside of school hours), though the consequent reduction in HGV movements at other times, including school hours, could be a slight benefit.

2.5.79 Two noise scenario years have been modelled and assessed in relation to an extension of the HGV delivery windows; the 2020 and 2023 scenarios. Both scenarios are discussed as the population exposed to road transport noise differs to some extent between the two. This is relevant to ensuring mitigation would be appropriately targeted. As presented in paragraphs 2.5.43 to 2.5.58, an extension to the HGV delivery window does slightly increase the number of significant effects pre-mitigation however the introduction of additional and enhanced mitigation reduces the effects when compared to the Draft DCO application.

2.5.80 The weekday evening delivery window, with HGV movements occurring up to 23:00, is most relevant to sleep disturbance as an outcome (though cardiovascular and annoyance effects are also relevant). It would be expected that most people, across all ages, would be turning in for the night between this 19:00 to 23:00 period. Although the 19:00 to 23:00 period is relevant to sleep, importantly the changes to HGV movements do not extend into the night-time period of 23:00 to 07:00 that is often used by health-related noise criteria such as the World Health Organisation's Night Noise Guidelines for Europe [RD10]. For this reason, the modelling described above is based on daytime criteria of 50dB  $L_{Aeq\ T}$ .

2.5.81 In both noise assessment scenario years, the change associated with the introduction of an HGV delivery window in weekday evenings (with a limit of 20 HGV movements in each direction per evening) is equivalent to on average an additional five HGV movements in each direction per hour. Whilst a small increase to overall road traffic, the noise from vehicles of this size is likely to be more noticeable than noise from most lighter vehicles. Intermittent disturbance at this time, particularly if it is from a source about which strong views are held, could potentially inhibit sleep or cause annoyance. The effects are likely to be limited to those people living close to the local road network along the HGV route.

2.5.82 HGV deliveries during Saturdays (08:00 to 13:00) may affect periods of rest and amenity, including in dwellings, gardens and along PRoW. A reduction in amenity may affect day-time relaxation and may discourage physical activity, e.g. in gardens. The introduction of an HGV delivery window on Saturdays between 08:00 and 13:00 (with a maximum limit of 50 HGV movements in each direction) is equivalent to on average an additional 10 HGV movements in each direction per hour. As noted in paragraph D.3.15 of the Health Impact Assessment Report [APP-429], generally there is a higher tolerance of day-time, compared to night-time, noise. The population most likely to be affected regularly are those people living close to the local road network along the HGV route.

2.5.83 To mitigate changes in the magnitude and extent of significant adverse effects (for weekday evenings, Saturday mornings and their combined effects) the noise section (paragraphs 2.5.60 to 2.5.67) describes the

expansion of the LNMS as set out in the Wylfa Newydd Code of Construction Practice (APP-414). As shown by the increase in the number of dwellings eligible for noise insulation (increasing in the 2020 and 2023 assessment years), such enhanced mitigation would be commensurate with the level of change in extent and magnitude of effects. Although day-time metrics have been used in the modelling, the mitigation offered would include measures appropriate to reducing the potential for sleep disturbance (e.g. acoustic ventilation and either double or secondary glazing depending on the property for bedrooms of eligible properties).

- 2.5.84 In population health terms the change in size of the affected population (for weekday evenings, Saturday mornings and their combined effects) is very similar to that which informed the Health Impact Assessment Report [APP-429] submitted as part of the Draft DCO application.
- 2.5.85 On this basis, it is considered that potential noise disturbance effects on population health from the Wylfa Newydd DCO Project's HGVs on the local road network during construction as a result of the proposed change would be within the bounds of the existing assessment conclusions of the Health Impact Assessment Report [APP-429]. As described in paragraphs C.3.20 and C.3.12 of the Health Impact Assessment Report [APP-429] this would be a negligible residual effect on the health of the general population and up to a minor adverse residual effect on the health of particularly sensitive groups. It is therefore concluded that there would be no new or different likely significant noise related health effects from the proposed change.

### **Transport related health effects**

- 2.5.86 The transport assessment undertaken as a result of the proposed change is discussed above (paragraphs 2.5.2 to 2.5.12). The results describe how the weekday evenings (19:00 to 23:00) and Saturday day-time (08:00 to 13:00) would be off-peak times for the highway network. During these off-peak times, the change to traffic volumes is assessed to be small and would not alter the conclusions presented in chapter C2 [APP-089] of the Environmental Statement. That conclusion includes that there is sufficient capacity at Junction 2 of the A55 (near the Logistics Centre) which has a high retail and leisure related use at the weekends.
- 2.5.87 The Health Impact Assessment Report [APP-429] considers transport effects in relation to both potential delays to health trip journey times and road safety.

### **Health trip journey times**

- 2.5.88 Peak times for the highway network are also the period where health trip journey times may be most affected. The proposed changes do not increase vehicle movements during these peak times. During the off-peak times of weekday evenings (19:00 to 23:00) and Saturday day-time (08:00 to 13:00) the potential for significant delays for health trip journey times is considered unlikely. The conclusions reached in the Health Impact Assessment Report [APP-429] on this issue would therefore remain unchanged and therefore no new or different likely significant effects have been identified. As described in paragraphs C.5.35 and C.5.36 of the Health Impact Assessment Report [APP-

429] this would be a negligible effect on the health of the general population and up to a minor adverse effect on the health of particularly sensitive groups.

2.5.89 Although not included within the transport assessment (in order to reflect a worst-case scenario), the general reduction in the frequency of HGV movements at peak times (as a consequence of spreading some vehicle movements into the off-peak evening and Saturday period) could represent a slight improvement compared to the Draft DCO application. Although beneficial, any change would likely be within the bounds of the existing conclusions in paragraphs C.5.35 and C.5.36 of the Health Impact Assessment Report [APP-429] as described above.

### ***Road Safety***

2.5.90 Whilst the proposed change in Project HGVs during the evening period (19:00 to 23:00) would represent a relatively small increase to overall road traffic, the change may still affect road safety. Factors that contribute to accident risk are likely to vary during the evening period, some increasing risks, others reducing risks. This includes a likely reduction in visibility during the evenings (particularly in winter months), which may increase risks. However, most evening periods are also a time when there tend to be lower numbers of other vehicles using the road network, potentially reducing accident risk.

2.5.91 In contrast, the Friday evening (19:00 to 23:00) and Saturday day-time (08:00 to 13:00) are times when a greater number of people who are walking or cycling for leisure may be expected (particularly in summer months). Compared to the HGV delivery window times in the Draft DCO application there may therefore be more vulnerable road users (particularly Non-Motorised Users (NMUs)) on, or crossing, the route used by the Wylfa Newydd DCO Project's HGVs.

2.5.92 Chapter C2 [APP-089] of the Environmental Statement includes assessment of accidents and safety; this chapter describes the A5025 as in proximity to residential communities and as showing a dispersed but frequent accident history. That assessment of accident risk presented in chapter C2 [APP-089] of the Environmental Statement was based on accident history data and modelling (see Transport Assessment appendix E); [APP-106]. Estimates of the increases in accidents along each route were based upon the percentage change in total AADT flows with and without the Wylfa Newydd Project in place. The assessment also included consideration of the change in percentage of HGVs on the routes. Accident cluster sites were identified, and common causes considered.

2.5.93 Compared to the Draft DCO application, the proposed changes do not affect the AADT flows or the overall percentage of HGVs on the routes. This reflects that whilst the timings of HGVs would change (increasing in the weekday evenings 19:00 to 23:00 and Saturday 08:00 to 13:00), the overall numbers of HGVs (or other traffic) would not change. The results of the accident analysis presented in chapter C2 [APP-089] of the Environmental Statement are therefore not expected to change. This is due to that analysis already spanning all times of day and night and all days of the week, including periods when NMUs may be more likely to be present, such as Friday evenings 19:00

to 23:00 and Saturdays between 08:00 and 13:00. The most relevant sections of the accident analysis presented in chapter C2 [APP-089] of the Environmental Statement are reproduced below:

- paragraph 2.5.37: The predicted increase in traffic flows along the A5025 between Valley and Tregele in the Wylfa Newydd 'without bypasses' scenario could result in NMUs experiencing an increase in accident risk, especially in villages. Therefore, this represents a small magnitude of change and an adverse effect of minor significance.
- paragraph 2.5.38: During the Wylfa Newydd Project 'with bypasses' scenario, NMUs in Valley (section 9), Llanfachraeth (section 12), Llanfaethlu (section 15) and Cefn Coch (section 18) would experience a decrease in accident risk as the majority of traffic would transfer from the existing A5025 onto the A5025 Offline Highway Improvements (sections 10, 13, 16 and 19). Therefore, this represents a small magnitude of change and a beneficial effect of minor significance.
- paragraph 2.5.39: NMUs travelling along other sections in the study area where additional Wylfa Newydd Project traffic is present are unlikely to experience an increase in accident risk during either Wylfa Newydd Project scenario. Therefore, this represents a negligible magnitude of change, which is not considered to be a significant effect.

2.5.94 These conclusions of the accident analysis presented in chapter C2 [APP-089] of the Environmental Statement were taken into account by the Health Impact Assessment Report [APP-429] in relation to road safety associated with the Wylfa Newydd DCO Project's HGVs on the local road network during construction. As described in paragraphs C.5.13 and C.5.14 of the Health Impact Assessment Report [APP-429] this would be a negligible effect on the health of the general population and up to a minor adverse effect on the health of particularly sensitive groups. The Health Impact Assessment Report [APP-429] noted the expected benefits to road safety from the A5025 Highway Improvements.

2.5.95 Whilst the Friday evening periods (19:00 to 23:00), and Saturday period (08:00 to 13:00) are acknowledged as potentially being times when a greater number of people who are walking or cycling for leisure would be expected, these are also times when there are typically lower numbers of other vehicles on the roads (off-peak times).

2.5.96 The quantitative accident analysis undertaken for the Draft DCO application is unlikely to have the resolution to detect changes in risk due to the proposed HGV delivery window changes, as the accident analysis considers annual vehicle movements. However, based on a qualitative professional judgement, compared to the Draft DCO application, the proposed changes may be associated with a slight increase in accident risk prior to the completion of the A5025 Highway Improvements. Therefore, the following enhanced mitigation is proposed which will be secured through the Section 106:

- Horizon will fund a road safety campaign with the Isle of Anglesey County Council, as Highways Authority, and the North Wales Police. The

campaign would commence from Project implementation through to the completion of the A5025 Highway Improvements (on-line and off-line). The target audience would be all road users on the A5025 between Valley and the Site Entrance. This would include the Wylfa Newydd DCO Project's HGV drivers, the public (including those walking or cycling) and construction workers. The road safety campaign would use a mix of methods (e.g. information, Logistics Centre briefings, school presentations and speed checks). The detail planning of the multi-agency road safety campaign would be an activity of the Health and Well-being monitoring sub-group. The timing of checks would include weekday evenings 19:00 to 23:00 and Saturday 08:00 to 13:00. Key locations would include:

- the areas of the future bypasses in Valley, Llanfachraeth, Llanfaethlu and Cefn Coch; and
- junctions or crossings of the A5025 used by footpaths, NCN Route 5; the Copper Trail, or between Llanfaethlu and the Black Lion Inn.

2.5.97 With the inclusion of this enhanced mitigation, it is considered that the HGV delivery window changes (weekday evenings 19:00 to 23:00 and Saturday 08:00 to 13:00) before the completion of the A5025 Highway Improvements, would be within the bounds of the existing assessment conclusions of the Health Impact Assessment Report [APP-429] and therefore no new or different likely significant effects have been identified.

2.5.98 Once the A5025 Highway Improvements (on-line and off-line) are fully completed the slight increase in the road accident risk compared to the Draft DCO application would reduce to negligible. This reflects the road safety benefits of:

- the bypasses in Valley, Llanfachraeth, Llanfaethlu and Cefn Coch;
- the construction of a segregated cycle path for NCN Route 5 at Llanynghenedl and a new segregated cycle path between Nanner Road and the Wylfa Newydd Development Area, which incorporates a crossing for the Copper Trail heading east to Llanfechell at Bwlch; and
- the new shared use footway/cycle way between Llanfaethlu and the Black Lion Inn.

2.5.99 Noting the proposed additional mitigation measures, as well as those existing measures described in the Health Impact Assessment Report [APP-429] and committed to in the Draft DCO application in relation to monitoring accident hotspots and road safety promotion work, the conclusions reached in the Health Impact Assessment Report [APP-429] in relation to road safety associated with the Wylfa Newydd DCO Project's HGVs on the local road network during construction would remain unchanged and therefore no new or different likely significant effects have been identified. As described in paragraphs C.5.13 and C.5.14 of the Health Impact Assessment Report [APP-429] this would be a negligible effect on the health of the general population and up to a minor adverse effect on the health of particularly sensitive groups.

2.5.100 As with journey times, although not included within the transport assessment (in order to reflect a worst-case scenario), the general reduction in the frequency of HGV movements at peak times (as a consequence of spreading some vehicle movements into the off-peak evening and Saturday period) could represent a slight improvement compared to the Draft DCO submission. Although beneficial, any change would likely be within the bounds of the existing conclusions in paragraphs C.5.13 and C.5.14 of the Health Impact Assessment Report [APP-429] as described above.

### ***Equality impacts***

2.5.101 The potential effects of the Wylfa Newydd DCO Project on people with 'protected characteristics' (as set out in the Equality Act 2010) as well as socioeconomically deprived communities have been assessed in the Equality Impact Assessment [APP-434].

2.5.102 The traffic assessment presented above in paragraphs 2.5.2 to 2.5.12 concluded that the change in traffic flows associated with the proposed HGV delivery windows on weekday evenings plus Saturday mornings is small and would not affect the outcome of the assessment currently presented in chapter C2 [APP-089] and the DCO Transport Assessment [APP-101]. The public access and recreation assessment presented above in paragraphs 2.5.13 to 2.5.24 concluded that the proposed changes to HGV delivery windows would extend the periods during which there would be adverse effects on onshore recreation and active travel. However, with existing embedded and additional mitigation measures already secured in the Draft DCO application there would be no new or different likely significant environmental effects to the assessment presented in chapter C3 [APP-090] of the Environmental Statement and the conclusions of the assessment remain as reported. On this basis it is considered that the overall equality effects reported in the Equality Impact Assessment [APP-434] with regard to road traffic and public access and recreation would remain unchanged and therefore no new or different likely significant effects have been identified.

2.5.103 Sensitivity testing of air quality models presented in the Draft DCO application is discussed above in paragraphs 2.5.25 to 2.5.37. The results indicate that the effect of the proposed HGV delivery window changes on average concentrations of air pollutants associated with the Wylfa Newydd DCO Project's vehicle movements along the road network would not alter the conclusions presented in chapter C4 [APP-091] of the Environmental Statement. On this basis it is considered that the conclusions reached in the Equality Impact Assessment [APP-434] in relation to potential air quality effects on equality from the Wylfa Newydd DCO Project's HGVs on the local road network during construction would remain unchanged. Therefore, no significant health and no disproportionate or differential equality effects are expected as a result of the proposed change.

2.5.104 The results of noise modelling and assessment discussed above in paragraphs 2.5.38 and 2.5.67 show a small increase in the number of residential and non- residential properties effected by the proposed change pre-mitigation. With additional and enhanced mitigation proposed these effects are reduced further than those presented in the Draft DCO application.

Therefore, the conclusions of the Equality Impact Assessment [APP-434] with regard to noise effects from road traffic on these receptors remain unchanged and therefore no new or different likely significant effects have been identified.

**Table 2-6 Likely new or different environmental effects**

Document name	Examination Reference Number	Chapter name / section name	New or different likely significant effects	Material change / non-material change / no change
Environmental Statement chapter C2 and the DCO Transport Assessment	APP-089 and APP-101	Traffic and Transport and DCO Transport Assessment	As outlined in paragraphs 2.5.2 to 2.5.12, the change in traffic flows associated with the proposed HGV delivery windows on weekday evenings and Saturday mornings is small and would not affect the outcome of the assessment currently presented in chapter C2 [APP-089] and the DCO Transport Assessment [APP-101].	Non-material change
Environmental Statement chapter C3	APP-090	Public Access and Recreation	As outlined in paragraphs 2.5.13 to 2.5.24, the proposed changes would extend the periods during which there would be adverse effects for onshore recreation and active travel.  However, with existing mitigation measures and the constraints placed on the number of HGVs during weekday evenings and on Saturdays there would be no new or different likely significant environmental effects.	Non-material change
Environmental Statement chapter C4	APP-091	Air quality	As outlined in paragraphs 2.5.25 to 2.5.37, the proposed change would not significantly alter the air quality assessment, in particular effects to human and ecological receptors, due	Non-material change

Document name	Examination Reference Number	Chapter name / section name	New or different likely significant effects	Material change / non-material change / no change
			<p>to the proposed change in HGV delivery windows.</p> <p>Thus, there is considered to be no new or different likely significant environmental effects to the assessment of air quality and the conclusions presented in chapter C4 [APP-091] of the Environmental Statement remain as reported.</p>	
Environmental Statement chapter C5	APP-092	Noise and Vibration	<p>As outlined in the Noise and Vibration assessment outlined in paragraphs 2.5.38 to 2.5.67 the findings of the revised noise assessment show that the proposed change in HGV delivery windows would increase the overall number of significant adverse effects on residential receptors pre-mitigation compared to those reported in chapter C5 [APP-092] of the Environmental Statement.</p> <p>As a result, enhanced mitigation measures are presented in paragraph 2.5.66 which will be secured through an update to the Wylfa Newydd CoCP [APP-414]. These measures will reduce the significant adverse effects for the Wylfa Newydd Project and as a result of this change. It is therefore concluded that the proposed change would not introduce any new or</p>	Non-material change

Document name	Examination Reference Number	Chapter name / section name	New or different likely significant effects	Material change / non-material change / no change
			<p>different likely significant environmental effects other than those reported in the Environmental Statement.</p> <p>The proposed change will result in an increase in noise at some non-residential receptors however upon detailed analysis presented in paragraphs 2.5.53 to 2.5.58 these would still be considered not significant and therefore no new or different likely significant environmental effects are predicted.</p>	
Environmental Statement chapter C7	APP-094	Combined effects topic	<p>Based on the assessments outlined in section 2.5 and summarised in this table, there are no new or different likely significant combined effects as a result of the proposed change. Consequently, the combined topic effects assessment remains as reported in chapter C7 [APP-094] of the Environmental Statement.</p>	No change
Environmental Statement, chapter I4	APP-387	Intra-project cumulative effects	<p>Based on the assessments outlined in section 2.5 and summarised in this table and the additional mitigation proposed with respect to noise effects, there are no new or different likely significant intra-project cumulative effects that would arise as</p>	Non-material change

Document name	Examination Reference Number	Chapter name / section name	New or different likely significant effects	Material change / non-material change / no change
			a result of the proposed change. Consequently, the intra-project cumulative effects assessment remains as reported in chapter I4 [APP-387] of the Environmental Statement.	
Environmental Statement chapter I5	APP-388	Inter-project cumulative effects	Based on the assessments outlined in section 2.4.72.5 and summarised in this table and the additional mitigation proposed with respect to noise effects, there is considered to be no new or different likely significant inter-project cumulative effects that would arise as a result of the proposed change. Consequently, the inter-project cumulative effects assessment remains as reported in chapter I5 [APP-388] of the Environmental Statement.	Non-material change
Health Impact Assessment Report	APP-429	Air quality (HIA section C.2)  Noise (HIA section C.3 Noise)  Traffic (HIA section C.5)	As outlined in paragraphs 2.5.68 to 2.5.100, the proposed change to HGV delivery windows is unlikely to change the conclusions reached in the Health Impact Assessment Report [APP-429] provided further road safety restrictions and noise mitigation commitments are adopted by the Wylfa Newydd DCO Project.  For the general population, the redistribution of the same number of	Non-material change

Document name	Examination Reference Number	Chapter name / section name	New or different likely significant effects	Material change / non-material change / no change
			<p>Project HGVs over a longer time period is expected to have slight benefits for emissions, disturbance, journey times, road safety.</p> <p>For vulnerable groups there is the potential for more significant adverse effects compared to the scenario submitted in the DCO application. However, this is mitigated by a commensurate expansion of the Local Noise Mitigation Strategy.</p> <p>Any reduction in road safety is expected to be greatest prior to the opening of the A5025 Off-line Highway Improvements, so would be mitigated by a targeted road safety campaign during this time.</p> <p>On the basis of adoption of such mitigation, the conclusions of the Health Impact Assessment Report [APP-429] remain as reported and therefore no new or different likely significant effects have been identified.</p>	
Equality Impact Assessment	APP-434	7 What are the potential equality effects of the Wylfa Newydd DCO Project?	As outlined in paragraphs 2.5.101 to 2.5.104 there are no new or different likely significant effects to the traffic and transport or public access and recreation assessments presented in chapter C2 [APP-089], the DCO	Non-material change

Document name	Examination Reference Number	Chapter name / section name	New or different likely significant effects	Material change / non-material change / no change
			<p>Transport Assessment [APP-101] and chapter C3 [APP-090] of the Environmental Statement. On this basis it is considered that the overall equality effects reported in the Equality Impact Assessment [APP-434] with regard to road traffic and public access and recreation would remain unchanged.</p> <p>Sensitivity testing of air quality models presented in the DCO application indicate that the effect of the proposed HGV delivery window changes on average concentrations of air pollutants associated with the Wylfa Newydd DCO Project's vehicle movements along the road network would not alter the conclusions presented in chapter C4 [APP-091] of the Environmental Statement. On this basis it is considered that the conclusions reached in the Equality Impact Assessment [APP-434] in relation to potential air quality effects on equality from the Wylfa Newydd DCO Project's HGVs on the local road network during construction would remain unchanged. Therefore, no significant health and no disproportionate or differential</p>	

Document name	Examination Reference Number	Chapter name / section name	New or different likely significant effects	Material change / non-material change / no change
			<p>equality effects are expected as a result of the proposed change.</p> <p>The increase in the properties that would experience significant adverse effects due to road traffic noise as a result of the proposed changes is considered to be small and with enhanced mitigation would be reduced below that assessed in the DCO application and therefore would not change the overall equality effects reported in the Equality Impact Assessment [APP-434] with regard to noise effects from road traffic.</p>	

## 2.6 Cumulative assessment for the proposed changes

- 2.6.1 To assess whether all the proposed non-material changes could interact to result in the Wylfa Newydd Project having a greater cumulative effect to that reported in the Draft DCO application, a cumulative assessment has been carried out, the results of which can be found in appendix 1-1.
- 2.6.2 Cumulative effects include both intra-project (resulting from the various developments that comprise the Wylfa Newydd Project) and inter-project (resulting from the Wylfa Newydd Project together with external projects) effects; these assessments are reported in volume I (cumulative effects) [APP-384 to APP-388] of the Environmental Statement.
- 2.6.3 Combined topic effects, also known as intra-development effects, occur when a single receptor is affected in more than one way by the same development. The relevant combined topic assessment (i.e. project wide effects) is reported in chapter C7 [APP-094] of the Environmental Statement.
- 2.6.4 As demonstrated in the cumulative assessment report (appendix 1-1), there are considered to be no new or different intra- and inter-cumulative effects to environmental receptors as a consequence of the proposed changes. Furthermore, there are considered to be no new or different combined topic effects as a consequence of the proposed changes.
- 2.6.5 Consequently, the overall cumulative assessment of the Wylfa Newydd Project remains as reported in the Draft DCO application.

## 2.7 Schedule of engagements

Table 2-7 Schedule of engagements

Date	Event
17 October 2018	Horizon wrote to PINS, submitting Batch 1 Requests for Non-Material Change (Blasting Strategy and Marine Vessel Movements) and advising of an emerging Batch 2 (Working Hours, Shift Patterns and HGV Deliveries)
23 October 2018	Preliminary Meeting
31 October 2018	Horizon's letter of 17 October 2018 (outlining the three new (Batch 2) proposed changes and advising of the intention to consult on them) accepted at the discretion of the Examining Authority
31 October 2018	First notice advertising consultation on Batch 2 (8 November to 6 December 2018) published in The Daily Post
7 November 2018	Second notice advertising consultation on Batch 2 (8 November to 6 December 2018) published in The Daily Post, and also in the London Gazette

8 November 2018	28-day consultation on Batch 2 begins
19 November 2018, 1-7pm	Horizon Open Surgery at Cemaes Village Hall, attended by Batch 2 consultation team
6 December 2018	28-day consultation on Batch 2 ends
7 December 2018 – 16 January 2019	Horizon reviews representations received and updates proposed change as required to have regard to representations
17 January 2019 (Exam Deadline 4)	Submission of three proposed non-material changes to the Examining Authority for consideration.
23 April 2019	End of Examination

2.7.2 As noted in paragraph 1.4.5, copies of the consultation documents were made available for public viewing at:

- The Anglesey Business Centre, Isle of Anglesey County Council, Bryn Cefni Business Park, Llangefni, Anglesey, LL77 7XA, Monday to Friday 9am to 5pm, and
- Wylfa Newydd Site Office, Cemaes Bay, Anglesey, LL67 0AA, Monday to Friday 9am to 5pm by appointment only, and
- on Horizon's consultation website, [www.horizonnuclearpower.com/consultation](http://www.horizonnuclearpower.com/consultation).

2.7.3 The following specified consultees (prescribed persons under section 42(1)(a)-(d) of the Planning Act 2008) were notified of the proposed change. Those who responded are asterisked.

Welsh Government \*

Natural Resources Wales \*

Isle of Anglesey Council \*

Gwynedd Council \*

Conwy County Borough Council

North Wales Economic Ambition Board

North Wales Wildlife Trust

RSPB Cymru

National Trust

The Crown Estate

Betsi Cadwaladr University Health Board

Public Health Wales

Welsh Ambulance Service Trust

North Wales Police

RAF Valley

North Wales Fire and Rescue Service \*

National Grid

Welsh Water

North & Mid Wales Trunk Road Agency

The Marine Management Organisation

North West & North Wales Sea Fisheries Committee

The Maritime & Coastguard Agency

Marine Conservation Trust

Royal National Lifeboat Institution

The Maritime & Coastguard Agency

SP Manweb plc

Magnox

Nuclear Decommissioning Authority

North Anglesey Partnership

Destination Anglesey Partnership

North Wales Economic Ambition Board

Trinity House \*

Joint Nature Conservation Committee

Cyngor Tref Amlwch (Town Council)

Cyngor Cymuned Cylch-Y-Garn (Community Council)

Cyngor Cymuned Llanbadrig

Cyngor Cymuned Mechell

Cyngor Cymuned Llanelian

Cyngor Cymuned Rhosybol

Bodedern Community Council

Bryngwran Community Council

Llanfachraeth Community Council

Llanfaethlu Community Council

Trearddur Community Council

Valley Community Council

Llanfair yn Neubwll Community Council

Talybolion Local Members

Twrcelyn Local Members

2.7.4 Targeted mail drops for “Consultation update” newsletter covering all three Batch 2 changes:

Main Site – regular list of near neighbours, comprising 909 addresses in Cemaes and Tregele

A5025 corridor – list of addresses (within 1km wide corridor along the A5025 from Main Site to and including Valley) used for on-line road consultations for applications under the Town & Country Planning Act 1990 – 1,679 addresses

Logistics Centre, Parc Cybi – a new zone of 750m radius from the Centre, comprising 67 residential and business addresses

Park and Ride, Dalar Hir – a new zone based on a 1,250m radius, with the addition of some further properties close to the zone, comprising a total of 363 addresses

TOTAL: 3,018 addresses.

2.7.5 Site notices:

22 locations around Anglesey

2.7.6 As the proposed changes do not require any ‘additional land’, Horizon did not seek the consent of persons with an interest in the relevant land was required under the Infrastructure Planning (Compulsory Acquisition) Regulations 2010. However, letters providing information about the consultation were sent to persons with an interest in land relating to the Main Site, A5025, Parc Cybi and Dalar Hir, comprising approximately 850 addresses.

2.7.7 Horizon’s letter to the Planning Inspectorate of 17 October 2018 (notifying of the emerging second batch of non-material changes) advised that Horizon did not propose to undertake ‘roadshow’ type events as part of the consultation, but instead to undertake consultation on a written basis only (due to the scheduled hearings and other demands of the examination process on stakeholders). However, Horizon identified an opportunity to send a Batch 2 consultation team to one of the regular ‘Open Surgeries’ hosted at Cemaes Village Hall, thereby giving stakeholders an opportunity to discuss the Batch 2 changes in person, as noted in the schedule of engagements above. Notification of the event was included in publicity materials.

## 2.8 Schedule of consequential amendments to application documents

**Table 2-8 Schedule of consequential amendments to application documents**

Application document name	Examination Reference Number	Section	Version to be amended	Description of amendment
DCO Transport Assessment	APP-101	1.13, 7.5 and 7.6	1.0	Update to key assumptions of assessment (table 1-1) and the associated figures and text.
DCO TA appendix F – Integrated Travel and Transport Strategy	APP-107	7.5	1.0	Update to figures and associated text describing delivery windows
Environmental Statement chapter C3: Public access and recreation effects of traffic	APP-090	3.5	1.0	Update to basis of assessment and duration of effects.
Environmental Statement chapter C5: Noise and vibration effects of traffic	APP-092	5.5	1.0	Changes to the number of receptors predicted to experience significant adverse effects from construction traffic and details about the enhanced mitigation to reduce effects.
Environmental Statement chapter D1: Proposed development	APP-120	1.6	1.0	Update to HGV delivery windows.
Environmental Statement Road traffic-related effects (project-wide) Figure Booklet – Volume C	APP-119	Figures	1.0	Updates to noise levels/receptors in figures.
Design and Access Statement - Volume 1 – Project-Wide	APP-407	4.4	1.0	Update to HGV delivery windows.
Wylfa Newydd Code of Construction Practice	REP2-031	8.3	2.0	Updates to outline the extended commitments of the LNMS.
Draft Heads of Terms for Planning Obligations (Planning Statement Chapter 7 (APP-406)	APP-406		1.0	Addition of road safety campaign mitigation.

Application document name	Examination Reference Number	Section	Version to be amended	Description of amendment
Health Impact Assessment Report	APP-429	C.3	1.0	Summary of additional detail within the LNMS and how it would mitigate the HGV delivery window changes, including for properties affected before and after the opening of the A5025 Highway Improvements.
Health Impact Assessment Report	APP-429	C.5 and J	1.0	Inclusion of Road Safety Campaign and summary of the reasons for its inclusion prior to the opening of the A5025 Highway Improvements.
Equality Impact Assessment	APP-434	7.2	1.0	Updates to numbers of properties affected by traffic noise.

### 3 References

Table 3-1 Schedule of references

ID	Reference
RD1	The Planning Inspectorate. 2018. Advice Note 16: How to request a change which may be material. [Online]. [Accessed: June 2018]. Available from: <a href="https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/07/Advice-note-16.pdf">https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/07/Advice-note-16.pdf</a>
RD2	Department of Energy and Climate Change. 2011. Overarching National Policy Statement for Energy (EN-1). [Online]. [Accessed: 02 July 2018]. Available from: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf</a>
RD3	Department of Energy and Climate Change. 2011. National Policy Statement for Nuclear Power Generation (EN-6). [Online]. [Accessed: 02 July 2018]. Available from: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47859/2009-nps-for-nuclear-volumel.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47859/2009-nps-for-nuclear-volumel.pdf</a>
RD4	Department for Business, Energy and Industrial Strategy. 2017. Statement on Energy Infrastructure. [Online] [Accessed: 22 October 2018]. Available from: <a href="https://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Lords/2017-12-07/HLWS316/">https://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Lords/2017-12-07/HLWS316/</a>
RD5	Steer. 2018. Wylfa Newydd Project – RFC Heavy Goods Vehicles Delivery Window Changes. Technical Memo. 40 pp.
RD6	World Health Organization. (WHO) Guidelines for Community Noise 1999. [Online] Available from: <a href="http://whqlibdoc.who.int/hq/1999/a68672.pdf">http://whqlibdoc.who.int/hq/1999/a68672.pdf</a>
RD7	British Standards Institute. 2014. British Standard BS 8233: 2014: Guidance on Sound Insulation and Noise Reduction for Buildings. Available from: <a href="https://shop.bsigroup.com/ProductDetail/?pid=000000000030241579">https://shop.bsigroup.com/ProductDetail/?pid=000000000030241579</a>
RD8	Tim Waters-Fuller and Daniel Lurcock, NANR116: 'Open/closed window research' sound insulation through ventilated domestic windows. Edinburgh, UK: The Building Performance Centre, Napier University, 2007. Available from: <a href="https://www.napier.ac.uk/~media/worktribe/output-246785/twfrepnanr116pdf.pdf">https://www.napier.ac.uk/~media/worktribe/output-246785/twfrepnanr116pdf.pdf</a>
RD9	Highways Agency. 2006. Design Manual for Roads and Bridges Vol 7 Pavement Design and Maintenance Section 2 Part 1 Traffic Assessment (HD24/06) [Online] Available from: <a href="http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol7/section2/hd2406.pdf">http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol7/section2/hd2406.pdf</a>
RD10	World Health Organization Regional Office for Europe. (2009) Night noise guidelines for Europe. (Copenhagen, Denmark). <a href="http://www.euro.who.int/data/assets/pdf_file/0017/43316/E92845.pdf">http://www.euro.who.int/data/assets/pdf_file/0017/43316/E92845.pdf</a>

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## Appendix 1-1: Cumulative Assessment Report

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## 1 Introduction

1.1.1 Horizon Nuclear Power Wylfa Limited's ("Horizon") is currently seeking a Development Consent Order to enable the construction, operation and maintenance of the Wylfa Newydd DCO Project ("Draft DCO application"). Horizon is seeking a total of five non-material changes to the Draft DCO application for the Wylfa Newydd DCO Project. Horizon has already submitted the following two non-material change requests, both of which were accepted into examination on 31 October 2018:

- Request for Non-Material Change no.1 – Blasting Strategy [AS-012]; and
- Request for Non-Material Change no.2 – Marine Vessel Movements [AS-013].

1.1.2 Horizon is now making the following three non-material change requests:

- Request for Non-Material Change no.3 – Worker Shift Patterns;
- Request for Non-Material Change no.4 – Working Hours; and
- Request for Non-Material Change no.5 – HGV delivery window.

1.1.3 Further information related to each non-material change is provided in section 1.4 below; detailed assessments can be found in the standalone Request for Non-Material Change documents listed above.

1.1.4 This cumulative effects report considers whether the Requests for Non-Material Change would change the findings of the cumulative effects assessments reported in the Environmental Statement.

## 1.2 Scope

1.2.1 This appendix (which is attached – in duplicate form – to documents 3, 4 and 5 listed above) sets out an assessment of the effects of all five proposed non-material changes to the cumulative assessment reported in the Draft DCO application. The purpose is to assess whether the proposed changes could interact to result in the Wylfa Newydd DCO Project having a greater cumulative effect to that reported in the Draft DCO application. The effect of each separate request for non-material change on the cumulative assessment reported in the Draft DCO application has been assessed and reported within the standalone candidate for change documents.

1.2.2 The approach to the cumulative assessment of the proposed changes is consistent with the Project Environmental Impact Assessment (EIA); see chapter B1 (introduction to the assessment process), [APP-066] of the Environmental Statement for an overview of this process. There are three components to the assessment of cumulative EIA effects: combined topic effects; intra-project effects; and inter-project effects, and all are described further below.

1.2.3 The methodology used for the cumulative effects assessment has considered all residual effects that are minor adverse or greater.

1.2.4 Combined topic effects (also known as intra-development effects) occur when a single receptor is affected in more than one way by the same development.

Combined topic effects for each development comprising the Wylfa Newydd DCO Project are reported in chapters C7 (Project-wide effects), [APP-094], D16 (WNDA Development), [APP-135], E12 (Off-Site Power Station Facilities: AECC ESL and MEEG), [APP-250], F12 (Park and Ride), [APP-227], G12 (A5025 Off-line Highway Improvements), [APP-315] and H12 (Logistics Centre), [APP-366] of the Environmental Statement.

- 1.2.5 Intra-project effects result from the various developments that comprise the Wylfa Newydd DCO Project, whilst inter-project effects result from the Wylfa Newydd Project together with external projects. These assessments are reported in volume I (cumulative effects) [APP-384 to APP388] of the Environmental Statement.
- 1.2.6 Consideration has also been given to the cumulative effects of the proposed changes to the Health Impact Assessment Report [APP-429] and the Shadow Habitats Regulations Assessment Report [APP-050/051] and a conclusion of no new cumulative or in-combination effects has been reached, respectively.
- 1.2.7 All other assessments submitted as part of the Draft DCO application (e.g. Welsh Language Impact Assessment, [APP-432]; Equality Impact Assessment, [APP-434]; and Water Framework Directive Compliance Assessment, [APP-444] would remain unaffected by the proposed changes and have therefore not been considered further.

## **1.3 Assessment approach**

- 1.3.1 For the purpose of the assessment and in order to assess a worst case, it is assumed that the proposed changes and the associated construction activities and environmental effects would occur concurrently. This is considered worst case as in reality the proposed changes are unlikely to fully overlap with one another (e.g. blasting activities will occur earlier in the programme than marine vessel movements but are estimated to overlap for approximately 8 months).

### ***Assessment of noise effects***

- 1.3.2 The noise assessments for each of the following requests for non-material change identified the potential for new or different likely significant environmental effects:
  - Request for Non-Material Change no.4 – Working Hours; and
  - Request for Non-Material Change no.5 – HGV delivery window.
- 1.3.3 However, implementation of a Local Noise Mitigation Strategy (LNMS) for the Wylfa Newydd DCO Project, as well as other mitigation measures secured in the Wylfa Newydd Code of Construction Practice (CoCP) [APP-414], will reduce the assessment of effects arising from the proposed changes. With the potential for some small increases in the number of adverse effects, including cumulatively, a number of options for new and enhanced mitigation have been proposed. Included in these options is an extension to the commitment made in the LNMS set out in section 8.3 of the Wylfa Newydd CoCP [REP2-031] irrespective of the proposed changes to working hours and the HGV delivery window (Requests for Non-Material Change no. 4 and 5). This extension will on balance mitigate the worst-affected properties and

reduce major significant effects identified in the Draft DCO application and as of the proposed change.

1.3.4 On the basis of this mitigation, the noise and vibration topic assessment for the proposed change to working hours and the HGV delivery window (Requests for Non-Material Change no. 4 and 5) concluded that on balance, there would be no new or different likely significant environmental effects. However, the potential cumulative effect of changes to noise disturbance as a result of the five requests for non-material change to the Draft DCO application has been considered within this appendix (see sections 2 to 4).

### ***Assessment of air quality effects***

1.3.5 The air quality dispersion modelling which was undertaken to assess the air quality effects of the proposed change to working hours (Request for Non-Material Change no. 4) took into consideration Horizon's pre-existing commitment within the Draft DCO application to use lower emitting plant, machinery and marine vessels proposed as additional mitigation. It also took account of the proposed change to the marine vessel movements (Request for Non-Material Change no. 2) which has been submitted to the Examining Authority.

1.3.6 Although air quality modelling work was undertaken to assess the proposed change to worker shift patterns and the HGV delivery window (Requests for Non-Material Change no. 3 and 5), there was no requirement to take account of any pre-existing mitigation commitments within the Draft DCO application. The proposed change to the blasting strategy (Request for Non-Material Change no. 1) relates to the timings for carrying out blasting and has no effect on the amount or magnitude of blasting required. Therefore, this proposed change does not affect the assessment of air quality effects reported in the Draft DCO application.

1.3.7 As expected, the lower emitting construction plant, machinery and vessels delivered significant reductions in air quality effects. The effect of the proposed changes to working hours (Request for Non-Material Change no. 4) has therefore been assessed against the quantified residual effects of the two modelling scenarios (for year 2 and year 5) which take account of this mitigation. This is considered to be a more appropriate baseline scenario than the Draft DCO application which does not quantify this mitigation within the modelling assessments (see paragraphs 2.5.2 to 2.5.4 of the request for non-material change to working hours). This forms the basis of the cumulative assessment.

### ***Assessment of human health impacts***

1.3.8 The Health Impact Assessment has adopted the same assessment approach to mitigation as the noise and air quality assessments described above. This forms the basis of the cumulative assessment.

## 1.4 Description of the proposed non-material changes

- 1.4.1 A detailed description of the five proposed non-material changes being sought by Horizon, including a justification for their requirement and non-materiality can be found in the standalone candidate for change documents.
- 1.4.2 For reference, a brief description of each proposed non-material change is provided in Table 1-1 below.

**Table 1-1 Proposed non-material changes to the Draft DCO application being sought by Horizon**

Proposed non-material change	Description
Request for Non-Material Change no.1 – Blasting Strategy [AS-012]	<p>Horizon is seeking an extension to the daily time frame within which blasting for the Main Construction works is permitted, from:</p> <p>Monday to Friday between 10:00 and 16:00, and Saturday between 10:00 and 13:00 (as submitted in the Draft DCO application);</p> <p>to</p> <p>Monday to Friday between 09:00 and 19:00, and Saturday between 08:00 and 13:00 (with no blasting after dusk between March and September). In practice, because of the change in length of day and the change to BST, dusk falls after 19:00 from April until September.</p>
Non-Material Change no.2 – Marine Vessel Movements [AS-013]	Horizon is seeking to increase the upper daily limit from four movements per day (two vessels) to 16 movements per day (eight vessels). These changes fall within the total vessel movements described and assessed in the Draft DCO application.
Request for Non-Material Change no.3 – Worker Shift Patterns	<p>Horizon is also seeking the following changes to shift times and durations:</p> <ul style="list-style-type: none"><li>• increase the day shift windows by half hour at the end of each shift;</li><li>• amend the start of the night shift window by three hours; and</li><li>• decrease the night shift window by half hour during peak construction (e.g. 2023).</li></ul>
Request for Non-Material Change no.4 – Working Hours	Horizon is seeking to extend the following working hours to include 19:00-07:00 hours (i.e. 24-hours) for: <ul style="list-style-type: none"><li>• marine piling (percussion piling to 19:00 only);</li><li>• MOLF construction</li><li>• preparation for blasting including rock drilling and packing for blasting;</li></ul>

Proposed non-material change	Description
	<ul style="list-style-type: none"> <li>• moving/repositioning won rock in the excavations; and</li> <li>• support operations which covers a range of activities required to support the early works and Main Construction</li> </ul> <p>As a consequence of the proposed change to working hours and to reduce overall environmental effects from those reported in the Draft DCO application, Horizon is also seeking an extension to the working hours for earthworks and site grading.</p>
Request for Non-Material Change no.5 – HGV delivery window	<p>Horizon is seeking to extend the weekday (Monday to Friday inclusive) delivery window into the evening, to include deliveries between the hours of 19:00 and 23:00 (up to a maximum of 20 HGV movements in each direction). Furthermore, an additional delivery window is proposed on Saturday mornings, between 08:00 and 13:00 (up to a maximum of 50 HGV movements in each direction).</p>

## 2 Combined topic effects (i.e. intra-development cumulative effects)

2.1.1 The proposed changes to worker shift patterns and the HGV delivery window (Requests for Non-Material Change no. 3 and 5) have potential implications for the assessment of project-wide effects outlined in volume C of the Environmental Statement. The remaining proposed changes to the blasting strategy, marine vessel movements, and working hours (Request for Non-Material Change no. 1, 2 and 4) relate specifically to the WNDA Development which is assessed in volume D of the Environmental Statement (Table 2-1).

2.1.2 Thus, this section examines the potential effect of the proposed changes to the combined topic effects assessments presented within chapter C7 [APP-094] (project-wide effects) and D16 [APP-135] (WNDA Development) of the Environmental Statement.

**Table 2-1 Summary matrix of the non-material change requests and the developments effected**

Proposed non-material change	Project-wide effect (volume C)	WNDA Development (volume D)
Request for Non-Material Change no.1 – Blasting Strategy [AS-012]		X
Non-Material Change no.2 – Marine Vessel Movements [AS-013]		X
Request for Non-Material Change no.3 – Worker Shift Patterns	X	
Request for Non-Material Change no.4 – Working Hours		X
Request for Non-Material Change no.5 – HGV delivery window	X	

The proposed changes do not affect assessments of combined topic effects relating to the Off-Site Power Station Facilities: AECC ESL and MEEG (volume E), Park and Ride (volume F), A5025 Off-line Highway Improvements (volume G) and the Logistics Centre (volume H) as there is no pathway of effect to receptors considered within these assessments. Therefore, the assessment of combined topic effects for these developments remain as reported in chapters E12 [APP-250], F12 [APP-277], G12 [APP-315] and H12 [APP-366] of the Environmental Statement.

## 2.2 Project-wide combined topic effects

2.2.1 The project-wide combined topic effects assessment of each of the proposed changes to worker shift patterns and the HGV delivery window (Requests for Non-Material Change no. 3 and 5), concluded no change to the assessment and conclusions presented in chapter C7 [APP-094] of the Environmental Statement.

2.2.2 Considering these proposed changes together, it was identified that there could be effects to the following receptors via the traffic and transport, and public access and recreation project-wide topic assessments (see Table 2-2):

- Motorised and public transport users (traffic and transport);
- Recreational cyclists and walkers (public access and recreation); and
- Active travel cyclists and walkers (public access and recreation).

**Table 2-2 Topic assessments and receptors potentially affected by the proposed changes to worker shift patterns and the HGV delivery window (adapted from appendix C7-1) [APP-118]**

	Socio-economics	Traffic and transport	Public access and recreation	Air quality	Noise and vibration	Waster and materials management
Motorised and public transport users		Y				
Recreational cyclists and walkers			Y			
Active travel cyclists and walkers			Y			

2.2.3 As a consequence of the proposed changes to worker shift patterns and HGV delivery windows, no new receptors would be scoped into the project-wide combined topic effects assessment.

### **Traffic and transport**

2.2.4 The proposed changes to worker shift patterns and the HGV delivery window (Requests for Non-Material Change no. 3 and 5) both have the potential to alter traffic flows, and in the case of Saturday morning HGV deliveries, introduce new construction-related traffic from that assessed within the Draft DCO application.

2.2.5 The traffic and transport assessment for the proposed changes to shift patterns (Request for Non-Material Change no. 3) and the HGV delivery window (Request for Non-Material Change no. 5) each concluded that there would be no new or different likely significant combined effects than those reported in chapter C7 [APP-094] of the Environmental Statement.

2.2.6 When considering these two proposed changes in combination, the only potential for a cumulative effect to occur is during the weekday evenings around the commencement of the evening night shift (i.e. 19:00) as HGV deliveries would continue past 19:00. There would be no overlap in the timing of worker shift patterns (which means workers arrive at the Wylfa Newydd Development Area before 08:00) and the HGV delivery window on Saturdays (which ensures there are no HGV movements before 08:00) and so any impacts of these proposed changes are considered independent of one another.

2.2.7 If HGV movements were to be introduced in the evenings, the number of HGV movements in the hour that overlaps with worker traffic movements associated with the proposed change to shift patterns would be small (an average of five HGVs per direction). Lower background traffic flows in the evening period mean that impacts should be less than those assessed during peak hours of traffic on the road network. Furthermore, in practice the proposed change would reduce peak hourly flows during the day as the same number of HGV deliveries would occur over a longer time period. Given the limited temporal overlap of the two proposed changes and the small vehicle numbers involved, there would be no new or different likely cumulative transport impacts.

2.2.8 Consequently, there is considered to be no change to the assessment of combined topic effects to motorised and public transport users presented within chapter C7 [APP-094] of the Environmental Statement. Thus, the conclusions remain as reported in the Draft DCO application.

### ***Public access and recreation***

2.2.9 The proposed changes to shift patterns and the HGV delivery window both have the potential to affect recreational amenity value as well as active travel for walkers and cyclists as a result of changes to, or increases in, traffic flows.

2.2.10 The proposed change to construction worker shift patterns (Request for Non-Material Change no. 3) is not anticipated to lead to any net increase or decrease in the number of vehicles entering or exiting the Park and Ride or using the A5025 to access the Wylfa Newydd Development Area. However, it would lead to minor changes to the peak flows, which would increase as a result of a reduction in the number of shifts. The assessment for the proposed change to construction worker shift patterns concluded that the change would not result in new or different likely significant environmental effects than those reported in the Environmental Statement.

