



A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

ENVIRONMENTAL STATEMENT  
VOLUME 2: FIGURES

July 2019









## Table of Contents

---

Figure 1.1 – Scheme Location

Figure 2.1 – Administrative Areas

Figure 2.2 – Statutory Designations and Key Environmental Constraints in the vicinity of the Scheme

Figure 2.3 – Geographical Characteristics and Environmental Constraints

Figure 2.4A – Total Permanent Landtake of the Scheme (Sheet 1 of 2)

Figure 2.4B – Total Permanent Landtake of the Scheme (Sheet 2 of 2)

Figure 2.5A – Photographs Illustrating the Immediate Setting of the Scheme (Sheet 1 of 2)

Figure 2.5B – Photographs Illustrating the Immediate Setting of the Scheme (Sheet 1 of 2)

Figure 6.1A – Features and Constraints Plan (Sheet 1 of 3)

Figure 6.1B – Features and Constraints Plan (Sheet 2 of 3)

Figure 6.1C – Features and Constraints Plan (Sheet 3 of 3)

Figure 7.1A - Surface Water Features (Sheet 1 of 2)

Figure 7.1B - Surface Water Features (Sheet 2 of 2)

Figure 7.2A - Ground and Water Features (Sheet 1 of 2)

Figure 7.2B - Ground and Water Features (Sheet 2 of 2)

Figure 7.3 - Proposed Highways Drainage Catchments

Figure 7.4 - Surface Water Flood Risk

Figure 7.5A - WFD Surface Water Bodies

Figure 7.5B - WFD Ground Water Bodies

Figure 8.1 – Ecological Study Area

Figure 8.2 – NVC Survey Locations

Figure 8.3 -Amphibian Survey Locations

Figure 8.4A – Building Survey Locations Sheet 1 of 3

Figure 8.4B – Building Survey Locations Sheet 2 of 3

Figure 8.4C – Building Survey Locations Sheet 3 of 3

Figure 8.5 – Bat Activity Transects

Figure 8.6 – Bat Activity Static Monitoring Locations

Figure 8.7 Dormouse Nest Tube Locations

Figure 8.8 – Riparian Mammal Survey Locations

Figure 8.9 – Reptile Survey Locations

Figure 8.10 – European Designated Sites

Figure 8.11A – Phase 1 Survey Sheet 1 of 3

Figure 8.11B – Phase 1 Survey Sheet 2 of 3

Figure 8.11C – Phase 1 Survey Sheet 3 of 3

Figure 8.12 – Hedgerow Survey Results

Figure 8.13 National Vegetation Classification Survey Results

Figure 8.14 – Amphibian Survey Results

Figure 8.15A – Bat Roost Suitability Results (Sheet 1 of 3)

Figure 8.15B – Bat Roost Suitability Results (Sheet 2 of 3)

Figure 8.15C – Bat Roost Suitability Results (Sheet 3 of 3)

Figure 8.16 – Bat Roost Results Summary

Figure 8.17A – Bat Activity Transect Results April (Sheet 1 of 3)

Figure 8.17B – Bat Activity Transect Results April (Sheet 2 of 3)

Figure 8.17C – Bat Activity Transect Results April (Sheet 3 of 3)

Figure 8.18A – Bat Activity Transect Results May (Sheet 1 of 3)

Figure 8.18B – Bat Activity Transect Results May (Sheet 2 of 3)

Figure 8.18C – Bat Activity Transect Results May (Sheet 3 of 3)

Figure 8.19A – Bat Activity Transect Results June (Sheet 1 of 3)

Figure 8.19B – Bat Activity Transect Results June (Sheet 2 of 3)

Figure 8.19C – Bat Activity Transect Results June (Sheet 3 of 3)

Figure 8.20A – Bat Activity Transect Results July (Sheet 1 of 3)

Figure 8.20B – Bat Activity Transect Results July (Sheet 2 of 3)

Figure 8.20C – Bat Activity Transect Results July (Sheet 3 of 3)

Figure 8.21A – Bat Activity Transect Results August (Sheet 1 of 3)