2.2.11 The proposed change to the HGV delivery window (Request for Non-Material Change no. 5) found no new or different likely significant effects on public access, onshore recreation or active travel.

2.2.12 Consequently, there is considered to be no change to the assessment of combined topic effects to walkers and cyclists undertaking recreation or active travel presented within chapter C7 [APP-094] of the Environmental Statement. Thus, the conclusions remain as reported in the Draft DCO application.

## 2.3 WNDA Development combined topic effects

2.3.1 The WNDA Development combined topic effects assessment for each of the proposed changes to the blasting strategy, marine vessel movements and working hours (Request for Non-Material Change no. 1, 2 and 4), concluded no change to the assessment and conclusions presented in chapter D16 [APP-135] of the Environmental Statement.

2.3.2 Considering these proposed changes together, it was identified that there could be a change to the WNDA Development combined topic assessment for the following receptors (which are already considered in chapter D16 [APP-135] of the Environmental Statement) via the air quality and noise and vibration topic assessments (Table 2-3):

- Human receptors:
  - i) residential receptors within 350m of the Wylfa Newydd Development Area.
- other receptors:
  - ii) bats; and
  - iii) marine mammals (pinnipeds and cetaceans).

2.3.3 As a consequence of the proposed changes to the blasting strategy, marine vessel movements and working hours, no new receptors would be scoped into the WNDA Development combined topic effects assessment.

**Table 2-3 Topic assessments and receptors potentially affected by the proposed changes to the blasting strategy, marine vessel movements and working hours (denoted by 'Y') (adapted from appendix D16-1) [APP-236]**

	Socio-economics	Public access and recreation	Air quality	Noise and vibration	Soils and geology	Surface water and groundwater	Terrestrial and freshwater ecology	Landscape and visual	Cultural heritage	Coastal processes and coastal geomorphology	Marine environment	Radiological effects	Shipping and navigation
<b>Human receptors</b>													
Residential receptors within 350m of the Wylfa Newydd Development Area			Y										
<b>Other receptors</b>													
Bats							Y						
Marine mammals (pinnipeds and cetaceans)											Y		

### ***Human residential receptors***

2.3.4 The proposed change to the blasting strategy, marine vessel movements, and working hours (Requests for Non-Material Change no. 1, 2 and 4) each have the potential to affect human residential receptors due to changes in noise and vibration effects. The proposed change to marine vessel movements and working hours also each have the potential to impact air quality. Those receptors potentially affected are likely to be located within 350m of the Wylfa Newydd Development Area, which includes the majority of Tregele, the western half of Cemaes (i.e. those properties or locations to the west of the High Street) and several other properties located around the Wylfa Newydd Development Area.

2.3.5 The combined topic assessment for each of the proposed changes to the blasting strategy, marine vessel movements and working hours (Requests for Non-Material Change no. 1, 2 and 4) each concluded no change to the assessment and conclusions presented in chapter D16 [APP-135] of the Environmental Statement. However, it is acknowledged that the proposed changes combined could result in an additive or combined effect which could lead to a change in the overall combined topic assessment for the WNDA Development.

2.3.6 The proposed change to marine vessel movements (Request for Non-Material Change no. 2) would result in a small increase in noise levels at 120 properties closest to the Wylda Newydd Development Area which would be undetectable to a person. As the proposed change to the blasting strategy (Request for Non-Material Change no. 1) would be subject to the noise and vibration control measures (including monitoring) set out in section 8 of the Main Power Station Site sub-CoCP and would include strict adherence to BS6472-2 [RD1], there would be no additive effect from these two proposed changes. This conclusion remains valid when the proposed change to working hours is also considered, on the basis that new and enhanced mitigation has been offered to address any new or different likely significant noise disturbance effects associated with this proposed change.

2.3.7 The proposed changes to marine vessel movements and working hours (Requests for Non-Material Change no. 2 and 4) are both predicted to result in small changes in predicted concentrations of pollutants at human receptor locations, with some properties experiencing an additive effect. The changes, however, would be small and are not considered to alter the conclusions of the combined topic effects assessment presented in D16 [APP-135] of the Environmental Statement.

2.3.8 Overall, any changes to noise and air quality effects arising from the proposed changes to the blasting strategy (Request for Non-Material Change no. 1) would not combine to result in a change to the assessment of combined topic effects presented within chapter D16 [APP-135] of the Environmental Statement. Thus, the conclusions remain as reported in the Draft DCO application

## ***Other receptors***

### **Bats**

- 2.3.9 The proposed changes to the blasting strategy and working hours (Requests for Non-Material Change no. 1 and 4) both have the potential to affect bats via visual, noise and air quality disturbance effects as this crepuscular receptor is most active around dusk.
- 2.3.10 The terrestrial and freshwater ecology assessment for each of the proposed changes to the blasting strategy and working hours (Request for Non-Material Change no. 1 and 4) concluded that there would be no new or different likely significant combined effects than those reported in chapter D16 [APP-135] of the Environmental Statement.
- 2.3.11 Given the mitigating effects that the lower emitting plant, machinery and marine vessels would have for air quality, the neutral effect of environmental lighting and the very minor changes to peak noise levels predicted as a result of the proposed changes, it is not considered that these effects would combine to alter the assessment of combined topic effects to bats presented within chapter D16 [APP-135] of the Environmental Statement. Thus, the conclusions remain as reported in the Draft DCO application.

### **Marine mammals (pinnipeds and cetaceans)**

- 2.3.12 The proposed changes to the marine vessel movements and working hours (Requests for Non-Material Change no. 2 and 4) both have the potential to affect marine mammals (pinnipeds and cetaceans) due to increases in underwater noise disturbance and the increased risk of vessel strikes associated with marine vessel movements.
- 2.3.13 The marine environment assessment for each of the proposed changes to the blasting strategy and working hours (Request for Non-Material Change no. 1 and 4) concluded that there would be no new or different likely significant combined effects than those reported in chapter D16 [APP-135] of the Environmental Statement.
- 2.3.14 Given that the assessment of underwater noise effects presented in chapter D13 [APP-132] of the Environmental Statement already takes into consideration 24-hr operations for marine dredging and that the overall number of vessel movements associated with the Wylfa Newydd DCO Project would be small, it is not considered that these effects would combine to alter the assessment of combined topic effects to marine mammals presented within chapter D16 [APP-135] of the Environmental Statement. Thus, the conclusions remain as reported in the Draft DCO application.

### 3 Intra-project cumulative effects

3.1.1 An intra-project cumulative assessment has been undertaken for those topic assessments outlined in the Environmental Statement that would be potentially affected by the non-material changes being sought in relation to the Draft DCO application. The methodology used for the cumulative effects assessment has considered all residual effects that are minor adverse or greater.

#### ***Traffic and transport***

3.1.2 Of the five requests for non-material change, the proposed change to worker shift patterns and the HGV delivery window (Request for Non-Material Change no. 3 and 5) have implications to the traffic and transport assessment reported in the Draft DCO application. The potential effect of these proposed changes has already been assessed on a project-wide basis and is considered in section 2.2. Thus, there is no requirement to carry out an intra-project cumulative effects assessment for this topic.

#### ***Public access and recreation***

3.1.3 Of the five requests for non-material change, the proposed changes to worker shift patterns and HGV delivery window (Request for Non-Material Change no. 3 and 5) have implications to the public access and recreation assessment reported in the Draft DCO application. The potential effect of these proposed changes has already been assessed on a project-wide basis and is considered in section 2.2. Thus, there is no requirement to carry out an intra-project cumulative effects assessment for this topic.

#### ***Air quality***

3.1.4 Of the five requests for non-material change, the proposed changes to marine vessel movements, shift patterns, working hours and the HGV delivery window (Request for Non-Material Change no. 2, 3, 4 and 5) have implications for both the project-wide and WNDA Development assessments of air quality. As such, there is potential for intra-project additive cumulative effects due to emissions to air from sources within the Wylfa Newydd Development Area and emissions from road traffic associated with the Wylfa Newydd Project.

3.1.5 The air quality assessment for the proposed changes associated with the WNDA Development demonstrated that, with the use of newer, lower emitting plant, machinery and marine vessels, the majority of effects at human receptors would be negligible, and air quality effects as a consequence of the proposed change would be not significant.

3.1.6 The project-wide air quality assessments undertaken for the proposed changes to worker shift patterns and HGV delivery window (Request for Non-Material Change no. 3 and 5) stated that there would be no net increase or decrease in the total vehicle flows on the road network. The changes would result in some modifications to the time of day or night at which vehicles would arrive at and depart from the Wylfa Newydd Development Area during construction. The assessments for the proposed changes to worker shift

patterns and HGV delivery window (Request for Non-Material Change no. 3 and 5) indicated that predicted concentrations or deposition rates are unlikely to be any higher than those presented in chapter C4 [APP-091] of the Environmental Statement. The assessments concluded that the balance of air quality effects at human receptors would remain predominantly negligible with some beneficial effects due to the A5025 Offline Highway Improvements.

- 3.1.7 Consequently, further consideration of the potential additive effects to air quality as a consequence of the proposed changes to worker shift patterns and HGV delivery window individually (Request for Non-Material Change no. 3 and 5) concluded no change to the intra-project cumulative assessment reported in the Draft DCO application.
- 3.1.8 Air quality effects are local in scale; most air quality assessment methodologies in the UK only consider receptors within 200m of the road network when assessing emissions from road traffic and the largest effects are within very close proximity to the affected roads. Therefore, at most air quality sensitive receptors, the physical distance of the proposed changes listed associated with project-wide activities and those occurring at the WNDA Development would prevent intra-project cumulative air quality effects occurring.
- 3.1.9 There would be some receptors, particularly those close to the A5025 in the vicinity of the Wylfa Newydd Development Area, where there is the potential for additive effects. The predicted changes in annual mean and short-term (i.e. 99.8<sup>th</sup> percentile of one-hour mean) concentrations of NO<sub>2</sub> for the year 2 peak earthworks and Marine Works scenario, which includes the proposed changes to marine vessel movements (Request for Non-Material Change no. 2) and working hours (Request for Non-Material Change no. 4), are shown below in Table 3-1 and 0, respectively. The results are presented for those key human receptors which are in close proximity to both the Wylfa Newydd Development Area and the A5025. The predicted changes in annual mean and short-term concentrations of NO<sub>2</sub> for the year 5 peak construction scenario are shown below in Table 3-3 and 0, respectively.
- 3.1.10 The concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> due to the cumulative intra-project effects are not altered from those presented in the Air Quality Mitigation Quantification report submitted to the Examining Authority at Deadline 3 (18 December 2018) [REP3-052] and are not repeated below. The effect descriptors were negligible at all human receptors.
- 3.1.11 The concentrations of oxides of nitrogen and nitrogen and acid deposition rates at the three ecological receptors (Afon Wygyr Wildlife Site, Ancient Woodland (26051) and Ancient Woodland (26076)) remain well below the criteria for requiring further consideration in the terrestrial and freshwater ecology assessment. The likely additive effects at Afon Wygyr Wildlife Site and Ancient Woodland sites (26051 and 26076) would be negligible and not significant (i.e. no further consideration needs to be given to the significance of in-combination effects at these sites).
- 3.1.12 The proposed changes are not considered to alter the overall intra-project cumulative effects reported in the Air Quality Mitigation Quantification report submitted to the Examining Authority at Deadline 3 (18 December 2018)

[REP3-052]. Thus, the conclusions remain as reported and the significance of the residual air quality effects at human receptors is concluded to be not significant. For those ecological receptors where an additive cumulative effect is possible, the residual air quality effects are also not significant.

**Table 3-1 Peak earthworks and Marine Works (year 2) – predicted intra-project additive annual mean air pollutant concentrations at key human receptors**

Receptor	Total concentration for future baseline	Total intra-project additive concentration for future with Wylfa Newydd Project (all proposed changes)	Magnitude of change as percentage of AQO value <sup>1,2</sup>
		NO <sub>2</sub> (µg/m <sup>3</sup> )	
R4	10.4	12.7	+6% (s)
R5	7.5	11.0	+9% (s)
R6	8.4	13.4	+13% (m)
R7	6.1	12.0	+15% (m)
R8	5.1	6.7	+4% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.

Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-15 of chapter B5 [APP-070]: 'n' is negligible, 's' is small, 'm' is medium and 'l' is large.

**Table 3-2 Peak earthworks and Marine Works (year 2) – predicted intra-project additive short-term air pollutant concentrations at key human receptors**

Receptor	Total concentration for future baseline	Total intra-project additive concentration for future with Wylfa Newydd Project	Magnitude of change as percentage of AQO value <sup>1,2</sup>
		1-hour NO <sub>2</sub> (µg/m <sup>3</sup> )	
R4	20.7	41.0	+10% (n)
R5	14.9	43.1	+14% (s)
R6	16.7	57.7	+20% (s)
R7	12.2	58.3	+23% (m)
R8	10.3	27.4	+9% (n)

Receptor	Total concentration for future baseline	Total intra-project additive concentration for future with Wylfa Newydd Project	Magnitude of change as percentage of AQO value <sup>1,2</sup>
	1-hour NO <sub>2</sub> (µg/m <sup>3</sup> )	1-hour NO <sub>2</sub> (µg/m <sup>3</sup> )	1-hour NO <sub>2</sub> (AQO = 200µg/m <sup>3</sup> )

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.

Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-16 of chapter B5 [APP-070]: 'n' is negligible, 's' is small, 'm' is medium and 'l' is large.

**Table 3-3 Peak construction (year 5) – predicted intra-project additive annual mean air pollutant concentrations at key human receptors**

Receptor	Total concentration for future baseline	Total intra-project additive concentration for future with Wylfa Newydd Project (all proposed changes)	Magnitude of change as percentage of AQO value <sup>1,2</sup>
	NO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (AQO = 40µg/m <sup>3</sup> )
R4	9.7	11.4	+4% (n)
R5	7.1	9.1	+5% (n)
R6	7.8	10.9	+8% (s)
R7	5.8	8.6	+7% (s)
R8	5.0	6.2	+3% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.

Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-15 of chapter B5 [APP-070]: 'n' is negligible, 's' is small, 'm' is medium and 'l' is large.

**Table 3-4 Peak construction (year 5) – predicted intra-project additive short-term air pollutant concentrations at key human receptors**

Receptor	Total concentration for future baseline	Total intra-project additive concentration for future with Wylfa Newydd Project	Magnitude of change as percentage of AQO value <sup>1,2</sup>
	1-hour NO <sub>2</sub> (µg/m <sup>3</sup> )	1-hour NO <sub>2</sub> (µg/m <sup>3</sup> )	1-hour NO <sub>2</sub> (AQO = 200µg/m <sup>3</sup> )
R4	19.4	28.9	+5% (n)

Receptor	Total concentration for future baseline	Total intra-project additive concentration for future with Wylfa Newydd Project	Magnitude of change as percentage of AQO value <sup>1,2</sup>
	1-hour NO <sub>2</sub> (µg/m <sup>3</sup> )	1-hour NO <sub>2</sub> (µg/m <sup>3</sup> )	1-hour NO <sub>2</sub> (AQO = 200µg/m <sup>3</sup> )
R5	14.1	29.2	+8% (n)
R6	15.6	33.0	+9% (n)
R7	11.6	28.5	+8% (n)
R8	9.9	21.0	+6% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.

Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-16 of chapter B5 [APP-070]: 'n' is negligible, 's' is small, 'm' is medium and 'l' is large.

### ***Noise and vibration***

3.1.13 The proposed changes to the blasting strategy, marine vessel movements and shift patterns (Request for Non-Material Change no. 1, 2 and 3) have been shown not to result in any changes to noise effects, therefore these are not considered further.

3.1.14 The proposed changes to working hours and the HGV delivery window (Request for Non-Material Change no. 4 and 5) have implications for both the project-wide and WNDA Development assessments of noise effects. There is potential for intra-project additive cumulative effects due to increased evening and night-time noise levels from sources within the Wylfa Newydd Development Area and from road traffic associated with the Wylfa Newydd DCO Project.

3.1.15 Considering both 2020 (representative of early construction) and 2023 (representative of peak construction), the proposed change to the HGV delivery window (Request for Non-Material Change no. 5) was found to potentially result in adverse effects at an additional 18 residential properties compared to the Draft DCO application and in the absence of mitigation. These effects are predicted to occur at Cefn Coch, Kingsland, Llanfaethlu, Llangynghenedl as well as outlying receptors at Llanfaethlu and Llanfachraeth.

3.1.16 The proposed change to working hours was also found to potentially result in a small number of additional significant effects at residential receptors located predominately over 1km from the Wylfa Newydd Development Area. A large number of residential receptors with effects assessed as being of major adverse significant effects in the Draft DCO application would be reduced to moderate adverse significant effects. This would be a benefit from the proposed change to working hours; these are located in Cemaes.

3.1.17 There is very little overlap between the residential properties affected by the proposed changes to the HGV delivery window and working hours. This is principally because these two non-material change requests relate to aspects of the Wylfa Newydd DCO Project that are spatially segregated. Noise effects are local in scale; most noise assessment methodologies in the UK only consider receptors within 600m of the development scheme. Therefore, at most noise sensitive receptors, the physical distance of the proposed changes would prevent cumulative noise effects from one group at the other group. However, there is potential for some properties which are both adjacent to the Main Site and adjacent to the A5025, and at which cumulative adverse effects could occur.

3.1.18 With consideration of the enhanced mitigation outlined in paragraph 1.3.3, the proposed changes to working hours and the HGV delivery window are not considered to result in any new intra-project effects with respect to increased noise levels from the effects of traffic and elevated noise levels during construction. Thus, the intra-project cumulative effects for this topic remain as reported in chapter I4 [APP-387] of the Environmental Statement.

### ***Terrestrial and freshwater ecology***

3.1.19 The only potential effects considered of minor or greater significance relate to the WNDA Development. As shown in section 2.3, the proposed changes to the blasting strategy, marine vessel movements and working hours (Request for Non-Material Change no. 1, 2 and 4) have no effect on this assessment and therefore there are no changes to the intra-project cumulative effects reported in chapter I4 [APP-387] of the Environmental Statement.

### ***The marine environment***

3.1.20 The only potential effects on the marine environment as a result of the proposed change to marine vessel movements and working hours (Request for Non-Material Change no. 2 and 4) relate to the WNDA Development (see section 2.3); hence, there are no intra-project cumulative effects to report for this topic.

## 4 Inter-project cumulative effects

4.1.1 An inter-project cumulative assessment has been undertaken for those topic assessments outlined in the Environmental Statement which are potentially affected by the non-material changes being sought in relation to the Draft DCO application. These are:

- public access and recreation which is potentially affected by the proposed change to worker shift patterns and the HGV delivery window (Request for Non-Material Change no. 3 and 5);
- air quality which is potentially affected by the proposed change to marine vessel movements and working hours (Request for Non-Material Change no. 2 and 4); and
- noise and vibration which are potentially affected by the proposed change to the blasting strategy, marine vessel movements, working hours and the HGV delivery window (Request for Non-Material Change no. 1, 2, 4 and 5).

4.1.2 For the traffic and transport assessment, projects considered to have cumulative effects have been included in the traffic model for the Wylfa Newydd DCO Project and therefore form part of the assessment of effects that is represented in volume C of the Environmental Statement and considered in section 2.2 of this document.

4.1.3 The list of Reasonably Foreseeable Future Projects (RFFPs) that have been considered within the inter-project cumulative assessment is shown in appendix I2-2 (Matrix of receptors affected by the Wylfa Newydd Project and which short-listed projects could affect them) [APP-390]. There is no requirement to scope in any additional RFFPs as a consequence of the proposed changes.

### ***Public access and recreation***

4.1.4 In order for there to be a potential change to the inter-project cumulative effects assessment for this topic, there would need to be a change to at least one of the residual effects of the Wylfa Newydd DCO Project, whether an individual effect, a combined topic effect or an intra-project effect.

### ***Contributing individual effects***

4.1.5 As noted in section 2.2 above, the public access and recreation assessment for the proposed changes to worker shift patterns (Request for Non-Material Change no. 3) and the HGV delivery window (Request for Non-Material Change no. 5) each concluded that, with consideration of existing embedded and additional mitigation measures already secured in the Draft DCO application, there would be no new or different likely significant combined effects than those reported in chapter C7 [APP-094] of the Environmental Statement.

### **Contributing combined topic effects**

4.1.6 As also noted in section 2.2 above there is considered to be no change to the assessment of combined topic effects to walkers and cyclists undertaking recreation or active travel presented within chapter C7 [APP-094] of the Environmental Statement.

### **Contributing intra-project cumulative effects**

4.1.7 Also, as noted in section 3 above, the proposed changes would have no effect on the intra-project cumulative effects.

### **Resulting inter-project cumulative effects**

4.1.8 As the residual effects for this topic remain as they were reported in the Environmental Statement, there are no amended effects to input to an updated inter-project cumulative effects assessment. Therefore, for this topic, the inter-project cumulative effects remain as reported in chapter I5 the Environmental Statement.

### **Air quality**

4.1.9 In order for there to be a potential change to the inter-project cumulative effects assessment for this topic, there would need to be a change to at least one of the residual effects of the Wylfa Newydd DCO Project, whether an individual effect, a combined topic effect or an intra-project effect.

### **Contributing individual effects**

4.1.10 As noted in section 2.3 above, the proposed changes to marine vessel movements and working hours (Requests for Non-Material Change no. 2 and 4) are both predicted to result in small changes in predicted concentrations of pollutants at some human receptor locations.

4.1.11 As explained in section 3 above, the majority of effects of the proposed changes associated with the WNDA Development at human receptors would be negligible. Air quality effects as a consequence of the proposed changes would be not significant.

4.1.12 Also noted in section 3 above, the project-wide air quality assessment found that the balance of air quality effects at human receptors would remain predominantly negligible with some beneficial effects due to the A5025 Offline Highway Improvements.

### **Contributing combined topic effects**

4.1.13 As reported in section 2.3 above, the proposed changes are not considered to alter the conclusions of the combined topic effects assessment presented in D16 [APP-135] of the Environmental Statement.

### **Contributing intra-project cumulative effects**

4.1.14 As explained in section 3 above, the proposed changes are not considered to alter the intra-project cumulative effects reported in chapter I4 [APP-387] of

the Environmental Statement. Thus, the conclusions remain as reported in the Draft DCO application.

### **Resulting inter-project cumulative effects**

4.1.15 As the residual effects identified above for this topic would not be significantly different from those reported in the Environmental Statement, the inputs to the inter-project cumulative effects assessment remain unchanged. Therefore, for this topic, the inter-project cumulative effects remain as reported in chapter I5 [APP-388] of the Environmental Statement.

### ***Noise and vibration***

4.1.16 In order for there to be a potential change to the inter-project cumulative effects assessment for this topic, there would need to be a change to at least one of the residual effects of the Wylfa Newydd DCO Project, whether an individual effect, a combined topic effect or an intra-project effect.

### **Contributing individual effects**

4.1.17 All blasting would continue to be subject to the noise and vibration control measures (including monitoring) set out in section 8 of the Main Power Station Site sub-CoCP to reduce potential disturbance effects to human and ecological receptors. All blasting methods would therefore be designed to prevent undue disturbance at residential dwellings, education facilities, bat roosts and barn owl roosts.

4.1.18 The proposed change to marine vessel movements would result in a small increase in noise levels at 120 properties closest to the Wylfa Newydd Development Area, which would be undetectable to a person.

4.1.19 The noise and vibration assessment for the proposed change in worker hours concluded there would be no new or different likely significant environmental effects other than those reported in the Environmental Statement, with a greater number of residential receptors benefiting from being eligible for noise insulation.

4.1.20 In relation to the proposed change to the HGV delivery window, the noise and vibration assessment concluded that the proposed change would not introduce any new or different likely significant environmental effects other than those reported in the Environmental Statement and a greater number of residential receptors would benefit from being eligible for noise insulation (an updated LNMS was submitted at Deadline 3 (18 December 2018) [REP3-050]).

### **Contributing combined topic effects**

4.1.21 As none of the changes would lead to significant changes to the individual noise and vibration effects reported in the Environmental Statement, there is no potential for more significant combined topic effects.

### **Contributing intra-project effects**

4.1.22 As explained in Section 3 above, the intra-project cumulative effects for this topic remain as reported in chapter I4 [APP-387] of the Environmental Statement

### **Resulting inter-project cumulative effects**

4.1.23 As the residual effects identified above for this topic would not be significantly different from those reported in the Environmental Statement, the inputs to the inter-project cumulative effects assessment remain unchanged. Therefore, for this topic, the inter-project cumulative effects remain as reported in chapter I5 the Environmental Statement.

## 5 Health impacts

5.1.1 The Health Impact Assessment Report [APP-429] could potentially be affected by the proposed changes to the blasting strategy, worker shift patterns, working hours and HGV delivery (Request for Non-Material Change no. 1, 3, 4 and 5). The proposed change to the marine vessel movements (Request for Non-Material Change no. 2) will have no impact on human health.

5.1.2 The general influences relevant to population health that arise from the proposed changes are summarised in Table 5-1. The table shows the potential effects against the relevant geographical population groups as used in the Health Impact Assessment Report [APP-429].

5.1.3 The effects are summarised as follows:

- For the population near the Wylfa Newydd Development Area the proposed change to the blasting strategy and workings hours (Request for Non-Material Change no. 1 and 4) are the relevant sources of potential cumulative effects.
- For the population near the local road network (A5025, A55, A5 and A487) the proposed change to the HGV delivery window and worker shift patterns are the relevant sources of potential cumulative effects.

5.1.4 The proposed change to marine vessel movements (Request for Non-Material Change no. 2) is not considered to impact the assessment of effects to human health reported in the Health Impact assessment Report [APP-429].

5.1.5 In both cases similar potentially vulnerable groups are relevant (children and young people; older people; and people with existing poor health). Where groups overlap, there may be increased vulnerability.

5.1.6 For the population near the Wylfa Newydd Development Area, the proposed changes that affect the same determinant of health relate to noise disturbance in the evening period from both blasting and construction related activities (including general earthworks close to communities). Other changes from the effects discussed in the Draft DCO application Health Impact Assessment table I-2 that combine to influence the health of this population include: increased night-time noise and reduced nitrogen dioxide concentrations.

5.1.7 As appropriate new and enhanced mitigation is proposed (see paragraph 1.3.3), the overall effect for population health, taking account of the range of small residual beneficial and adverse changes across vulnerable groups, is not expected to alter the Health Impact Assessment conclusion that near the Wylfa Newydd Development Area the overall residual population health effect is considered to be up to minor adverse for the general population and up to moderate adverse for relevant vulnerable groups. The largest change relates to the air quality commitments to improved emission standards. Whilst beneficial, the change in this one determinant of health is unlikely to change the overall cumulative score, which takes account of a range of other health determinants.

5.1.8 For the population near the local road network (A5025, A55, A5 and A487), the proposed changes that affect the same determinants of health relate to

more noise disturbance in the evening period from both HGVs and from vehicles associated with worker shift changes. The combination of morning noise due to shift changes (06:00 or 05:30) and evening noise due to HGV movements (19:00 to 23:00) would also reduce the period when Project related transport would not contribute to potential sleep disturbance. Changes to the times at which these two categories of Project vehicle would be using the local road network may also contribute to both beneficial and adverse influences on road safety. Other changes from the effects discussed in the Draft DCO application Health Impact Assessment (table I-2) that combine to influence the health of this population include: reduced night-time noise (there being no night-shifts ending between 03:00 and 04:00); reduced potential for health-trip journey time delays (e.g. to a hospital); and the potential for weekend HGV movements to reduce amenity and discourage physical activity.

5.1.9 As appropriate new and enhanced mitigation is proposed, the overall effect for population health, taking account of the range of small residual beneficial and adverse changes across vulnerable groups, is not expected to alter the Health Impact Assessment conclusion that near the local road network the overall residual population health effect is considered to be negligible for the general population and up to minor adverse for relevant vulnerable groups. Thus, the conclusions remain as reported in the Draft DCO application.

**Table 5-1 Health analysis cumulative assessment**

	Relevant geographical population groups	
	Population near the Wylfa Newydd Development Area	Population near the local road network
<b>Changes to working hours</b>		
Air quality	Less potential for adverse effects from air pollution due to commitment to higher emission standards.	N/A
Lighting	No changes to community identity or sleep disturbance expected.	N/A
<b>Changes to the HGV delivery window</b>		
Air quality	N/A	No change to air quality from redistribution of vehicle times.
Traffic	N/A	More potential for accident risk during the weekend, as more pedestrians and cyclists. Less potential for journey delays as more use of off-peak times.
<b>Changes to worker shift patterns</b>		
Air quality	N/A	No change to air quality from redistribution of vehicle times.
Traffic	N/A	Less potential for accident risk as less overlap with school travel. Less potential for journey delays.
Construction workers	N/A	No change to community interaction with workforce.

## 6 Shadow Habitats Regulations Assessment

- 6.1.1 It was identified that the Shadow Habitats Regulations Assessment [APP-050/051] could potentially be affected by the proposed changes to the blasting strategy, marine vessel movements and working hours (Request for Non-Material Change no. 1, 2 and 4).
- 6.1.2 Assessments of each of these proposed changes concluded no new or different likely significant (alone or in-combination) effects to that reported in the Shadow Habitats Regulations Assessment [APP-050/051]. Consequently, there is not considered to be any new or likely significant (alone or in-combination) effects from the three changes being sought in relation to the Wylfa Newydd DCO Project (i.e. blasting strategy, marine vessel movements and working hours, Request for Non-Material Change no. 1, 2 and 4). Thus, the conclusions remain as reported in the Draft DCO application.

## 7 Schedule of consequential amendments to application documents

Table 7-1 Schedule of consequential amendments to application documents

Application document name	Examination Reference Number	Section of document	Version to be amended	Description of amendment
Environmental Statement chapter I4: Intra-project cumulative effects	APP-387	4.2	1.0	Update to air quality and noise modelling results
Environmental Statement appendix I4-2: Project-wide and WNDA development intra-project air quality assessment	APP-393	5	1.0	Update to air quality modelling results
Environmental statement appendix I4-3: Intra-project cumulative noise effects	APP-394	1.2	1.0	Update to noise modelling results

## 8 References

**Table 8-1 Schedule of references**

ID	Reference
RD1	British Standards Institution. 2008. BS 6472-2 Guide to Evaluation of human exposure to vibration in buildings. Blast-induced vibration. London: British Standards Institution.

## **Appendix 1-2: Modelling of road traffic emissions with diurnal profile**

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## 1 Introduction

### 1.1 Purpose of this report

- 1.1.1 As a part of the Non-Material Change assessment of the effects upon air quality, an evaluation has been carried out of the effect of using an hourly diurnal profile of vehicle flows for modelling of dispersion of air pollutants from vehicles on the A55, A5 and A5025, connected with the Wylfa Newydd Project. For the DCO submission, a single, annual average hourly traffic (AAHT) flow was input to the model for each hour of the day, derived from annual average daily traffic (AADT) flows.
- 1.1.2 The Non-Material Change would re-distribute construction-related traffic on an hourly basis to and from the site within the 24-hour periods of days but would not result in any net increase in daily traffic flows of light duty vehicles (LDV) or heavy duty vehicles (HDV) over and above the DCO submission case.
- 1.1.3 Initially, further modelling was undertaken for one receptor, Hum\_1964, which was identified as the receptor experiencing the largest change in concentrations as a result of project traffic on the A5025. It was then recognised that the use of a diurnal profile would have an effect on the adjustment factors applied to the emissions from road traffic results; therefore, the diurnal profile modelling was expanded to include the diffusion tube locations around the Valley area and an updated adjustment factor was calculated.
- 1.1.4 This report contains a summary of the modelling methodology adopted in the assessment, the results of the revised modelling and the effect upon the model verification and adjustment procedures. A section of road links comprising the A55, A5 around Valley and the A5025 immediately to the north of Valley has been used as a test case.

## 2 Methodology

### 2.1 Background to the proposed methodology

- 2.1.1 This modelling uses the previous verification model (from Autumn 2017) as a base.
- 2.1.2 Jacobs was requested to provide Wood with the hourly traffic flows for the relevant road links in the model. This traffic flow profile is consistent with the Strategic Traffic Model (STM) used in the DCO submission. Relevant road links consist of those within 200 m – 250 m of the diffusion tube locations and Hum\_1964.
- 2.1.3 Hourly traffic flows were converted into hourly emission factors for each link, using different profiles for LDV flows and HDV flows.
- 2.1.4 A fac file was created to incorporate these emission factors into the model. The fac file uses a 3-day diurnal profile, for weekdays, Saturdays and Sundays.
- 2.1.5 There are two profiles for each road link, as we need an HDV profile and a LDV profile, consistent with the road traffic flow data split.
- 2.1.6 Since two profiles cannot be applied to one road source, roads sources with profiles applied need to be duplicated. In this case, the following statements are true:
  - the locations of duplicated sources remain the same,
  - for links where the LDV profile is applied, the HDV flows are set to zero,
  - for links where the HDV profile is applied, the LDV flows are set to zero; and
  - therefore, the total traffic flows along the links remain the same.
- 2.1.7 The model included 5 of the diffusion tube locations as receptors and Hum\_1964, using RAF Valley meteorological data. This aligns with the previous verification modelling undertaken at the diffusion tube locations. For more details, see Appendix C4.1 in the DCO Environmental Statement. The receptor locations are presented in Table 2.1.

**Table 2-1 Receptors included in the modelling**

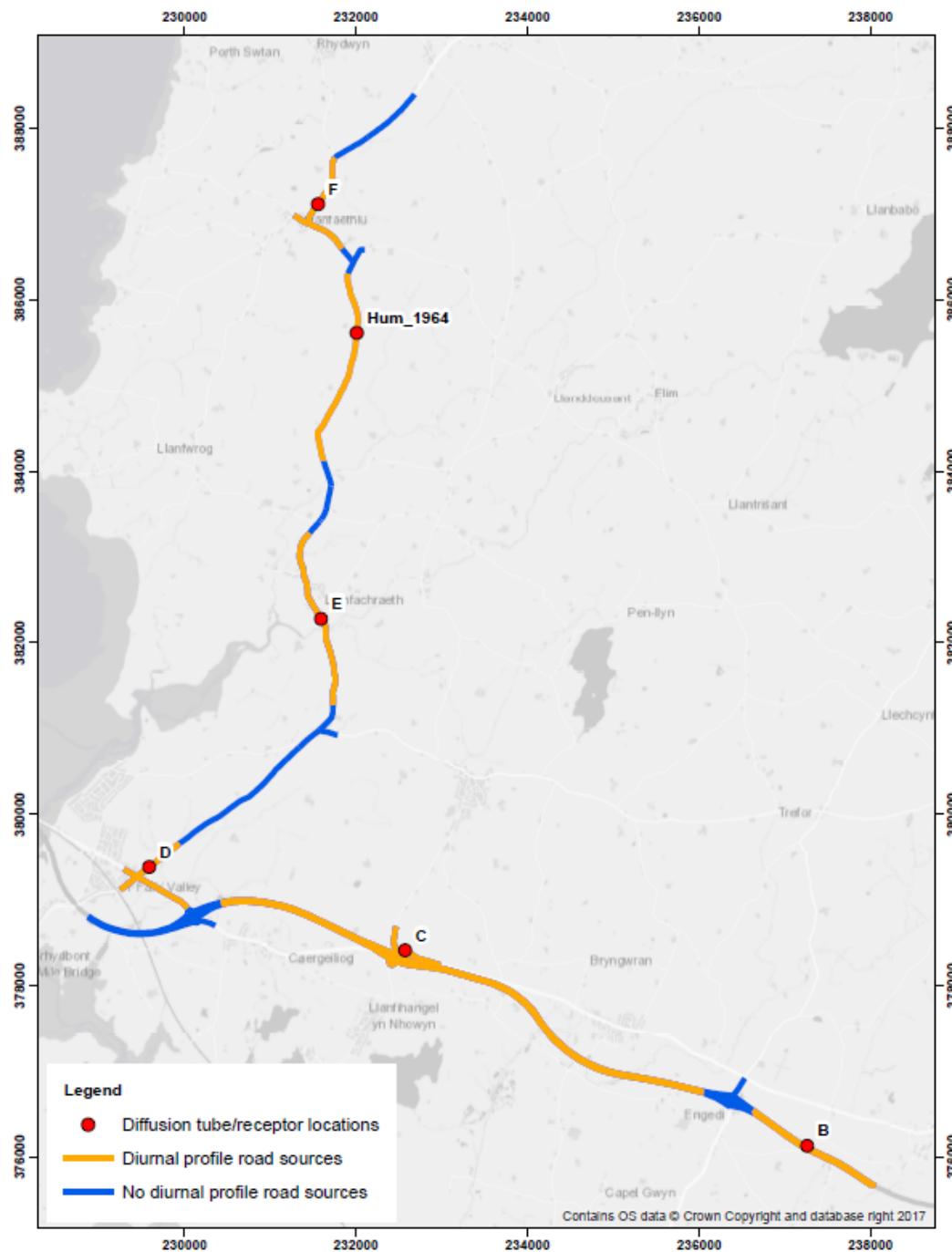
Diffusion tube/receptor ID	Location	X (m)	Y (m)
B	Minor road A55	237267	376129
C	A5 at Dalar Hir	232573	378407
D	A5025 Valley	229588	379382
E	A5025 Llanfacraeth	231593	382274
F	A5025 Llanfaethlu	231555	387112
Hum_1964	A5025 between Llanfacraeth and Llanfaethlu	232008	385608

2.1.8 Figure 2-1 provides a visualisation of the receptor locations and the road sources included in the modelling. The road links included in the modelling which had a diurnal profile applied are also listed below.

- A55\_J5\_J6\_EB,
- A55\_J5\_J6\_WB,
- A5\_30,
- A55\_J4\_ON-SLIP\_EB,
- A55\_J4\_ON-SLIP\_WB,
- A55\_J4\_OFF-SLIP\_EB,
- A55\_J4\_OFF-SLIP\_WB,
- A44\_J4\_THR\_JCT\_EB,
- A44\_J4\_THR\_JCT\_WB,
- A55\_J4\_J5\_EB,
- A55\_J4\_J5\_WB,
- A55\_J3\_J4\_EB,
- A55\_J3\_J4\_WB,
- A55\_J4\_BRIDGE\_NB,
- A55\_J4\_BRIDGE\_SB,
- LOCAL\_10; and
- A5025\_71 (applied to all relevant A5025 links i.e. the profile was assumed to be the same along the entirety of the A5025).

2.1.9 Note that there are road links included in the model that did not have a profile applied. Where this occurred, it was because the road link is more than 250 m from the relevant receptor location and was left in the model for completion.

**Figure 2-1 Road sources and receptor locations included in the modelling**



2.1.10 Note: Figure 2.1 shows the road sources without bypasses (i.e. without the A5025 off-line highway improvements) and without the Logistics Centre and Park and Ride. As such, this represents an early project year.

## 3 Results and Discussion

### 3.1 Summary

3.1.1 The re-run of the verification with the diurnal profile in place results in lower modelled raw NOx (i.e. unadjusted) concentrations at the diffusion tube locations. This is consistent with the initial modelling completed for receptor Hum\_1964.

3.1.2 Overall, this results in a higher model adjustment factor, because the difference between the modelled results and the monitoring data has increased, when compared with the original verification. Using the diurnal profile, therefore, indicates that the model performs less well than without the profile in place:

- The previous Valley adjustment factor, without the diurnal profile applied, was 3.62,
- The Valley adjustment factor, with the diurnal profile applied, is now 4.89; and
- This may bring about increases in modelled NO<sub>2</sub> concentrations at receptors where the adjustment factor is applied. However, where the reduction with the profile is large enough to offset the effect of a larger adjustment factor, the overall concentration will decrease.

### 3.2 Verification calculations

3.2.1 Table 3.1 shows the comparison of the monitored and unadjusted modelled NO<sub>2</sub> results at the diffusion tube locations. The comparison indicates that it is appropriate to undertake model verification, as the differences between the modelled and monitored NO<sub>2</sub> are greater than 25%.

**Table 3-1 Comparison of unadjusted and monitored NO<sub>2</sub> concentrations**

Diffusion tube location	Background NO <sub>2</sub> (µg m <sup>-3</sup> )	Monitored total NO <sub>2</sub> (µg m <sup>-3</sup> )	Modelled total NO <sub>2</sub> (µg m <sup>-3</sup> )	% difference (modelled vs. monitored)
B	3.8	9.6	4.98	-48.1%
C	3.9	11.1	5.20	-53.2%
D	4.5	15.1	6.92	-54.2%
E	3.9	9.8	4.97	-49.3%
F	3.8	9.3	4.87	-47.6%

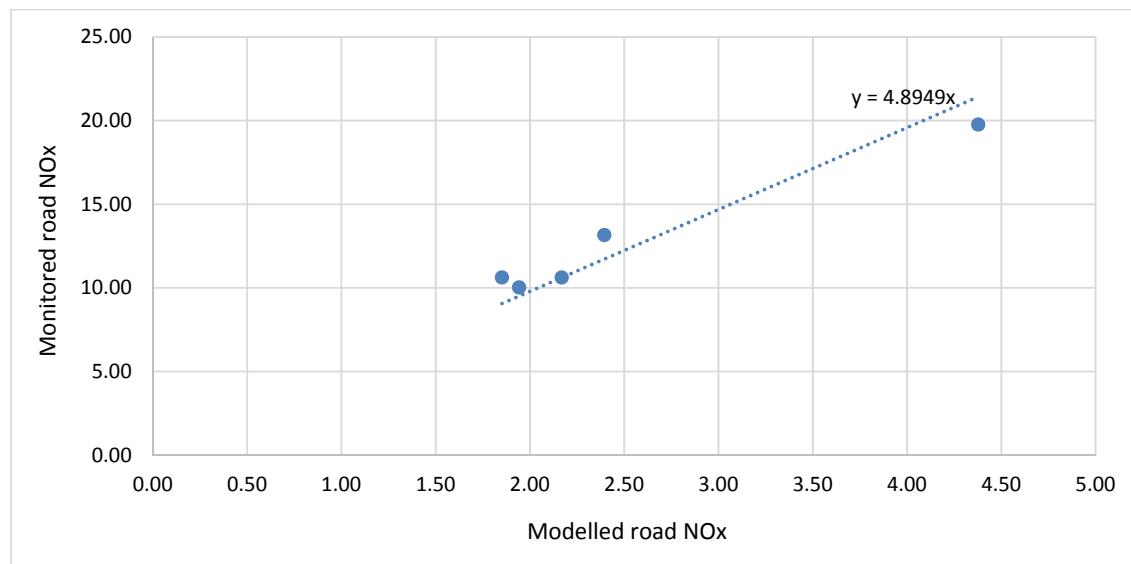
3.2.2 The data required for model adjustment is presented in Table 3.2.

**Table 3-2 Model adjustment data**

Diffusion tube location	Monitored road contribution NOx ( $\mu\text{g m}^{-3}$ )	Modelled road contribution NOx ( $\mu\text{g m}^{-3}$ )
B	10.62	2.17
C	13.16	2.40
D	19.76	4.38
E	10.62	1.85
F	10.02	1.94

3.2.3 Figure 3-1 provides a comparison of the modelled road contribution NOx versus monitored road contribution NOx and the equation of the trend line based on linear regression through zero for each of the verification areas. The equation of the trend line gives the adjustment factor which should be applied to the modelled results.

**Figure 3-1 Adjustment factor line of regression**



3.2.4 The raw results and the verified (adjusted) results for each of the diffusion tube locations are shown in Table 3.3.

**Table 3-3 Model results after verification**

Diffusion tube location	Monitored total NO2 ( $\mu\text{g m}^{-3}$ )	Adjusted modelled total NO2 ( $\mu\text{g m}^{-3}$ )	% difference (modelled vs. monitored)	Adjustment factor
B	9.6	9.6	<0.1%	4.89
C	11.1	10.3	-7.4%	4.89
D	15.1	16.0	5.7%	4.89
E	9.8	8.9	-9.0%	4.89
F	9.3	9.0	-2.9%	4.89

### 3.3 Results at Hum\_1964

3.3.1 Using the updated adjustment factor calculated in section 3.2, the results at Hum\_1964 with the diurnal profile in place are presented in Table 3.4. 'Baseline' and 'with project' scenarios for 2020 and 2023 have been evaluated.

**Table 3-4 Annual mean NO<sub>2</sub> results at Hum\_1964 with diurnal profile**

Scenario	Raw road NOx concentration ( $\mu\text{g m}^{-3}$ )	Adjusted modelled road NO2 ( $\mu\text{g m}^{-3}$ )	Adjusted modelled total NO2 ( $\mu\text{g m}^{-3}$ )	% PEC of AQS*
2020 base	3.60	9.55	13.68	34.2%
2020 project	4.81	12.59	16.73	41.8%
2023 base	3.36	8.93	13.07	32.7%
2023 project	5.11	13.34	17.47	43.7%

\*AQS for annual mean NO<sub>2</sub> is 40  $\mu\text{g m}^{-3}$

3.3.2 The results in Table 3.4 show that, with a diurnal profile and an adjustment factor of 4.89, the results at Hum\_1964 are significantly below the air quality standard (AQS) in both the 2020/2023 base and 2020/2023 with project scenarios.

### 3.4 Results comparison – with and without diurnal profile

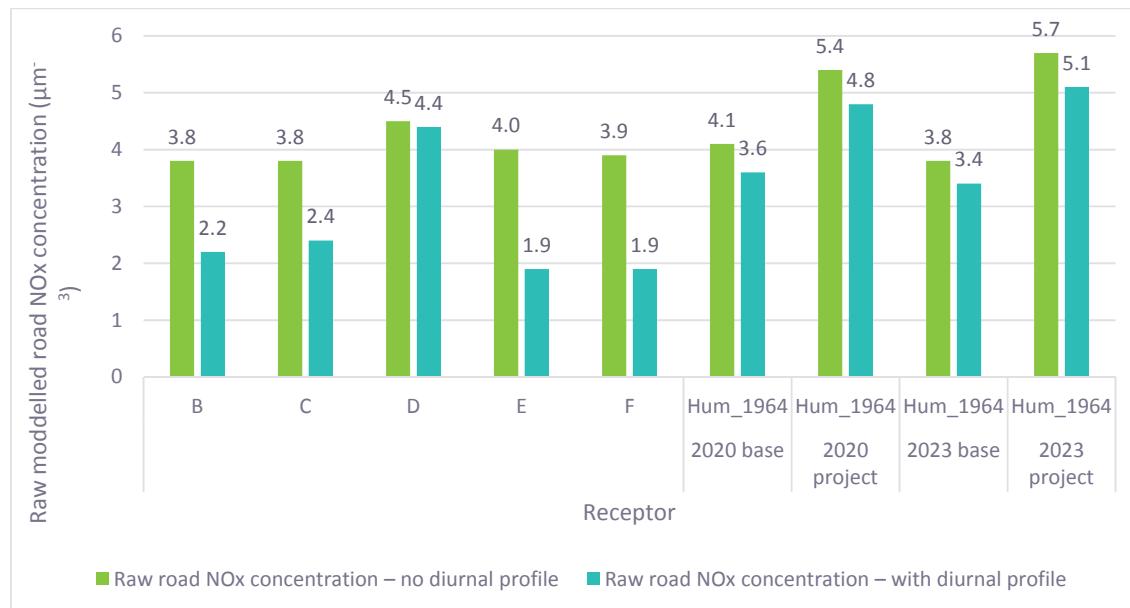
3.4.1 A comparison of the raw road contribution NOx concentrations (unadjusted) and the adjusted total NO<sub>2</sub> concentrations at the receptor locations with and without the diurnal profile are presented in Table 3.5 and Figures 3.2 and 3.3. The adjustment factor for the No Profile scenario is 3.62 and the adjustment factor for the With Profile scenario is 4.89.