Figure 8.21B – Bat Activity Transect Results August (Sheet 2 of 3)

Figure 8.21C – Bat Activity Transect Results August (Sheet 3 of 3)

Figure 8.22A – Bat Activity Transect Results September (Sheet 1 of 3)

Figure 8.22B – Bat Activity Transect Results September (Sheet 2 of 3)

Figure 8.22C – Bat Activity Transect Results September (Sheet 3 of 3)

Figure 8.23A – Bat Activity Transect Results October (Sheet 1 of 3)

Figure 8.23B – Bat Activity Transect Results October (Sheet 2 of 3)

Figure 8.23C – Bat Activity Transect Results October (Sheet 3 of 3)

Figure 8.24 – 2016 Static Bat Activity Monitoring April: All Bat Species

Figure 8.25 – 2016 Static Bat Activity Monitoring May: All Bat Species

Figure 8.26 – 2016 Static Bat Activity Monitoring June: All Bat Species

Figure 8.27 – 2016 Static Bat Activity Monitoring July: All Bat Species

Figure 8.28 – 2016 Static Bat Activity Monitoring August: All Bat Species

Figure 8.29 – 2016 Static Bat Activity Monitoring September: All Bat Species

Figure 8.30 – 2016 Static Bat Activity Monitoring October: All Bat Species

Figure 8.31 – 2017 Static Bat Activity Monitoring June: All Bat Species

Figure 8.32 – 2017 Static Bat Activity Monitoring June: Barbastelle

Figure 8.33 – 2017 Static Bat Activity Monitoring June: Serotine

Figure 8.34 – 2017 Static Bat Activity Monitoring June: Myotis Species

Figure 8.35 – 2017 Static Bat Activity Monitoring June: Leisler's Bat

Figure 8.36 – 2017 Static Bat Activity Monitoring June: Noctule

Figure 8.37 – 2017 Static Bat Activity Monitoring June: Common Pipistrelle

Figure 8.38 – 2017 Static Bat Activity Monitoring June: Soprano Pipistrelle

Figure 8.39 – 2017 Static Bat Activity Monitoring June: Pipistrelle Species

Figure 8.40 – 2017 Static Bat Activity Monitoring June: Greater Horseshoe Bat

Figure 8.41 – 2017 Static Bat Activity Monitoring June: Lesser Horseshoe Bat

Figure 8.42 – 2017 Static Bat Activity Monitoring July: All Bat Species

Figure 8.43 – 2017 Static Bat Activity Monitoring July: Barbastelle

Figure 8.44 – 2017 Static Bat Activity Monitoring July: Myotis Species

Figure 8.45 – 2017 Static Bat Activity Monitoring July: Leisler's Bat

Figure 8.46 – 2017 Static Bat Activity Monitoring July: Noctule

Figure 8.47 – 2017 Static Bat Activity Monitoring July: Common Pipistrelle

Figure 8.48 – 2017 Static Bat Activity Monitoring July: Soprano Pipistrelle

Figure 8.49 – 2017 Static Bat Activity Monitoring July: Pipistrelle Species

Figure 8.50 – 2017 Static Bat Activity Monitoring July: Greater Horseshoe Bat  
 Figure 8.51 – 2017 Static Bat Activity Monitoring August: All Bat Species  
 Figure 8.52 – 2017 Static Bat Activity Monitoring August: Serotine  
 Figure 8.53 – 2017 Static Bat Activity Monitoring August: Myotis Species  
 Figure 8.54 – 2017 Static Bat Activity Monitoring August: Leisler’s Bat  
 Figure 8.55 – 2017 Static Bat Activity Monitoring August: Noctule  
 Figure 8.56 – 2017 Static Bat Activity Monitoring August: Common Pipistrelle  
 Figure 8.57 – 2017 Static Bat Activity Monitoring August: Soprano Pipistrelle  