**Table 3-5 Comparison of results with and without diurnal profile (µg m<sup>-3</sup>)**

Scenario	Receptor location	Raw road NO <sub>x</sub> concentration – no diurnal profile	Raw road NO <sub>x</sub> concentration – with diurnal profile	Adjusted modelled total NO <sub>2</sub> – no diurnal profile	Adjusted modelled total NO <sub>2</sub> – with diurnal profile
2016 verification	B	3.8	2.2	11.3	9.6
2016 verification	C	3.8	2.4	11.4	10.3
2016 verification	D	4.5	4.4	13.2	16.0
2016 verification	E	4.0	1.9	11.9	8.9
2016 verification	F	3.9	1.9	11.4	9.0
2020 base	Hum_1964	4.1	3.6	12.3	13.7
2020 project	Hum_1964	5.4	4.8	14.7	16.7
2023 base	Hum_1964	3.8	3.4	11.5	13.1
2023 project	Hum_1964	5.7	5.1	15.0	17.5

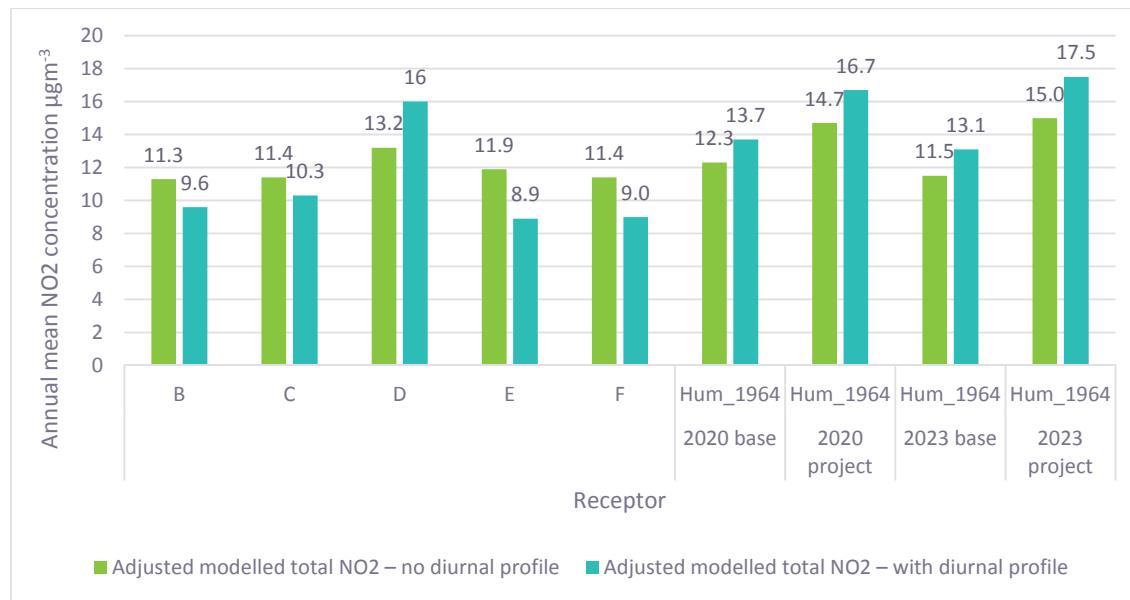
Note: the adjusted results for the No Profile scenario were derived using the same procedure as presented in section 3.2.

**Figure 3-2 Comparison of results – raw modelled road NO<sub>x</sub>**



3.4.2 The data in Figure 3.2 show the comparison between the raw modelled road NOx (i.e. unadjusted) for the No Profile and With Profile scenarios. At all the receptors, the raw modelled road NOx is higher for the No Profile scenario.

**Figure 3-3 Comparison of results – adjusted total modelled NO<sub>2</sub>**

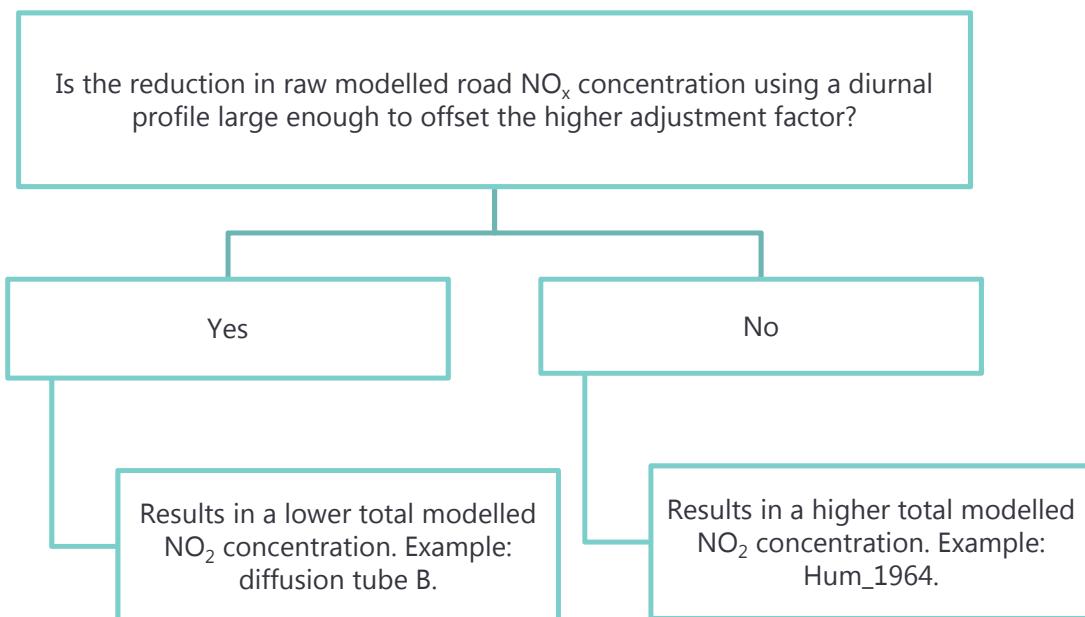


3.4.3 The data in Figure 3.3 compares the adjusted total modelled NO<sub>2</sub> results for the No Profile and With Profile scenarios. For diffusion tubes B, C, E and F, using the diurnal profile results in lower total modelled NO<sub>2</sub> concentrations. For diffusion tube D and Hum\_1964 2020/2023 base/project, using the diurnal profile results in higher total modelled NO<sub>2</sub> concentrations.

## 3.5 Discussion

3.5.1 The data in Table 3.5 and Figures 3.2 and 3.3 show that, for 4 of the receptors in this assessment, raw modelled roads NOx concentrations for the No Profile scenario are higher and therefore adjusted NO<sub>2</sub> results at most receptors for the No Profile scenario are also higher, compared with those for the With Profile scenario. This is in spite of the higher adjustment factor derived for the With Profile scenario. At the other 2 receptors, diffusion tube D and Hum\_1964, the reduction in raw NOx concentration as a result of using the diurnal profile is not significant enough to counteract the higher adjustment factor. Examples are shown in Figure 3.4 below.

**Figure 3-4 Flow chart**



3.5.2 The modelling demonstrates, therefore, that the use of a diurnal profile tends to reduce raw modelled road NO<sub>x</sub> concentrations, when compared with the No Profile scenario. However, the final, adjusted, total modelled NO<sub>2</sub> results may increase or decrease, when compared with the No Profile scenario, due to the use of an adjustment factor.

The adjustment factor in the With Profile scenario has increased, because the ratio between the monitored road contribution NO<sub>x</sub> data and the modelled contribution NO<sub>x</sub> data has increased. This means that, where the use of a diurnal profile results in a decrease in raw modelled road NO<sub>x</sub> concentration that is significant enough to offset the increase in the adjustment factor, the overall total modelled NO<sub>2</sub> result will be lower. However, the opposite is true if the diurnal profile results in a raw NO<sub>x</sub> concentration reduction that does not differ by a significant amount.

## Appendix 1-1

### Issued by

### Approved by

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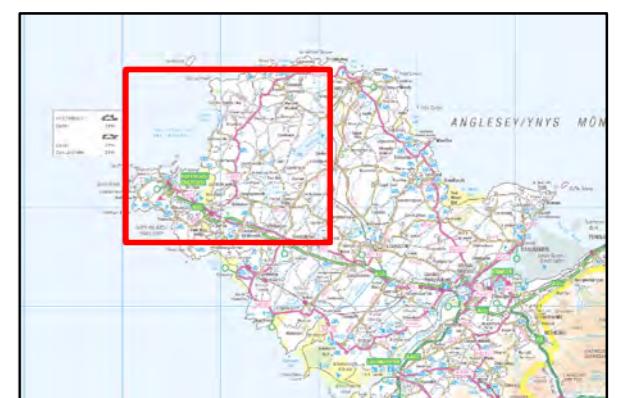
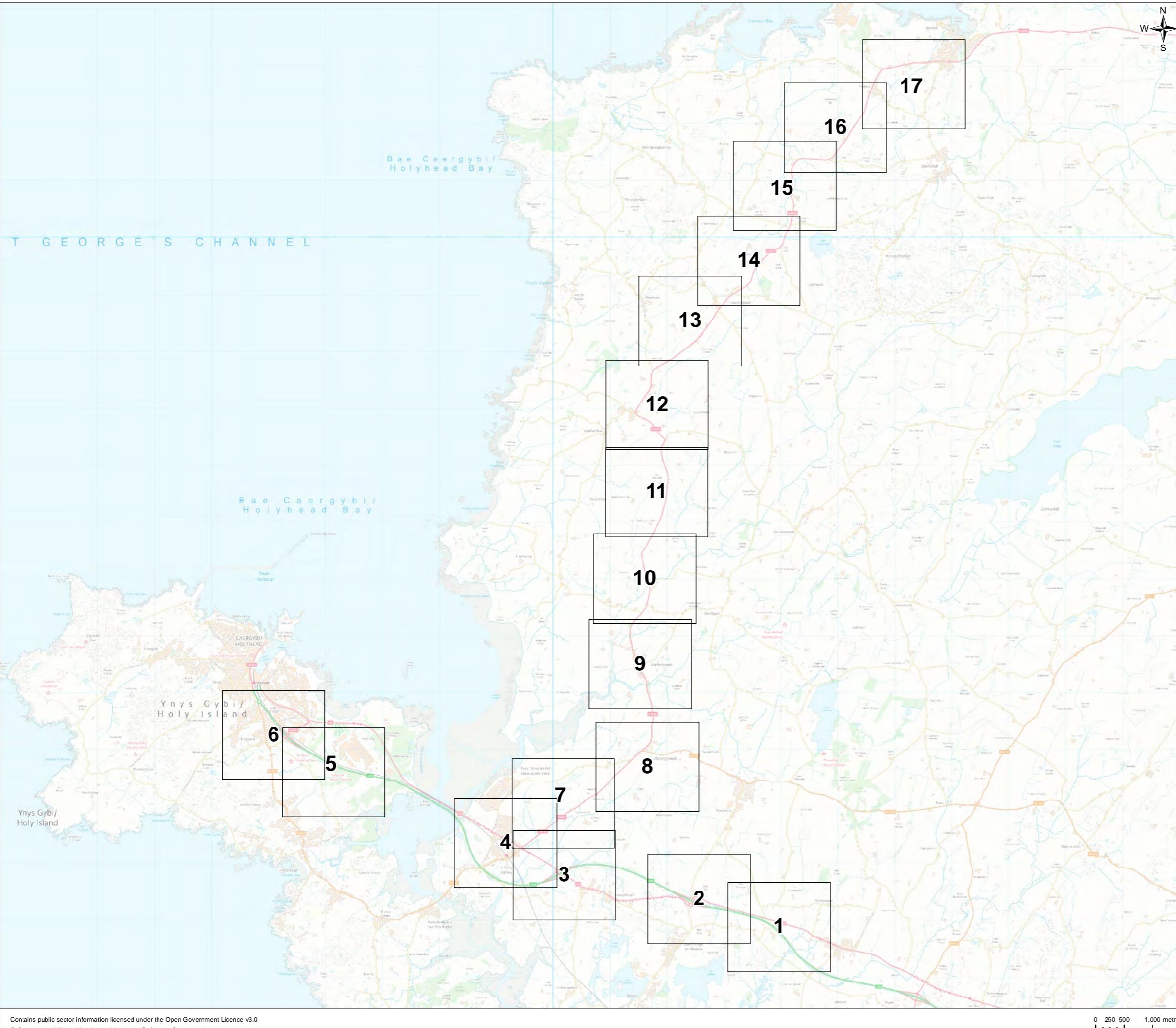
## **Appendix 1-3: Predicted noise levels at residential receptors.**

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## OVERVIEW

### Legend

 Figure Sheet



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'd

Client

**HORIZON**  
NUCLEAR POWER

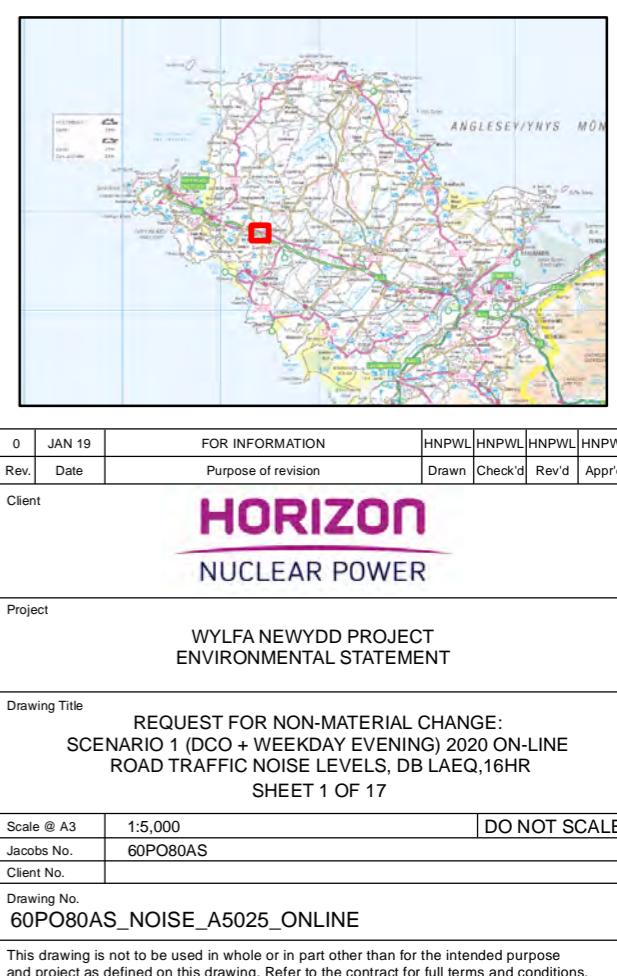
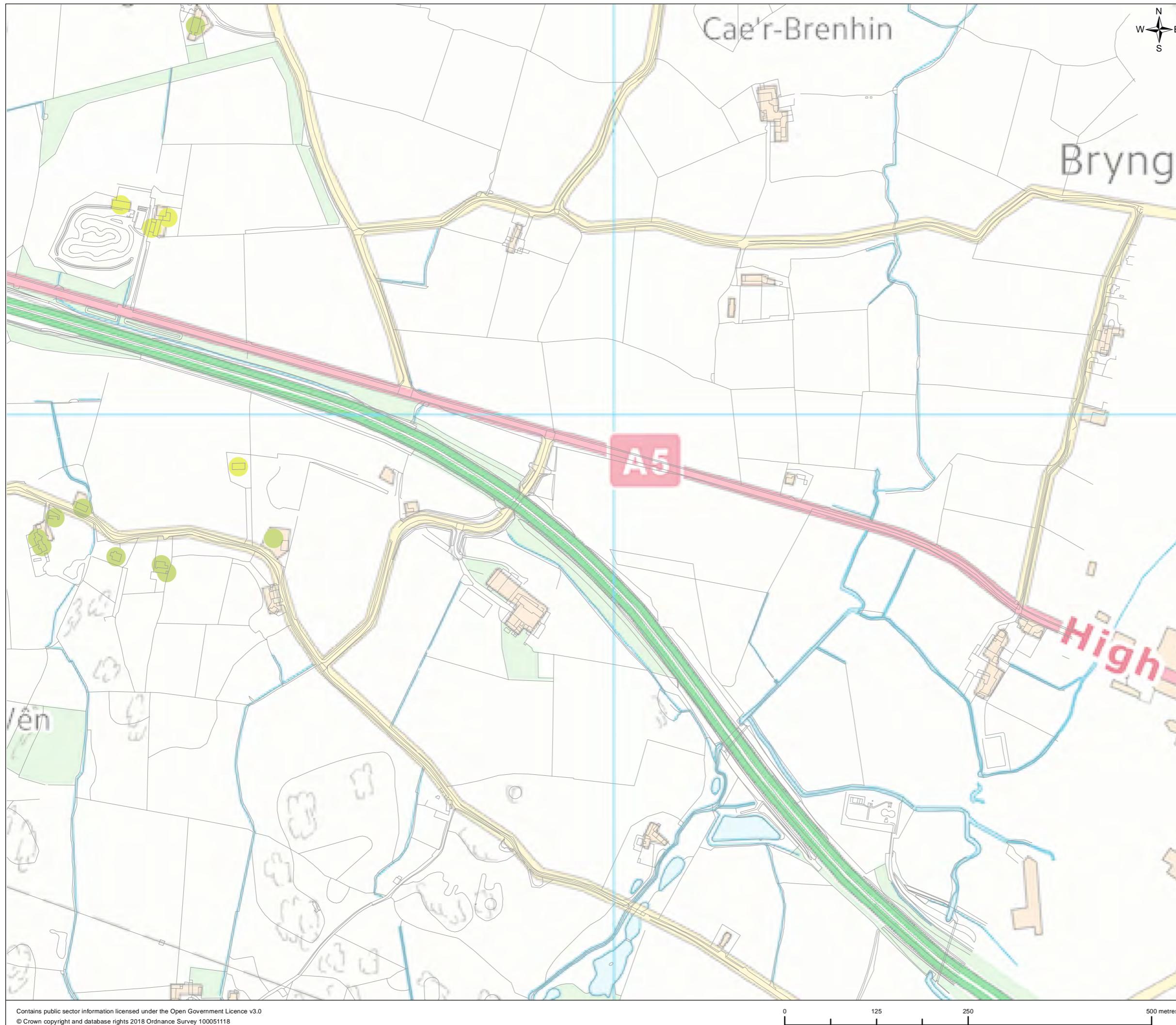
WYLFA NEWYDD PROJECT  
ENVIRONMENTAL STATEMENT

Drawing Title						
REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR OVERVIEW						
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Jacobs No.						60PO80AS
Client No.						

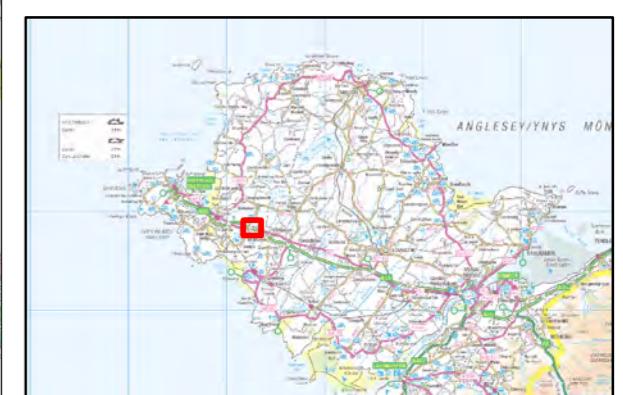
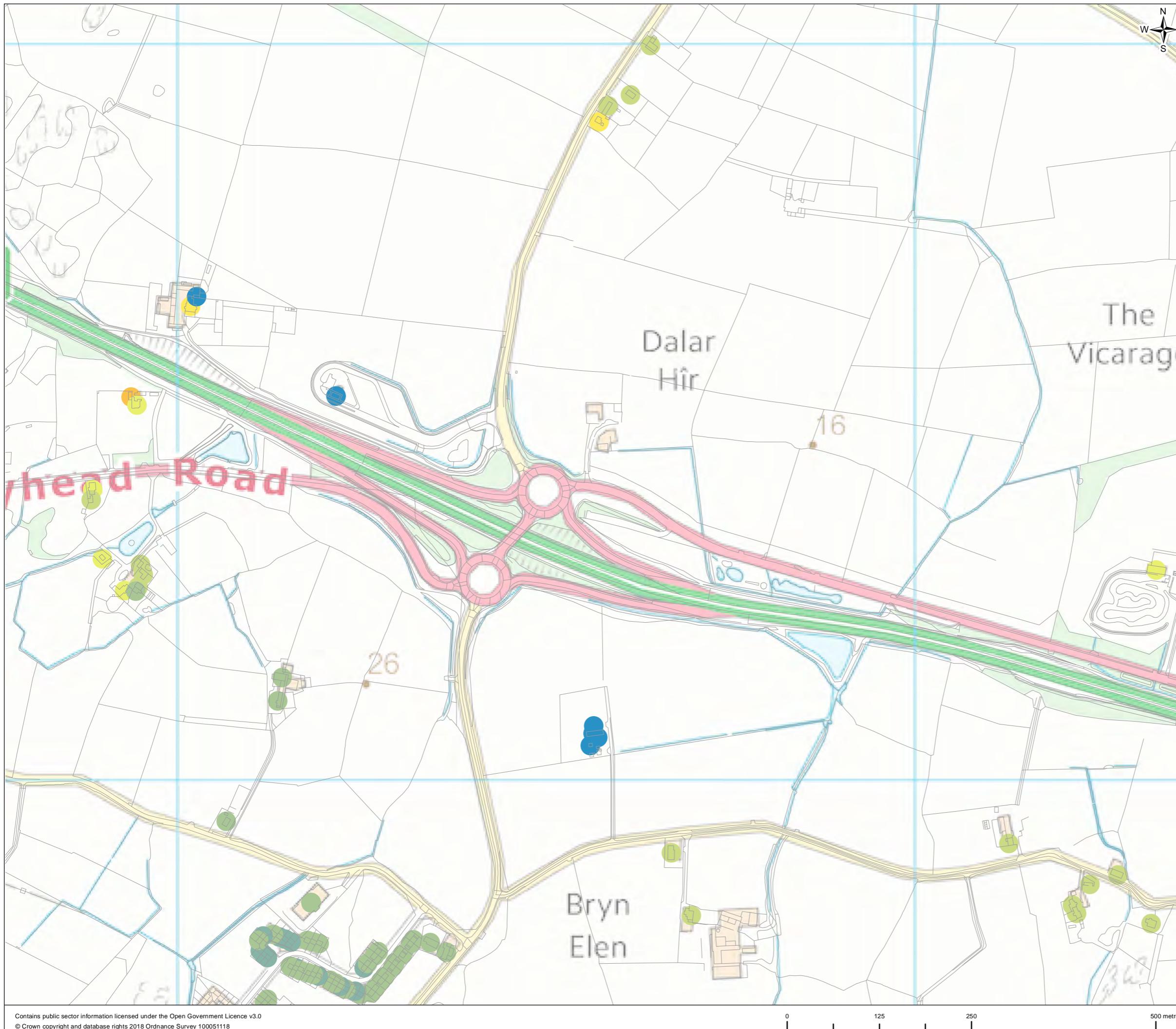
Drawing No.  
60PO80AS\_NOISE\_A5025\_ONLINE\_OVERVIEW

This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

FIGURE 2-3



**FIGURE 2-3**



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'd

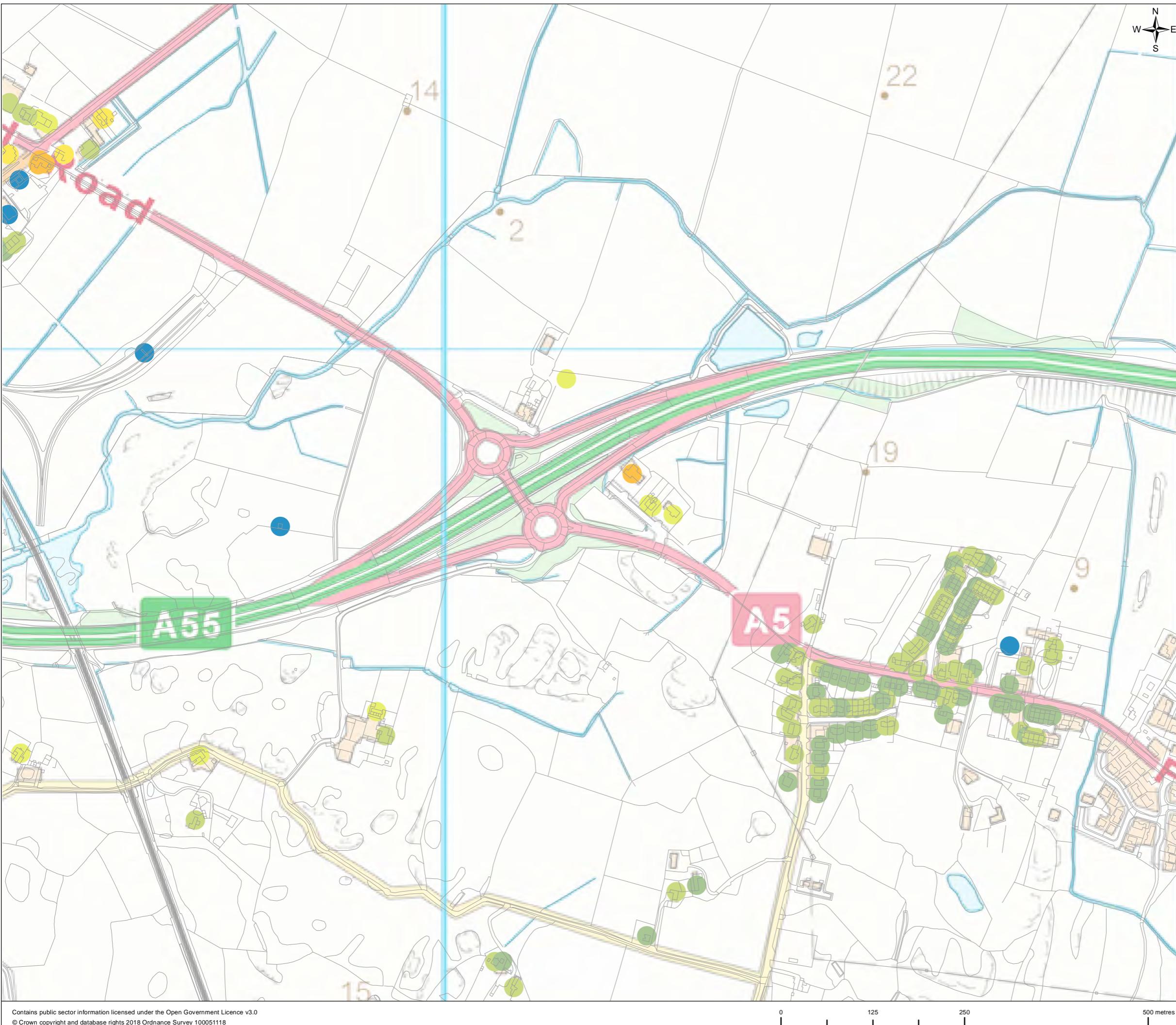
**HORIZON**  
NUCLEAR POWER

WYLFA NEWYDD PROJECT  
ENVIRONMENTAL STATEMENT

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Scale @ A3	1:5,000		
Jacobs No.	60PO80AS		
Client No.			

Drawing No.	60PO80AS_NOISE_A5025_ONLINE	This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.
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**FIGURE 2-3**



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd

**HORIZON**  
NUCLEAR POWER

WYLFA NEWYDD PROJECT  
ENVIRONMENTAL STATEMENT

Drawing Title  
REQUEST FOR NON-MATERIAL CHANGE:  
SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE  
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR  
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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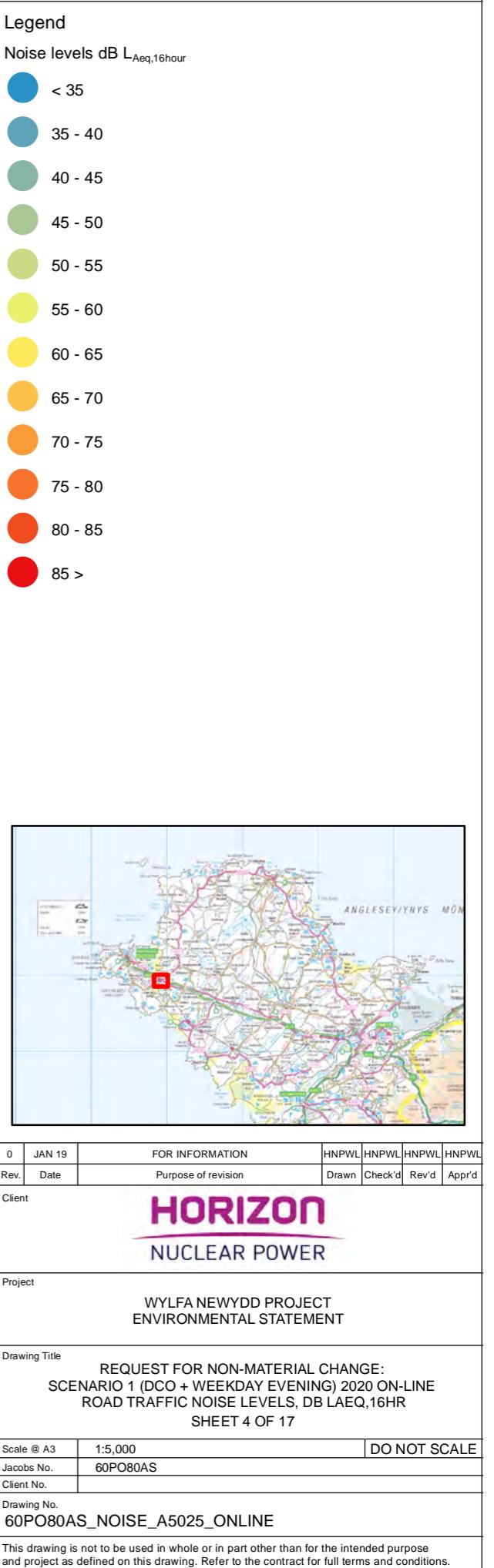
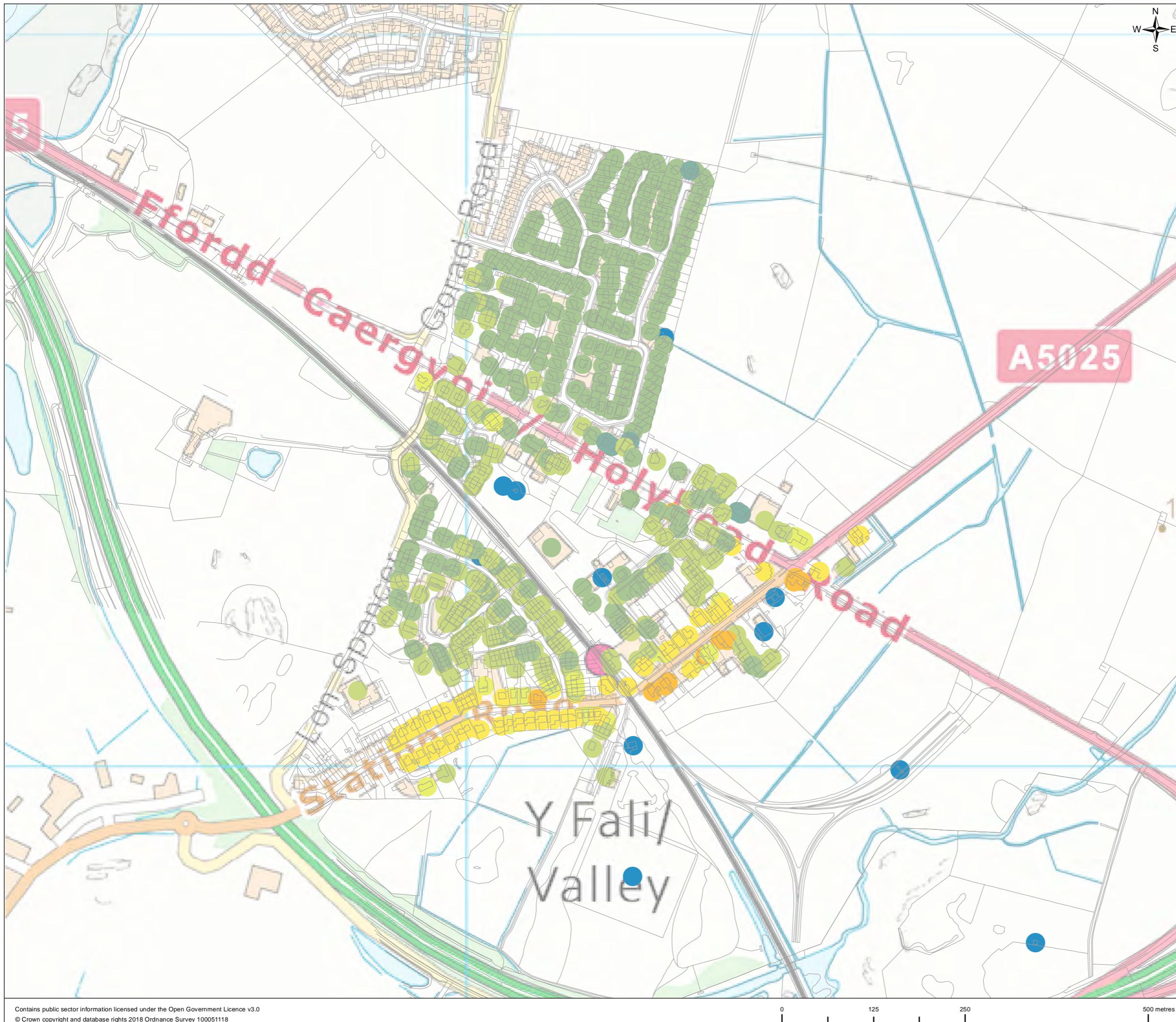
Jacobs No.	60PO80AS
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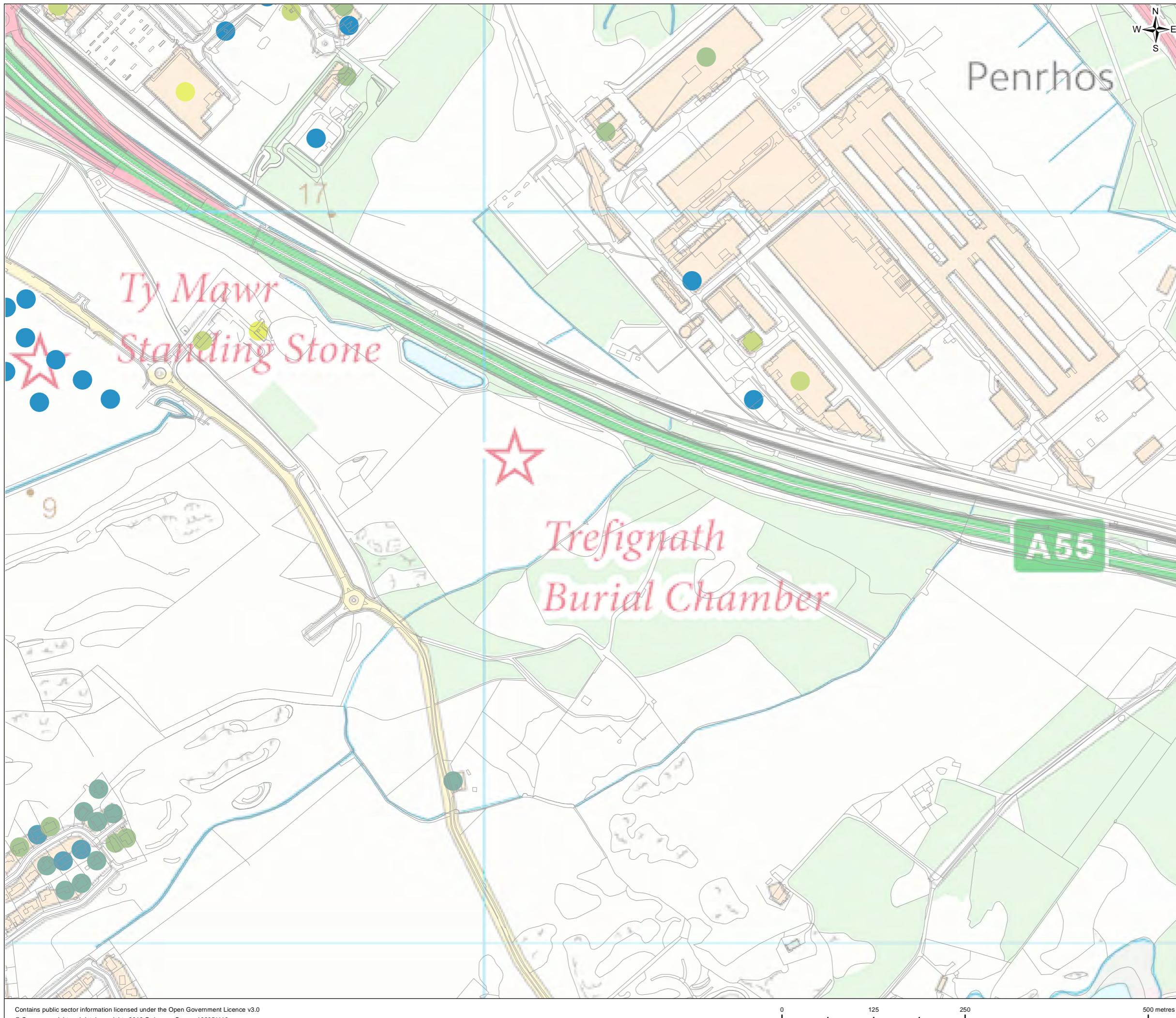
Client No.	
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Drawing No.	60PO80AS_NOISE_A5025_ONLINE
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**FIGURE 2-3**

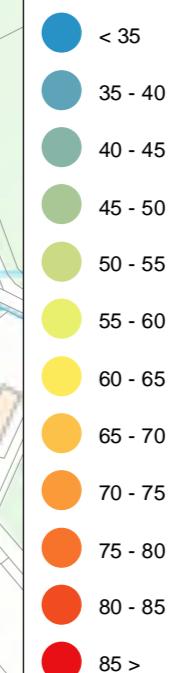




## FIGURE 2-3

## Legend

### Noise levels dB L<sub>avg,16hour</sub>



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

HORIZON

NUCLEAR POWER

## WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT

QUEST FOR NON-MATERIAL CHANGE:  
1 (DCO + WEEKDAY EVENING) 2020 ON-LINE  
TRAFFIC NOISE LEVELS, DB LAEQ,16HR  
SHEET 5 OF 17

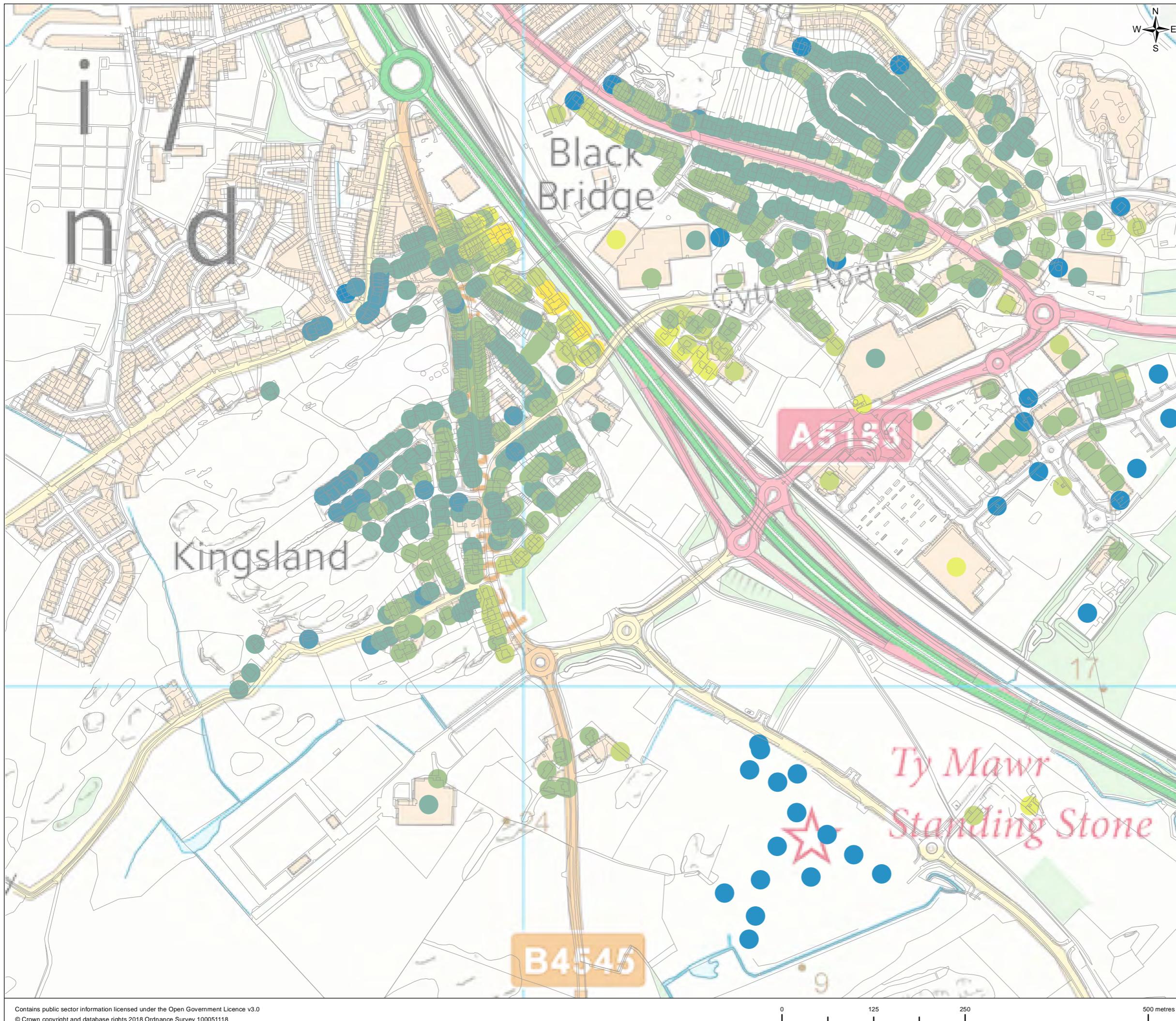
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Jacobs No. 60PO80AS

Client No.

Drawing No. 60RQ80AS NOISE A5035 QN1 INF

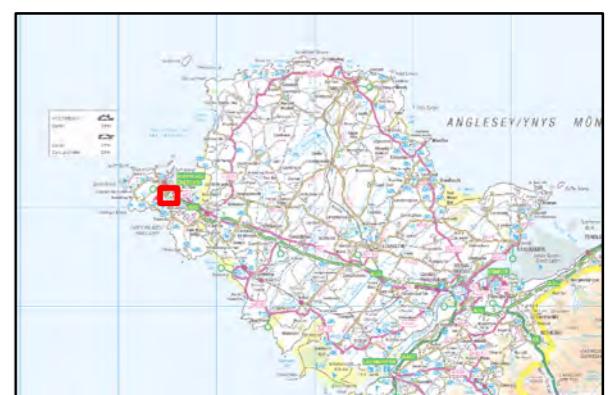
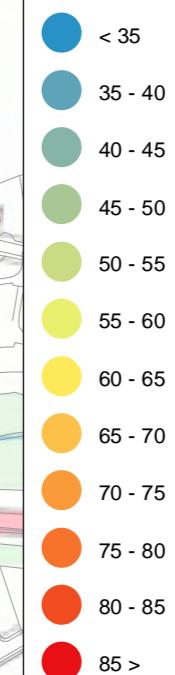
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## FIGURE 2-3

## Legend

### Noise levels dB L<sub>avg,16hour</sub>



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

# HORIZON NUCLEAR POWER

## WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT

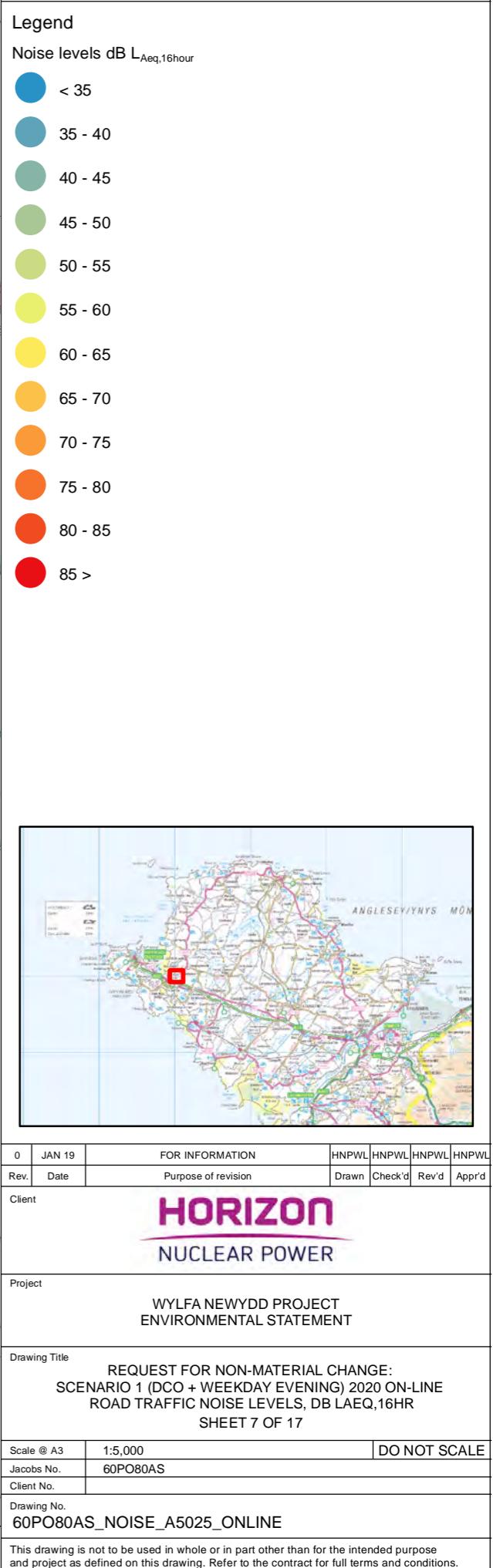
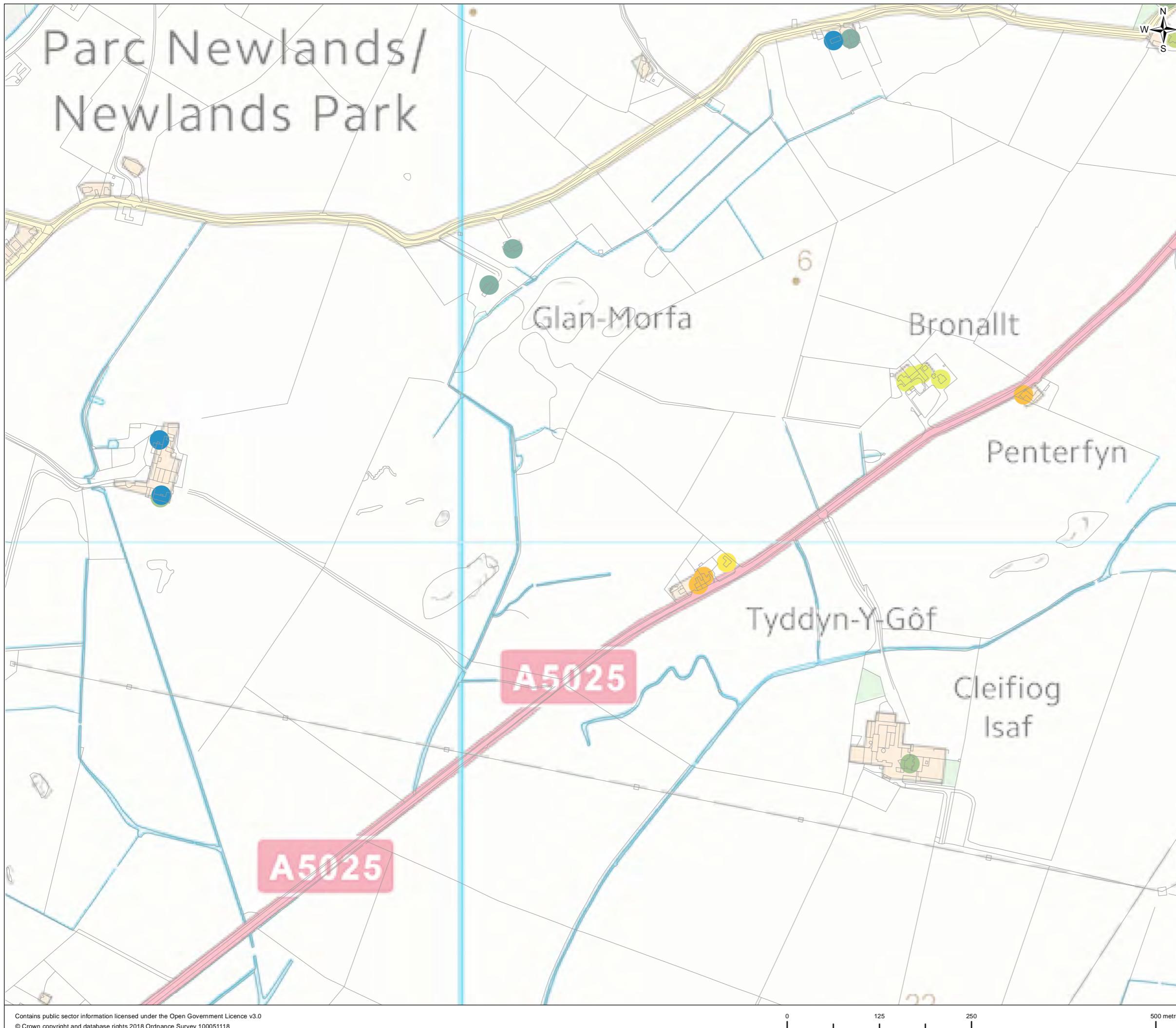
REQUEST FOR NON-MATERIAL CHANGE:  
1 (DCO + WEEKDAY EVENING) 2020 ON-LINE  
TRAFFIC NOISE LEVELS, DB LAEQ,16HR  
SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	

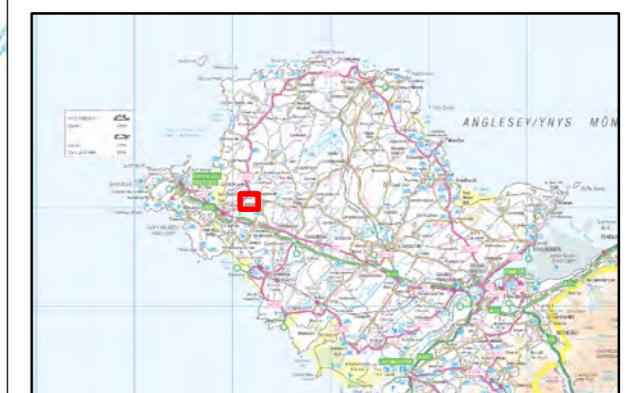
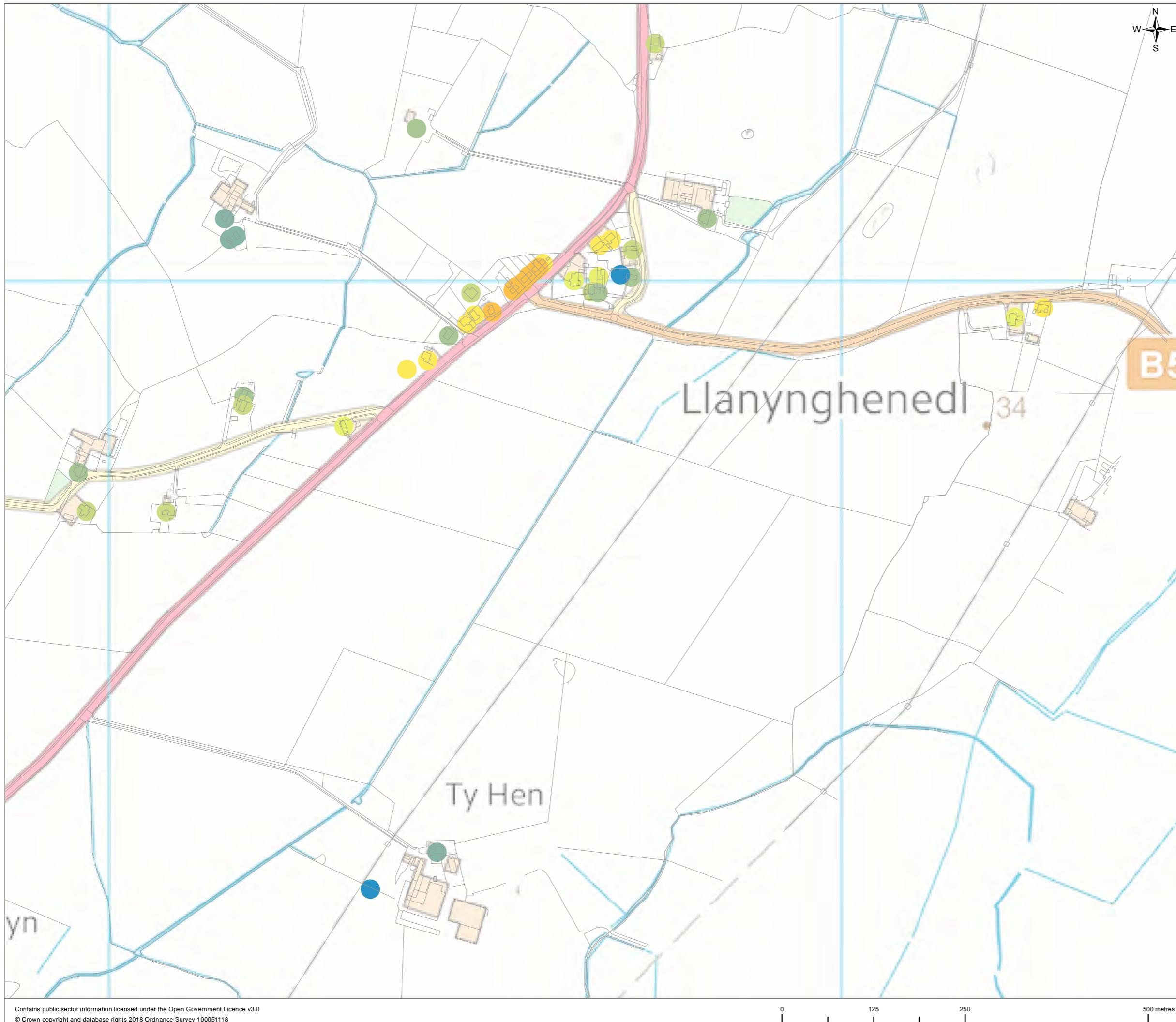
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FIGURE 2-3

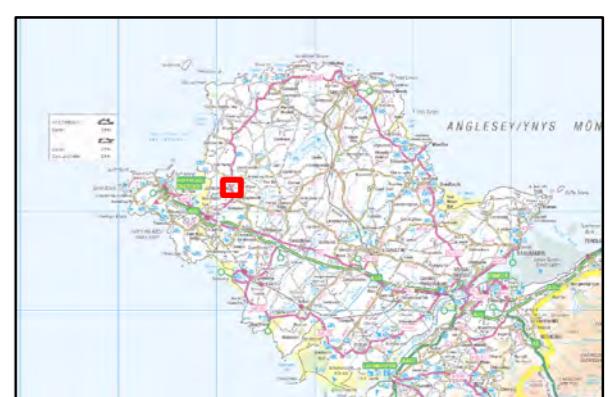
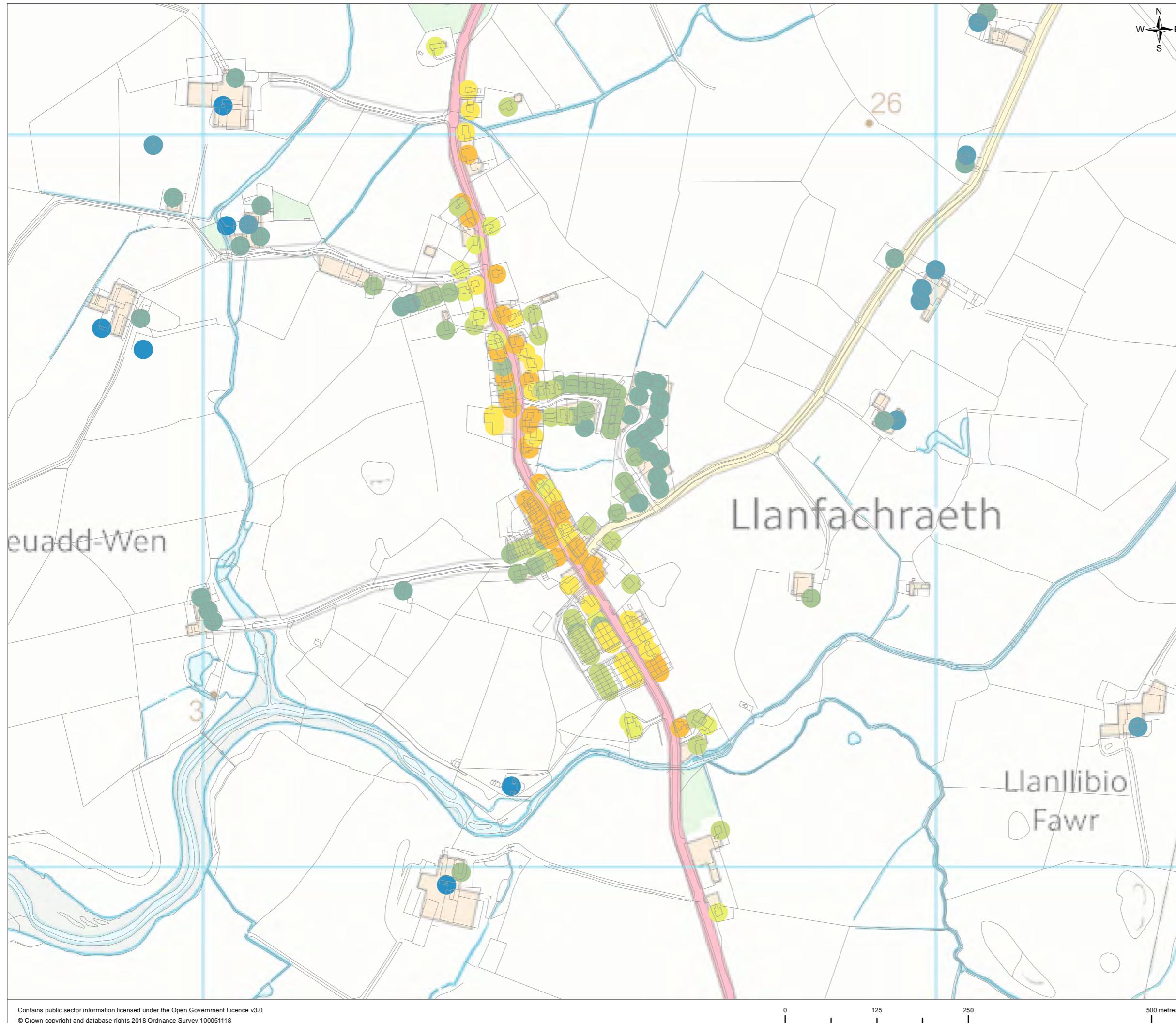


**FIGURE 2-3**



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd
Client						
<b>HORIZON</b> NUCLEAR POWER						
Project						
WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT						
Drawing Title						
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Scale @ A3	1:5,000	DO NOT SCALE				
Jacobs No.	60PO80AS					
Client No.						
Drawing No.	60PO80AS_NOISE_A5025_ONLINE					
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**FIGURE 2-3**



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd

**HORIZON**  
NUCLEAR POWER

WYLFA NEWYDD PROJECT  
ENVIRONMENTAL STATEMENT

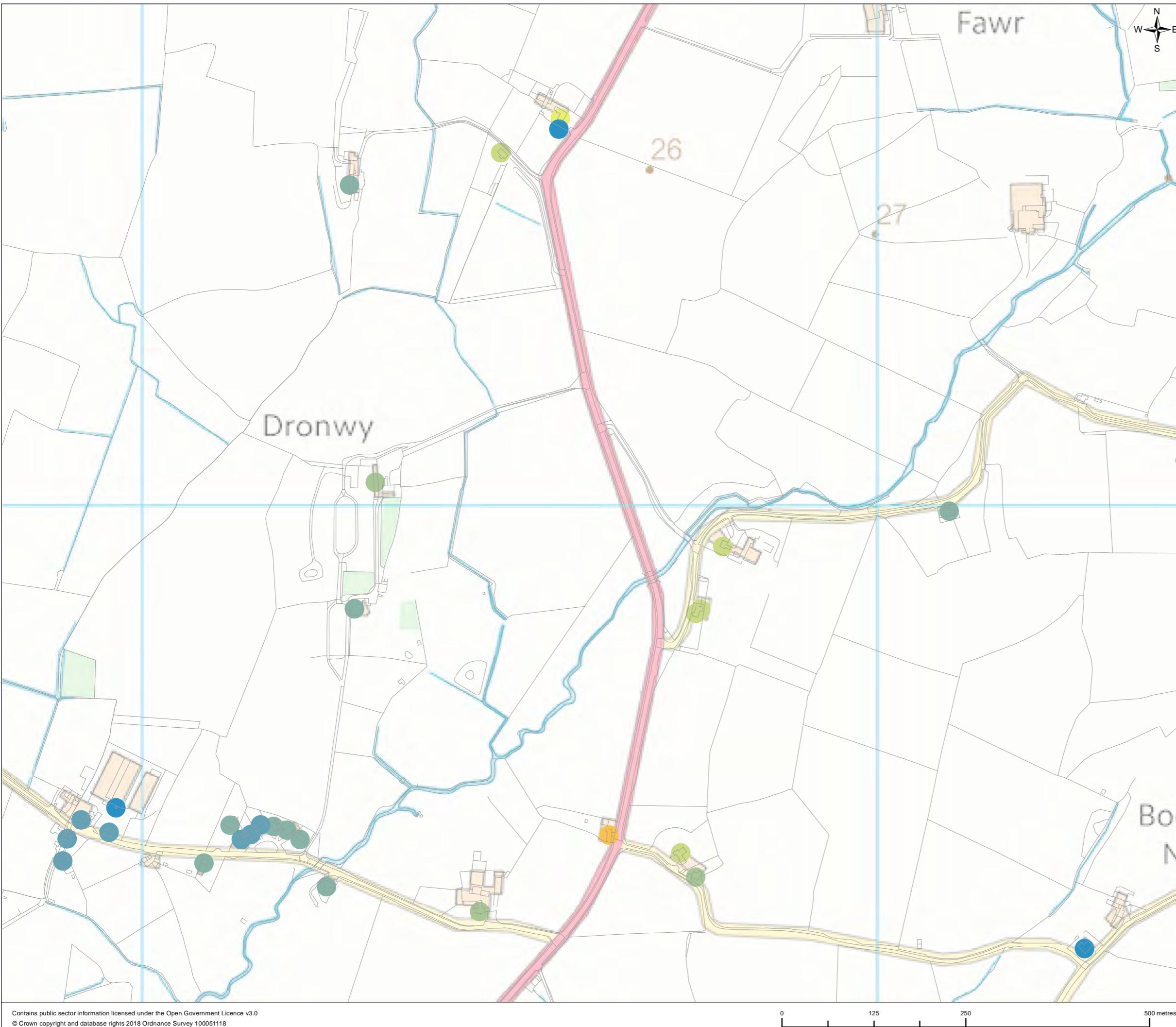
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SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE  
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR  
SHEET 9 OF 17

Scale @ A3 1:5,000 DO NOT SCALE  
Jacobs No. 60PO80AS  
Client No.

Drawing No.  
60PO80AS\_NOISE\_A5025\_ONLINE

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and project as defined on this drawing. Refer to the contract for full terms and conditions.

**FIGURE 2-3**



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd

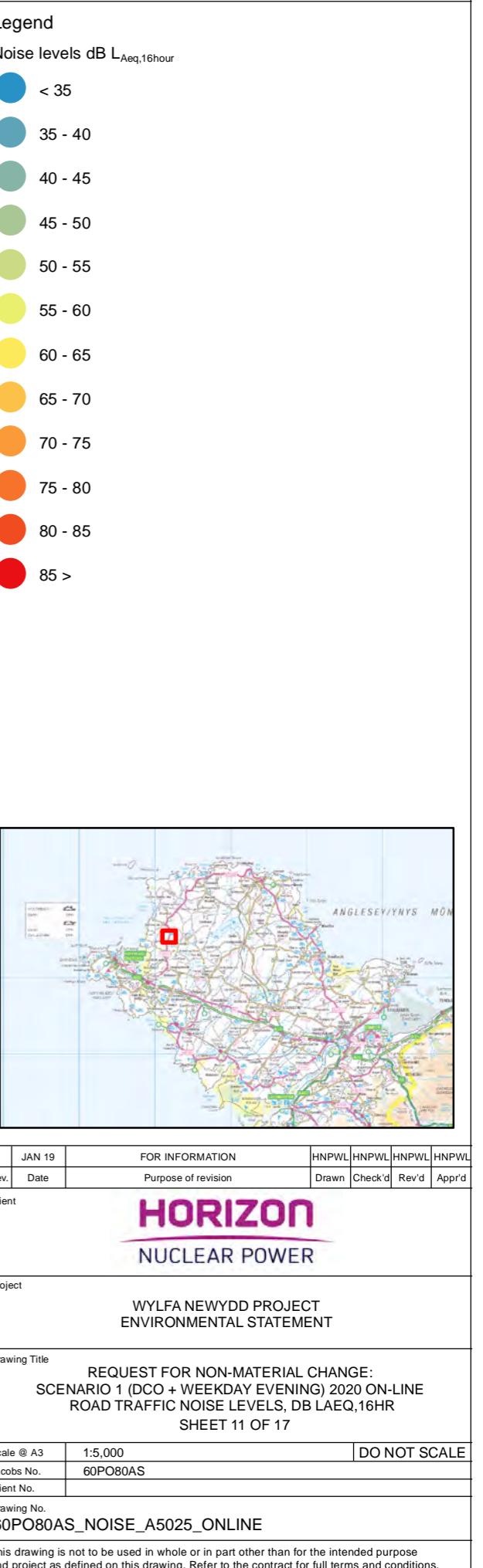
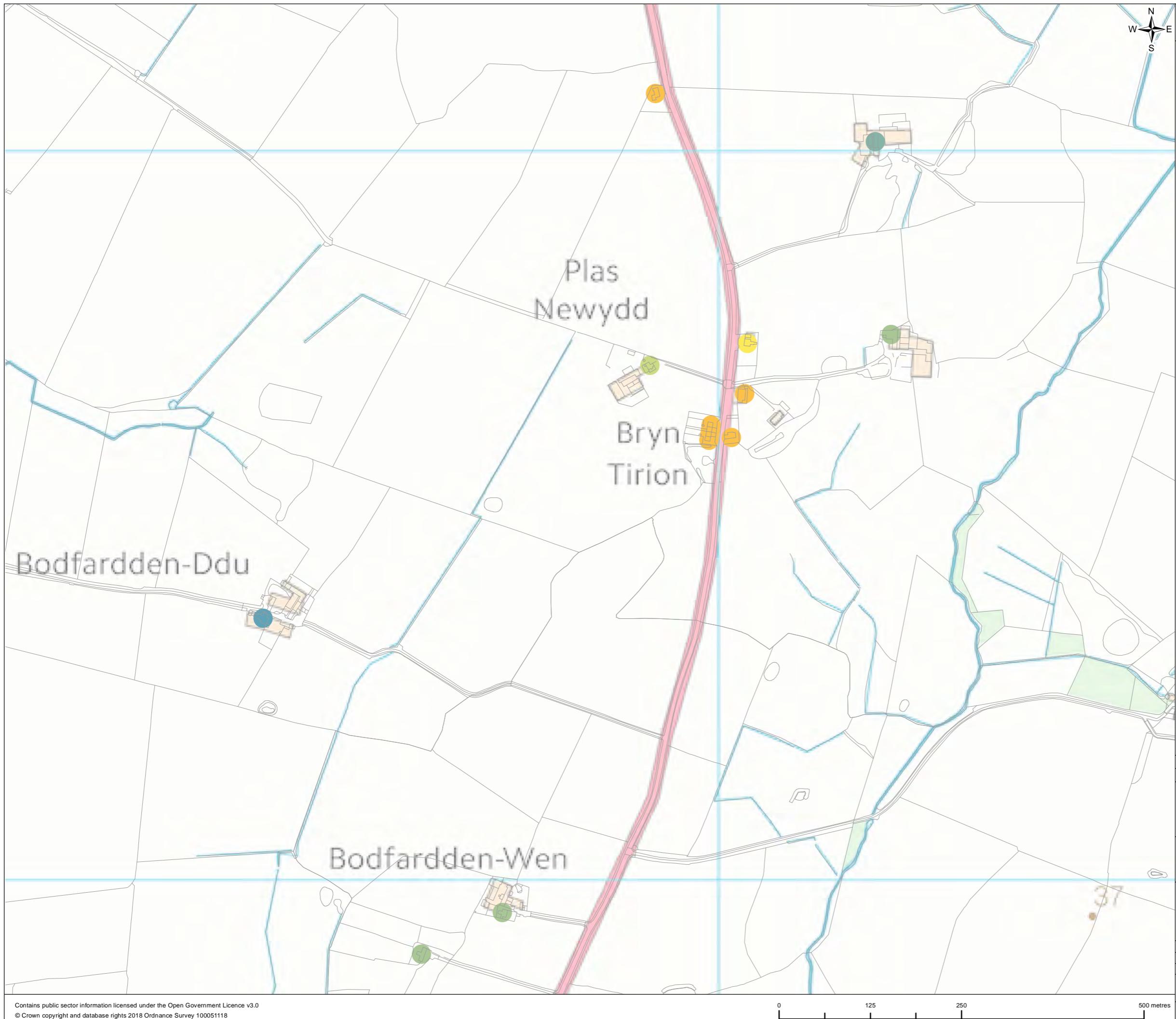
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NUCLEAR POWER

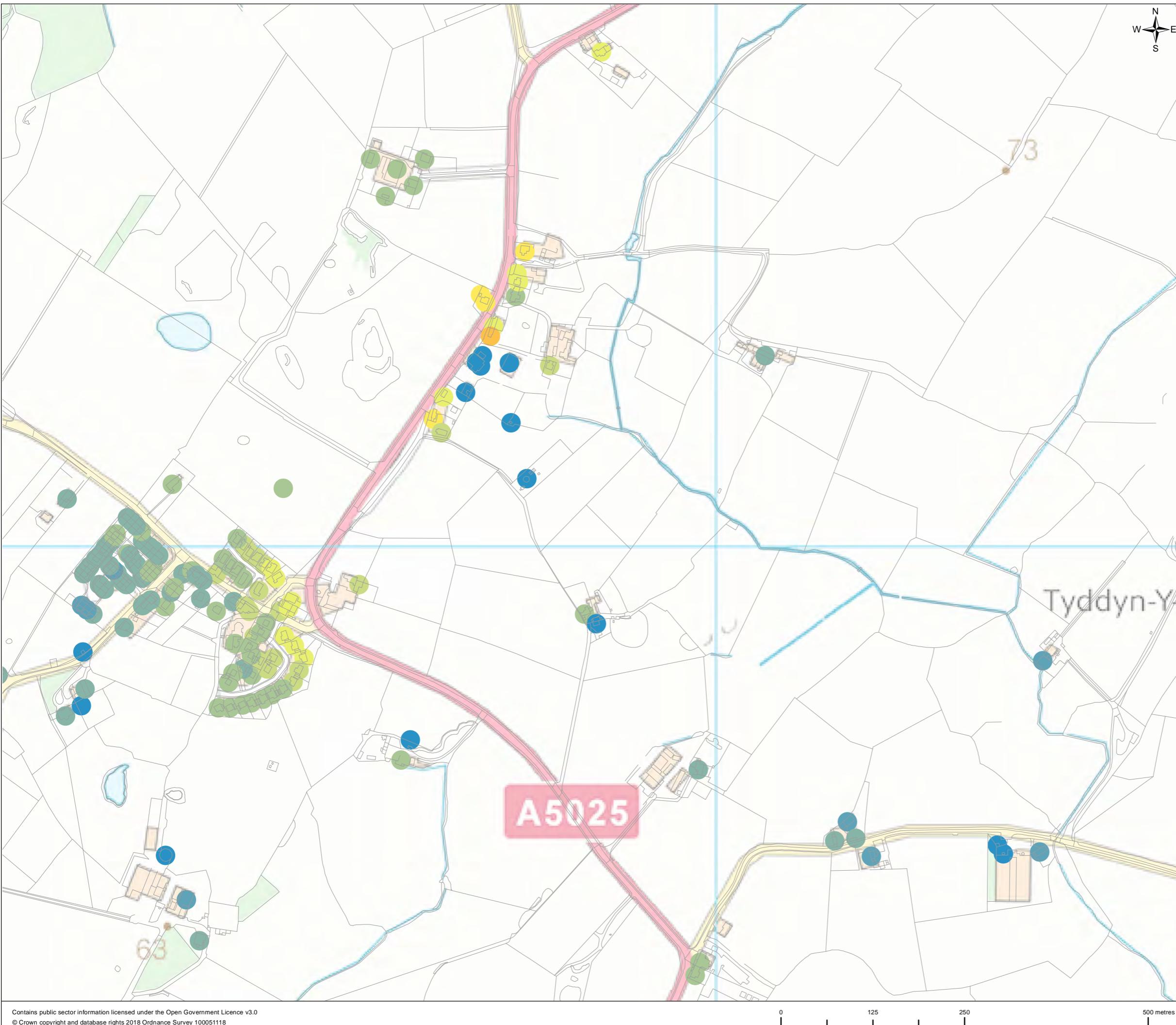
WYLFA NEWYDD PROJECT  
ENVIRONMENTAL STATEMENT

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Jacobs No.		60PO80AS				
Client No.						
Drawing No.		60PO80AS_NOISE_A5025_ONLINE				
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**FIGURE 2-3**

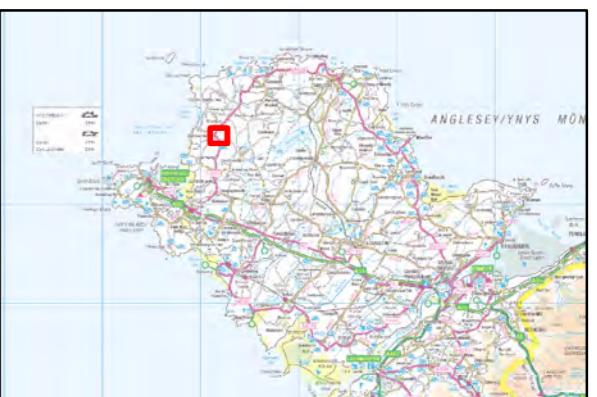
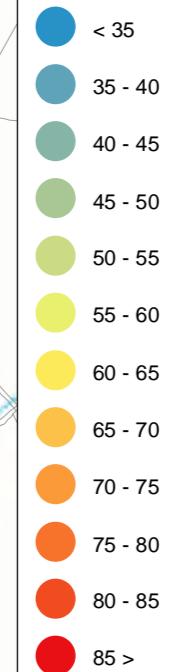




## FIGURE 2-3

## Legend

### Noise levels dB $L_{Aeq,16hour}$



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

**HORIZON**  
NUCLEAR POWER

WYLFA NEWYDD PROJECT  
ENVIRONMENTAL STATEMENT

REQUEST FOR NON-MATERIAL CHANGE:  
NARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE  
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR  
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	

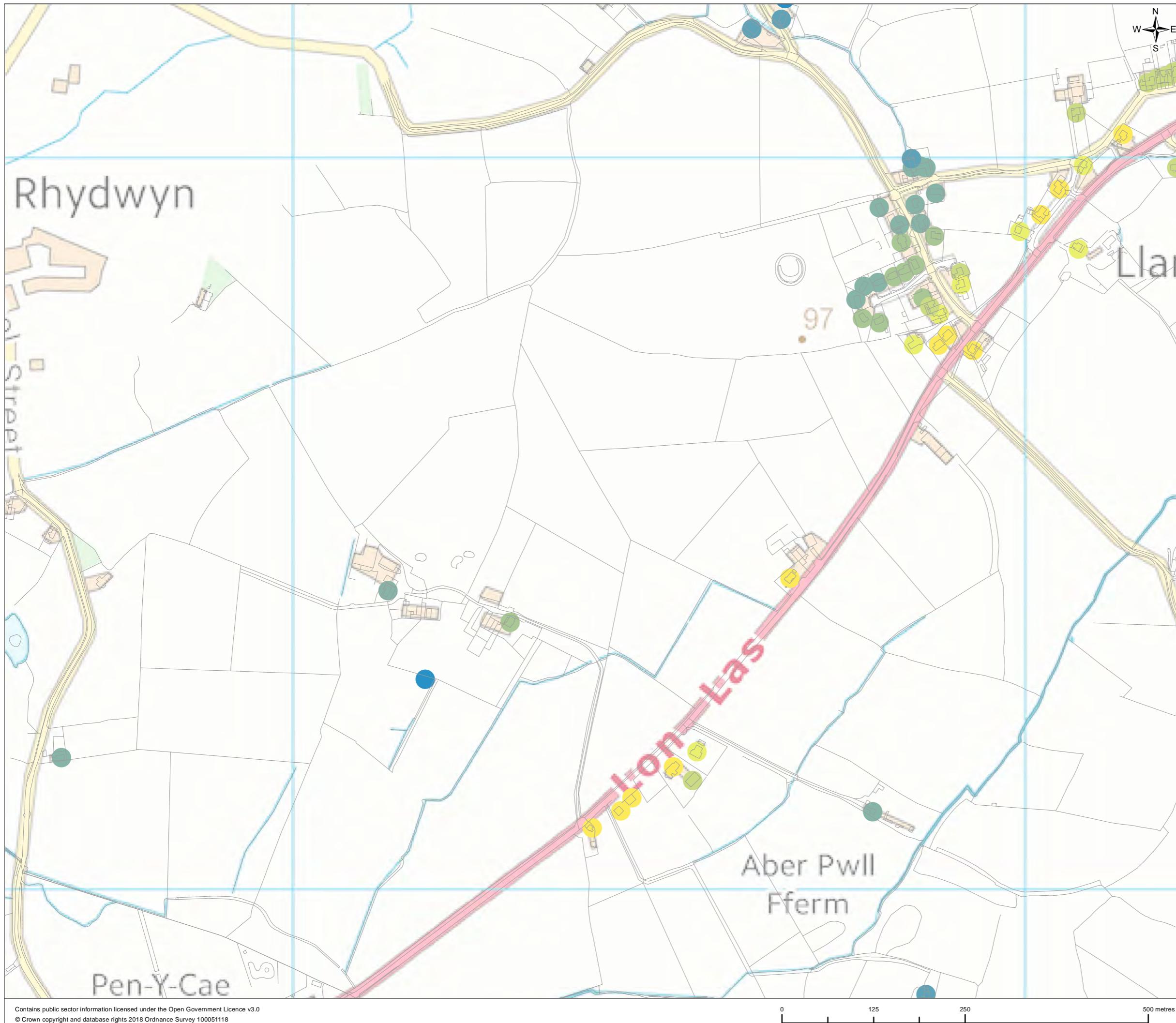
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Ref. No.	

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0                    125                    250                    500 metres

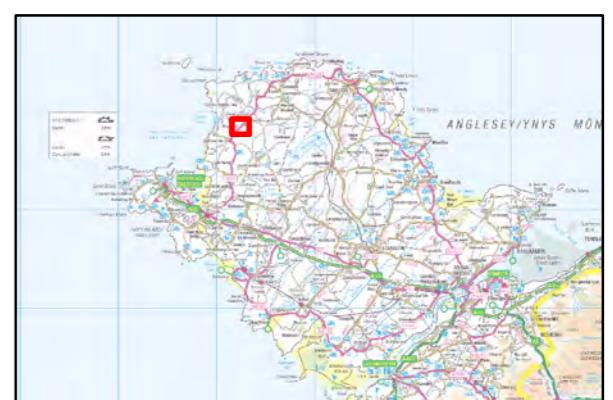
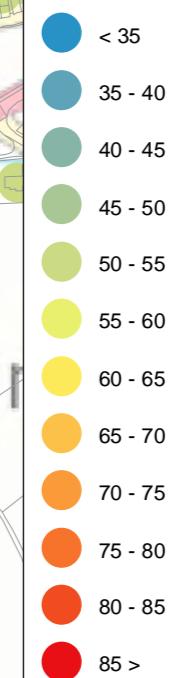
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## FIGURE 2-3

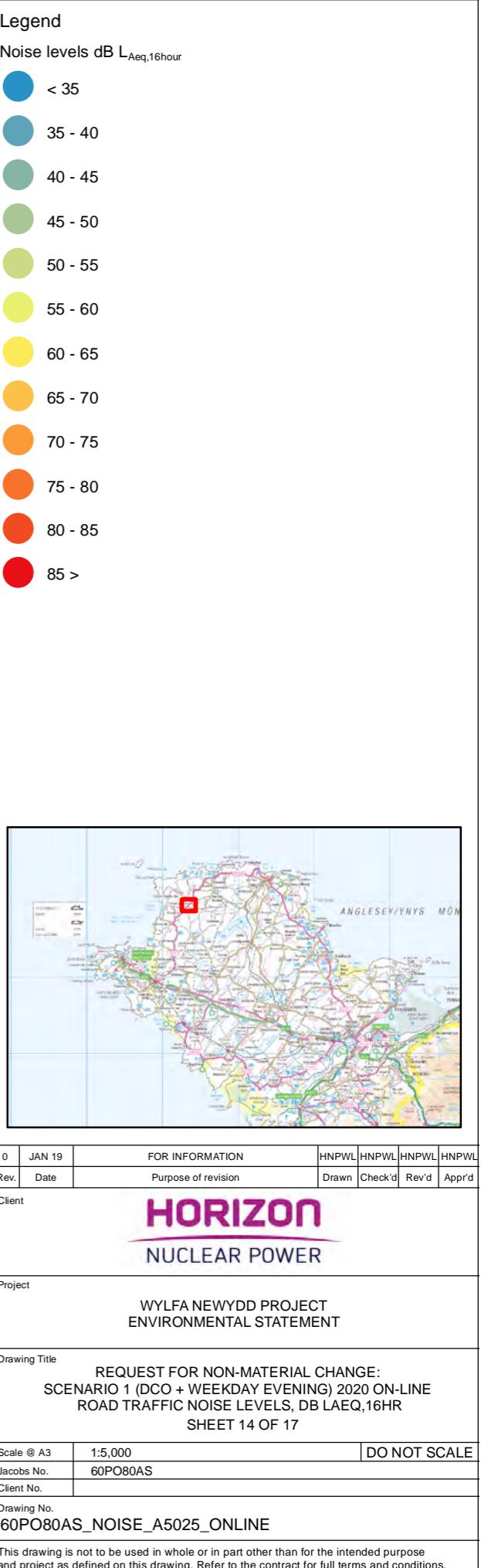
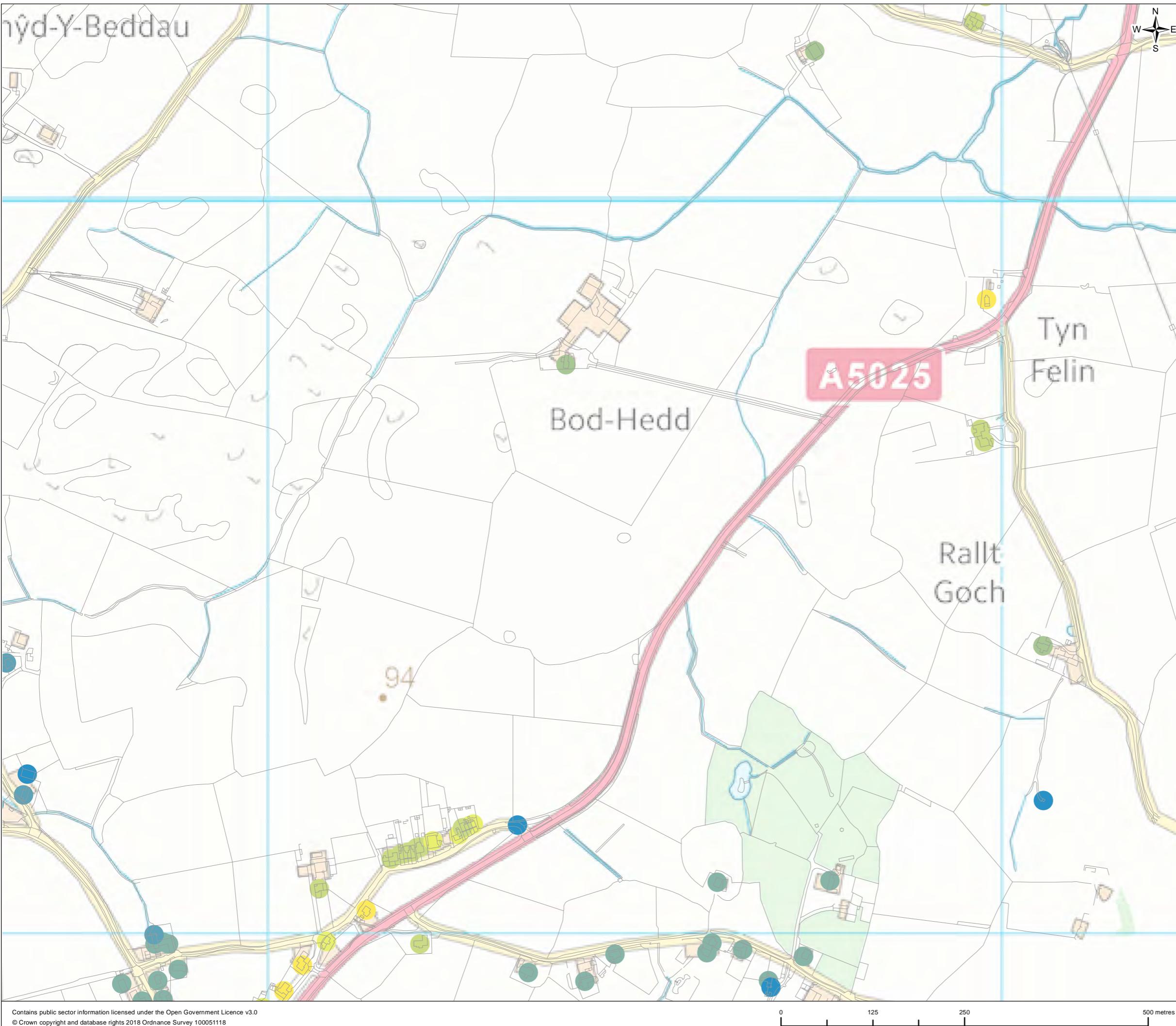
## Legend

## Noise levels dB L<sub>Aeq,16hour</sub>

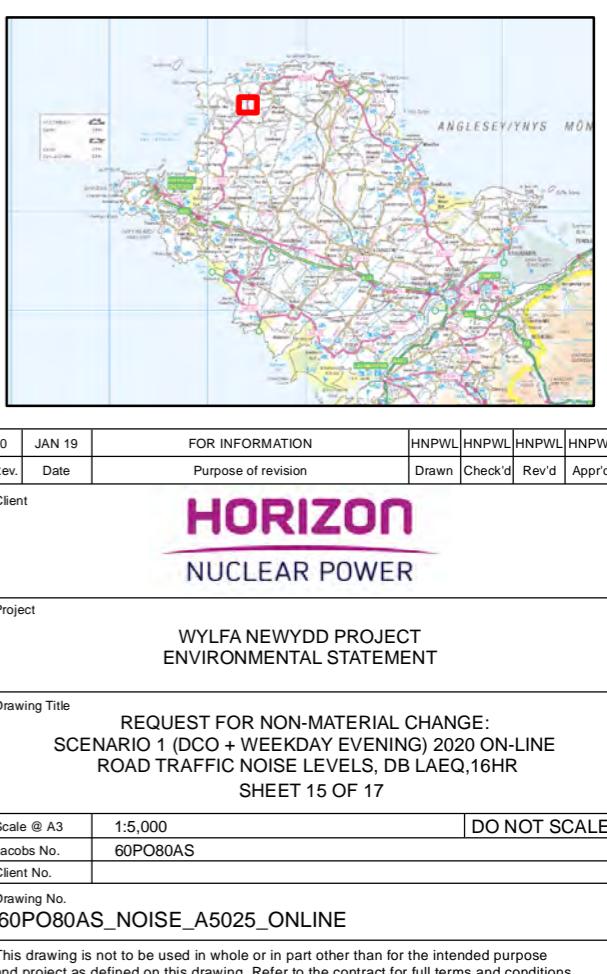
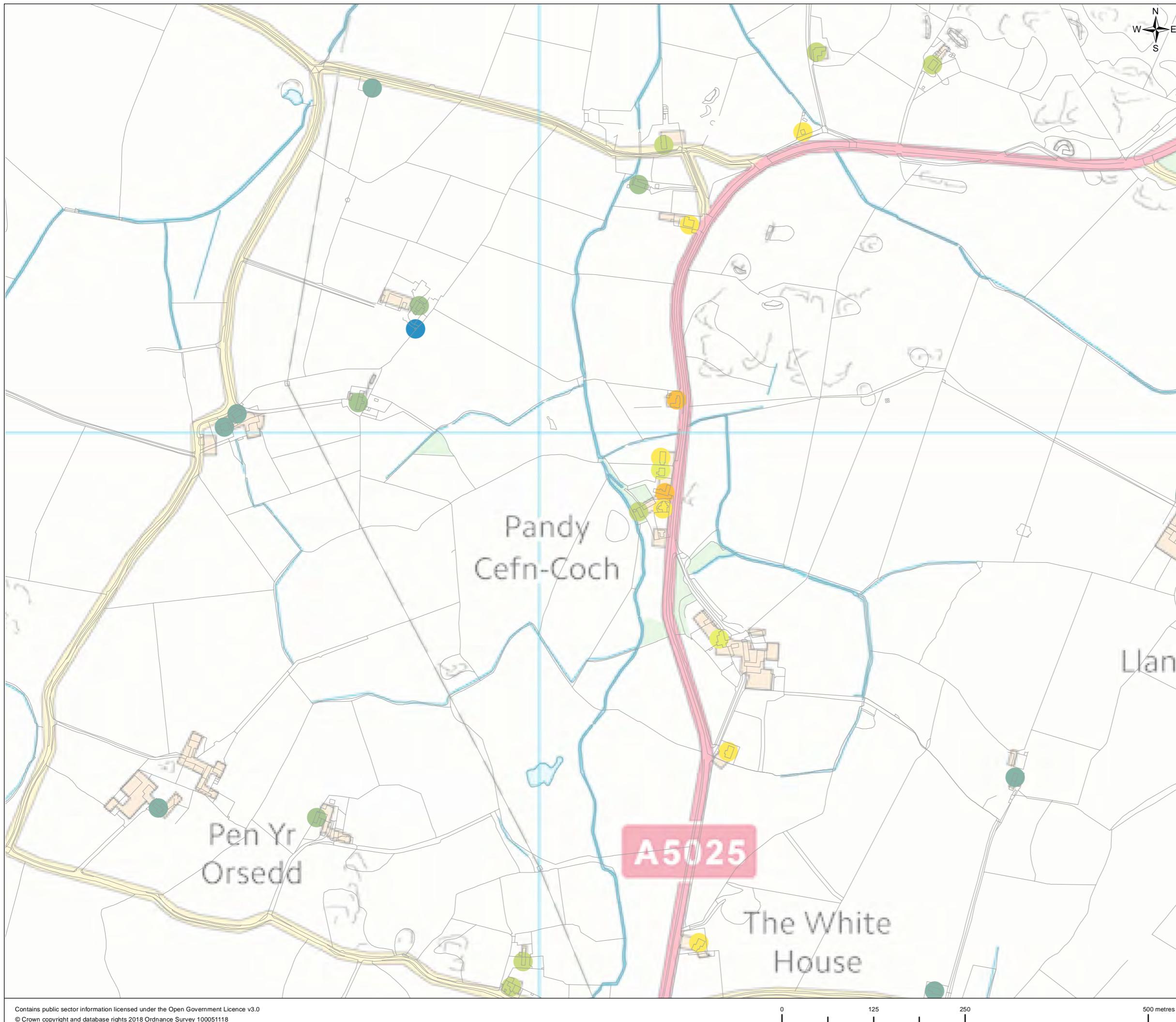


0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd
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 <p><b>HORIZON</b> NUCLEAR POWER</p>						
Project						
<p style="text-align: center;"><b>WYLFA NEWYDD PROJECT</b> <b>ENVIRONMENTAL STATEMENT</b></p>						
Drawing Title						
<p style="text-align: center;"><b>REQUEST FOR NON-MATERIAL CHANGE:</b>  <b>SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE</b>  <b>ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR</b>  <b>SHEET 13 OF 17</b></p>						
Scale @ A3	1:5,000		DO NOT SCALE			
Jacobs No. 60PO80AS						
Client No.						
Drawing No. <b>60PO80AS_NOISE_A5025_ONLINE</b>						
<p>This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.</p>						

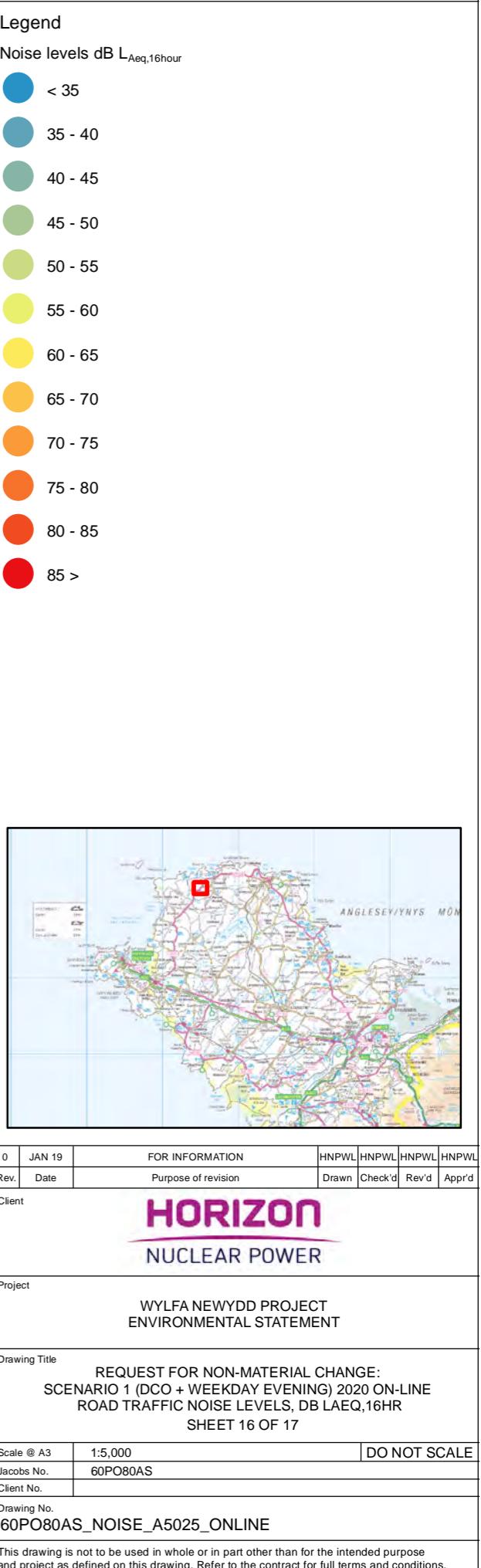
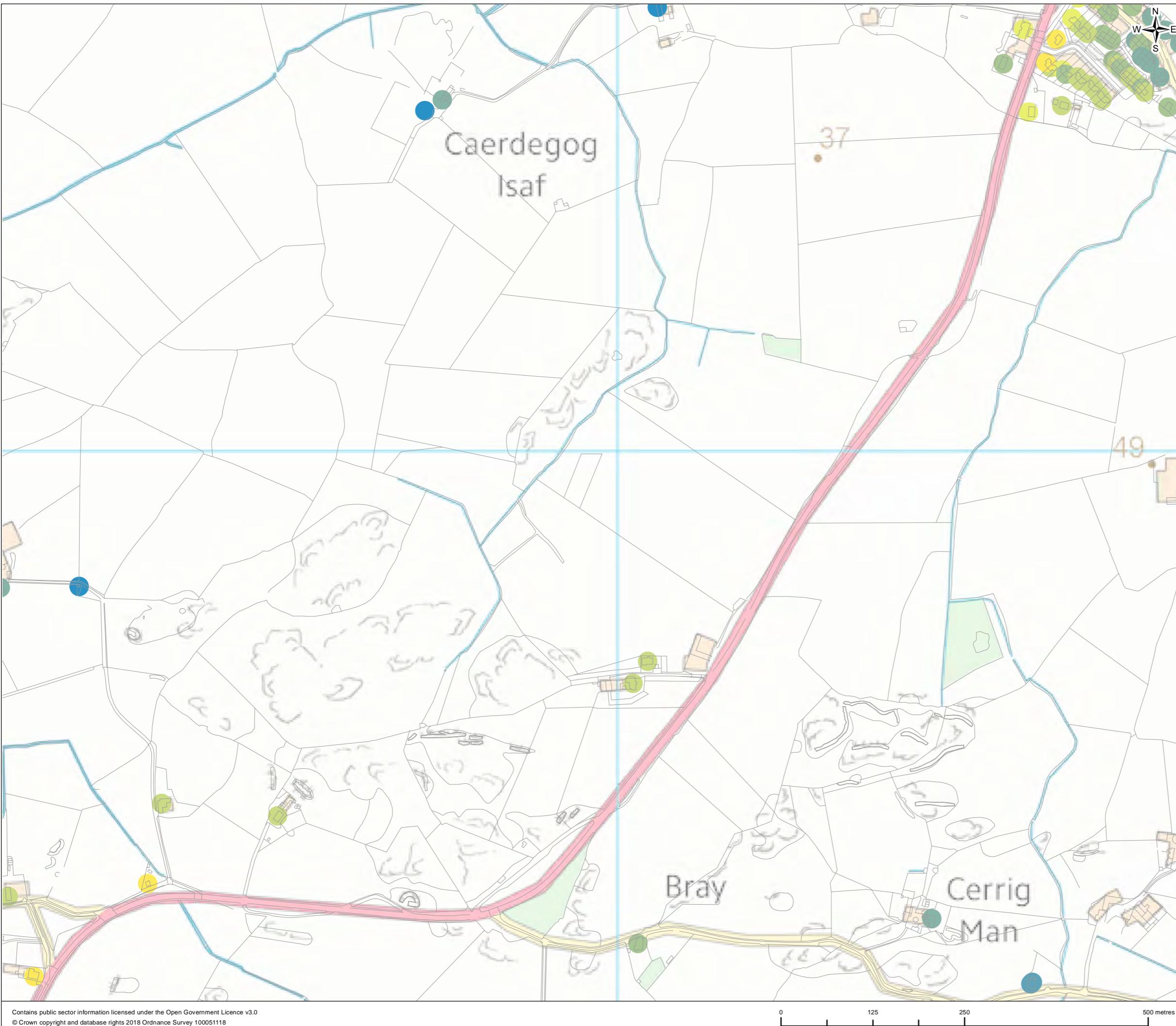
FIGURE 2-3