 Figure 8.58 – 2017 Static Bat Activity Monitoring August: Pipistrelle Species  
 Figure 8.59 – 2017 Static Bat Activity Monitoring August: Brown Long Eared Bat  
 Figure 8.60 – 2017 Static Bat Activity Monitoring August: Greater Horseshoe Bat  
 Figure 8.61 – 2017 Static Bat Activity Monitoring September: All Bat Species  
 Figure 8.62 – 2017 Static Bat Activity Monitoring September: Barbastelle  
 Figure 8.63 – 2017 Static Bat Activity Monitoring September: Serotine  
 Figure 8.64 – 2017 Static Bat Activity Monitoring September: Myotis Species  
 Figure 8.65 – 2017 Static Bat Activity Monitoring September: Leisler’s Bat  
 Figure 8.66 – 2017 Static Bat Activity Monitoring September: Noctule  
 Figure 8.67 – 2017 Static Bat Activity Monitoring September: Common Pipistrelle  
 Figure 8.68 – 2017 Static Bat Activity Monitoring September: Soprano Pipistrelle  
 Figure 8.69 – 2017 Static Bat Activity Monitoring September: Pipistrelle Species  
 Figure 8.70 – 2017 Static Bat Activity Monitoring September: Greater Horseshoe Bat  
 Figure 8.71 – 2017 Static Bat Activity Monitoring October: All Bat Species  
 Figure 8.72 – 2017 Static Bat Activity Monitoring October: Myotis Species  
 Figure 8.73 – 2017 Static Bat Activity Monitoring October: Noctule  
 Figure 8.74 – 2017 Static Bat Activity Monitoring October: Common Pipistrelle  
 Figure 8.75 – 2017 Static Bat Activity Monitoring October: Soprano Pipistrelle  
 Figure 8.76 – 2017 Static Bat Activity Monitoring October: Pipistrelle Species  
 Figure 8.77 – 2017 Static Bat Activity Monitoring October: Brown Long Eared Bat  
 Figure 8.78 – 2017 Static Bat Activity Monitoring October: Lesser Horseshoe Bat  
 Figure 8.79 – Bat Flight Routes  
 Figure 8.80 – Dormouse Survey Results  
 Figure 8.81 – Otter Survey Results  
 Figure 8.82A – Badger Survey Results (Sheet 1 of 3) CONFIDENTIAL  
 Figure 8.82B – Badger Survey Results (Sheet 2 of 3) CONFIDENTIAL  
 Figure 8.82C – Badger Survey Results (Sheet 3 of 3) CONFIDENTIAL  
 Figure 8.83A – Breeding Birds Survey Results April (Sheet 1 of 3)  
 Figure 8.83B – Breeding Birds Survey Results April (Sheet 2 of 3)  
 Figure 8.83C – Breeding Birds Survey Results April (Sheet 3 of 3)  
 Figure 8.84A – Breeding Birds Survey Results May (Sheet 1 of 3)  
 Figure 8.84B – Breeding Birds Survey Results May (Sheet 2 of 3)  
 Figure 8.84C – Breeding Birds Survey Results May (Sheet 3 of 3)  
 Figure 8.85A – Breeding Birds Survey Results June (Sheet 1 of 3)  
 Figure 8.85B – Breeding Birds Survey Results June (Sheet 2 of 3)  
 Figure 8.85C – Breeding Birds Survey Results June (Sheet 3 of 3)  
 Figure 8.86A – Breeding Birds Survey Results July (Sheet 1 of 3)  
 Figure 8.86B – Breeding Birds Survey Results July (Sheet 2 of 3)  
 Figure 8.86C – Breeding Birds Survey Results July (Sheet 3 of 3)  
 Figure 8.87 - Barn Owl Survey Results  
 Figure 8.88 - Reptile Survey Results  
 Figure 8.89A – Badger Setts Requiring Closure (Sheet 1 of 3) CONFIDENTIAL

Figure 8.89B – Badger Setts Requiring Closure (Sheet 2 of 3) CONFIDENTIAL  
 Figure 8.89C – Badger Setts Requiring Closure (Sheet 3 of 3) CONFIDENTIAL

Figure 9.1 - Zone of Theoretical Visibility  
 Figure 9.2 – Landform and Terrain  
 Figure 9.3A – LANDMAP Evaluation Visual and Sensory  
 Figure 9.3A – LANDMAP Evaluation Geological Landscape  
 Figure 9.3A – LANDMAP Evaluation Landscape Habitats  
 Figure 9.3A – LANDMAP Evaluation Historic Landscape  
 Figure 9.3A – LANDMAP Evaluation Cultural Landscape  
 Figure 9.4 – Designated Landscapes  
 Figure 9.5 – Roads and Recreation  
 Figure 9.6 – Landscape Character Areas  
 Figure 9.7 – Visual Effects Drawing - Overview  
 Figure 9.8A – Visual Effects Drawing (Sheet 1 of 16)  
 Figure 9.8B – Visual Effects Drawing (Sheet 2 of 16)  
 Figure 9.8C – Visual Effects Drawing (Sheet 3 of 16)  
 Figure 9.8D – Visual Effects Drawing (Sheet 4 of 16)  
 Figure 9.8E – Visual Effects Drawing (Sheet 5 of 16)  
 Figure 9.8F – Visual Effects Drawing (Sheet 6 of 16)  
 Figure 9.8G – Visual Effects Drawing (Sheet 7 of 16)  
 Figure 9.8H – Visual Effects Drawing (Sheet 8 of 16)  
 Figure 9.8I – Visual Effects Drawing (Sheet 9 of 16)  
 Figure 9.8J – Visual Effects Drawing (Sheet 10 of 16)  
 Figure 9.8K – Visual Effects Drawing (Sheet 11 of 16)  
 Figure 9.8L – Visual Effects Drawing (Sheet 12 of 16)  
 Figure 9.8M – Visual Effects Drawing (Sheet 13 of 16)  
 Figure 9.8N – Visual Effects Drawing (Sheet 14 of 16)  
 Figure 9.8O – Visual Effects Drawing (Sheet 15 of 16)  
 Figure 9.8P – Visual Effects Drawing (Sheet 16 of 16)

Figure 10.1 – Designated Sites  
 Figure 10.2A – Effects on Cultural Heritage (Sheet 1 of 4)  
 Figure 10.2B – Effects on Cultural Heritage (Sheet 2 of 4)  
 Figure 10.2C – Effects on Cultural Heritage (Sheet 3 of 4)  
 Figure 10.2D – Effects on Cultural Heritage (Sheet 4 of 4)

Figure 11.1 – Community Assets  
 Figure 11.2 – Local Community Assets

Figure 12.1 – Predictive Agricultural Land Classification Map  
 Figure 12.2 – Wider Area Predictive ALC Map

Figure 13.1 – Study Area for Air Quality Assessment  
 Figure 13.2 – Air Quality Monitoring Locations  
 Figure 13.4 – Modelled Roads in the Baseline and Do Minimum Scenarios  
 Figure 13.5 – Modelled Roads in the Do Something Scenario  
 Figure 13.7 – Assessed Receptor Locations  
 Figure 13.8 – Construction Dust Buffers  
 Figure 13.10 – Impact of the Scheme on NO2 Concentrations



Figure 13.11 – Impact of the Scheme on PM10 Concentrations

Figure 14.1A – Noise Study Area, Noise Survey and Assessment Locations and Baseline Noise Contour in 2021 (Sheet 1 of 2)

Figure 14.1B – Noise Study Area, Noise Survey and Assessment Locations and Baseline Noise Contour in 2021 (Sheet 2 of 2)

Figure 14.2 – Noise Changes (LA10, 18HR) in the future year without the Scheme

Figure 14.3 – Noise Changes (LA10, 18HR) as a result of the Scheme in the baseline year

Figure 14.4 – Noise Changes (LA10, 18HR) as a result of the Scheme in the future year (2036)

Figure 15.1A – Existing Public Rights of Way and other routes by Walkers, Cyclists and Horse riders (WCHRs) (Sheet 1 of 2)

Figure 15.1B – Existing Public Rights of Way and other routes by Walkers, Cyclists and Horse riders (WCHRs) (Sheet 2 of 2)