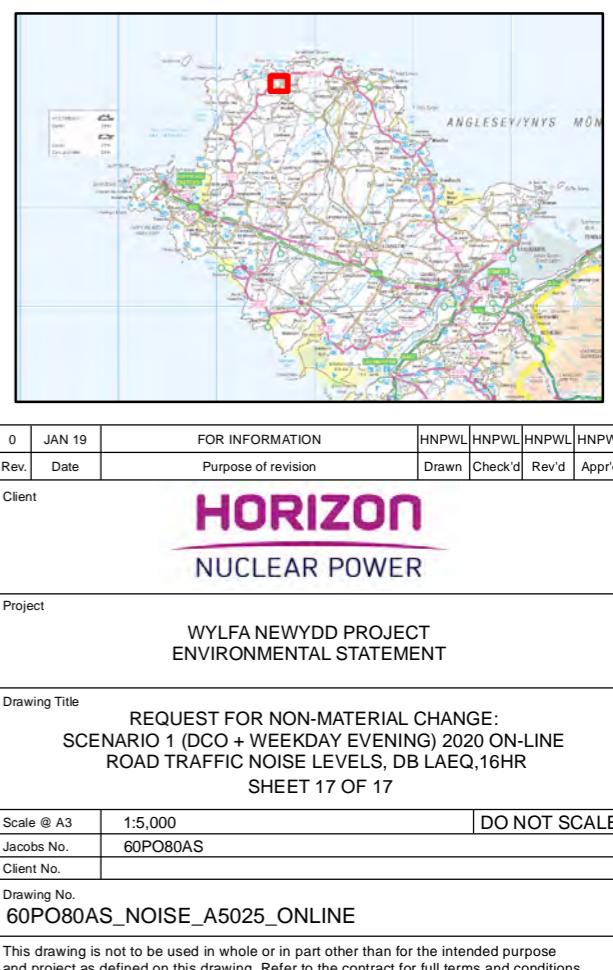
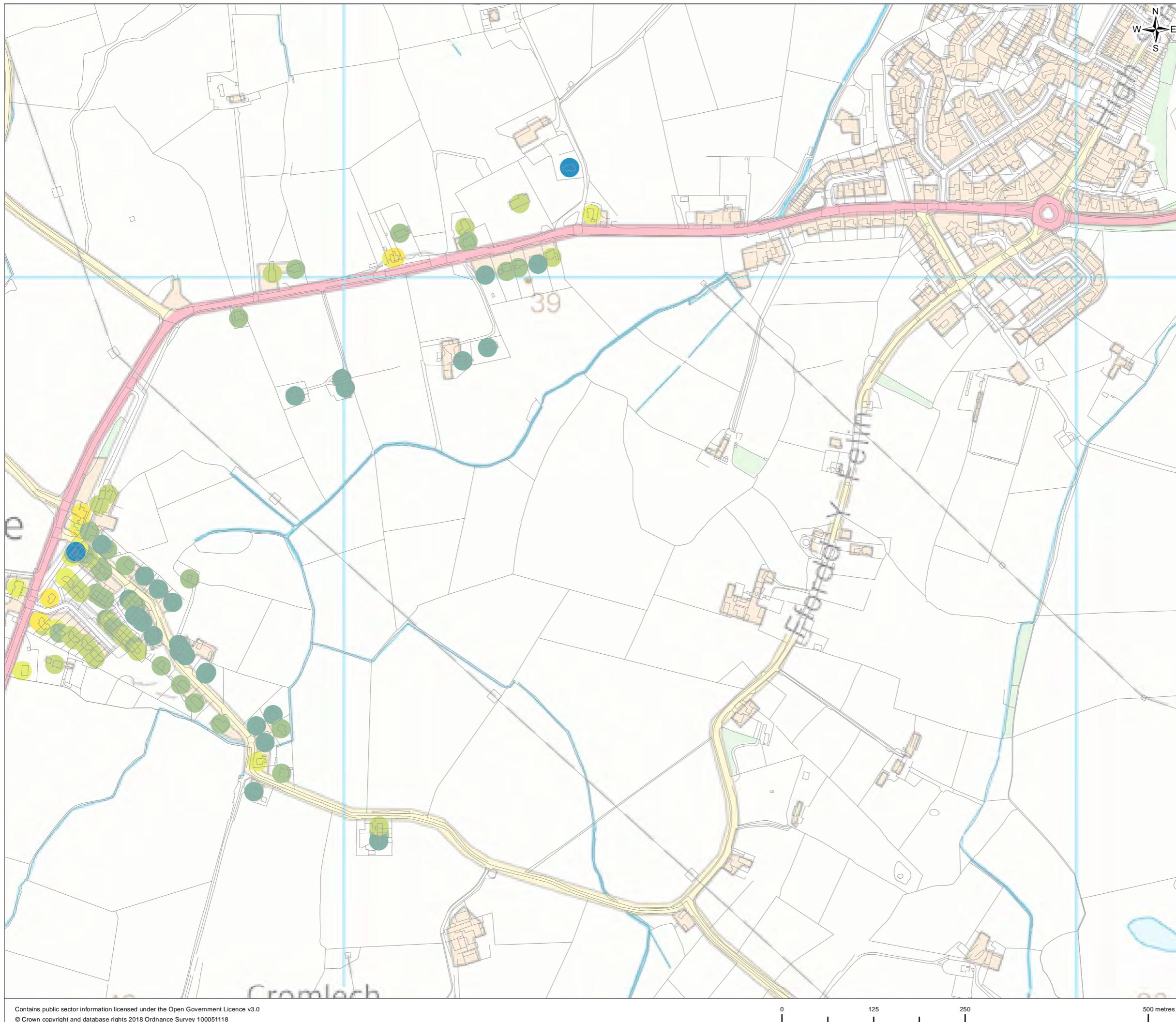
**FIGURE 2-3**

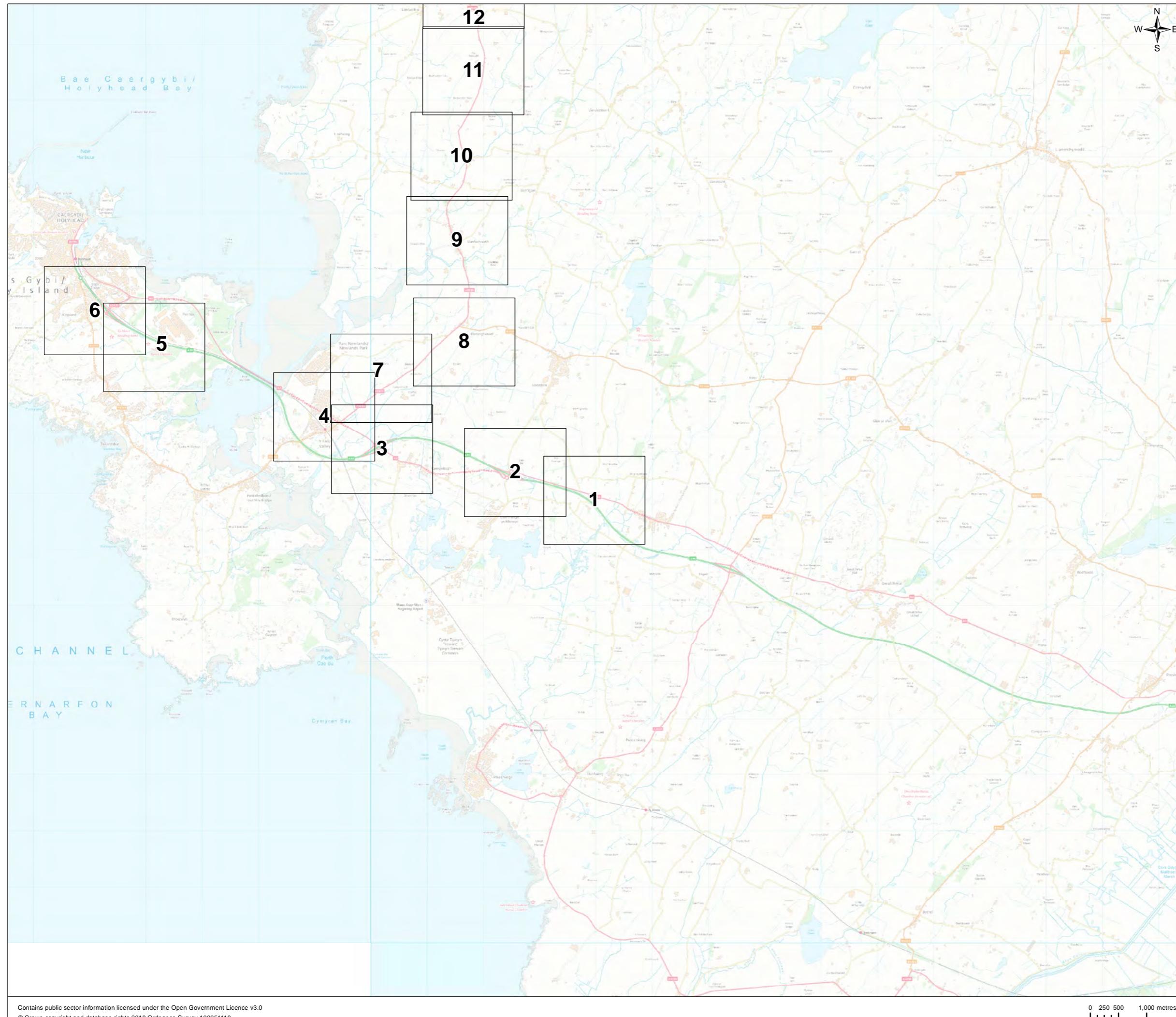


**FIGURE 2-3**



**FIGURE 2-3**

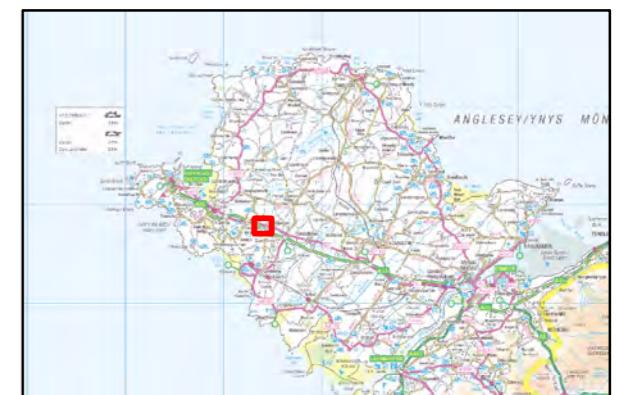




## OVERVIEW

### Legend

Figure Sheet



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'd

**HORIZON**  
NUCLEAR POWER

ANGLESEY/YNYS MÔN  
WYLFA NEWYDD PROJECT  
ENVIRONMENTAL STATEMENT

Drawing Title  
REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1  
(DCO + WEEKDAY EVENING) 2023 OFF-LINE  
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR  
OVERVIEW

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Jacobs No.	60PO80AS	

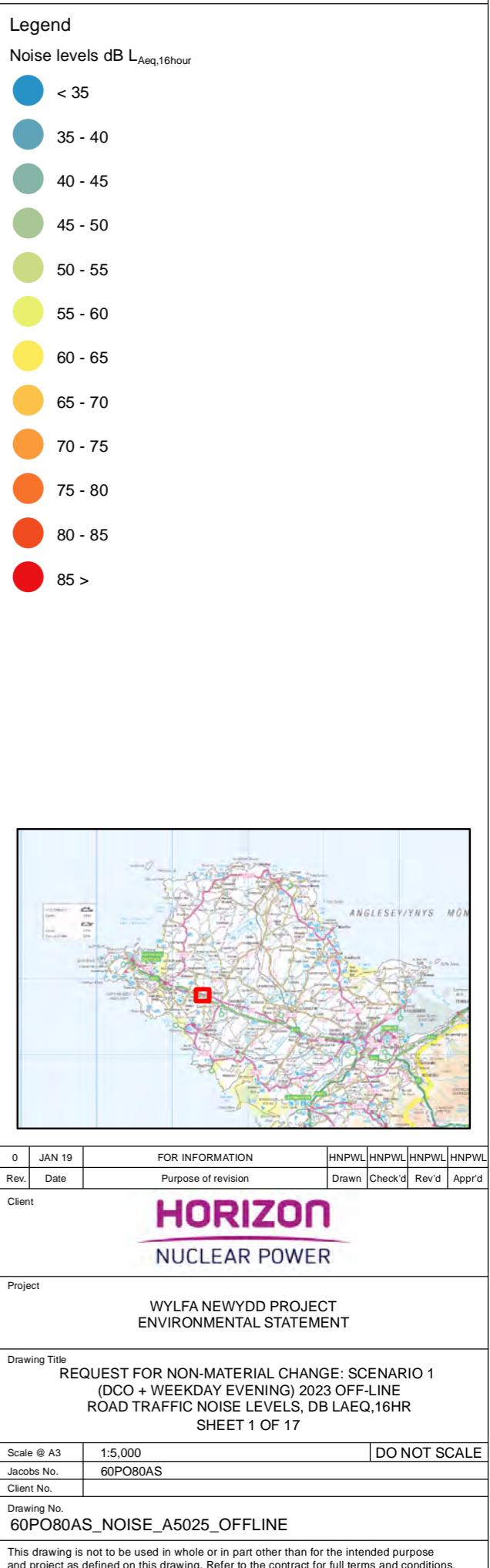
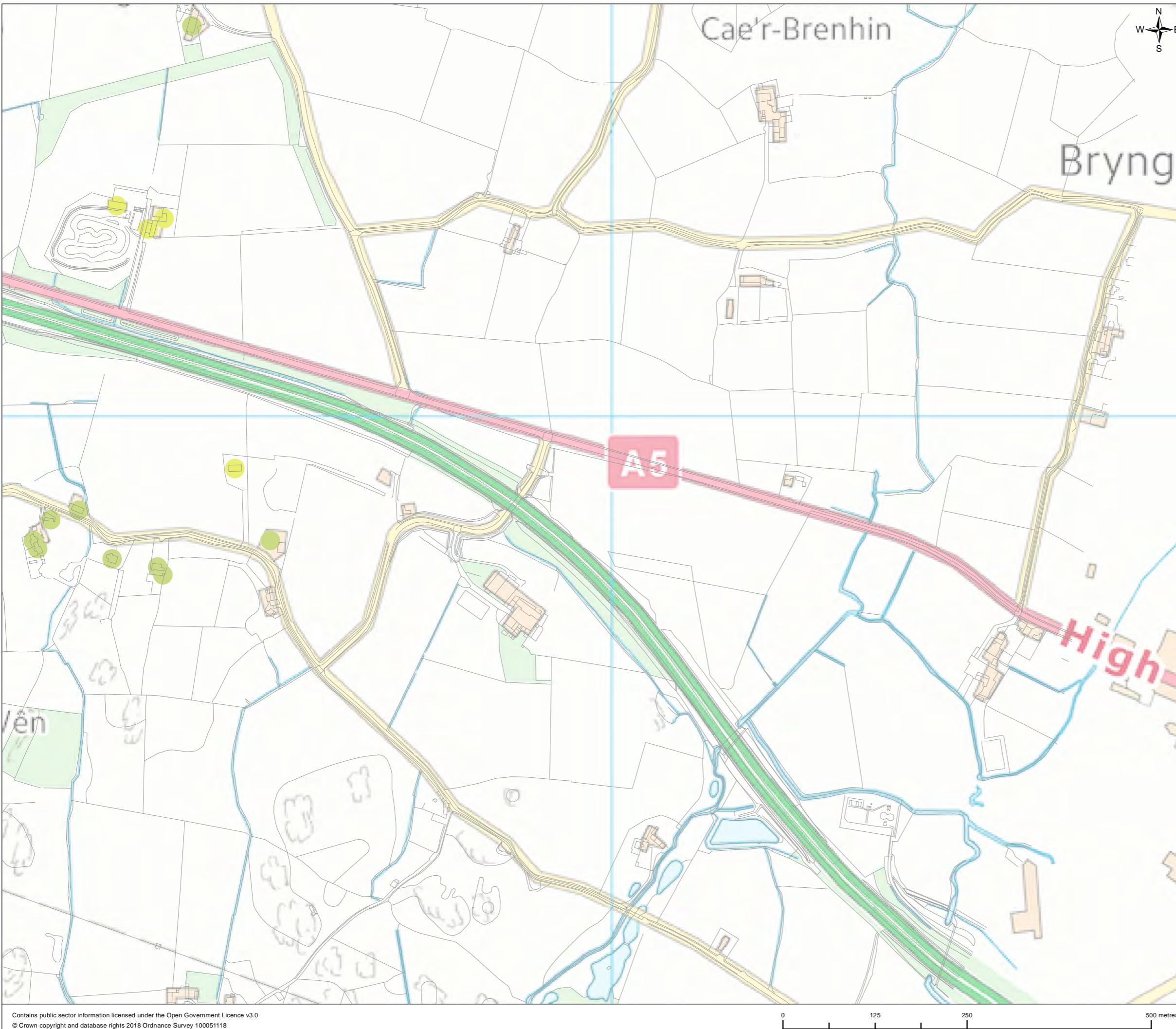
Client No.  
Drawing No.  
60PO80AS\_NOISE\_A5025\_OFFLINE\_OVERVIEW

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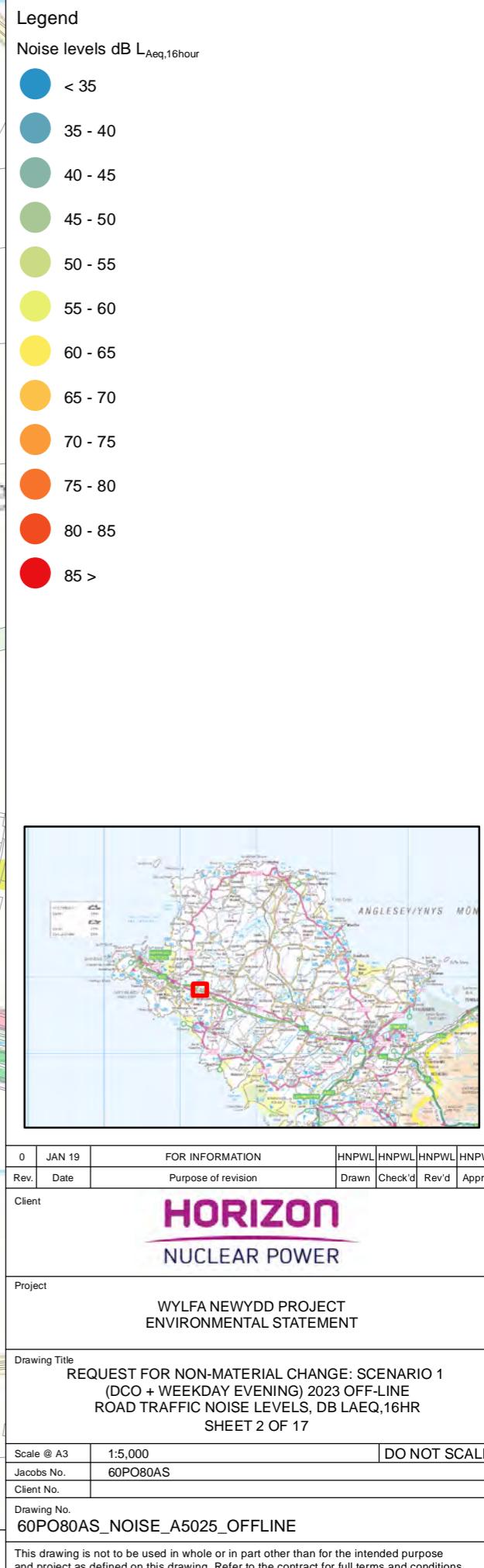
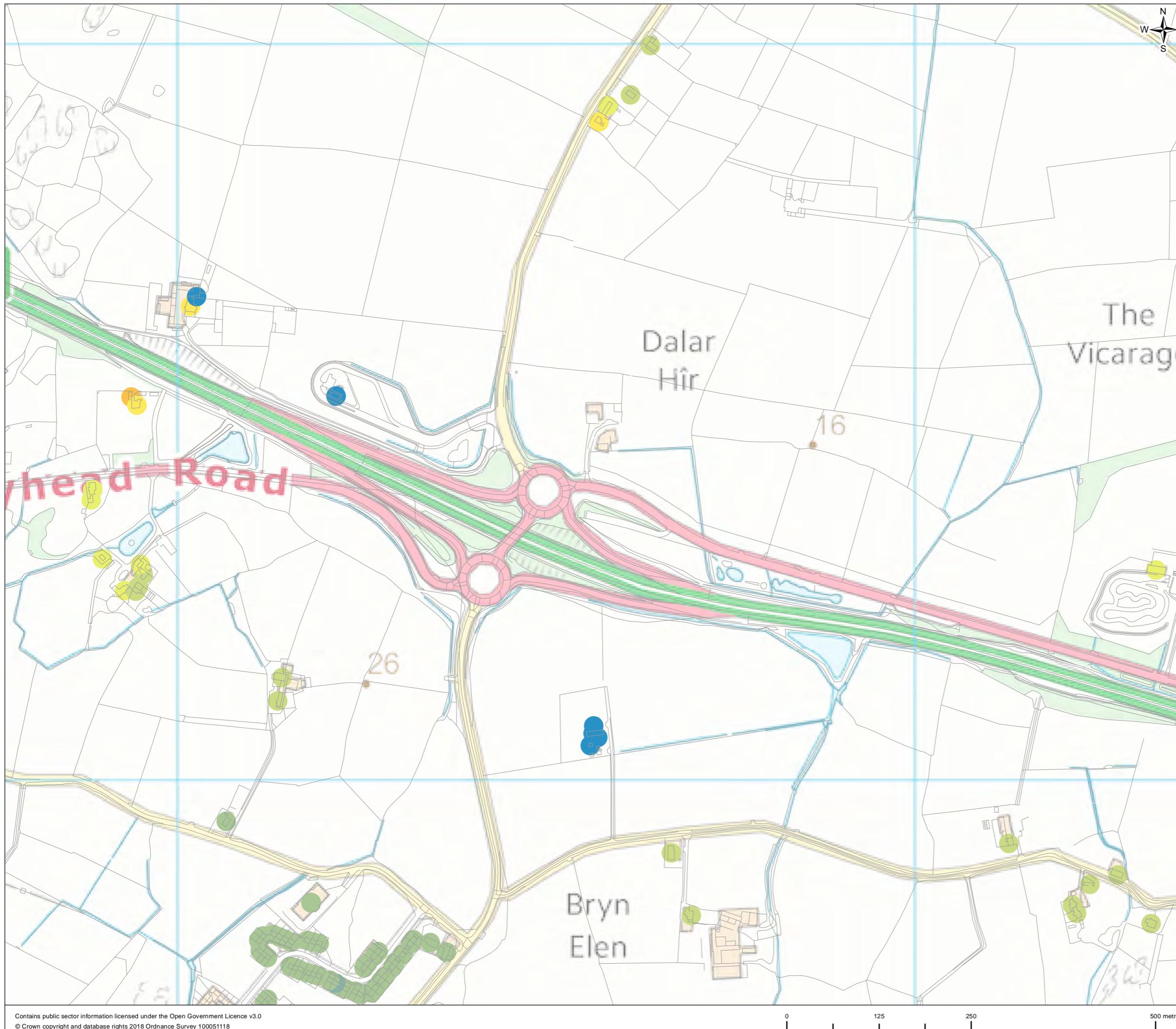
0 250 500 1,000 metres

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and project as defined on this drawing. Refer to the contract for full terms and conditions.

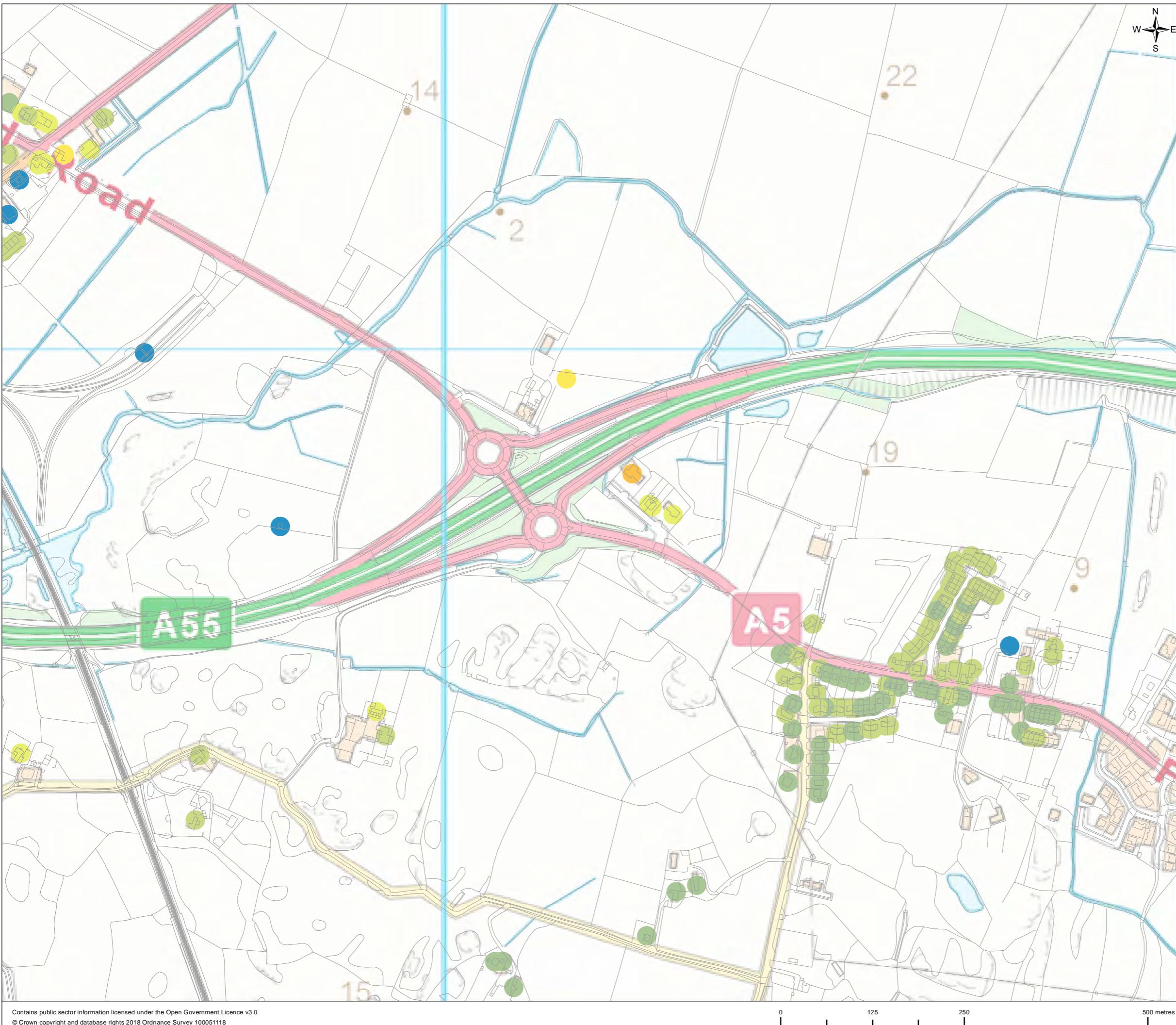
FIGURE 2-4



**FIGURE 2-4**



**FIGURE 2-4**



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd

**HORIZON**

NUCLEAR POWER

WYLFA NEWYDD PROJECT  
ENVIRONMENTAL STATEMENT

**Drawing Title:**  
REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1  
(DCO + WEEKDAY EVENING) 2023 OFF-LINE  
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR  
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Jacobs No.	60PO80AS
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Client No.	
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Drawing No.	60PO80AS_NOISE_A5025_OFFLINE
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FIGURE 2-4

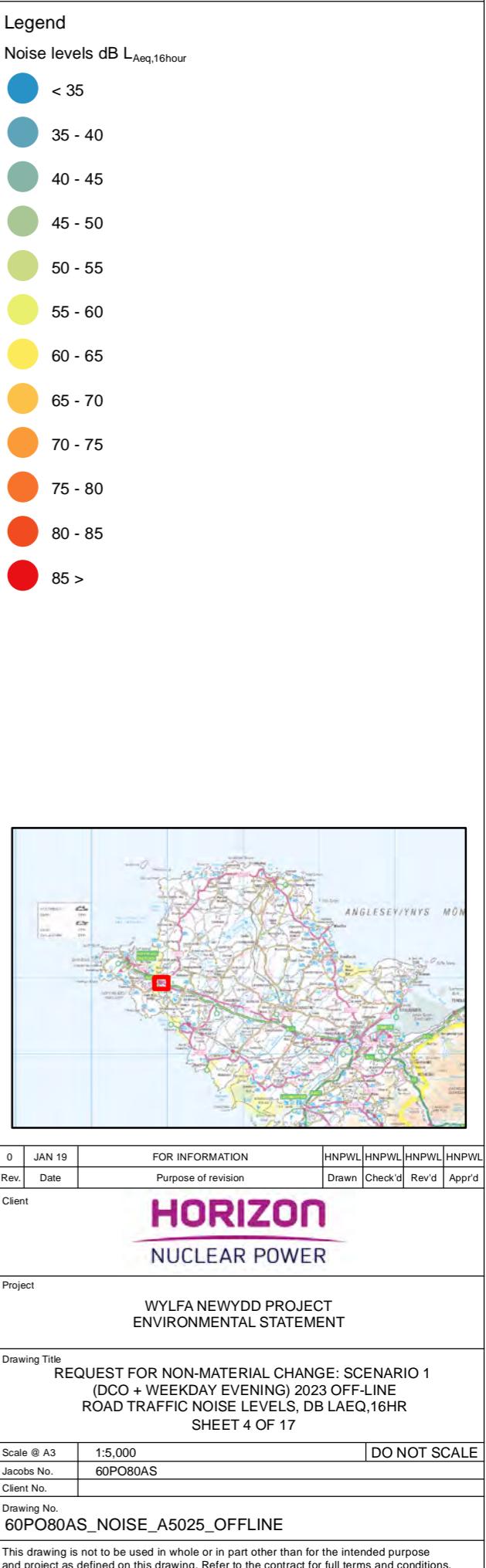
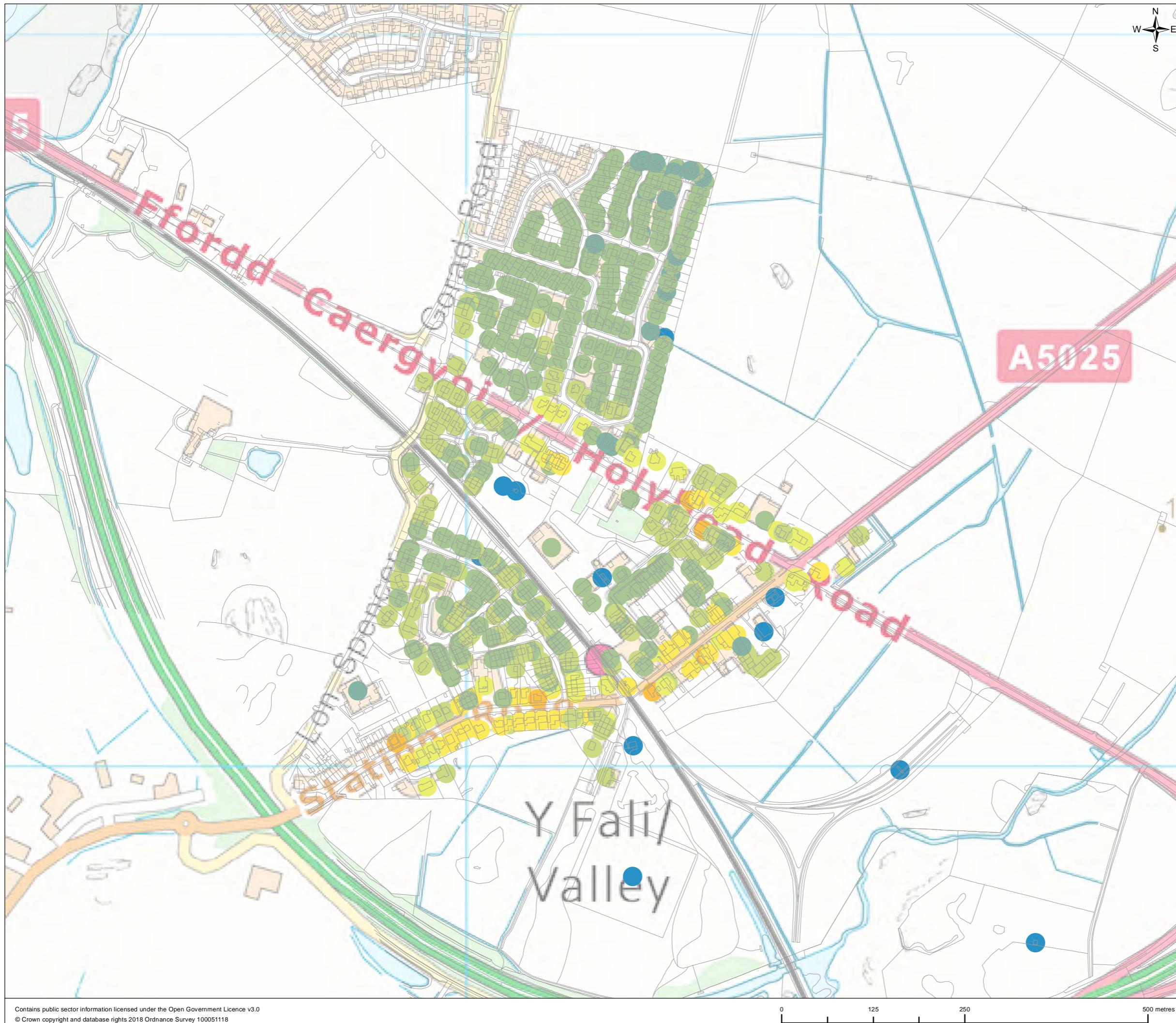
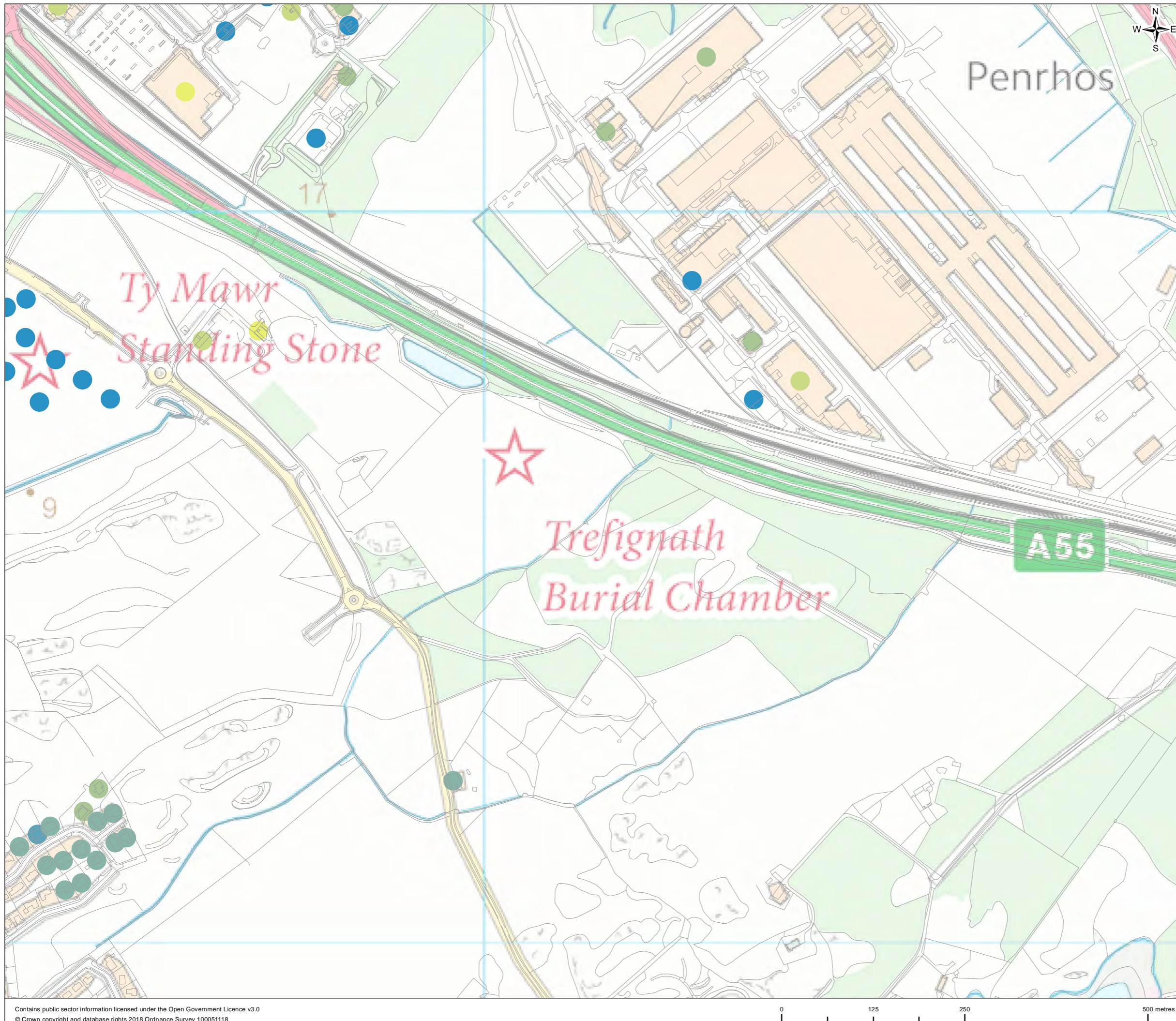
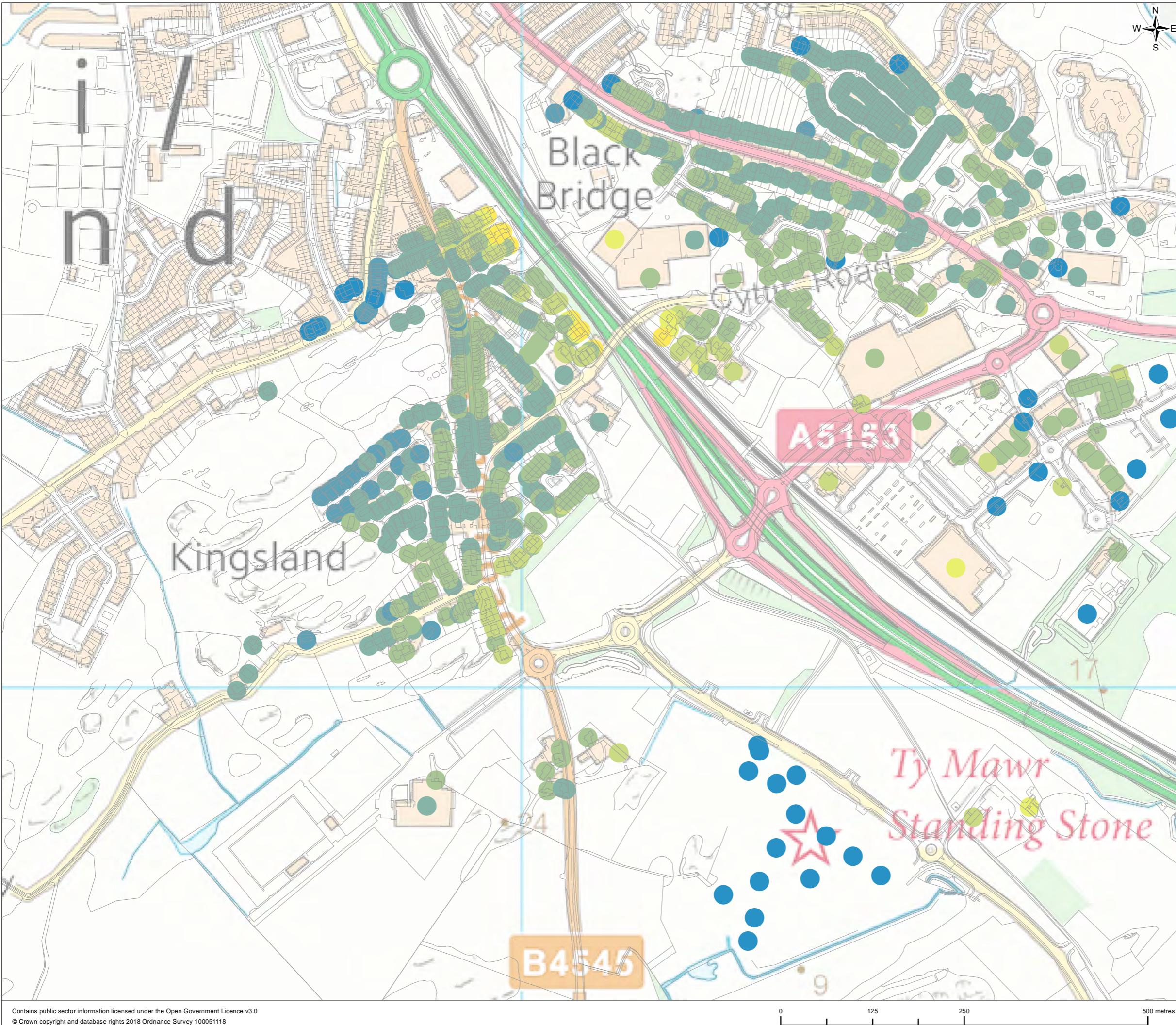


FIGURE 2-4



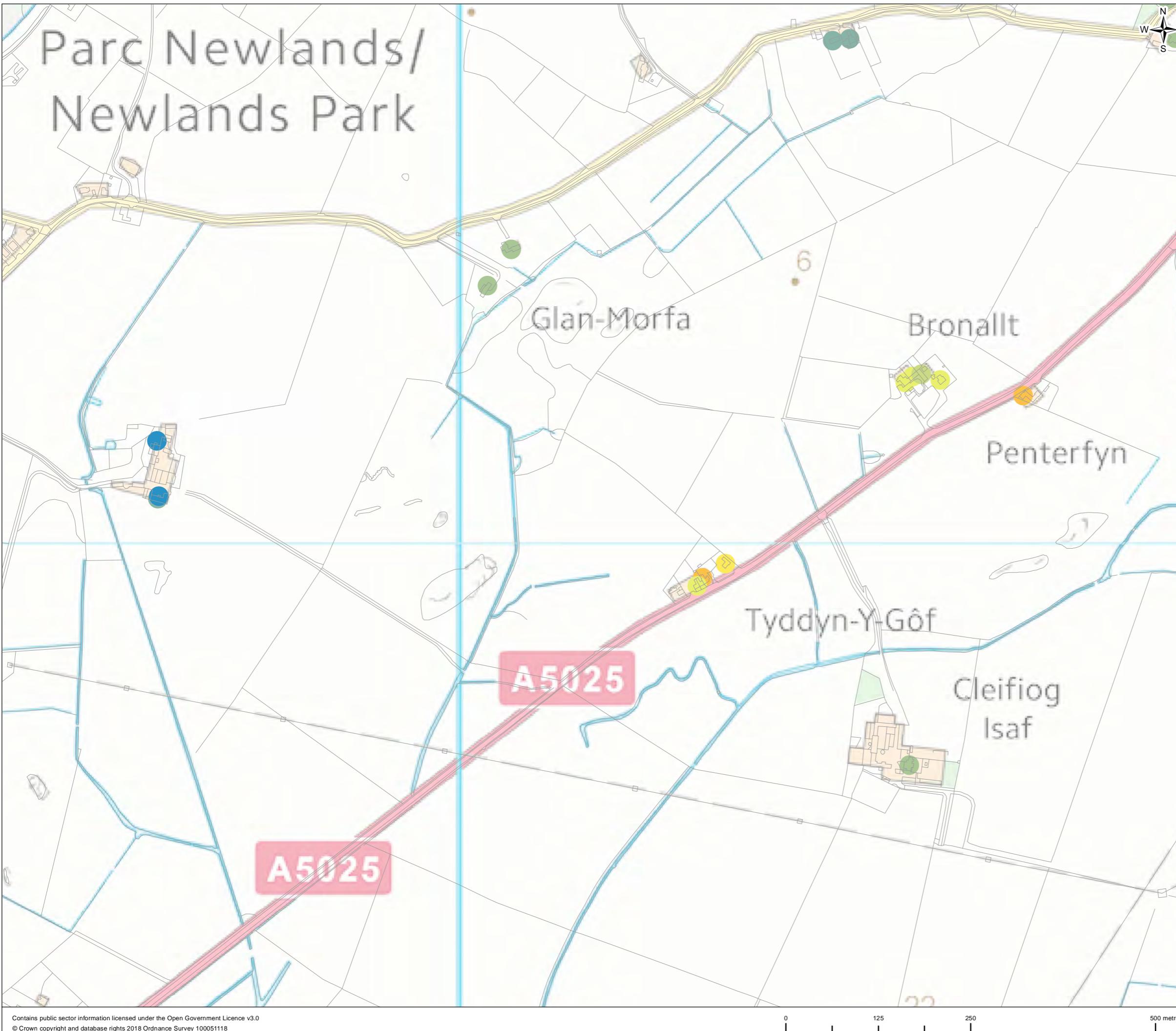
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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd
Client						
HORIZON						
NUCLEAR POWER						
Project						
WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT						
Drawing Title						
REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1 (DCO + WEEKDAY EVENING) 2023 OFF-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR						
SHEET 5 OF 17						
Scale @ A3	1:5,000	DO NOT SCALE				
Jacobs No.	60PO80AS					
Client No.						
Drawing No.	60PO80AS_NOISE_A5025_OFFLINE					
This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.						