Figure 15.2A – Existing Public Rights of Way and other routes used by WCHRs permanently or temporarily stopped up and/or diverted (Sheet 1 of 2)

Figure 15.2B – Existing Public Rights of Way and other routes used by WCHRs permanently or temporarily stopped up and/or diverted (Sheet 1 of 2)

Figure 16.1 – Waste Management Facilities

Figure 19.1 – Other Planning Applications and Allocated Sites in the Vicinity of the Scheme

















- Legend**
- Waterbody
  - Watercourse
  - Scheduled Ancient Monument
  - Listed Building
  - NMRW Feature
  - Public Right of Way
  - Residential Property
  - Community Facility

Note:  
Proposed road layout and earthworks shown as white line on aerial photograph

|     |          |                                        |     |      |      |
|-----|----------|----------------------------------------|-----|------|------|
|     |          |                                        |     |      |      |
| --- | ---      | ---                                    | --- | ---  | ---  |
| --- | ---      | ---                                    | --- | ---  | ---  |
| --- | ---      | ---                                    | --- | ---  | ---  |
| --- | ---      | ---                                    | --- | ---  | ---  |
| --- | ---      | ---                                    | --- | ---  | ---  |
| --- | ---      | ---                                    | --- | ---  | ---  |
| --- | ---      | ---                                    | --- | ---  | ---  |
| --- | ---      | ---                                    | --- | ---  | ---  |
| P01 | 02/10/18 | ISSUED FOR COLLABORATION               | RE  | AS   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE  | AS   | TE   |
| P03 | 22/01/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE  | AS   | TE   |
| Rev | Date     | Description                            | By  | Chkd | Appd |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uydwodaeth Cymru  
Welsh Government

Delivery Team  
ARUP

Drawing Title  
FIGURE 2.3  
GEOGRAPHICAL CHARACTERISTICS  
AND ENVIRONMENTAL CONSTRAINTS

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A1  
N/A

|      |          |      |          |      |
|------|----------|------|----------|------|
| Rev  | By       | Chkd | Appd     | Auth |
| P03  | RE       | AS   | TE       | GD   |
| Date | 21/01/19 | Date | 21/01/19 | Date |

Name  
A40LVP-RML-EGN-SWI-DR-LE-0002

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|













View north along the Llanfallteg Road to Preseli Hills from  
Llanddewi Velfrey



The A40 on the Llanddewi Velfrey ridge 800m to the east of the village centre.



View north from a field close to Blaen-pen-troydin over Ty Bach Wood.  
Showing the characteristic pattern of wet woodland in small wet valleys between plateaus of pasture.



View of the Llanddewi Velfrey Ridge from 1.5km from an unclassified road.  
Showing the characteristic pattern of pastures enclosed by hedges and hedgebacks.



View west of the A40 through Llanddewi Velfrey from beside the war memorial



## The A40 and Bethel Chapel



View of the A40, east, through Llanddwei Velfrey with the former public house to the left and the war memorial right of centre.

| SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION                                                                                                                                                                 |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log). |  |
| Construction                                                                                                                                                                                                 |  |
| None                                                                                                                                                                                                         |  |
| Maintenance / Cleaning                                                                                                                                                                                       |  |
| None                                                                                                                                                                                                         |  |
| Use                                                                                                                                                                                                          |  |
| None                                                                                                                                                                                                         |  |
| Decommissioning / Demolition                                                                                                                                                                                 |  |
| None                                                                                                                                                                                                         |  |

|     |          |                               |    |      |      |      |
|-----|----------|-------------------------------|----|------|------|------|
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
|     |          |                               |    |      |      |      |
| P01 | 21/09/18 | FIRST ISSUE                   | GJ | TE   | TE   | GD   |
| P02 | 21/01/19 | UPDATED FOLLOWING WG COMMENTS | EB | TE   | TE   | GD   |
| Rev | Date     | Description                   | By | Chkd | Appd | Auth |

Drawing Title

**FIGURE 2.5A**

**PHOTOGRAPHS ILLUSTRATING THE IMMEDIATE SETTING OF THE SCHEME SHEET 1 OF 2**

Suitability

**S4 | SUITABLE FOR STAGE APPROVAL**

---

Scale at A1

N/A

| Rev        | By               | Chkd             | Appd             | Auth             |
|------------|------------------|------------------|------------------|------------------|
| <b>P02</b> | EB               | TE               | TE               | GD               |
|            | Date<br>21/01/19 | Date<br>21/01/19 | Date<br>21/01/19 | Date<br>21/01/19 |

Name

**A40LVP - ARP - ELS - SWI - DR - C - 0001**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|---------|------------|--------|----------|------|------|--------|





View of the A40 west of Llanddewi Velfrey towards Ffynnon Wood



## Ffynnon Chapel, a Listed building close to the A40



## Henllan Lodge to the west of Ffynnon Wood



View of the A40 on embankment west through Ffynnon Wood



The minor public road from south from Henllan Lodge  
junction with the A40



View east towards Ffynnon Wood along the A40 from near Penblewin

| SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION                                                                                                                                                                 |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log). |  |
| Construction                                                                                                                                                                                                 |  |
| None                                                                                                                                                                                                         |  |
| Maintenance / Cleaning                                                                                                                                                                                       |  |
| None                                                                                                                                                                                                         |  |
| Use                                                                                                                                                                                                          |  |
| None                                                                                                                                                                                                         |  |
| Decommissioning / Demolition                                                                                                                                                                                 |  |
| None                                                                                                                                                                                                         |  |

|     |          |                               |     |      |      |      |
|-----|----------|-------------------------------|-----|------|------|------|
|     |          |                               |     |      |      |      |
|     |          |                               |     |      |      |      |
| --- | ---      | ---                           | --- | ---  | ---  | ---  |
| --- | ---      | ---                           | --- | ---  | ---  | ---  |
| --- | ---      | ---                           | --- | ---  | ---  | ---  |
| --- | ---      | ---                           | --- | ---  | ---  | ---  |
| --- | ---      | ---                           | --- | ---  | ---  | ---  |
| --- | ---      | ---                           | --- | ---  | ---  | ---  |
| --- | ---      | ---                           | --- | ---  | ---  | ---  |
| --- | ---      | ---                           | --- | ---  | ---  | ---  |
| P01 | 21/09/18 | FIRST ISSUE                   | GJ  | TE   | TE   | GD   |
| P02 | 21/01/19 | UPDATED FOLLOWING WG COMMENTS | EB  | TE   | TE   | GD   |
| Rev | Date     | Description                   | By  | Chkd | Appd | Auth |

[illegible]

Drawing Title

**FIGURE 2.5B**  
**PHOTOGRAPHS ILLUSTRATING THE**  
**IMMEDIATE SETTING OF THE**  
**SCHEME SHEET 2 OF 2**

---

Suitability

**S4 | SUITABLE FOR STAGE APPROVAL**

---

Scale at A1

N/A

|            |                  |                  |                  |                  |
|------------|------------------|------------------|------------------|------------------|
| Rev        | By               | Chkd             | Appd             | Auth             |
| <b>P02</b> | EB               | TE               | TE               | GD               |
|            | Date<br>21/01/19 | Date<br>21/01/19 | Date<br>21/01/19 | Date<br>21/01/19 |