FIGURE 2-4

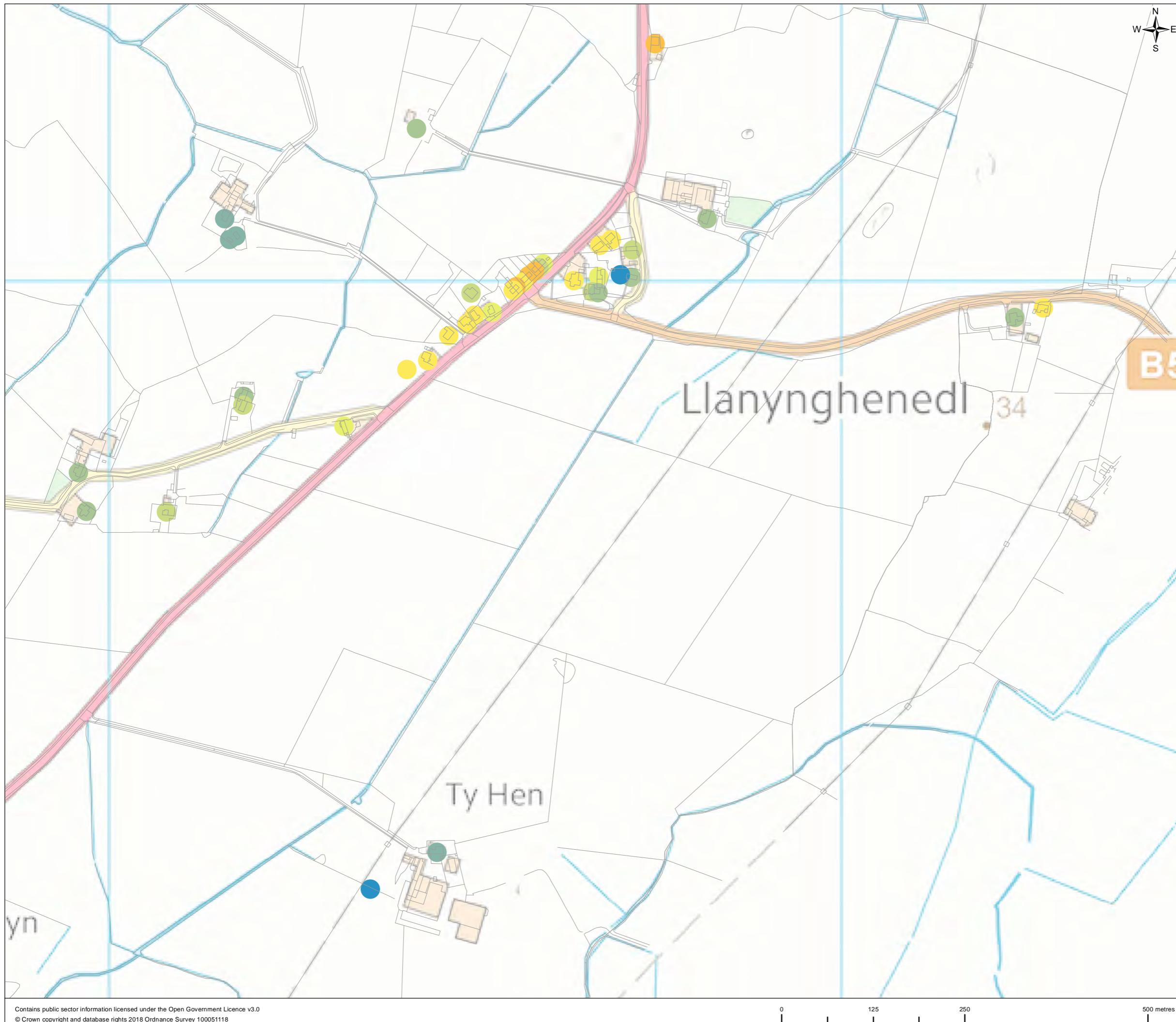


0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd
Client						
<b>HORIZON</b> NUCLEAR POWER						
Project						
WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT						
Drawing Title						
REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1 (DCO + WEEKDAY EVENING) 2023 OFF-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR						
SHEET 6 OF 17						
Scale @ A3	1:5,000	DO NOT SCALE				
Jacobs No.	60PO80AS					
Client No.						
Drawing No.	60PO80AS_NOISE_A5025_OFFLINE					
This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.						

FIGURE 2-4

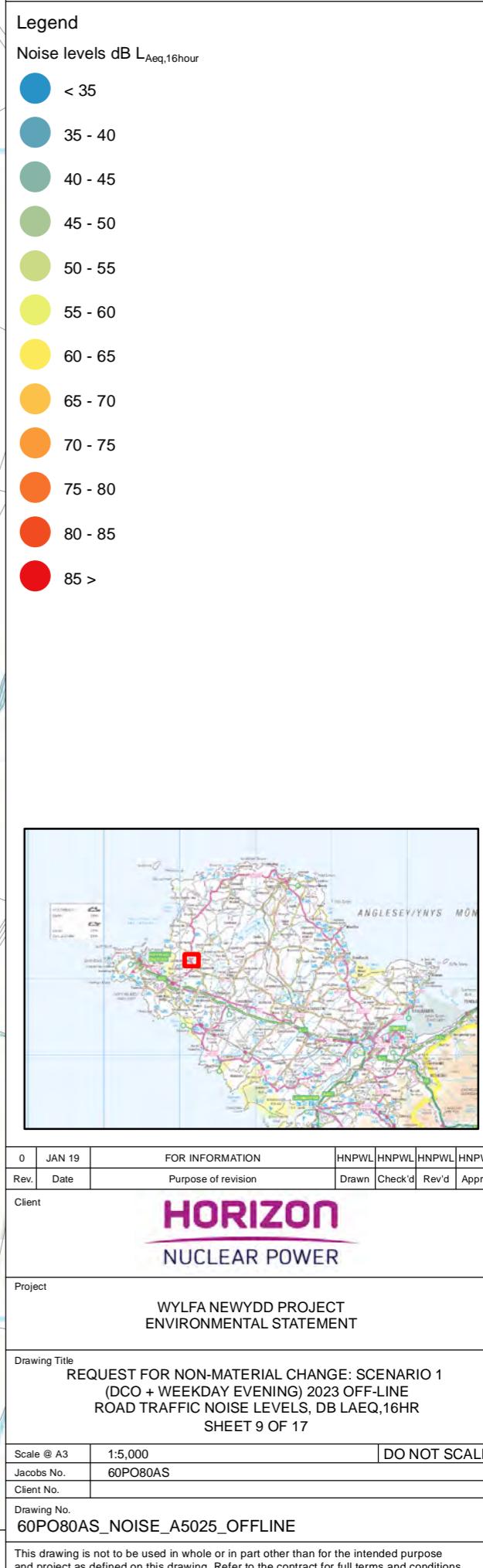
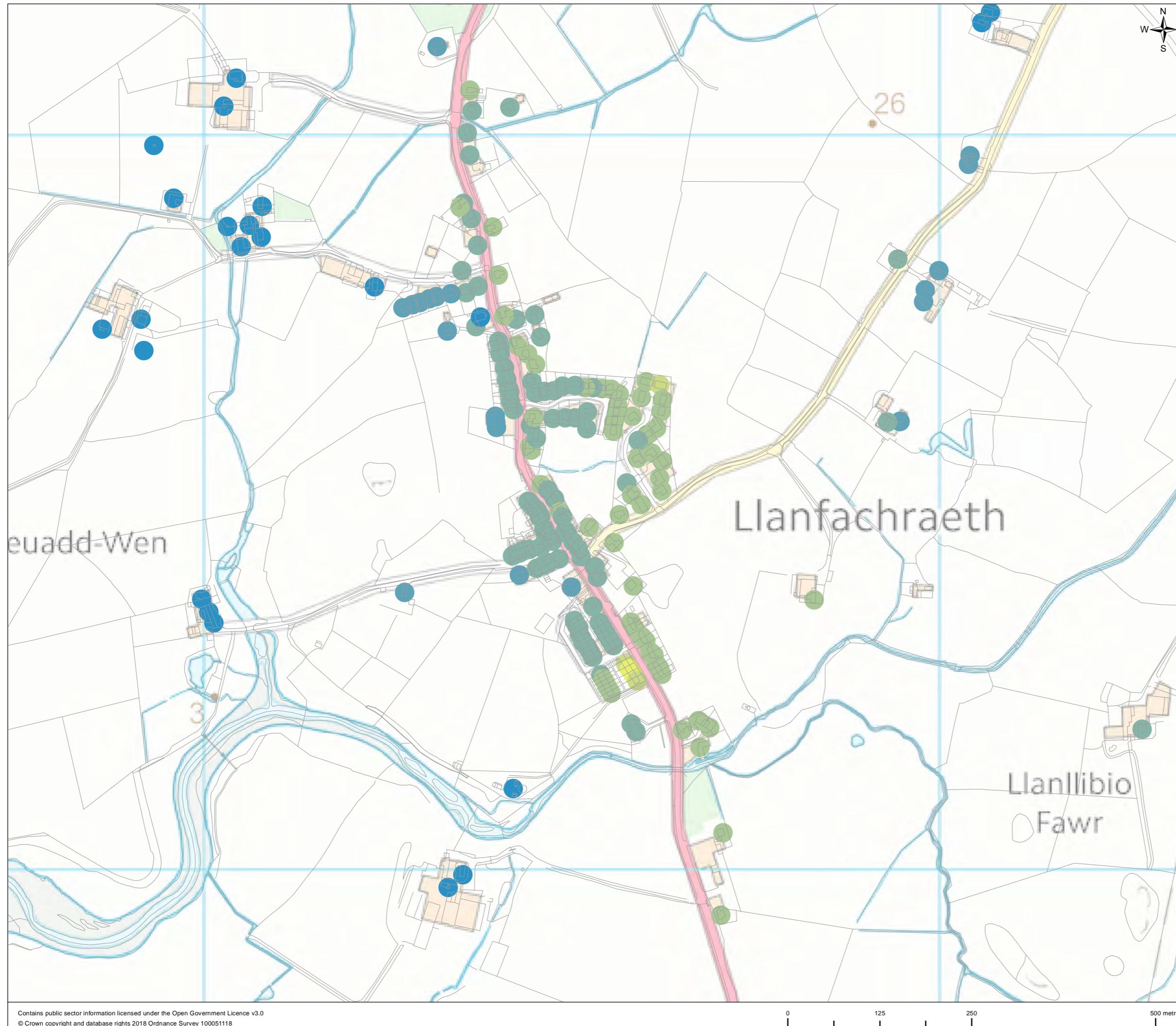


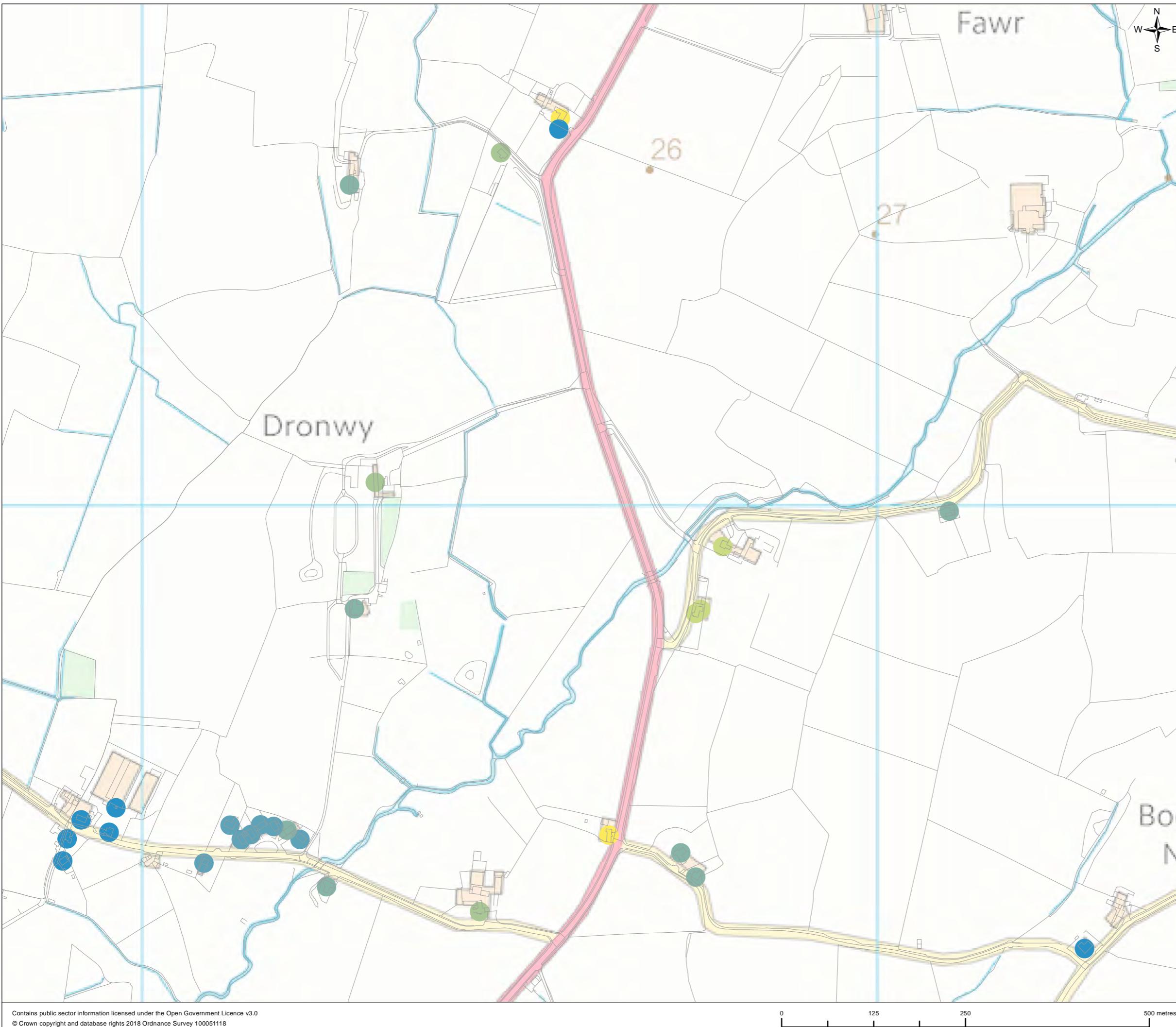
**FIGURE 2-4**



Drawing Title					
REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1 (DCO + WEEKDAY EVENING) 2023 OFF-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR					
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd
Client					
<b>HORIZON</b> NUCLEAR POWER					
Project					
WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT					
Drawing No.					
60PO80AS_NOISE_A5025_OFFLINE					
Scale @ A3					
1:5,000					
DO NOT SCALE					
Jacobs No.					
60PO80AS					
Client No.					
Drawing No.					
60PO80AS_NOISE_A5025_OFFLINE					
This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.					

**FIGURE 2-4**

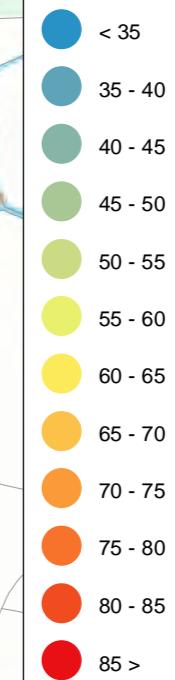




## FIGURE 2-4

### Legend

### Noise levels dB L<sub>Aeq,16hour</sub>



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

**HORIZON**  
NUCLEAR POWER

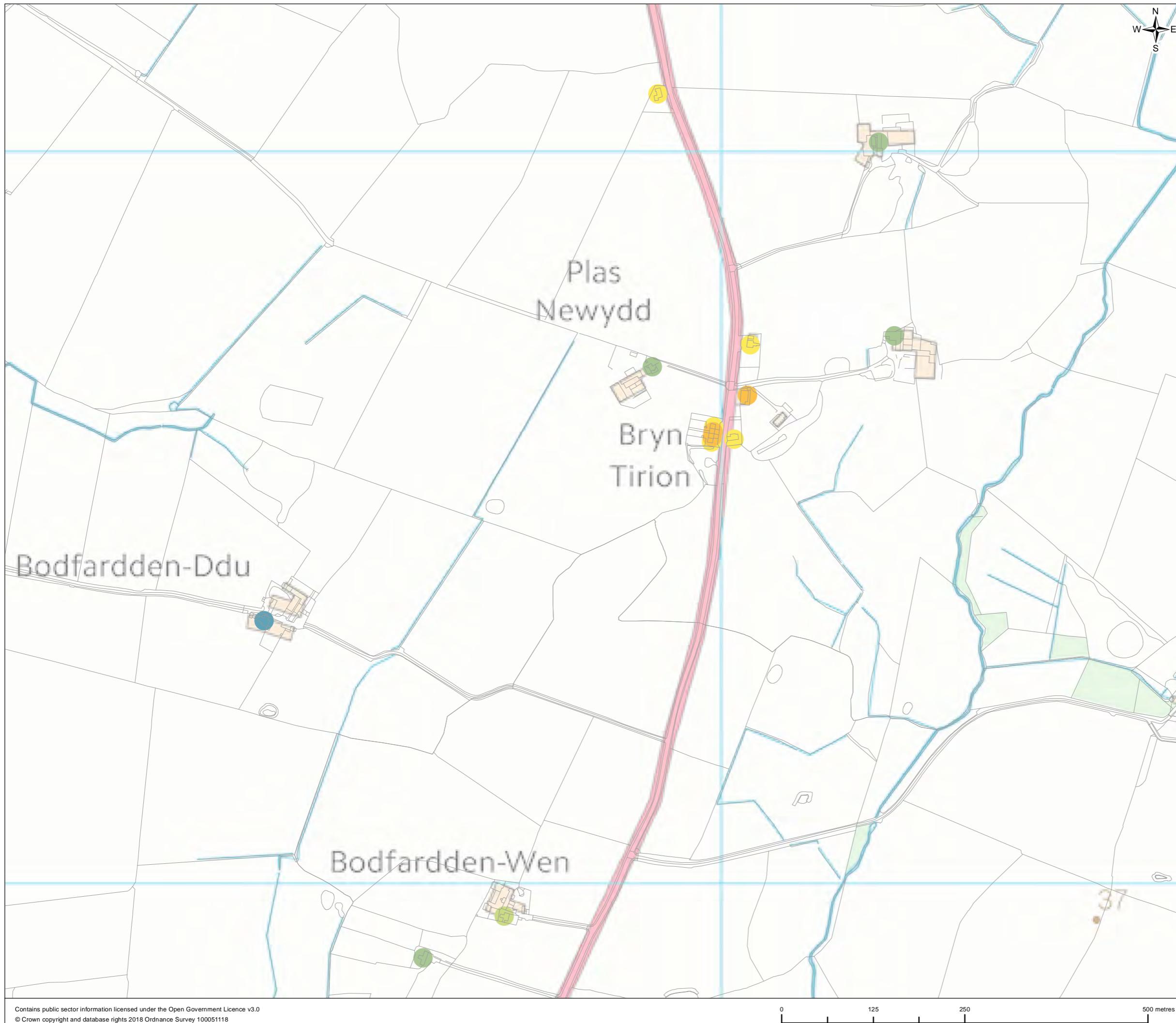
## WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT

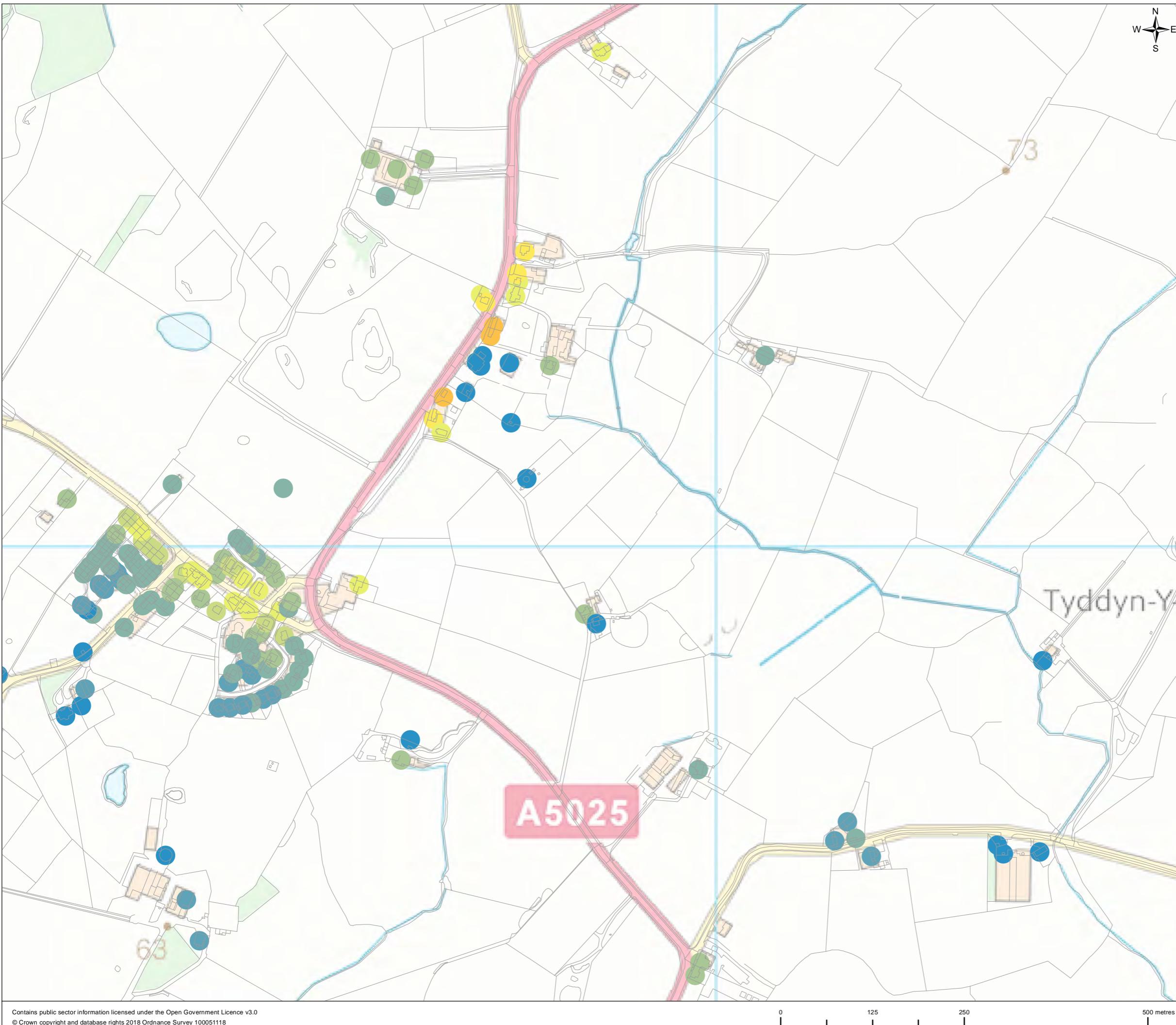
Drawing Title  
**REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1**  
**(DCO + WEEKDAY EVENING) 2023 OFF-LINE**  
**ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR**  
**SHEET 10 OF 17**

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	

This drawing is not to be used in whole or in part other than for the intended purpose

**FIGURE 2-4**

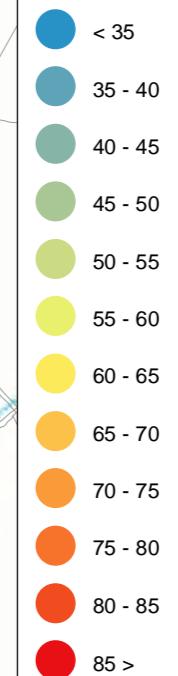




## FIGURE 2-4

## Legend

### Noise levels dB L<sub>Aeq,16hour</sub>



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

# HORIZON NUCLEAR POWER

## WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT

Drawing Title  
**REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1**  
**(DCO + WEEKDAY EVENING) 2023 OFF-LINE**  
**ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR**  
 **SHEET 12 OF 17**

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	

Drawing No. 100-10000

This drawing is not to be used in whole or in part other than for the intended purpose

FIGURE 2-4

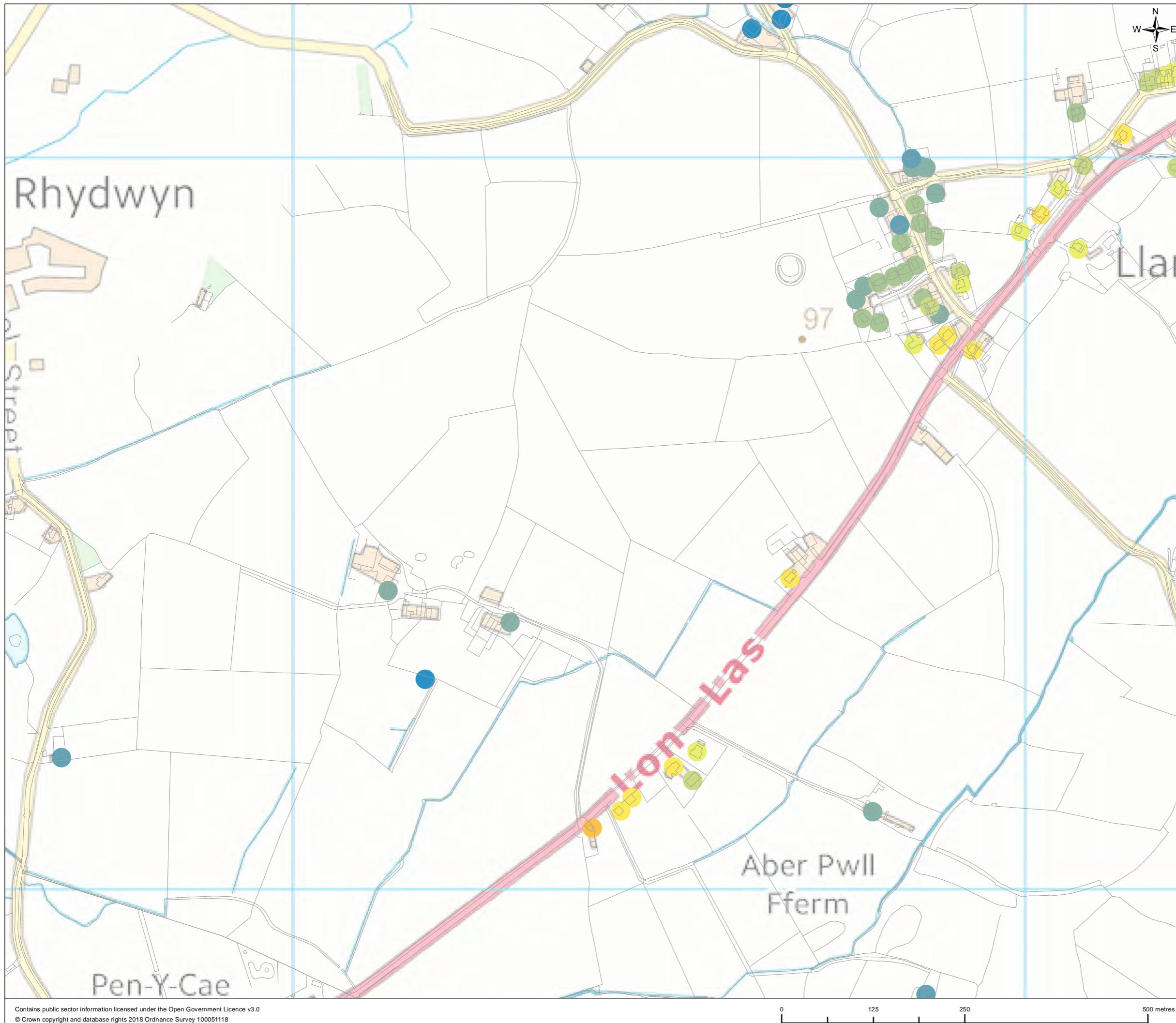
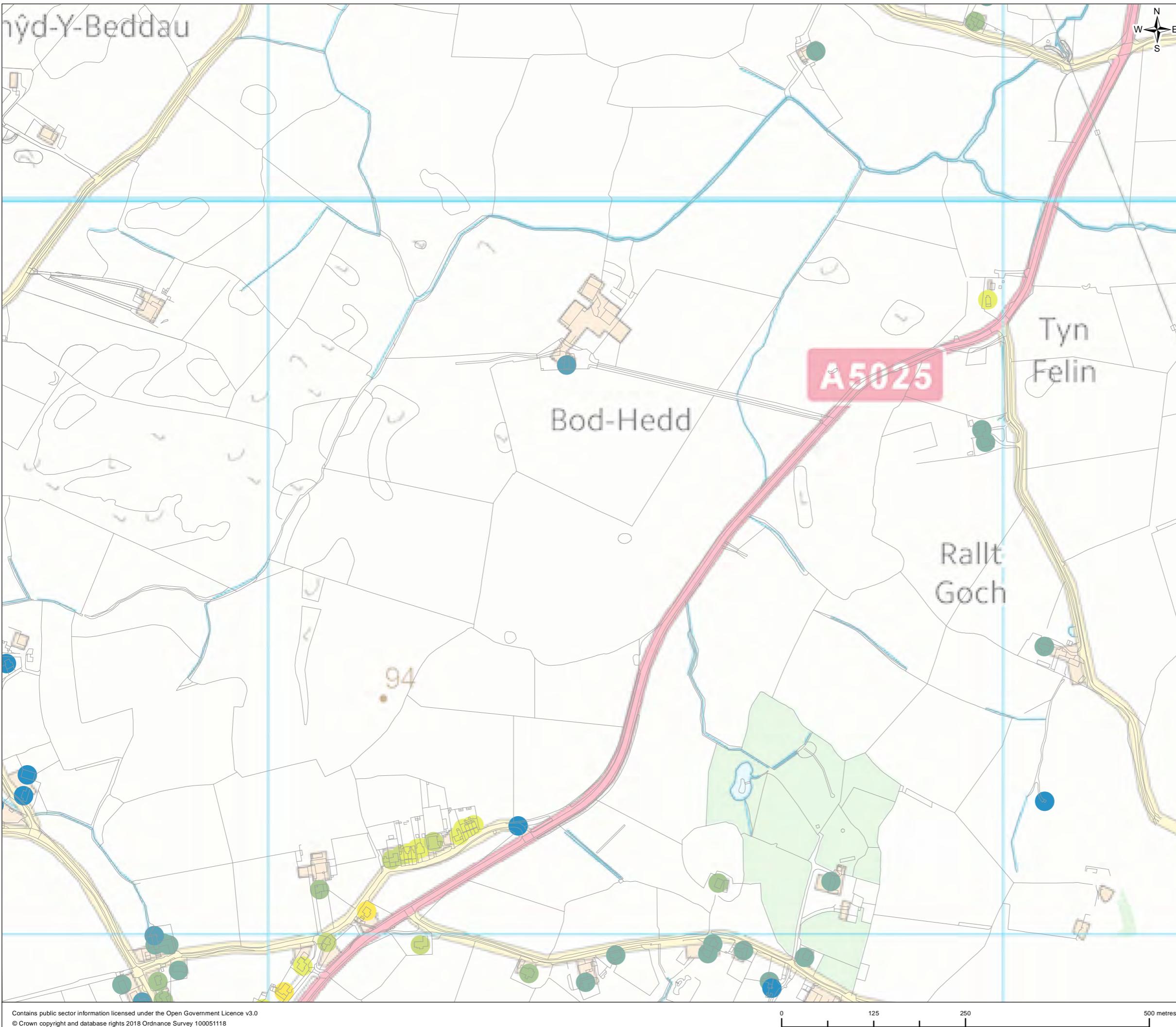
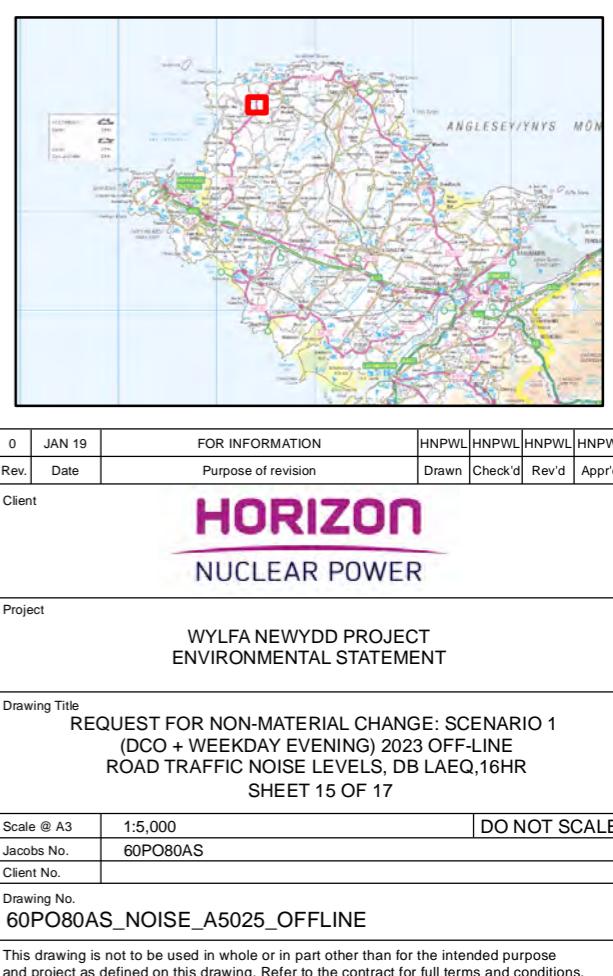
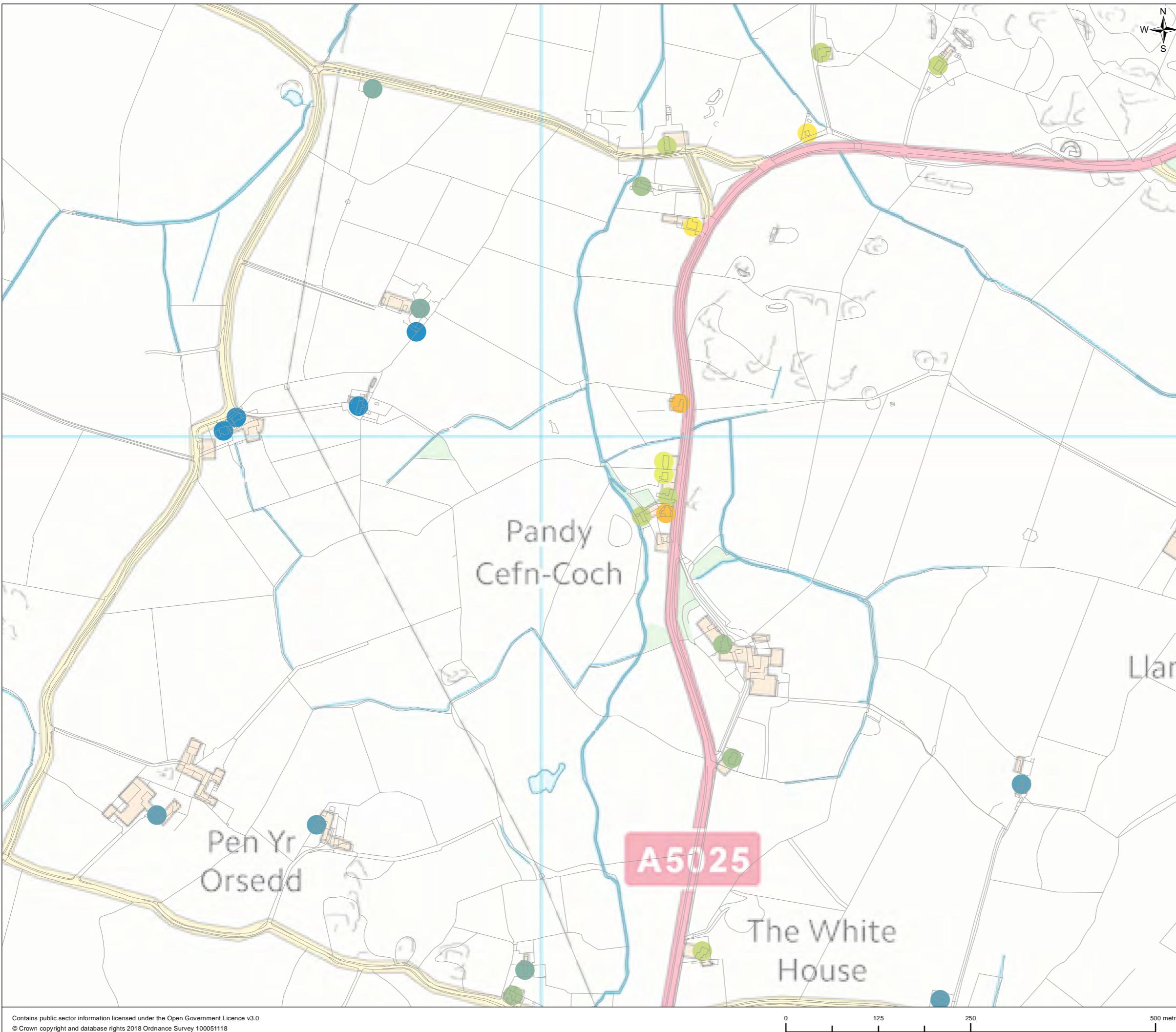


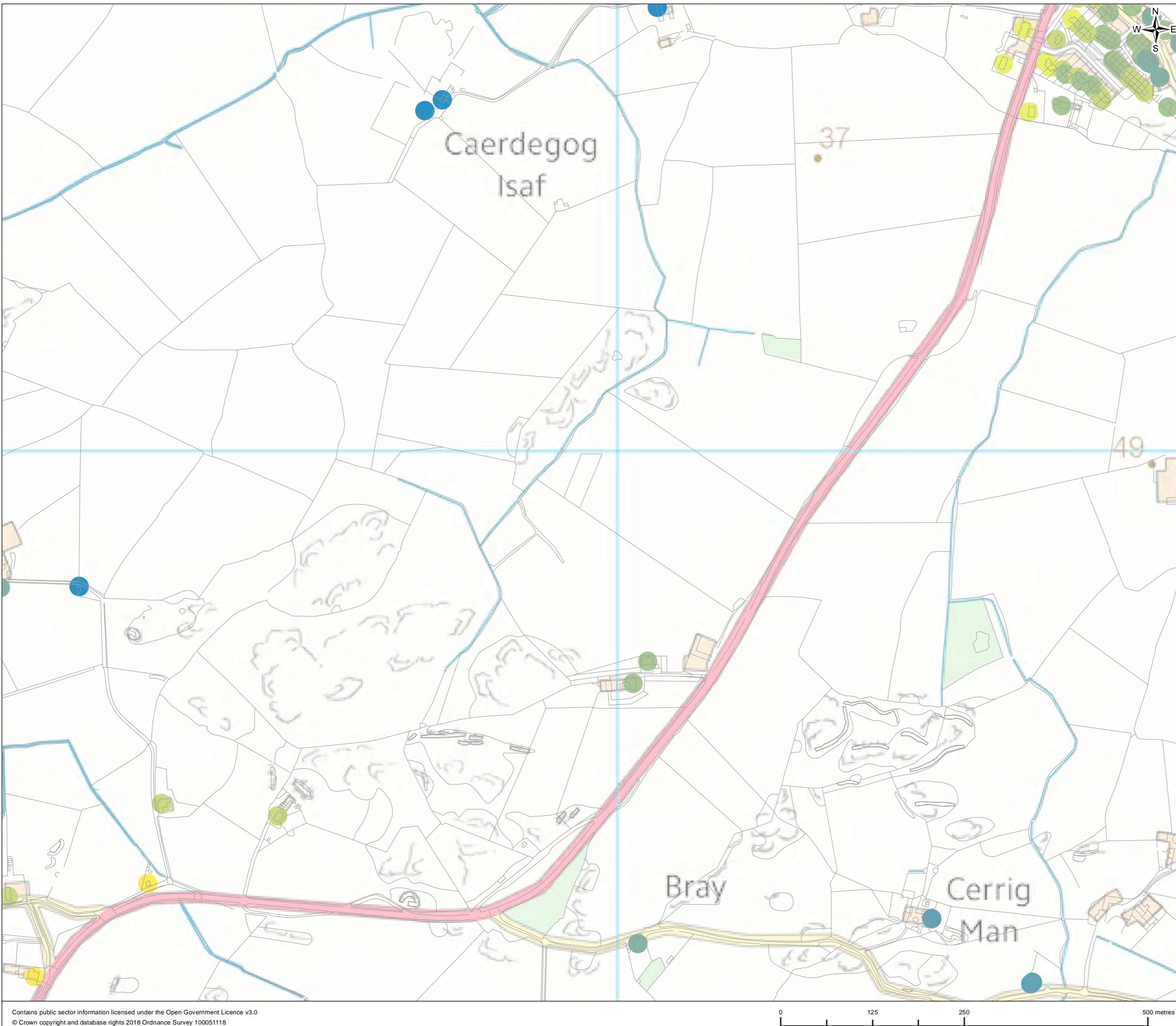
FIGURE 2-4

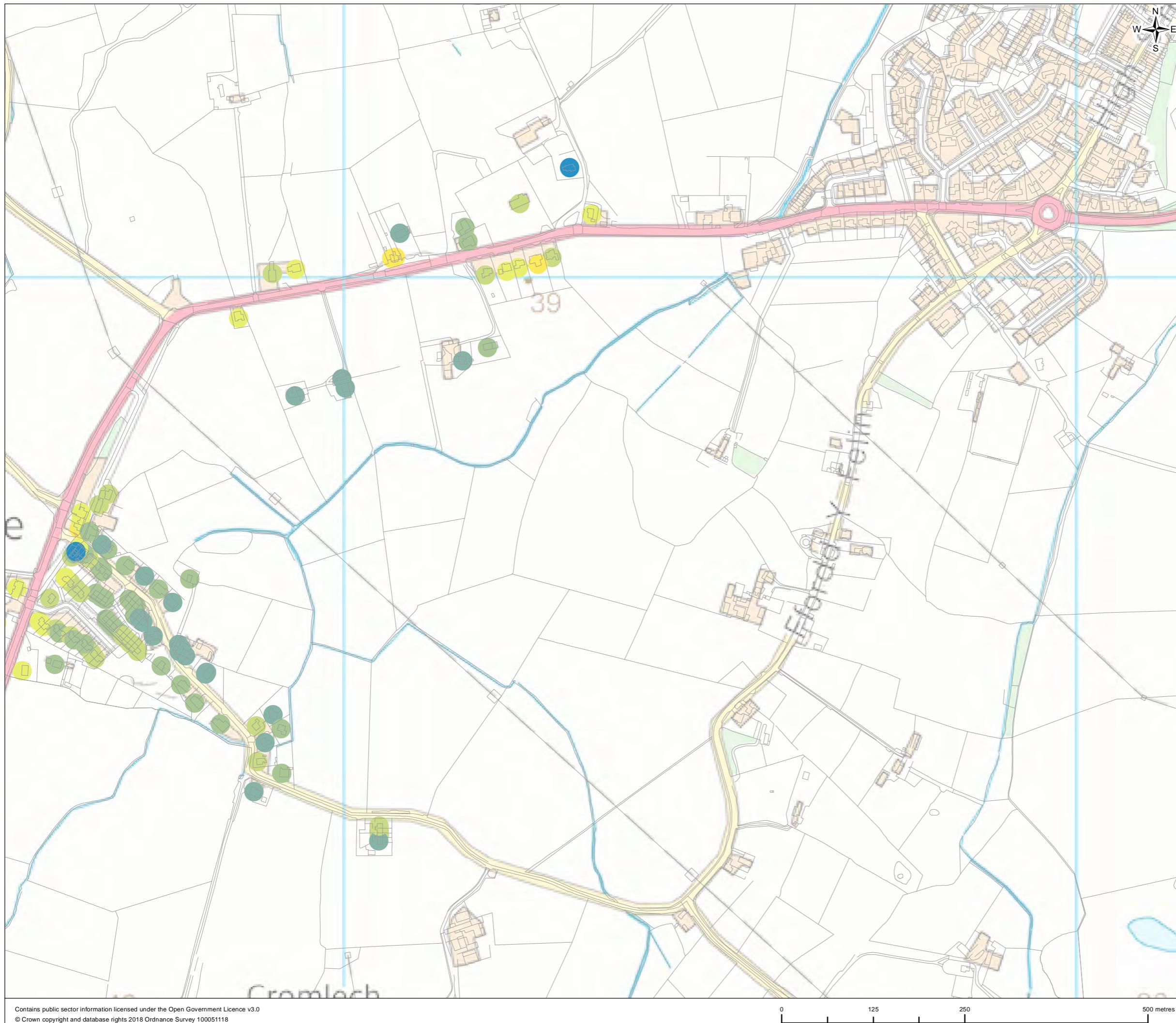


**FIGURE 2-4**



**FIGURE 2-4**

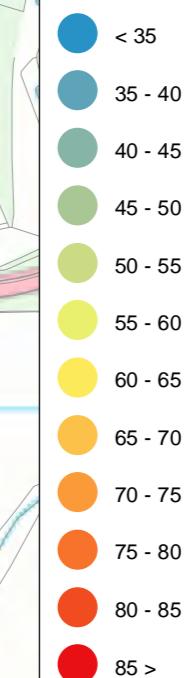




## FIGURE 2-4

## Legend

## Noise levels dB L<sub>Aeq,16hour</sub>



0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd
Client						
 <p><b>HORIZON</b> NUCLEAR POWER</p>						
Project						
<p style="text-align: center;"><b>WYLFA NEWYDD PROJECT</b> <b>ENVIRONMENTAL STATEMENT</b></p>						
Drawing Title						
<p style="text-align: center;"><b>REQUEST FOR NON-MATERIAL CHANGE: SCENARIO 1</b>  <b>(DCO + WEEKDAY EVENING) 2023 OFF-LINE</b>  <b>ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR</b></p>						
<b>SHEET 17 OF 17</b>						
Scale @ A3	1:5,000		DO NOT SCALE			
Jacobs No. 60PO80AS						
Client No.						
Drawing No. <b>60PO80AS_NOISE_A5025_OFFLINE</b>						
<p>This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.</p>						

## **Appendix 1-4: Copies of "Consultation Update"**

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# Y Diweddaraf am yr Ymgyngoriad

Tachwedd 2018



## Ymgyngori yngylch newidiadau ansylweddol i'n cais am Orchymyn Cydsyniad Datblygu

Ym mis Mehefin 2018, fe wnaethon ni gyflwyno ein cais am Orchymyn Cydsyniad Datblygu i adeiladu a gweithredu Wylfa Newydd, sef gorsaf bŵer niwclear newydd ar Ynys Môn. Ers hynny, rydyn ni wedi dangos y bydd angen diwygio tri gweithgaredd adeiladu, sef patrymau shifftiau gweithwyr, oriau gwaith, a symudiadau Cerbydau Nwyddau Trwm.

Er nad oes disgyl i'r newidiadau hyn greu unrhyw effeithiau amgylcheddol sylweddol newydd yn wahanol i'r rhai sydd wedi'u cyflwyno yn ein cais am Orchymyn Cydsyniad Datblygu, hoffem glywed eich barn chi amdanynt.

### Patrymau shifftiau gweithwyr

Yn ystod y gwaith o adeiladu Gorsaf Bŵer arfaethedig Wylfa Newydd, bydd angen shifftiau dydd a shifftiau nos ar gyfer gweithwyr er mwyn cyflawni rhaglen adeiladu'r Prosiect.

Yn ôl dadansoddiad diweddar, mae'r amseroedd shifftiau yn ein cais yn arwain at orgyffwrdd rhwng shifftiau dydd a shifftiau nos, felly mae rhan o bob shifft yn anghynhyrchiol. Felly rydyn ni'n cynnig rhai newidiadau i'r rhain i wneud y rhaglen yn fwy effeithlon a chydnerth, tra'n parhau i osgoi effeithiau niweidiol ar Bont Britannia a thraffig oriau brig.

Dyma'r patrymau shifftiau newydd arfaethedig:

- ym mlynnyddoedd cynnar y gwaith adeiladu, dwy shifft yn dechrau ar amseroedd gwahanol yn y dydd ac un shifft nos.
- dros flynyddoedd y prif waith adeiladu, tair shifft yn dechrau ar amseroedd gwahanol yn y dydd a dwy shifft yn dechrau ar amseroedd gwahanol yn y nos.
- newidiadau i amseroedd cychwyn y shifftiau, ac i'w hyd.

### Dweud eich dweud

Mae'n bwysig iawn eich bod yn dweud eich dweud am y newidiadau arfaethedig hyn. Rhowch eich barn drwy anfon neges e-bost neu lythyr **erbyn 6 Rhagfyr 2018** - mae ein manylion ar gefn y cylchlythyr hwn.

I'ch helpu, rydyn ni wedi creu taflenni gwybodaeth sy'n rhoi crynodeb o bob un o'r tri newid arfaethedig. Gallwch ddarllen y rhain, ynghyd â'r dogfennau technegol ar-lein, yn: [www.horizonnuclearpower.com/ymgyngoriad](http://www.horizonnuclearpower.com/ymgyngoriad)

Bydd tîm technegol bach yn bresennol hefyd yng Nghymhorthfa Agored nesaf Horizon ar 19 Tachwedd yn Neuadd Bentref Cemaes rhwng 1pm a 7pm os hoffech drafod y cynigion hyn ymhellach.



## Oriau Gwaith

Mae ein cais am Orchymyn Cydsyniad Datblygu yn nodi'r dyddiau a'r adegau pan fyddai'n bosibl gwneud gweithgareddau ar y safle. Mewn llawer o feysydd gwaith, rhaid gallu gweithio 24 awr 7 diwrnod yr wythnos er mwyn cynnal amserlen adeiladu hyfyw. Nodir yr eithriadau i hyn, a bydd rhai gweithrediadau'n cael eu cynnal rhwng 7am a 7pm yn unig.

Ein cynnig yw newid y rhestr o weithgareddau sy'n cael eu cyflawni rhwng 7pm a 7am, i gynyddu nifer y gweithgareddau a ganiateir bob awr o'r dydd a'r nos.

Er mwyn i ni allu manteisio'n llawn ar y ffenestr waith arfaethedig heb greu effeithiau amgylcheddol tebygol newydd neu wahanol o bwys, bydd angen hefyd inni wneud mân newidiadau i rai o'r dulliau adeiladu, megis cyfyngu ar ba gyfarpar y caniateir ei ddefnyddio, ble a phryd.

Bydd y newidiadau hyn yn rhoi rhagor o hyblygrwydd a chydnerthedd yn y rhaglen, a byddant yn gwella'r diogelwch i weithwyr.

## Symudiadau Cerbydau Nwyddau Trwm

Yn ystod y gwaith adeiladu, bydd Cerbydau Nwyddau Trwm yn cael eu defnyddio i gludo rhai deunyddiau ac offer i'r safle. Mae'r Gorchymyn Cydsyniad Datblygu yn cynnig y bydd y rhan fwyaf o'r siwrneiau danfon yn digwydd rhwng 7am a 7pm o ddydd Llun i ddydd Gwener.

Rydyn ni nawr yn cynnig ymestyn y ffenestr ar gyfer siwrneiau danfon gan gerbydau nwyddau trwm i'r adeg rhwng 7am ac 11pm, a chynnwys bore Sul rhwng 8am ac 1pm.

Rydyn ni hefyd yn cynnig peidio â chaniatau mwy nag 20 o siwrneiau danfon gan gerbydau nwyddau trwm rhwng 7pm

ac 11 pm o ddydd Llun i ddydd Gwener, a dim mwy na 50 o siwrneiau danfon gan gerbydau nwyddau trwm ar fore Sul.

Byddai'r nifer uchaf o siwrneiau danfon gan gerbydau nwyddau trwm bob dydd yn aros yr un fath â'r hyn a nodir yn ein cais am Orchymyn Cydsyniad Datblygu – dim ond y ffenestr danfon fyddai'n newid. Bydd hyn yn caniatáu inni ymdopi'n well â digwyddiadau annisgwyl fel tywydd garw sy'n effeithio ar ddanfon nwyddau dros y môr, gan wneud yn siŵr nad yw hyn yn effeithio'n ormodol ar gymunedau a llif y traffig yn lleol.

## Rheoli unrhyw effeithiau o ganlyniad i'r newidiadau hyn

Yn ein dogfennau technegol, mae mesurau ychwanegol i leihau unrhyw effeithiau o ganlyniad i'r newidiadau. Gyda'r rhain, rydyn ni'n rhagweld na fydd unrhyw effeithiau tebygol newydd neu wahanol o bwys yn digwydd o ganlyniad i'r tri newid yma, boed ar eu pen eu hunain neu gyda'i gilydd. Ni fyddai'r newidiadau arfaethedig yn effeithio ar unrhyw un o'r asesiadau eraill a gyflwynwyd fel rhan o'r cais am Orchymyn Cydsyniad Datblygu.

Caiff y newidiadau arfaethedig eu hegluro'n fanylach yn y dogfennau technegol sydd ar gael fel rhan o'n hymgyngħoriad.

**Rhowch eich barn ar y cynigion hyn drwy ysgrifennu atom drwy'r cyfeiriad e-bost neu Radbost isod erbyn 6 Rhagfyr. Ac os hoffech chi wybod am unrhyw agwedd arall ar Brosiect Wylfa Newydd, mae croeso i chi anfon neges e-bost atom neu ein ffonio.**



**Richard Foxhall, Rheolwr Materion Allanol Cymru**

## Beth yw 'DCO'?

Gelwir prosiectau mawr fel Wylfa Newydd yn Brosiectau Seilwaith o Arwyddocâd Cenedlaethol. Mae angen Gorchymyn Cydsyniad Datblygu, a Llywodraeth y Deyrnas Unedig sy'n penderfynu a ddylid caniatáu'r cais ai peidio. Rydyn ni wedi gwneud cais am Orchymyn Cydsyniad Datblygu i Ysgrifennydd Gwladol y Deyrnas Unedig dros Fusnes, Ynni a Strategaeth Ddiwydiannol.

## Cysylltu â ni

 [ymholiadauwylfa@horizonnuclearpower.com](mailto:ymholiadauwylfa@horizonnuclearpower.com)

 [www.horizonnuclearpower.com/hafan](http://www.horizonnuclearpower.com/hafan)

 0800 954 9516

 [Freepost WYLFA NEWYDD](mailto:Freepost WYLFA NEWYDD)

 [@HorizonNuclear](https://twitter.com/HorizonNuclear)

 [@horizonnuclear](https://www.instagram.com/horizonnuclear)

Mae Horizon yn mynd ati o'i wirfodd i ddarparu cylchlythyrau i roi'r wybodaeth ddiweddaraf i'r gymuned am ddatblygiad y prosiect. Bydd unrhyw ddata personol a roddwch yn cael eu defnyddio ar gyfer hyn yn unig. Efallai y byddwn ni'n rhoi eich enw a'ch manylion cyswllt i drydydd partïon sy'n argraffu ac yn dosbarthu'r cylchlythyr hwn. Ond ni fyddwn yn defnyddio nac yn rhannu'r data mewn unrhyw ffordd arall. Rydyn ni o ddifri am ddiogelu data. Os hoffech chi gael mwy o wybodaeth am y data sydd gennym amdanoch chi, sut rydyn ni'n eu defnyddio, sut rydyn ni'n eu cadw'n ddiogel a sut i'w cywiro neu eu dileu, cysylltwch â ni: [dataprivity@horizonnuclearpower.com](mailto:dataprivity@horizonnuclearpower.com)

# Consultation Update

November 2018



## Consulting on non-material changes to our DCO application

In June 2018, we submitted our application for a Development Consent Order (DCO) to build and operate Wylfa Newydd, a new nuclear power station on Anglesey. Since then, we've identified a need to amend three construction activities: worker shift patterns, working hours, and Heavy Goods Vehicles (HGV) movements.

While these changes are not expected to create any new significant environmental effects from those presented in our DCO application, we want to hear what you think about them.

### Worker shift patterns

During construction of the proposed Wylfa Newydd Power Station, we'll need day and night shifts for workers to meet the Project construction programme.

New analysis has shown that the shift times in our application result in an overlap between day and night shifts, making a part of each shift unproductive. So we are proposing some changes to these to make the programme more efficient and resilient, while continuing to avoid adverse effects on Britannia Bridge and peak time traffic.

The proposed new shift patterns are:

- in the early years of construction, two staggered day shifts and one night shift
- during peak construction years, three staggered day shifts and two staggered night shifts
- changes to shift start times and shift duration.

### Have your say

It's really important that you have your say on these proposed changes. Please give us your views by emailing or writing to us **by 6 December 2018**, using the details on the back of this newsletter.

To help you, we've produced information sheets that summarise each of the three proposed changes. You can read these, together with detailed technical documents, online at:  
[www.horizonnuclearpower.com/consultation](http://www.horizonnuclearpower.com/consultation)

A small technical team will also be present at the next Horizon Open Surgery on 19 November at Cemaes Village Hall between 1pm and 7pm if you would like to discuss these proposals further.



## Working hours

Our DCO application sets out the days and times when site activities may be undertaken. In many areas of activity, 24-hour 7-days per week working is necessary to maintain a viable construction schedule. Exceptions to this are specified, with certain operations undertaken only from 7am to 7pm.

We are proposing to amend the list of activities carried out from 7pm to 7am, to increase the range of activities allowed on a 24/7 basis.

To allow us to make full use of the proposed extended working window without creating new or different likely significant environmental effects, we will also need to make minor changes to some construction methods, such as constraints on what equipment can be used where and when.

These changes will give greater flexibility and resilience in the programme, as well as improving worker safety.

## HGV movements

During construction, Heavy Goods Vehicles (HGVs) will be used to transport some materials and equipment to site. The DCO proposes that the majority of deliveries happen between 7am and 7pm, Monday to Friday.

We are now proposing to extend the weekday HGV delivery window to between 7am and 11pm and to include Saturday mornings between 8am and 1pm.

We're also proposing that no more than 20 HGV deliveries would be allowed between 7pm and 11pm weekdays, and no more than 50 HGV deliveries would be allowed on Saturday mornings.

The peak number of HGV deliveries per day would stay the same as specified in our DCO application – it is only the delivery window that would change. This will allow us to better manage unexpected events, such as bad weather affecting delivery by sea, while making sure that local traffic flows and communities are not unduly affected.

## Managing any effects of these changes

Additional measures to reduce any effects of these changes are set out in our technical documents. With these, we predict that no new or different likely significant environmental effects will occur as a result of these three changes, alone or in combination. All other assessments submitted as part of the DCO application would remain unaffected by the proposed changes.

The proposed changes are explained in more detail in the technical documents available as part of our consultation.

**Please let us know your views on these proposals by writing to us via our Freepost or email addresses below by 6 December.**

**And if you'd like to know about any other aspect of the Wylfa Newydd Project, please feel free to contact us.**



**Richard Foxhall, External Affairs Manager Wales**

## What is a 'DCO'?

Large projects such as Wylfa Newydd are known as Nationally Significant Infrastructure Projects (NSIPs).

They require a Development Consent Order (DCO) that is determined by UK Government. We have applied for a DCO from the UK Secretary of State for Business, Energy and Industrial Strategy.

This is now being examined by appointed Planning Inspectors.

For more information on this process you can contact the Planning Inspectorate at: <https://infrastructure.planninginspectorate.gov.uk/>, email [Wylfa@pins.gsi.gov.uk](mailto:Wylfa@pins.gsi.gov.uk) or call 0303 444 5000.

## Getting in touch



[wylfaenquiries@horizonnuclearpower.com](mailto:wylfaenquiries@horizonnuclearpower.com)



[www.horizonnuclearpower.com](http://www.horizonnuclearpower.com)



0800 954 9516



[Freepost WYLFA NEWYDD](mailto:Freepost WYLFA NEWYDD)



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# Horizon Nuclear Power Wylfa Limited - Hysbysiad Cyhoeddus

## DEDDF CYNLLUNIO 2008

## RHEOLIADAU CYNLLUNIO SEIWAITH (ASESU EFFAITH AMGYLCHEDDOL) 2009

## GORCHYMYN WYLFA NEWYDD (GORSAF CYNHYRCHU NIWCLEAR) ARFAETHEDIG

## CYFEIRNOD Y CAIS: EN010007

## HYSBYSIAD O GYFLE I GYFLWYNO SYLWADAU MEWN PERTHYNAS Â THRI NEWID ARFAETHEDIG I GAIS GORCHYMYN CYDSYNIAD DATBLYGU (DCO) WYLFA NEWYDD

- Ar 1 Mehefin 2018 gwnaeth Horizon Nuclear Power Wylfa Limited ('Ymgeisydd') o Sunrise House, 1420 Charlton Court, Parc Busnes Caerloyw, Caerloyw, GL3 4AE gais i'r Ysgrifennydd Gwladol, d/o Yr Arolygiaeth Gynllunio ('PINS'), am orchymyn cydsyniad datblygu ('DCO') o dan Ddeddf Cynllunio 2008 (y 'Cais'). Byddai'r DCO yn awdurdodi'r gwaith o adeiladu a gweithredu Wylfa Newydd, gorsaf bŵer niwclear newydd ar Ynys Môn gyda chapasiti o hyd at 3100 megawat, a datblygiadau cysylltiedig ('Prospect DCO Wylfa Newydd'). Cafodd y Cais ei dderbyn ar gyfer archwiliad ar 28 Mehefin 2018.
- Hysbysir trwy hyn bod Horizon Nuclear Power Wylfa Limited ("Ymgeisydd") yn bwriadu gwneud cais am dri newid ("newidiadau arfaethedig") i'r Cais, y mae'r Ymgeisydd yn eu hystyried yn ansylweddol o ran natur. Disgrifir y newidiadau arfaethedig ym mharagraff 6.
- Mae'r Ymgeisydd yn hysbysebu'r newidiadau arfaethedig i'r Cais mewn papurau newydd, ar sail anstatudol.

### Crynodeb o'r prosiect

- Dyma brif elfennau Prosiect DCO Wylfa Newydd:
  - Yr Orsaf Bŵer, sy'n cynnwys dau Adweithydd Dŵr Berwedig Uwch y DU, y System Dŵr Oeri, cyfleusterau, adeiladau, strwythurau ac offer cefnogol, adeiladau i storio tanwydd sydd wedi cael ei ddefnyddio a gwastraff ymbelydrol a chysylltiad â'r grid cenedlaethol.
  - Datblygiadau eraill ar y safle, gan gynnwys gwaith tirwedd a phlannu, draenau, systemau rheoli dŵr wyneb, gwaith mynediad i'r cyhoedd gan

gynnwys cau a dargyfeirio hawliau tramwy cyhoeddus dros dro ac yn barhaol, Ffordd Fynediad newydd i'r Orsaf Bŵer a ffurdd mewnol y safle, meysydd parcio, gwaith a gweithgareddau adeiladu gan gynnwys compowndiau adeiladu ac ardaloedd parcio dros dro, ardaloedd gosod, ardaloedd gweithio a gwaith a strwythurau dros dro, ardal dros dro i wyllo'r gwaith adeiladu, dargyfeirio cyfleustodau, ffens y ffin a ffensys adeiladu a chysylltiadau trydan.

- Gwaith Morol sy'n cynnwys:
  - Gwaith Morol parhaol, gan gynnwys y System Dŵr Oeri, y Cyfleuster Dadlwytho Morol, strwythurau morglawdd, gwaith i ddiogelu'r lan, mannau gollwng draeniau dŵr wyneb, man gollwng carthffrwd dŵr gwastraff (a draeniau cysylltiedig dŵr wyneb a charthffrwd dŵr gwastraff i'r môr), system achub a dychwelyd pysgod, system atal pysgod, cymhorthion mordwyo a charthu; a
  - Gwaith Morol dros dro, gan gynnwys argaeau coffr dros dro, ramp mynediad dros dro, cymhorthion mordwyo dros dro, mannau gollwng dros dro ac angorfa dros dro i gychod camlas.
- Cyfleusterau Oddi ar Safle'r Orsaf Bŵer: sy'n cynnwys y Ganolfan Rheoli Argyfwng Amgen, y Labordy Arolygon Amgylcheddol a'r Garej Offer Argyfwng Symudol.
- Datblygiadau Cysylltiedig sy'n cynnwys:
  - Campws y Safle at gyfer llety gweithwyr yn Ardal Datblygu Wylfa Newydd;
  - cyfleuster Parcio a Theithio dros dro yn Dalar Hir ar gyfer gweithwyr adeiladu;
  - Canolfan Logisteg dros dro ym Mharc Cybi;
  - y Newidiadau i Briffordd yr A5025; a
  - gwaith creu a gwella cynefinoedd gwlyptir yn Nhŷ Du, Cors Gwawr a Chae Canol-dydd.
- Mae'r cais DCO hefyd yn ceisio pwerau amrywiol eraill, gan gynnwys darpariaethau sy'n caniatâu caffael buddiannau a hawliau mewn tir drwy orfodaeth, defnyddio tir dros dro, ymyrryd â hawliau a chau neu ddargyfeirio strydoedd a hawliau tramwy cyhoeddus eraill gan gynnwys cau Ffordd Cemlyn yn barhaol.

### Ceisiadau am newid

- Byddai'r newidiadau arfaethedig yn cynnwys y canlynol:
  - diwygio patrymau shifft gweithwyr fel a ganlyn:
    - ym mlynnyddoedd cynnar yr adeiladu, newid o dair shifft ddydd gyfnodol a thair shifft nos gyfnodol, i ddwy shifft ddydd gyfnodol ac un shifft nos;
    - ym mlynnyddoedd y gwaith adeiladu mwyaf, newid o dair shifft ddydd gyfnodol a thair shifft nos gyfnodol, i dair shifft ddydd gyfnodol a dwy shifft nos gyfnodol; a.
    - newidiadau i amseroedd dechrau shifftiau a hyd shifftiau.
  - diwygio cyfnodau dosbarthu'r Cerbydau Nwyddau Trwm ("HGV") i:
    - ymestyn cyfnod dosbarthu dyddiau'r wythnos (o ddydd Llun i ddydd Gwener yn gynwysedig) i'r gyda'r nos, i gynnwys dosbarthu rhwng 19:00 a 23:00 (cyfngedig i uchafswm o 20 o symudiadau HGV); ac
    - ychwanegu cyfnod dosbarthu ychwanegol ar foreau Sadwrn rhwng 08:00 a 13:00 (cyfngedig i uchafswm o 50 o symudiadau HGV).
  - ymestyn yr oriau gwaith ar y prif safle i gynnwys y canlynol:
    - 19:00 i 07:00 (h.y. ymestyn i 24 awr y dydd) ar gyfer rhai gweithgareddau a gwaith adeiladu cyffredinol a nodir; a
    - mân fesurau o ganlyniad i ddefnyddio'r oriau gwaith estynedig.
  - Mae'r Ymgeisydd wedi paratoi dogfennau ymgynghori ar bob un o'r newidiadau arfaethedig sy'n darparu manylion llawn am y newidiadau. Mae'r dogfennau ymgynghori'n cadarnhau nad oes unrhyw fuddiannau newydd mewn tir, neu barseli tir newydd, yn cael eu heffeithio gan y newidiadau arfaethedig ac nad oes disgwyl unrhyw effeithiau amgylcheddol arwyddocaol tebygol newydd neu wahanol o ganlyniad i'r newidiadau arfaethedig.
  - Mae'r newidiadau arfaethedig yn ychwanegol at ddu newid blaenorol yr ymgynghorwyd yn eu cylch ac a gyflwynwyd i'r Awdurdod Archwilio. **Ymgynghori**
  - Mae Horizon yn cynnal ymgynghoriad cyhoeddus ar y newidiadau arfaethedig **rhwng 8 Tachwedd a 6 Rhagfyr 2018**, i ofyn am safbwytiau rhanddeiliaid ac unigolion cyn iddo gyflwyno ei newidiadau arfaethedig terfynol i'r Arolygiaeth Gynllunio ar gyfer eu hystyried.

10. Os ydych chi eisiau cyflwyno sylwadau ar y newidiadau arfaethedig neu unrhyw un ohonynt, gellir darparu unrhyw sylwadau yn ysgrifenedig i:

- e-bost i ymholaauwylfa@horizonnuclearpower.com; neu
- llythyr at Freepost WYLFA NEWYDD (dim angen stamp)

11. Gellir gweld copiâu o'r dogfennau ymgynghori sy'n manylu ar y newidiadau arfaethedig ar-lein yn www.horizonnuclearpower.com/ymgynghoriad ac yn y lleoliadau cyhoeddus a restrir isod yn ystod yr ymgynghoriad.

### Canolfan Fusnes Môn

Cyngor Sir Ynys Môn  
Parc Busnes Bryn Cefni  
Llangefni, Ynys Môn, LL77 7XA  
Dydd Llun i ddydd Gwener 9am - 5pm  
A

### Swyddfa Safle Wylfa Newydd

Cemaes, Ynys Môn, LL67 0AA  
Dydd Llun i ddydd Gwener 9am - 5pm  
drwy apwyntiad yn unig  
Cysylltwch â ni ar ymholaauwylfa@horizonnuclearpower.com neu  
0800 954 9516 i drefnu ymweliad â swyddfa'r safle.

12. Gellir darparu copiâu o'r dogfennau ymgynghori ar gais hefyd, drwy gysylltu ag ymholaauwylfa@horizonnuclearpower.com neu drwy ffonio 0800 954 9516.

13. Mae Horizon yn gofyn i unrhyw adborth am y cynigion nodi'r ymgynghoriad yn glir a hefyd dylid cynnwys manylion cysylltu ar gyfer anfon unrhyw ohebiaeth yn ymwneud â'r sylwadau. Efallai y bydd rhaid i Horizon sicrhau bod copiâu o'r holl sylwadau a dderbynir ar gael i PINS. Cofiwch y bydd yr holl ymatebion yn cael eu cyhoedd. Fodd bynnag, bydd Horizon yn gofyn i fanylion personol beidio â chael eu nodi yn y cofnod cyhoeddus. Bydd manylion personol yn cael eu cadw'n ddiogel yn unol â Deddf Diogelu Data 1998 ac yn cael eu defnyddio mewn perthynas ag archwilio'r Cais yn unig.

### Gallwch chi gysylltu â Horizon unrhyw bryd.

Dros e-bost: [ymholaauwylfa@horizonnuclearpower.com](mailto:ymholaauwylfa@horizonnuclearpower.com)

Dros y ffôn: **0800 954 9516**

Gwefan:

[www.horizonnuclearpower.com/hafan](http://www.horizonnuclearpower.com/hafan)

Cyfeiriad rhadbost:

**Freepost WYLFA NEWYDD**

# Horizon Nuclear Power Wylfa Limited – Public Notice

## PLANNING ACT 2008

## THE INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009

## PROPOSED WYLFA NEWYDD (NUCLEAR GENERATING STATION) ORDER

## APPLICATION REFERENCE: EN010007

## NOTICE OF OPPORTUNITY TO COMMENT IN RELATION TO THREE PROPOSED CHANGES TO THE WYLFA NEWYDD DCO APPLICATION

1. On 1 June 2018 Horizon Nuclear Power Wylfa Limited ('Applicant') of Sunrise House, 1420 Charlton Court, Gloucester Business Park, Gloucester, GL3 4AE applied to the Secretary of State, c/o The Planning Inspectorate ('PINS') for a development consent order ('DCO') under the Planning Act 2008 (the 'Application'). The DCO would authorise the construction and operation of Wylfa Newydd, a new nuclear power station on Anglesey with a capacity of up to 3100 megawatts, and associated development ('Wylfa Newydd DCO Project'). The Application was accepted for examination on 28 June 2018.
2. Notice is hereby given that Horizon Nuclear Power Wylfa Limited ("Applicant") is proposing to apply for three changes ("proposed changes") to the Application, which the Applicant considers are non-material in nature. The proposed changes are described in paragraph 6.
3. The Applicant is advertising the proposed changes to the Application in newspapers, on a non-statutory basis.

### Summary of the project

4. The principal components of the Wylfa Newydd DCO Project are:
  - a. The Power Station which includes two UK Advanced Boiling Water Reactors, the Cooling Water System, supporting facilities, buildings, plant and structures, radioactive waste and spent fuel storage buildings and a connection to the national grid.
  - b. Other on-site development including landscape works and planting, drainage, surface water management systems, public access works including temporary and permanent closures and

diversions of public rights of way, new Power Station Access Road and internal site roads, car parking, construction works and activities including construction compounds and temporary parking areas, laydown areas, working areas and temporary works and structures, temporary construction viewing area, diversion of utilities, perimeter and construction fencing, and electricity connections.

- c. Marine Works comprising:
  - permanent Marine Works including the Cooling Water System, the Marine Off-loading Facility, breakwater structures, shore protection works, surface water drainage outfalls, waste water effluent outfall (and associated drainage of surface water and waste water effluent to the sea), fish recovery and return system, fish deterrent system, navigation aids and dredging; and
  - temporary Marine Works including temporary cofferdams, a temporary access ramp, temporary navigation aids, temporary outfalls and a temporary barge berth.
- d. Off-site Power Station Facilities: comprising the Alternative Emergency Control Centre, Environmental Survey Laboratory and a Mobile Emergency Equipment Garage.
- e. Associated Development comprising:
  - the Site Campus for worker accommodation within the Wylfa Newydd Development Area;
  - temporary Park and Ride facility at Dalar Hir for construction workers;
  - temporary Logistics Centre at Parc Cybi;
  - the A5025 Off-line Highway Improvements; and
  - wetland habitat creation and enhancement works at Tŷ Du, Cors Gwawr and Cae Canol-dydd.
5. The DCO application also seeks various other powers including provisions permitting the compulsory acquisition of interests and rights in land, the temporary use of land, interference with rights and the closure or diversion of streets and other public rights of way including the permanent closure of Cemlyn Road.

### Requests for change

6. The proposed changes would:
  - a. amend workers' shift patterns as follows:
    - i. in the early years of construction, changing from three staggered day shifts and three staggered night shifts, to two staggered day shifts and one night shift;
    - ii. during the peak construction years, changing from three staggered day shifts and three staggered night shifts, to three staggered day shifts and two staggered night shifts; and
    - iii. changes to shift start times and shift duration.
  - b. amend the Heavy Goods Vehicle ("HGV") delivery windows to:
    - i. extend the weekday (Monday to Friday inclusive) delivery window into the evening, to include deliveries between the hours of 19:00 and 23:00 (limited to a maximum of 20 HGV movements); and
    - ii. add an additional delivery window on Saturday mornings between 08:00 and 13:00 (limited to a maximum of 50 HGV movements).
  - c. extending the working hours on the main site to include:
    - i. 19:00 to 07:00 hours (i.e. extending to 24 hours a day) for some additional prescribed general building and activities; and
    - ii. consequential minor measures to utilise the extended working hours.
7. The Applicant has prepared consultation documents on each of the proposed changes which provide full details of the changes. The consultation documents confirm that no new interests in land or new land parcels are affected by the proposed changes and that no new or different likely significant environmental effects are predicted as a consequence of the proposed changes.
8. The proposed changes are in addition to two previous changes consulted on and submitted to the Examining Authority.
9. Horizon is holding a public consultation on the proposed changes between **8 November and 6 December 2018**, to seek the views of stakeholders and individuals before it submits its final proposed changes to the Planning Inspectorate for consideration.
10. Should you wish to comment on the proposed changes or any one of them, any comments may be provided in writing to:
  - email to [wylfaenquiries@horizonnuclearpower.com](mailto:wylfaenquiries@horizonnuclearpower.com)
  - letter to Freepost WYLFA NEWYDD (no stamp required)
11. Copies of the consultation documents detailing the proposed changes can be viewed online at [www.horizonnuclearpower.com/consultation](http://www.horizonnuclearpower.com/consultation) and at the public locations listed below during the consultation.
12. Copies of the consultation documents can also be provided on request from [wylfaenquiries@horizonnuclearpower.com](mailto:wylfaenquiries@horizonnuclearpower.com) or by telephone 0800 954 9516.
13. Horizon requests that any feedback relating to the proposals clearly identifies the consultation and that contact details are provided to which any correspondence relating to the comments may be sent. Horizon may be required to make copies of all comments received available to PINS. Please note all comments will be made public. Horizon will, however, request that personal details are not placed on the public record. Personal details will be held securely in accordance with the Data Protection Act 1998 and will be used solely in connection with the examination of the Application.

### You can contact Horizon at any time.

By email: [wylfaenquiries@horizonnuclearpower.com](mailto:wylfaenquiries@horizonnuclearpower.com)

By phone: **0800 954 9516**

Website:

[www.horizonnuclearpower.com](http://www.horizonnuclearpower.com)

Freepost address:

**Freepost WYLFA NEWYDD**

## Appendix 1-5: Maps of mailing zones

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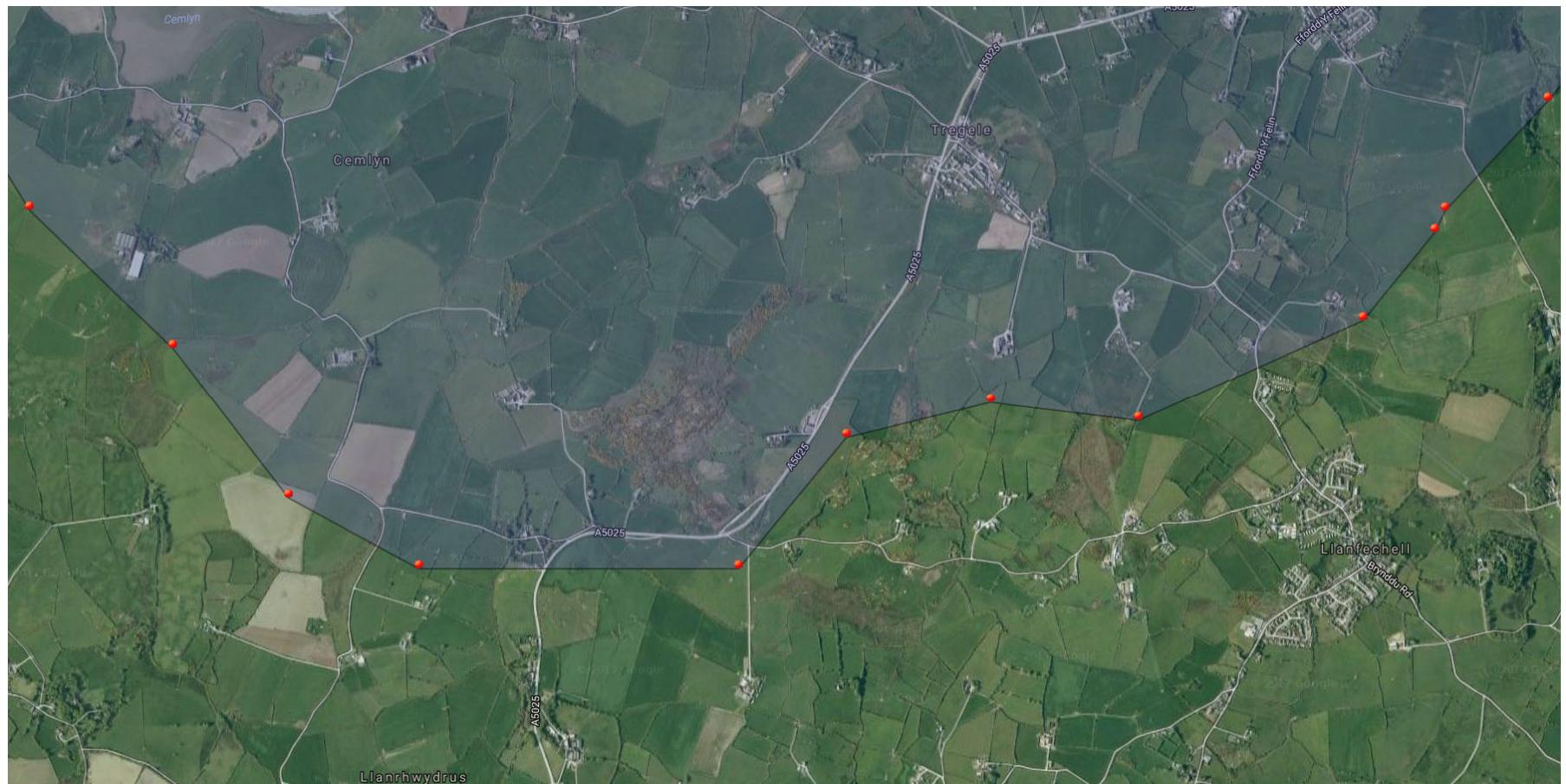
## Overview (909 addresses)



## Map one



**Map two**



**Map three**



**Map four**



**Dala Hir 1250m area exact map (228 addresses)**



Dalar Hir – defined area at roughly 1250m (363 addresses)







**Logistics Center Mailing Zone – 67 commercial and residential properties**







## Online Roads TCPA – Mailing Zone 2 (1679 addresses)

### Overview



Image 1



Image 2



Image 3



Image 4



Image 5



## **Appendix 1-6    Horizon's responses to consultation responses received**

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Ref	Comment	Horizon's Response
Local Resident LR1-01	<p>An increase in the volume of traffic and the hours covered by the deliveries as outlined above would quite obviously have an impact on the air quality and noise levels which would be burdened upon the local residents. A decrease in the quality of the air and an increase in noise levels would more than likely interfere with the health of residents i.e. loss of sleep, altered sleep patterns and mental health issues.</p>	<p>The Request for Non-Material Change No. 5 HGV movements only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application. This does not lead to any changes to the air quality assessment presented in chapter C4 of the Environmental Statement of the Draft DCO application which concludes no significant effects on air quality from Wylfa Newydd DCO Project related traffic.</p> <p>Likewise, this change does not lead to changes in noise assessment. Within the Draft DCO application mitigation measures are available including the Local Noise Mitigation Strategy (LNMS). The LNMS measures will be provided and installed free of charge.</p> <p><b>Noise insulation package</b></p> <p>The 'noise insulation package' contains measures to improve noise insulation in eligible rooms of eligible buildings. Its aim is to improve noise insulation for qualifying windows and doors whilst ensuring adequate ventilation. Specifically the noise insulation measures which will be available for eligible buildings include:</p> <ul style="list-style-type: none"> <li>- Either secondary glazing (to fit inside existing windows) or replacement double-glazing windows</li> <li>- Noise insulated ventilation</li> <li>- External doors with improved noise insulation</li> <li>Internal solar or blackout blinds</li> </ul>

Ref	Comment	Horizon's Response
		<p><b>Enhanced measures</b></p> <p>Two 'enhanced measures' may be offered where there is a need and scope to provide additional noise insulation for conservatories and/or gardens. These are:</p> <ul style="list-style-type: none"> <li>- Acoustic fencing</li> <li>- Noise insulation for conservatories</li> </ul> <p>The practical feasibility of installing each of the LNMS measures at an eligible building will be subject to a survey. During the survey, the surveyor will be able to provide further information and clarification. Additional conditions apply for the enhanced measures. Horizon will be available throughout the LNMS process to help with any queries.</p> <p>For further information of the LNMS please refer to the Local Noise Mitigation Strategy (Companion Guide) [D3 REP3-051] submitted at Deadline 3 (18 December 2018).</p>
LR1-02	<p>Most heavy goods vehicles are fuelled by diesel. An increase in HGV movements in the locality would naturally result in higher diesel fuel emissions which can have a detrimental effect on one's health</p>	<p>The Request for Non-Material Change No. 5 HGV movements only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application. This does not lead to any changes to the air quality assessment presented in chapter C4 of the Environmental Statement of the Draft DCO application which concludes no significant effects on air quality from Wylfa Newydd DCO Project related traffic.</p>

Ref	Comment	Horizon's Response
LR1-03	<p>HGV deliveries on a Saturday could have serious consequences for the tourism industry upon which Anglesey relies heavily. For most types of holiday accommodation Saturdays are the busiest days namely "change over days" which may require additional staff for cleaning of the properties etc some of these staff will need to travel by car to their place of work. Cleaning of holiday accommodation is mainly done in the morning when the tourists leave the premises and prior to the new holiday makers arriving. Any adverse effect upon tourism would be a tremendous detrimental loss to Anglesey.</p>	<p>The DCO Transport Assessment Appendix D Traffic Data Report [APP-105] shows traffic data count locations and timings in detail. These surveys were undertaken in different seasonal periods from August 2014 through to April 2017. The surveys covered the August holiday season over the summer of 2015 - see page 7 (pdf page 11) for survey periods from May 2015 and August 2015, including counts taken on Saturdays. August and November traffic counts were specifically chosen to capture the additional traffic of the Anglesey tourist trade in comparison with a more neutral month (ref: DCO Transport Assessment, Appendix G Strategic Traffic Model [APP-108], Strategic Traffic Model Method Statement, page 51 of 69 [pdf page 58], paragraph 6.1). These traffic data were then used to prepare the Strategic Traffic Model.</p> <p>A further consideration of the effect of holiday traffic is provided in the DCO Transport Assessment [APP-101], paragraph 11.4.7: <i>"A sensitivity test was also undertaken to assess peak traffic conditions in the main holiday period i.e. August. Analysis of traffic flows shows that although total daily flows are higher in August than in March, AM and PM peak hour flows are lower. This reflects a lower number of commuter trips in the holiday period but a higher number of recreational trips which occur away from typical commuter peaks. This means that the VISSIM results for peak traffic conditions in March are applicable to peak traffic conditions in August."</i></p> <p>Further details are also provided in DCO Transport Assessment, Appendix I, Section 7 - "August Sensitivity Test" [APP-110].</p>

Ref	Comment	Horizon's Response
		<p>Further information showing the variation of traffic flows in August / September is provided in Figure 5-3 of Appendix L Supplementary Information [APP-133].</p> <p>Overall, this analysis suggests impacts will be similar across the year.</p> <p>Further information showing the variation of traffic flows across a week (including on Saturdays) on the A5025 in August / September is provided in Figure 5-3 of Appendix L Supplementary Information [APP-133]. This shows that traffic flows on a Saturday are similar or lower than traffic flows on weekdays. This means that traffic impacts on Saturdays will be similar or less than impacts on weekdays.</p>
LR1-04	<p>Additionally, Saturday morning is the time when the majority of people who work Mondays to Fridays do their shopping etc again additional vehicles (particularly HGV's) on the road would impact on local residents. Such travel would inevitably coincide with the proposed timing of the Saturday HGV movements. All of the above would have a significant impact on Road Safety issues</p>	<p>The impact of the proposed changes on road safety is examined in section 2.5 of the Request for Non-Material Change No. 5 HGV movements. The analysis concludes "<i>the proposed changes may be associated with a slight increase in accident risk prior to the completion of the A5025 Highway Improvements</i>". As a result within the Draft DCO application Horizon has secured to fund a road safety campaign with the Isle of Anglesey County Council (IACC) and North Wales Police, to be secured through the Draft DCO s.106 agreement, and with the inclusion of this scheme the analysis concludes that the proposed changes are within the bounds of the conclusions of the existing assessment.</p> <p>Further information showing the variation of traffic flows across a week (including on Saturdays) on the A5025 in August / September is provided in Figure 5-3 of Appendix L Supplementary Information</p>

Ref	Comment	Horizon's Response
		<p>[APP-133]. This shows that traffic flows on a Saturday are similar or lower than traffic flows on weekdays. This means that traffic impacts on Saturdays will be similar or less than impacts on weekdays.</p>
LR1-05	<p>We believe that Horizon are now failing to consider the wellbeing and lifestyle of the local residents and such failings will definitely interfere with the quiet, peaceful enjoyment of residents lives and their properties.</p>	<p>Horizon will take all reasonable steps to limit the adverse effects of the Wylfa Newydd DCO Project as far as possible. Mitigation and good practice measures are proposed in order to avoid, reduce or compensate for adverse impacts where possible. These measures are set out in the Mitigation Route Map [APP-422], including measures relating to monitoring health and well-being.</p> <p>Horizon takes its responsibilities to the people and communities that neighbour the Wylfa Newydd Development Area and the Associated Development sites very seriously. The various mitigation strategies that form part of this application have been considered and designed with the interests of local people in mind. Where possible Horizon has sought to reduce the impacts on the surrounding properties and residents.</p> <p>Each of the RfNMCs has included a consideration of the potential population health effects. Such analysis has concluded that the proposed changes would not alter the conclusions reached in the Wylfa Newydd DCO Project's Health Impact Assessment (HIA) Report [APP-429]. The HIA Report acknowledges that there would be a range of beneficial and adverse effects across vulnerable groups and geographic levels. This encompasses minor to major beneficial effects and minor to moderate adverse effects. In relation to "the quiet, peaceful enjoyment of residents lives and their properties", Horizon acknowledges that there would be some</p>

Ref	Comment	Horizon's Response
		<p>adverse effects of the Wylfa Newydd DCO Project. However, the RfNMC sets out additional and enhanced noise mitigation (in the Wylfa Newydd Code of Construction Practice [APP-414]), which would reduce the effects when compared to the Draft DCO application. Such measures are specifically intended to benefit the wellbeing and lifestyles of local residents.</p> <p>Horizon has undertaken extensive noise modelling to predict the likely significant effects of the Wylfa Newydd DCO Project. Where the modelling shows it to be appropriate, Horizon has committed to providing mitigation (see response to LR1-01). Horizon is also committed to working with IACC in relation to appropriate monitoring and mechanisms for responding to any complaints received.</p> <p>Whilst the Wylfa Newydd DCO Project will, in common with any national infrastructure project, result in residual adverse effects on the local community these (considered individually or collectively) must, for a balanced approach, be considered in the context of the important benefits. These benefits would be delivered for the UK as a whole, including a vital role in the provision of safe and secure low carbon electricity, as well as significant local benefits including jobs creation, investment in the local economy and provision of skills for the local workforce. Together these benefits have the potential to create a significant lasting positive legacy for Anglesey, north Wales and the UK.</p>
LR2-01	Just a quick comment about the update I received this morning, which relates to working hours and HGV movements. I noted proposed changes to the	Horizon acknowledges the comment received but notes that it relates to the A5025 Highway Improvements as part of the examination of the Draft DCO application itself rather than Horizon's

Ref	Comment	Horizon's Response
	<p>road layout, such as "ironing out" the bends at Llanfaethlu and at the Black Lion pub in the first full scheme layout that was handed out to residents in the area. Given the number of accidents there have been on this stretch of road between Llanfaethlu and Llanfachraeth in the past 3 years (11 that I know of, including a HGV that had gone through a fence and landed on its side in a field), I'm wondering if the improvements go far enough in light of the proposed changes to the HGV delivery window.</p>	<p>Requests for Non-Material Changes, because the change does not alter the maximum number of HGV movements. Nevertheless, Horizon provides the following response.</p> <p>The existing bends at Llanfaethlu will be significantly improved as part of the proposed A5025 Off-line Highway Improvements.</p> <p>The following summarises the proposed A5025 On-line Highway Improvements which would, when considered in conjunction with the proposed off-line improvements, provide a route corridor designed to carry the forecast volume of traffic to Design Manual for roads and Bridges standards (DMRB).</p> <ul style="list-style-type: none"> <li>• Road safety will be improved by the realignment of the bends to DMRB standards.</li> <li>• The vertical alignment of the carriageway will be improved.</li> <li>• Super-elevation has been applied in line with TD 9 of DMRB. Rolling crowns have been applied in some flat areas to avoid drainage problems.</li> <li>• Visibility splays at the junctions and private means of access (PMAs) have been checked against the requirements of TD 42/95. Visibility has been improved where the carriageway is being widened.</li> </ul>

Ref	Comment	Horizon's Response
LR2-02	<p>While I understand that the original plans included a Llanfachraeth bypass, it doesn't appear to bypass some of the accident blackspots. Visibility at night, particularly when there's heavy rain, is bad down the hill and through the bends past the Black Lion towards Llanfachraeth. The road also seems fairly narrow in places. While the proposed changes to the HGV times are fine for the summer months, I would have concerns between October and April.</p>	<p>Horizon acknowledges the comment received but notes that it relates to the A5025 Highway Improvements as part of the examination of the Draft DCO application itself rather than Horizon's Requests for Non-Material Changes, because the change does not alter the maximum number of HGV movements.</p> <p>Existing accident data has been considered in the overall designs for both the A5025 On-line and Off-line Highway Improvements. The scheme designs have been jointly developed with IACC as the Highway Authority and Horizon and take into consideration both existing and increased traffic flows associated with the Wylfa Newydd DCO Project. The A5025 On-line Highway Improvements will see minimum carriage way widths increased to provide acceptable road carriageway widths in line with required standards. It is expected that all A5025 On-line Highway Improvements will significantly improve the existing A5025 with new surfacing to improve skid resistance.</p>
LR3-01	<p>As residents living directly on the A5025 through Llanfachraeth we attended a number of the consultation events and we were clearly informed that the construction of the proposed by-pass was specifically to move the construction traffic away from the village recognising that there were both traffic safety and health issues from the anticipated increase in traffic both HGV and other traffic to the Wylfa site. The major questions to be confirmed were about the precise route and the timing of the construction of such a bypass.</p>	<p>Horizon acknowledges the comment received but notes that it relates to the A5025 Highway Improvements as part of the examination of the Draft DCO application itself rather than Horizon's Requests for Non-Material Changes, because the change does not alter the maximum number of HGV movements or the programme for the A5025 off-line Highway Improvements.</p> <p>In respect of road traffic noise mitigation for residents along the A5025, please see Horizon's response to LR1-01.</p>

Ref	Comment	Horizon's Response
	<p>In the document, requesting a change in proposed HGV Movements, there are a number of references for example:-</p> <p>Page 22, it is noted that in the 2023 assessment there would be significant beneficial effects at two 'other' receptors (Llanfachraeth Play Area and a PRoW adjacent to Section 7 (Cefn Coch) but these benefits would not occur until after the A5025 Off-Line Highway Improvements have been completed; as they are not present in both the 2020 and 2023 assessments they have been omitted from the table.</p> <p>This acknowledges that you are proposing to impose these increased risks on us as residents even when you acknowledge that mitigation is required. This provided no reassurance that the impact on the lives of people living along this route will be treated seriously by Horizon.</p>	

Ref	Comment	Horizon's Response
LR3-02	<p>Your report and its proposals is based upon "modelling" not on an accurate reporting of real conditions.</p> <p>For example you make no acknowledgement of the road surface conditions through the village of Llanfachraeth where numerous partial resurfacing had left a number of drain grids etc now sunken further below new road levels (one is opposite our house) and HGVs in particular cause load noise and disturbance as they drive over the grid. This continuing into the evening will cause disturbance. I see no evidence of any survey being undertaken to check such conditions.</p>	<p>Horizon proposes to resurface the road through Llanfachraeth following completion of the A5025 Off-line Highway Improvements. Prior to the movement of HGVs in the extended times specified by this change, minor works like reseating gullies and covers and ironworks to the levels of the new resurfacing will be undertaken.</p>
LR3-03	<p>Your report makes reference to the DCO Traffic Assessment Appendix H, but your data is flawed</p> <ul style="list-style-type: none"> <li>- Fig 2-1 Weekday average hourly traffic flow A5025 Llanfachraeth is not dated at all with no background on how long date was collected for or what time of year so how relevant and reliable can this be treated</li> <li>- Fig 2-2 Traffic flow profile north of Valley over week and dated November 2014</li> </ul> <p>This is used to justify statements about off peak traffic levels on Saturday and therefore the acceptability of extending HGV movements into Saturday mornings. There is no acknowledgement of the very different traffic movements on Saturday during Summer Holiday period and the other / but shorter major holiday periods at Easter etc.</p>	<p>The DCO Transport Assessment Appendix D Traffic Data Report [APP-105] shows traffic data count locations and timings in detail. These surveys were undertaken in different seasonal periods from August 2014 through to April 2017. The surveys covered the August holiday season over the summer of 2015, for survey periods from May 2015 and August 2015, including counts taken on Saturdays. August and November traffic counts were specifically chosen to capture the additional traffic of the Anglesey tourist trade in comparison with a more neutral month (see DCO TA, Appendix G Strategic Traffic Model [APP-108]). These traffic data were then used to prepare the Strategic Traffic Model.</p> <p>See DCO Transport Assessment [APP-101], paragraph 11.4.7:</p> <p><i>"A sensitivity test was also undertaken to assess peak traffic</i></p>

Ref	Comment	Horizon's Response
	<p>Anglesey has a major tourist / holiday industry and for many Saturday is the change over day for accommodation.</p> <p>Anyone living locally has had the experience of traffic tailbacks at Valley traffic lights and heavier traffic flows and congestion through the village of Llanfachraeth. The introduction of potentially such a high level of HGV movements will both increase the risk of accidents and because of congestion the vehicles will be travelling slowly if not stopped which it is known will lead to increases in pollution gases produced.</p>	<p><i>conditions in the main holiday period i.e. August. Analysis of traffic flows shows that although total daily flows are higher in August than in March, AM and PM peak hour flows are lower. This reflects a lower number of commuter trips in the holiday period but a higher number of recreational trips which occur away from typical commuter peaks. This means that the VISSIM results for peak traffic conditions in March are applicable to peak traffic conditions in August."</i></p> <p>Further details are provided in DCO Transport Assessment, Appendix I, Section 7 - "August Sensitivity Test" [APP-110]. The impact of the proposed changes on road safety is examined in section 2.5 of the Request for Non-Material Change No. 5 HGV movements. The analysis concludes "<i>the proposed changes may be associated with a slight increase in accident risk prior to the completion of the A5025 Highway Improvements.</i>" and this means that Horizon proposes to fund a road safety campaign with the IACC and North Wales Police. The analysis concludes that the proposed changes are within the bounds of the conclusions of the existing assessment.</p>

Ref	Comment	Horizon's Response
LR4-01	<p>I have read your consultation paper for November 2018 regarding an extension of hours for HGV movement.</p> <p>What a ridiculous idea- even more disruption for local people. Forward planning is the key, weather forecasts are much improved and give a more accurate idea of upcoming storms, windy conditions etc.</p> <p>I strongly object to extended hours during the week and on a Saturday. Any HGV movement on local roads is an accident waiting to happen, especially during the winter months. There is very little lighting on Anglesey roads and the potential for incidents is already high.</p>	<p>The impact of the proposed changes on road safety is provided in section 2.5 of the Request for Non-Material Change No. 5 HGV movements. The analysis concludes "<i>the proposed changes may be associated with a slight increase in accident risk prior to the completion of the A5025 Highway Improvements</i>". As a result, within the Draft DCO application Horizon has secured to fund a road safety campaign with the IACC and North Wales Police (to be secured through the Draft DCO s.106 agreement) and with the inclusion of this scheme the analysis concludes that the proposed changes are within the bounds of the conclusions of the existing assessment.</p>
LR5-01	<p>Now from this latest information there is going to be an increase in both volume of traffic and the length of the working day and week so an increase in traffic noise. I would like to know if there is any thought for the local population as far as noise and inconvenience etc is concerned - are there any plans to compensate for the inconvenience and noise - there was mention one time of maybe enhancing windows maybe to triple glazing to lessen the traffic</p>	<p>The total number of HGVs and the overall volume of construction traffic would not change as a result of the proposed changes to HGV delivery windows, working hours or shift times.</p> <p>In relation to deliveries, Horizon is simply seeking additional flexibility by extending the delivery windows in order to ensure that HGV deliveries can be maintained (to the extent possible) in the event of unforeseen delivery delays or traffic incidents. However, noise modelling of the proposed changes to HGV delivery times, increased working hours and shift change times shows that these changes have the potential to cause an increase in limited noise</p>

Ref	Comment	Horizon's Response
	<p>noise in my home - any comment would be welcomed.</p>	<p>effects at locations close to the Wylfa Newydd Development Area (WNDA) and/or at properties adjacent to the A5025 and delivery road network at certain times of day.</p> <p>The Environmental Statement already proposes a range of mitigation measures within the WNDA and the boundary of the associated A5025 Off-line Highway Improvements to reduce and control noise at source, such that these noise effects are minimised. These combine a range of measures including design considerations, good practice and additional mitigation. These measures are secured through the Wylfa Newydd CoCP [REP2-031].</p> <p>Despite the above mitigation measures, there is still potential for significant residual noise effects at receptors which are near the WNDA, or in close proximity to certain roads on the HGV delivery route ('qualifying highways'). Qualifying buildings will be eligible for additional noise mitigation through the Local Noise Mitigation Strategy (LNMS), contained in section 8.3 of the Wylfa Newydd CoCP [REP2-031], which will provide either double-glazing or secondary glazing to improve the noise insulation. The Wylfa Newydd CoCP [REP2-031] forms part of the Draft DCO application for the Wylfa Newydd DCO Project. Compliance with it will be secured under a Requirement in the Draft DCO [REP2-020].</p> <p>In response to comments made through the Statement of Common Ground process with the North Anglesey Community Partnership and IACC, relevant representations received in August on the Draft DCO application, and consultation on the proposed changes,</p>

Ref	Comment	Horizon's Response
		<p>Horizon has lowered the eligibility criteria and extended the mitigation measures that may be provided by the LNMS. This means that a greater number of residential properties will be eligible for a range of noise mitigation measures (such as double or secondary glazing, noise ventilation, and acoustic fences).</p> <p>A number of mitigation measures are available for eligible buildings under the LNMS. There are four criteria which must be met for a building to be eligible:</p> <ul style="list-style-type: none"> <li>- Acoustic - where a building is within the LNMS WNDA Construction Boundary Plan Area (shown in the Local Noise Mitigation Strategy Update [REP3-050] submitted at Deadline 3 (18 December 2018)) or where construction or road traffic noise levels are predicted to exceed the LNMS noise thresholds.</li> <li>- Building type - buildings must be residential properties, guest houses, Bed &amp; Breakfast or hotels.</li> <li>- Owner or long-term leaseholder - with three or more years remaining in the case of a lease.</li> <li>- Existing and lawfully occupied - buildings must have been existing buildings at the date the Draft DCO is granted and are lawfully occupied (homeowner or tenant in the case of residential buildings and owner or leaseholder in the case of businesses providing overnight accommodation).</li> </ul> <p>The mitigation measures available under the LNMS fall into two categories as set out below. The LNMS measures will be provided</p>

Ref	Comment	Horizon's Response
		<p>and installed free of charge.</p> <p><b>Noise insulation package</b>  The 'noise insulation package' contains measures to improve noise insulation in eligible rooms of eligible buildings. Its aim is to improve noise insulation for qualifying windows and doors whilst ensuring adequate ventilation. Specifically the noise insulation measures which will be available for eligible buildings include:</p> <ul style="list-style-type: none"> <li>- Either secondary glazing (to fit inside existing windows) or replacement double-glazing windows</li> <li>- Noise insulated ventilation</li> <li>- External doors with improved noise insulation</li> <li>- Internal solar or blackout blinds</li> </ul> <p><b>Enhanced measures</b>  Two 'enhanced measures' may be offered where there is a need and scope to provide additional noise insulation for conservatories and/or gardens. These are:</p> <ul style="list-style-type: none"> <li>- Acoustic fencing</li> <li>- Noise insulation for conservatories</li> </ul> <p>The practical feasibility of installing each of the LNMS measures at an eligible building will be subject to a survey. During the survey, the surveyor will be able to provide further information and clarification. Additional conditions apply for the enhanced measures. Horizon will be available throughout the LNMS process to help with any queries.</p> <p>For further information of the LNMS please refer to the Local Noise</p>

Ref	Comment	Horizon's Response
		Mitigation Strategy (Companion Guide) [REP3-051] submitted at Deadline 3 (18 December 2018). If your building is potentially eligible, Horizon will contact you and provide an LNMS application pack in due course.
LR5-02	There has been a lot of correspondence from you regarding what is wanted from me - re compulsory purchase of some land but nothing about what impact this will have on my day to day living.	<p>Horizon acknowledges the comment received but notes that it does not relate to Horizon's request for a non-material change. Nevertheless, Horizon provides the following response.</p> <p>The Environmental Statement forming part of the Draft DCO application includes detailed assessments of impacts on multiple receptors. The Requests for Non-Material Change provide further detail specific to the proposed changes. The Local Resident has been contacted by Horizon offering discussion of impacts on their specific location and a meeting is being arranged in January 2019.</p>
LR6-01	I object most strongly not only to the extension of the traffic on the A5025 but also to any increase in traffic through Llanfachraeth before the bye pass is constructed. Residents were assured that Horizon were in the process of acquiring land in Mar 2013 and construction of a bye pass would begin in 2014, delayed to 2017 then 2018 now 2020.	<p>This response seems to be primarily concerned with an increase in traffic before the completion of the A5025 Off-line Highways Improvements. Horizon acknowledges these concerns but notes that they relate to the examination of the Draft DCO application itself and its assessments rather than Horizon's Requests for Non-Material Change. The Request for Non-Material Change to the HGV delivery window does not increase the number of HGVs (see section 2.2) compared to the number presented in the Draft DCO application, it just extends the delivery window to allow the same number of HGVs to be spread over a greater timeframe.</p>

Ref	Comment	Horizon's Response
LR6-02	<p>The latest proposal is to start work at Wylfa before the bye pass is even started, with HGV traffic from 7am to 11pm weekdays and 8am to 1pm on Saturdays.</p> <p>The 50 lorries on a Saturday, (100 including return journeys) would mean 20 HGVs per hour, ONE EVERY THREE MINUTES</p>	<p>The traffic impacts are examined in section 2.5 of the Request for Non-Material Change No 5 HGV movements. The extension of delivery hours will help to smooth HGV movements and a maximum number of movements on Saturday and weekday evenings of 50 and 20 respectively is still within the total HGV movements of 160 per day. For example, if Horizon were to have 160 movements per day between 07:00 and 19:00 there will be no additional movements on a weekday evening.</p>
LR6-03	<p>We were assured by Horizon on 15th Mar 2010 that "THE PEOPLE OF LLANFACHRAETH ARE NOT UNDULY AFFECTION BY TRAFFIC ASSOCIATED WITH THE DEVELOPMENT ON THE WYLFA SITE"!!!</p>	<p>Since Horizon first consulted on proposals for the Llanfachraeth bypass (and other parts of the A5025 Offline Highway Improvements) in 2014, Horizon has stated that the bypass would be in place to manage bulk construction traffic, i.e. vehicles associated with the main construction phase of the Wylfa Newydd DCO Project. Proposals for these offline highway changes are included within the Draft DCO application.</p> <p>However, to deliver the Wylfa Newydd DCO Project efficiently, Horizon needs to undertake Site Preparation and Clearance work to prepare the Wylfa Newydd Development Area for construction and improve sections of the A5025 through resurfacing and widening schemes (i.e. the A5025 Online Highway Improvements). Both these elements of work have been subject to separate applications and this work will need to take place before main construction and the development of any bypasses.</p>

Ref	Comment	Horizon's Response
		<p>At a similar time, Horizon will start work to deliver some developments associated with main construction of the Wylfa Newydd DCO Project – such as early Site Levelling, Deep Excavation activities and Temporary Worker Accommodation at the WNDA and at Logistics Centre. These projects will be built at an early stage in the delivery of the Project – likely to be ahead of the availability of a bypass at Llanfachraeth – and associated construction vehicle movements will increase traffic along the A5025. Horizon will cap this increase at 2,500 HGV deliveries a month and a maximum of 22 HGV movements per hour per direction. This is well within the existing capacity of the road. Further mitigation measures are also proposed including remedial work to the existing road surface to repair manholes and gullies. In addition, the Local Noise Mitigation Strategy is available for use by residents. Finally, Horizon notes that following completion of the A5025 Off-line Highway Improvements traffic flows are likely to drop very substantially in Llanfachraeth as through traffic will no longer use this section of road.</p>
LR6-04	<p>Horizon have been made aware of the Traffic and Transport report predicting a huge increase in serious accidents on this road. An increase of 140% with a prediction of 5 fatalities and 5 severely injured.</p>	<p>The source material provided in the respondent's representation does not predict a 140% increase with 5 fatalities and it is unclear how these numbers have been derived.</p> <p>The source material in the representation uses accident data from the period 2002 to 2007 to form a prediction of future accident rates. This data is out of date when compared to the Accident Analysis provided in the DCO Transport Assessment, Appendix E [APP-106].</p> <p>The DCO Transport Assessment, Appendix E Accident Analysis</p>

Ref	Comment	Horizon's Response
		<p>[APP-106] presents a full accident analysis review based on accident statistics from 2011 to 2015. The analysis of clusters at key locations on the A5, A55, and A487 indicate that in the majority of cases the accidents are likely to have occurred because of poor observation, with vehicles pulling in front of or colliding with the side of other vehicles in spite of generally good light and road conditions. Based on this analysis, the records for personal injury accidents included in clusters do not demonstrate a strong correlation of causes that would be of relevance to the Wylfa Newydd DCO Project (see Appendix E Accident Analysis of the Draft DCO TA, section 3 [APP-106]).</p>
LR6-05	<p>They have also been made aware of the Isle of Anglesey council speed check carried out in 2008 where from a sample of 33k vehicles, 28% were breaking the speed limit, and a vehicle every 12 seconds. Maximum speeds were 61mph for cars, 52mph FOR TRUCKS and 47mph for LONG TRUCKS.</p>	<p>All traffic modelling has been based on a posted speed limit (see the DCO Transport Assessment, Appendix G Strategic Traffic Model [APP-108]) with further adjustments to reflect local conditions. These adjustments are presented in Appendix C2-2 Journey Time Calculations [APP-099]. Horizon proposes to fund a road safety campaign with the IACC and North Wales Police, which is to be secured through the Draft DCO s.106 Agreement [REP3-042]. Details are provided in section 2.5 of the Request for Non-Material Change No 5 HGV movements and with the inclusion of this scheme the analysis concludes that the proposed changes are within the bounds of the conclusions of the existing assessment.</p>

Ref	Comment	Horizon's Response
LR6-06	HORIZON ARE NOW PROPOSING THIS INCREASE ON AN ALREADY OVERLOADED ROAD	The Request for Non-Material Change No. 5 HGV movements only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application.
LR6-07	I am quite willing to offer further evidence of HGVs skid marks showing vehicles out of control and oversized HGVs for Wylfa, having difficulty manoeuvring through the village.	Horizon notes this offer. Representatives from Horizon met with the respondent on 29 November 2018 to understand their views and to examine traffic conditions near their house and wrote to the local resident most recently on 6 December 2018 and 3 January 2019 providing references to specific Draft DCO documents for information.
LR7-01	Although I hold no objection to this overall project, I am extremely concerned about the increase of heavy traffic that will need to pass my home	Horizon acknowledges the comment received but notes that it relates to the examination of the Draft DCO application itself and its assessments rather than Horizon's Request for change relating to HGV movements, which only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application (see section 2).
LR7-02	.....as well as the additional noise and pollution effects, the increased vibration may well have detrimental effect to this property	Horizon notes that these comments relate to Draft DCO application itself rather than Horizon's Request for Non-Material Change. Nevertheless, Horizon provides the following response.  Passing vehicles can induce vibrations in buildings in two major ways:

Ref	Comment	Horizon's Response
		<p>- Low frequency sound produced by large vehicle engines and exhausts can produce detectable vibration in building elements, particularly if they are light and flexible. This is referred to as airborne vibration.</p> <p>- Forces between the road and tyres can become perceptible in building if heavy vehicles pass over irregularities in the road surface near properties. This is referred to as ground borne vibration.</p> <p>Airborne vibration in the most exposed parts of a property can be perceptible, but vibration levels in the hard structure of the building are much lower [1]. Ground-borne vibration enters buildings through the foundations, and can lead to higher levels of vibration in the hard structure of a building than is the case for airborne vibration.</p> <p>Concerns over the effect of traffic vibration on buildings which are close to heavily trafficked roads are common; a study on traffic induced vibration conducted in 1984 indicated that 55% of respondents were concerned that vibration could damage their homes [1]. However, despite these concerns, studies on vibration induced fatigue, and comparisons of properties fronting heavily trafficked roads with similar age and style buildings in areas away from traffic, <i>“have failed to show any significant effect of traffic vibration on ordinary domestic dwellings or heritage buildings”</i> [1].</p> <p>Nonetheless, to minimise any increases in noise and vibration Horizon will install:</p> <ul style="list-style-type: none"> <li>• new 'low noise' road surfaces along Sections 2, 4, 6 and 8 of the A5025, and,</li> </ul>

Ref	Comment	Horizon's Response
		<ul style="list-style-type: none"> <li>new surface dressings (a bitumen binder followed by the application of chippings to improve skid resistance) on Sections 1, 3, 5 and 7.</li> </ul> <p>These works to the A5025 will be undertaken as part of the Wylfa Newydd DCO Project A5025 On-Line Highways Improvements. A new road surface will minimise irregularities in the road surface, and thus will keep the level of ground-borne vibration from road traffic to a minimum. It is anticipated that the early commencement of the Wylfa Newydd DCO Project A5025 On-Line Highways Improvements means they will be completed before the volume of traffic associated with main construction reaches peak levels.</p> <p>References</p> <p>[1] G R Watts, "Traffic induced vibrations in buildings," Transport and Road Research Laboratory, Department of Transport, Crowthorne, Berkshire, UK, Research Report 246, 1990.</p>
LR7-03	<p>This consultation states only the extra movements during evening and Saturday morning. I feel that the extra noise and pollution during these hours will have a negative impact on my life</p>	<p>The Request for Non-Material Change No. 5 HGV movements only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application.</p> <p>In respect of noise mitigation please see Horizon's response to LR1-01.</p> <p>In respect of air quality, the proposed change does not lead to any changes to the air quality assessment presented in chapter C4 of the Environmental Statement of the Draft DCO application which</p>

Ref	Comment	Horizon's Response
		concludes no significant effects on air quality from Wylfa Newydd DCO Project related traffic.
LR7-04	In addition, the access in and out of my property, which is already difficult, will be further impeded with extra heavy traffic	<p>Horizon acknowledges these concerns and has proposed a number of improvements to improve visibility and access where necessary.</p> <p>At this location Horizon is widening the A5025 on the opposite side to the Private Means of Access (PMA). Horizon will be carrying out resurfacing of this PMA to tie in to the new A5025 on-line improvements.</p> <p>By extending out the delivery hours. HGV would be spread over a wider window therefore access to and from this property would be improved.</p>
LR8-01	I am writing to object to the increase in hours that HGV deliveries are permitted. I live in Valley and believe the constant movement of HGV deliveries within earshot and sight of my home will be intolerable. I have suffered from cancer and a peaceful living environment is essential to my health and well being.	<p>Horizon will take all reasonable steps to limit the adverse effects of the Wylfa Newydd DCO Project as far as possible. Mitigation and good practice measures are proposed in order to avoid, reduce or compensate for adverse impacts where possible. These measures are set out in the Mitigation Route Map [APP-422], including measures relating to monitoring health and well-being.</p> <p>Horizon takes its responsibilities to the people and communities that neighbour the Wylfa Newydd Development Area and the Associated Development sites very seriously. The various mitigation strategies that form part of this application have been considered and designed with the interests of local people in mind. Where possible Horizon has sought to reduce the impacts on the surrounding properties and residents.</p>

Ref	Comment	Horizon's Response
		<p>Each of the RfNMCs has included a consideration of the potential population health effects. Such analysis has concluded that the proposed changes would not alter the conclusions reached in the Wylfa Newydd DCO Project's Health Impact Assessment (HIA) Report [APP-429]. The HIA Report acknowledges that there would be a range of beneficial and adverse effects across vulnerable groups and geographic levels. This encompasses minor to major beneficial effects and minor to moderate adverse effects. The RfNMC for HGV Movements does not increase the number of HGVs compared to the number presented in the Draft DCO application. It extends the delivery window to allow the same number of HGVs to be spread over a longer (though still restricted) timeframe. It would be inaccurate to describe the change as resulting in "constant movement of HGV deliveries". In relation to a "peaceful living environment", Horizon acknowledges that there would be some adverse effects of the Wylfa Newydd DCO Project. However, the RfNMC sets out additional and enhanced noise mitigation (in the Wylfa Newydd Code of Construction Practice [APP-414]), which would reduce the effects when compared to the Draft DCO application. Such measures are specifically intended to benefit the health and well-being of local residents. Further detail of this is set out above in response to LR1-01.</p> <p>Horizon has undertaken extensive noise modelling to predict the likely significant effects of the Wylfa Newydd DCO Project. Where the modelling shows it to be appropriate, Horizon has committed to providing mitigation. In many cases the modelling demonstrates that significant noise effects due to the Wylfa Newydd DCO Project</p>

Ref	Comment	Horizon's Response
		<p>would be unlikely. Horizon is also committed to working with the IACC in relation to appropriate monitoring and mechanisms for responding to any complaints received.</p> <p>Whilst the Wylfa Newydd DCO Project will, in common with any national infrastructure project, result in residual adverse effects on the local community these (considered individually or collectively) must, for a balanced approach, be considered in the context of the important benefits. These benefits would be delivered for the UK as a whole, including a vital role in the provision of safe and secure low carbon electricity, as well as significant local benefits including jobs creation, investment in the local economy and provision of skills for the local workforce. Together these benefits have the potential to create a significant lasting positive legacy for Anglesey, north Wales and the UK.</p>
LR8-02	<p>My property faces the proposed new road extension from Valley to Wylfa and myself and two children will be directly impacted by the vast amount and extended working hours of HGV traffic.</p>	<p>The Request for Non-Material Change No. 5 HGV movements only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application</p>

Ref	Comment	Horizon's Response
LR8-03	I also run a tourism business leading wildlife walks and am concerned on the impact of the HGV traffic on tourism to the island. I can't imagine anyone wanting to come to the swathe of Anglesey that will be affected by the new build and construction for a holiday. Also all the other associated environmental and health impacts of a second Wylfa worry me.	<p>These concerns generally relate to the examination of the Draft DCO application and its assessments rather than the proposed change.</p> <p>The Request for Non-Material Change No. 5 HGV movements only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application (see section 2).</p>
LR8-04	What are the plans for disposal of nuclear waste?	<p>This comment is not directly relevant to the changes consulted upon, but to the Wylfa Newydd DCO Project as a whole. The stakeholder has been contacted separately in relation to these points. Radioactive waste matters are addressed in ES Chapter D14-1 [APP-233].</p>
LR8-05	What is the contingency in the event of sea level rise?	<p>This comment is not directly relevant to the changes consulted upon, but to the Wylfa Newydd DCO Project as a whole. The stakeholder has been contacted separately in relation to these points. Sea level rise matters are addressed in the Consultation Report [APP-037] and ES chapters B12 [APP-077] and D12 [APP-131].</p>
LR8-06	What are the plans in case of nuclear accident.	<p>This comment is not directly relevant to the changes consulted upon, but to the Wylfa Newydd DCO Project as a whole. The stakeholder has been contacted separately in relation to these points. Plans in the case of nuclear accident are addressed in ES chapter D14-2 [APP-234].</p>

Ref	Comment	Horizon's Response
LR8-07	<p>I would like to know when the construction of the new road link from Valley is proposed please.</p>	<p>This comment is not directly related to the changes consulted upon, but to the Wylfa Newydd DCO Project as a whole.</p> <p>The road improvements between Valley and Wylfa will be undertaken in two main phases:</p> <p><b>Phase 1</b> – A5025 On-line Highway Improvements - The online road improvements will commence prior to DCO grant as these are predominantly within the envelope of the existing A5025 roadway and can be construction on existing highways owned land. The works have been approved under a separate TCPA consent and could start as early as Q2 2019 (subject to CPO and contract approvals). The works will take approximately 24 months to complete and will be delivered progressively to minimise disruption to traffic using the A5025.</p> <p><b>Phase 2</b> – A5025 Off-line Highway Improvements. This involves constructing new stretches of roads which will divert construction traffic away main residential areas such as Llanfachraeth. This element of the works requires to be consented under the current Draft DCO application to ensure that all necessary permissions including compulsory acquisition powers (if required) can be secured under the DCO. The Off-line highway works will be delivered in accordance with the Phasing Strategy [APP-447].</p>
LR9-01	<p>I am extremely concerned about the increased HGV window. There is no conceivable reason to extend it into the night or have deliveries on Saturday.</p>	<p>The rationale for the proposed change to the HGV delivery window is explained in section 2 of a Request for Non-Material change No 5 - HGV.</p>

Ref	Comment	Horizon's Response
LR9-02	<p>The increase in traffic will be bad enough without having the window extended. As residents we will need some relief.</p>	<p>The Request for Non-Material Change No. 5 HGV movements only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application.</p> <p>The extension of delivery hours will help to smooth HGV movements and a maximum number of movements on Saturday and weekday evenings of 50 and 20 respectively is still within the total HGV movements of 160 per day. If Horizon achieve 160 movements per day between 07:00 and 19:00 there will be no additional movements on a weekday evening for example.</p>
NWFRS-01	<p>HGV movements - Do these changes include Abnormal Indivisible Load (AIL) movements on the road network as an alternative to via the MOLF?</p>	<p>The movement of AILS is considered separately to the arrangements for HGVs and details for the movement of AILS are provided in Section 5.4 of the Wylfa Newydd Code of Construction Practice [REP2-031].</p>
WG-01	<p>HGV The Welsh Government would wish to clarify with Horizon that the Transport Model, and ES Assessments have considered these proposed changes in order to reach such a conclusion?</p> <p>Information provided by Horizon in ES Chapter B3 Traffic and Transport to the DCO would appear to confirm that assessment of deliveries has only occurred Monday to Friday between 0700 and 1900.</p>	<p>The Environmental Statement has assumed that HGV movements are from 07:00 to 19:00 and considered the impact of the movements on the operation of junctions (see chapter 11 of DCO Transport Assessment [APP-101]) and on daily flows (00:00 to 24:00) (see Appendix C2-3 Traffic Flows [APP-101]). These daily traffic flows are used as inputs to the noise and air quality assessments of the Wylfa Newydd DCO Project. The impact of the proposed changes to HGV hours across the day is provided in section 2.5 of the Request for Non-Material Change No. 5 HGV movements with separate sections on Traffic and Transport, Air Quality and Noise and Vibration.</p>

Ref	Comment	Horizon's Response
		<p>The section on traffic concludes "<i>Therefore, there would be no new or different likely significant environmental effects than those reported in the DCO application.</i>"</p>
WG-02	<p>Welsh Government is aware that the Holyhead Ferry has arrivals at 18:20, which would mean additional freight traffic hitting the A55 network after 19:00 when (if the proposed change be introduced) additional HGV's would be delivering to and from the WNDA. In addition, there is a Saturday sailing that arrives in Holyhead at 11:50, so would again have freight traffic on the A55 network overlapping with HGV's travelling to and from the WNDA.</p>	<p>The potential effects of ferry arrivals on traffic flows is considered in paragraph 4.3.6 of the DCO Transport Assessment [APP-101]: <i>"The arrival of a ferry will typically result in an intense but short-lived traffic peak, travelling south-east along the A55. This effect is less pronounced for departures as vehicles will arrive over a longer period in advance of a ferry leaving. arrival ferry traffic is intense but short-lived, mostly heading southeast. Arrival traffic is more spread out over a longer time period."</i></p> <p>Figure 4-7 of the DCO Transport Assessment [APP-101] shows the traffic flow profile for eastbound traffic over the Britannia Bridge. This figure shows that traffic flows reduce after an evening peak between 17:00 and 18:00 and that by 19:00 to 20:00 they are 40% lower than the evening peak hour. This shows that there is spare capacity to accommodate HGV traffic flows in the period from 19:00 to 23:00.</p> <p>The Saturday sailing arriving at Holyhead at 11:50 is not expected to have an effect on the proposed Saturday morning delivery period for HGVs. Traffic emerging from the ferry at Holyhead Port is unlikely to enter the A55 until at least 12:00, possibly later, and the proposed HGV delivery period will terminate 60 minutes later at 13:00. In addition, traffic flows on a Saturday are much lower than during the week meaning that traffic impacts will be lower. This is demonstrated by Figure 5-1 of Appendix L Supplementary Information [APP-113]</p>

Ref	Comment	Horizon's Response
		<p>which shows the lower traffic flows on the A55 at the weekend compared to a weekday.</p> <p>The potential effects of ferry arrivals on traffic flows is considered in paragraph 4.3.6 of the DCO Transport Assessment [App-101]:</p> <p>“The arrival of a ferry will typically result in an intense but short-lived traffic peak, travelling south-east along the A55. This effect is less pronounced for departures as vehicles will arrive over a longer period in advance of a ferry leaving.”</p> <p>Figure 4-7 of the DCO Transport Assessment [APP-101] shows the traffic flow profile for eastbound traffic over the Britannia Bridge. This figure shows that traffic flows are very low before 07:00 when traffic being discharged from the 05:45 ferry arrival would use the A55 and then cross Britannia Bridge. In addition, construction traffic travelling to the Wylfa Newydd DCO Project would be travelling in the westbound direction in the early morning to reach the Wylfa Newydd DCO Project by 07:00 (the earliest time deliveries can be made). These movements are in the opposite direction to the eastbound traffic flows associated with the 05:45 ferry arrival. This analysis shows that the traffic associated with the 05:45 ferry arrival would not affect construction vehicle movements to the Wylfa Newydd DCO Project as there is sufficient capacity on the road network and vehicle movements are in opposite directions.</p>
GCC-01	Horizon are proposing changes to the currently proposed HGV delivery times, during the construction phase. GC acknowledge that this spreading of movements should result in lesser traffic during the	A VISSIM traffic model of the operation of the Britannia Bridge and the nearby road network has been prepared and used to assess the impact of the Wylfa Newydd DCO Project. This model is described in section 9.5 of the DCO Transport Assessment [APP-101] with

Ref	Comment	Horizon's Response
	<p>day, which could ease any of the delays experienced on the Britannia Bridge, which is welcomed. However, GC are concerned that extending the hours of traffic movements to periods when less background traffic is on the network, could result in the perception of bigger relative impacts in the percentage increase of vehicles on the network and at junctions. No assessment work has been done around these changes in terms of sensitivity test if things do not go to plan, as set out below.</p>	<p>results provided in section 11.4. Details of sensitivity tests concerning peak conditions and the potential effects of the North Wales Connection project are considered in paragraphs 11.4.7 and 11.4.8. Since the submission of the Draft DCO application further sensitivity tests have been prepared which examine the effects of an increase in construction workers living on the mainland. This technical note has been provided to GCC as part of the SoCG engagement. The potential effect of changes in traffic flows on junction operation is provided in Request for Non-Material Change No. 3 Worker Shift Patterns. This analysis shows that no change to the conclusions presented in the DCO Transport Assessment [APP-101] are expected as a result of the proposed changes to HGV deliveries.</p>
GCC-02	<p>Horizon are proposing changes to worker shift patterns and the HGV delivery window (Requests for Non-Material Change no. 3 and 5) which both have the potential to alter traffic flows, and in the case of Saturday morning HGV deliveries, introduce new construction-related traffic from that assessed within the DCO application. GCC, accept that whilst these changes individually do not affect significantly the outcomes of any previous modelling work undertaken and are not adding large amounts of traffic movements, but moving traffic flows around, the previous reservation still stand around sensitivities with the congestion on areas of the network such as Britannia Bridge. GC also welcome the consideration of further details to cover additional vehicle</p>	<p>Horizon acknowledges that the control documents that set out and secure mitigation in the Draft DCO application may be further refined during the Examination period. Recent meetings with the IACC and Welsh Government (Dec 2018) have updated issues such as limits on vehicle movements, traffic monitoring and enforcement.</p> <p>Horizon has already submitted revisions of the Wylfa Newydd CoCP [REP2-031] and relevant sub-CoCPs [REP2-032 to REF2-036] at Deadline 2 (4 December 2018).</p> <p>Horizon will provide the next updated revisions of the Wylfa Newydd CoCP [REP2-031] and relevant sub-CoCPs [REP2-032 to REF2-036] at Deadline 5 (12 February 2019) as well as an updated Phasing Strategy [APP-447].</p>

Ref	Comment	Horizon's Response
	<p>movements when items such as bridge closures and road congestion threaten the construction programme. However, GC would still request that the following elements are set out and are committed to in the DCO control documents, e.g. the Code of Construction Practice (CoCP), as follows: limits on all vehicular traffic in terms of volumes, timings, restricted hours and duration of movements. detailed Phasing Strategy of the project. traffic monitoring and management details, with penalties and mitigation set out for exceeding limits. travel planning details to manage traffic and set out measures of control. The CoCP is currently lacking in a lot of detail that would be expected for a project of this type. GC set out further details within their Local Impact Report.</p>	<p>Horizon will include the following items at the next update, confirming mitigation discussed with the IACC and Welsh Government (Dec 2018):</p> <ul style="list-style-type: none"> <li>- HGV limits, including limits that will apply in advance of the A5025 Off-line Highway Improvement Works opening;</li> <li>- traffic management monitoring and reporting;</li> <li>- delivery management systems; and</li> <li>- enforcement.</li> </ul>
NRW-01	<p>4. HGV MOVEMENTS (CHANGE NO. 5).</p> <p>4.1. Paragraph 2.2.1 explains that the proposed change is “to extend the weekday (Monday to Friday inclusive) delivery window into the evening, to include deliveries between the hours of 19:00 and 23:00. Furthermore, an additional delivery window is proposed on Saturday mornings, between 08:00 and 13:00”.</p>	<p>Horizon agrees with NRW's assessment.</p>

Ref	Comment	Horizon's Response
	<p>4.2. NRW advises that the proposed change is unlikely to result in new or different significant environmental effects.</p>	
IACC-01	<p>This letter constitutes the Isle of Anglesey County Council's (IACC) response to Horizon's consultation on the 'non-material changes' as outlined above. The IACC does not agree that the changes are 'nonmaterial'. This letter will outline the IACC's position as to why these changes are material and how these changes (individually and cumulatively) will materially change the impacts of the project and the DCO Application. As set out in advice note 16, a series of incremental changes can cumulatively amount to a material change to the application. IACC consider that the proposed changes when taken together have the potential to materially change the impacts and are cumulatively a Material Change to the DCO Application. The IACC accepts that the changes proposed do not fundamentally alter the substance of the proposal in the terms of advice note 16. However, IACC considers that these changes will</p>	<p>Horizon has provided an assessment of the cumulative impacts from all the Request for Non-Material Changes in the appendix. The appendix (which is attached – in duplicate form – to RfNMC docs 3, 4 and 5) sets out an assessment of the effects of all proposed non-material changes to the cumulative assessment reported in the Draft DCO application. The purpose is to assess whether the proposed changes could interact to result in the Wylfa Newydd DCO Project having a greater cumulative effect to that reported in the Draft DCO application. The effect of each separate request for non-material change on the cumulative assessment reported in the Draft DCO application has been assessed and reported within the standalone candidate for change documents.</p> <p>The details of the proposed changes have been carefully considered in isolation to ensure that the change can be undertaken with minimal environmental effects resulting in no new or different likely significant environmental effects. Where there is considered potential for new or different effects to occur as a consequence of</p>

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	<p>result in a material change to the impacts assessed in the ES and require not only full assessment of the impacts by Horizon, including the provision of other environmental information considering all of the changes together, but also the opportunity for IACC to assess and respond to these as this proposal will change the basis on which the LIR was prepared.</p>	<p>the proposed change, new and/or enhanced mitigation has been proposed to enable an overall conclusion of no new or different likely significant environmental effects to be reached. The cumulative effects have also been considered in detail from each change and Horizon also concludes 'no new or different likely significant environmental effects' as a result of all three proposed changes.</p>
IACC-02	<p>The IACC does not object to the change to the HGV delivery window provided that this does not take effect unless and until the A5025 offline works are completed and open to traffic and the limits on HGV movements proposed in the change are secured through the DCO.</p>	<p>The extension of HGV delivery windows to 23:00 will have a beneficial effect by spreading the HGV deliveries across a wider period of time. The early years are critical to project delivery, so extended delivery windows are required to apply prior to completion of the A5025 Off-line Highway Improvements. In the revised Wylfa Newydd CoCP to be submitted at Deadline 5 (12 February 2019), Horizon has committed that before the opening of the A5025 Off-Line Highway Improvement Works, the number of HGV deliveries will not exceed a maximum of 22 HGV deliveries (44 movements) per hour. Any further restriction beyond this number would jeopardise Horizon's ability to complete key project components early in the construction programme, such as the MOLF, Site Campus, and the A5025 Off-line Highway Improvements themselves. To mitigate the effects of increased noise during evening and night, Horizon has lowered eligibility criteria and the provided by the Local Noise Mitigation Strategy (LNMS). Further information on the improvements to this scheme are set out in the Local Noise Mitigation Strategy Update [REP3-050] submitted at Deadline 3 (18 December 2018), and it is recommended also to read the LNMS Companion Guide [REP3-051] (also submitted at Deadline 3, 18 December 2018) which provides additional</p>

Ref	Comment	Horizon's Response
		information on how the strategy will be operated. The A5025 on-line route is included within the definition of 'eligible highways' in respect of the LNMS.
IACC-03	The updated ARCADY models and assessment provided in reference RD5 'RFC Heavy Goods Vehicles Delivery Window Changes' has not been provided. The IACC therefore cannot comment on the impact on A55 Junction 2. The IACC request that this information is provided.	This document will be provided to IACC through the SOCG process.
IACC-04	IACC identifies there is a conflict between the stipulated hours of delivery for the SPC and that proposed for the main construction project. IACC does however recognise the difference in scale between both projects but wishes to highlight the conflict in timings proposed for HGV movements along the A5025 particularly during sensitive periods for residents who are more likely to be at home. IACC believes this is to be an unacceptable impact without adequate measures being in place to ensure	Horizon will work with contractors on both projects to coordinate HGV movements and help reduce impacts.

Ref	Comment	Horizon's Response
	<p>impacts are reduced during these times on the road network.</p>	
IACC-05	<p>The argument made for the amendments to the shift patterns in terms of 'improving road safety and community impacts' has a direct conflict with the justification for the extended HGV movement hours proposed. This extension of HGV travel movements results in an additional 5 hours during the evening when levels of lighting will be at their lowest and when residents will be winding down for the evening and preparing for sleep. In line with other justification for improving safety and community amenity, IACC suggest increasing the period for HGV movements on a Saturday to be consistent with the weekday times which would result in vehicles travelling in daylight. This change would be acceptable if HGV movements during the evening on weekdays were reduced accordingly, thus reducing movements during sensitive times and during periods where light levels are lower.</p>	<p>Horizon has considered a number of delivery window options in preparing the RfNMC and the current proposal minimises any additional adverse environmental effects while balancing the Wylfa Newydd DCO Project's need.</p>

Ref	Comment	Horizon's Response
IACC-04	<p>The IACC acknowledges that traffic volumes are lower during the evening period (19:00-23:00), however would note that receptors may be more sensitive to an increase in HGV movements due to the low baseline traffic levels (IACC traffic surveys confirm zero HGV movements occur on certain weekdays during the evening period). Extending the weekday delivery window into the evening will significantly reduce the time-period of zero HGV or bus traffic movements, which will adversely affect the amenities of existing residential properties adjacent the A5025. The IACC do not consider that the proposed changes are acceptable until the A5025 Offline improvements are completed.</p>	<p>The extension of HGV delivery windows to 23:00 will have a beneficial effect by spreading the HGV deliveries across a wider period of time. The early years are critical to project delivery, so extended delivery windows are required to apply prior to completion of the A5025 Off-line Highway Improvements. In the revised Wylfa Newydd CoCP to be submitted at Deadline 5 (12 February 2019), Horizon has committed that before the opening of the A5025 Off-Line Highway Improvement Works, number of HGV deliveries will not to exceed a maximum of 22 HGV deliveries (44 movements) per hour. Any further restriction beyond this number would jeopardise Horizon's ability to complete key project components early in the construction programme, such as the MOLF, Site Campus, and the A5025 Off-line Highway Improvements themselves.</p> <p>Although the weekday delivery window has been extended into the evening, Horizon has limited the number of movements to 20 HGVs in each direction between the hours of 19:00 and 23:00 in order to mitigate impacts on local residential receptors.</p>
IACC-05	<p>The proposal states that as a result of increasing the HGV delivery window, Horizon will impose the following additional limits.</p> <ul style="list-style-type: none"> <li>• during the weekday evening period 19:00 to 23:00 there will be a maximum of 20 HGV movements in each direction; and.</li> <li>• on Saturday between 08:00 and 13:00 there will be a maximum of 50 HGV movements in each direction. The IACC requires this restriction to</li> </ul>	<p>Horizon will secure the limits provided in the request for non-material change - HGV movement in the relevant sub-CoCP if the change is accepted in to Examination.</p>

Ref	Comment	Horizon's Response
	<p>be secured in a meaningful and enforceable manner through inclusion in the CoCPs or by requirement. Without being so secured IACC consider that this 'limit' cannot be relied upon.</p>	
IACC-06	<p>IACC notes that an additional 18 residential properties shall be 'adversely affected' by the changes proposed. The IACC requests that Horizon provides details of each affected residential property and the level of mitigation measures proposed for each property due to the increase in noise and vibration.</p>	<p>Horizon acknowledges that potential effects at individual properties cannot be identified from the consultation report. However, the noise modelling which has been undertaken is identical in methodology to that which supports the Draft DCO application, and due to this consultation response, detailed noise maps have been provided with the HGV and Working Hours requests for non-material change that have been submitted into examination. These show future noise levels at individual properties. In addition, further explanation is provided in the reports around newly affected properties, and those at which the effects are expected to reduce as a result of the proposed changes.</p> <p>As detailed in the Deadline 3 submissions (18 December 2018), in response to comments made through the Statement of Common Ground process with the North Anglesey Community Partnership and IACC, relevant representations received in August on the Draft DCO application, and in light of the potential Requests for Non-Material Change, Horizon has lowered the eligibility criteria and extended the mitigation measures that may be provided by the LNMS.</p> <p>The mitigation measures available under the LNMS fall into two categories as set out below. The LNMS measures will be provided</p>

Ref	Comment	Horizon's Response
		<p>and installed free of charge.</p> <p><b>Noise insulation package</b>  The 'noise insulation package' contains measures to improve noise insulation in eligible rooms of eligible buildings. Its aim is to improve noise insulation for qualifying windows and doors whilst ensuring adequate ventilation. Specifically the noise insulation measures which will be available for eligible buildings include:  Either secondary glazing (to fit inside existing windows) or replacement double-glazing windows  Noise insulated ventilation  External doors with improved noise insulation  Internal solar or blackout blinds</p> <p><b>Enhanced measures</b>  Two 'enhanced measures' may be offered where there is a need and scope to provide additional noise insulation for conservatories and/or gardens. These are:  - Acoustic fencing  - Noise insulation for conservatories</p> <p>The 'noise insulation package' measures are intended to reduce noise levels within dwellings, rather than outside them. However, a recent commitment has been made by Horizon in respect of the 'enhanced measures' to provide acoustic fences to gardens in some situations, would provide limited noise reductions in outdoor areas. This commitment has been included in the section 8.5 of the</p>

Ref	Comment	Horizon's Response
		<p>updated Wylfa Newydd CoCP submitted at Deadline 5 (12 February 2019). The Wylfa Newydd CoCP [REP2-031] forms part of the Draft DCO application for the Wylfa Newydd DCO Project. It is expected to be secured under Requirement PW7 in the Draft DCO [REP2-020].</p> <p>The practical feasibility of installing each of the LNMS measures at an eligible building will be subject to a survey. During the survey, the surveyor will be able to provide further information and clarification. Additional conditions apply for the enhanced measures. Horizon will be available throughout the LNMS process to help with any queries. Each element of the noise insulation package, and how they will benefit residents, are detailed below.</p> <p><b>Secondary glazing</b></p> <p>Secondary glazing is where a separate pane of glass is installed typically 100 – 200 mm inside the existing window (which remains in place). This can normally be opened for cleaning and ventilation. Compared to double glazing, secondary glazing tends to be more effective at reducing noise. The noise reduction benefit tends to be greatest at the lower frequencies associated with construction activities and road traffic movements.</p> <p><b>Double glazing</b></p> <p>The double-glazing option consists of two panes of glass, typically around 12-20mm apart in a sealed casing, which is installed to replace the existing window. Double glazing is designed to reduce thermal loss (keeping rooms warm) and to reduce noise. If a LNMS applicant wishes to take up the offer of double glazing,</p>

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		<p>they will be made aware that it may not perform as well as secondary glazing in reducing the noise levels associated with construction activities and road traffic movements. If double glazing is selected, it will not be possible for an occupier or owner to apply for secondary glazing at a later date.</p> <p><b>Acoustic ventilation</b></p> <p>Windows work best to control noise when they are kept closed. Acoustic ventilation will be offered to residents to that rooms can be ventilated even when windows are closed. Acoustic ventilators typically involve fixing a small electric ventilator fan in a housing mounted on the inside face of an external wall and installing an air duct through the wall so that the fan can draw fresh air in from outside. The ventilator provides fresh air but reduces sound transferring from outside to inside.</p> <p><b>Acoustic treatment for external doors</b></p> <p>Where an eligible room includes a qualifying door, it may be possible to provide a secondary door or a replacement double glazed door to improve noise insulation. The practicality of such measures will be assessed on a case by case basis during the survey stage.</p> <p><b>Internal solar blinds or blackout blinds</b></p> <p>Internal solar blinds are designed to help reduce the amount of heat within a room by reducing the transmittance of sunlight through windows. They are fitted close to the internal pane of a window (inside the eligible room) and are particularly useful in helping</p>

Ref	Comment	Horizon's Response
		<p>prevent rooms with south facing windows from becoming too warm when windows are closed. Where an eligible room includes a qualifying door, it may be possible to provide a secondary door or a replacement double glazed door to improve noise insulation. The practicality of such measures will be assessed on a case by case basis during the survey stage.</p> <p>For further information of the LNMS please refer to the Local Noise Mitigation Strategy (Companion Guide) [REP3-051] submitted at Deadline 3 (18 December 2018). If your building is potentially eligible, Horizon will contact you and provide an LNMS application pack in due course.</p>
IACC-07	<p>With respect to air quality, noise and health Horizon concludes that there would be no new effects and no change to the significance ratings of predicted effects relating to the revised shift patterns and working hours. The same conclusions are reached with respect to potential for and scope of cumulative effects. IACC concludes that these findings are rational given that they are based largely on the outcome of the updated traffic modelling.</p> <p>However, IACC seeks clarification regarding para 2.5.56 and whether the alterations proposed within Non-Material Change No 5: HGV Delivery Window, have indeed been factored into / accounted for in the revised Calculation of Road Traffic Noise due to the</p>	<p>Horizon acknowledges IACC's view that conclusions for shift patterns and working hours are rational with respect to air quality, noise and health.</p> <p>The Request for Non-Material Change No. 5 HGV movements only seeks to amend the delivery window of HGV movements to allow the same number of HGVs to be spread over a greater timeframe. It does not increase the number of HGVs compared to the number presented in the Draft DCO application (Non-Material Change No 5: HGV Delivery Window does not seek an increase in HGV numbers, only wider delivery windows during the daytime). Non-Material Change No 5: HGV Delivery Window does not propose any changes at night.</p> <p>The CRTN noise predictions for the daytime which are undertaken in support of Non-Material Change No 1: Worker Shift Pattern are</p>

Ref	Comment	Horizon's Response
	changes in timings and vehicle movements as proposed.	based on the 18-hour AAWT traffic flows from 06.00-00.00 hrs, from which both LA10,18hr (the traditional metric for describing road traffic noise in the UK) and LAeq,16hr (a contemporary metric describing noise over the period 07.00-23.00 hrs which is used in many international noise dose-effect health studies) are derived. The total number of HGV movements within the 06.00-00.00 hrs period will remain the same regardless of whether they are distributed between 07.00-19.00 hrs, or 07.00-23.00 hrs, and therefore Non-Material Change No 5: HGV Delivery Window does not affect the number of HGV movements assumed in Non-Material Change No 1: Worker Shift Pattern.
IACC-08	For the reasons outlined above, the IACC consider the proposed changes to the DCO application as being material as they will change the impacts of the project (individually and cumulatively). The impacts have not been adequately assessed as part of the DCO application process. Given the materiality of these changes, presenting these changes as 'non-material' is unacceptable.	Horizon considers that the assessment of impacts of the proposed changes is comprehensive, and the proposed changes have been shown to be non-material both individually and cumulatively. IACC has offered no evidence to the contrary.