Name

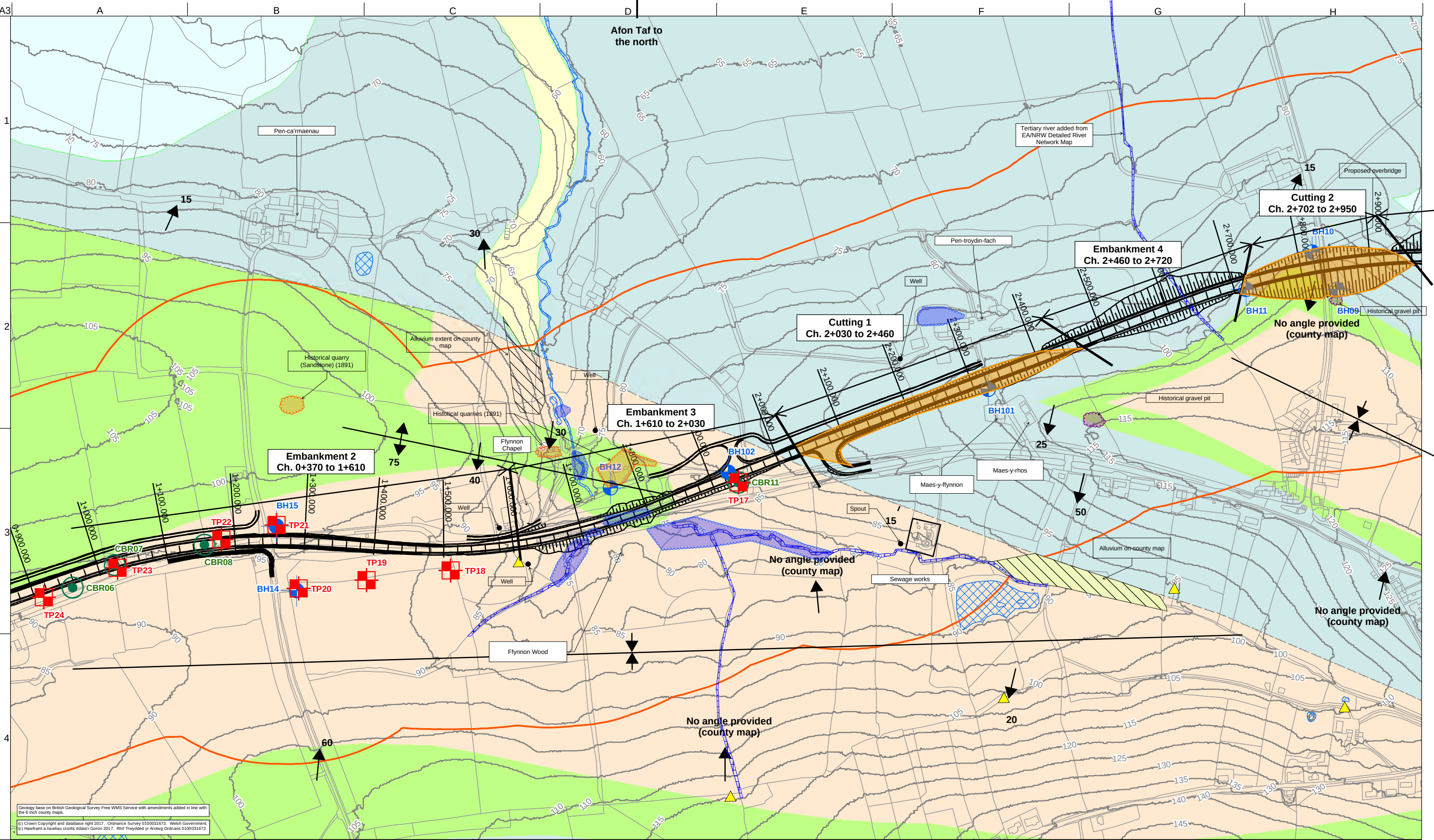
**A40LVP - ARP - ELS - SWI - DR - C - 0002**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|









LEGEND

PROPOSED ALIGNMENT

WATER FEATURE

GEOLOGY

PORTFIELD & HAVERFORD FORMATION

SLADE & REDHILL FORMATION

TILL DIAMICTON

HAVERFORD MUDSTONE FORMATION

GLACIOFLUVIAL DEPOSITS

ALLUVIUM

EXISTING EXPLORATORY HOLES

CBR

BOREHOLE

TRIAL PIT

QUARRY

AREA IN CUTTING

COUNTY MAP FEATURE

ANTICLINE, LONG BAR INDICATES LINE OF AXIS

SYNCLINE, LONG BAR INDICATES LINE OF AXIS

FAULT

DIP and ANGLE

SPRING

MEDIUM OR HIGH FLOODING RISK FROM SURFACE WATER

STUDY AREA

| SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION                                                                                                                                                                |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log) |      |
| Construction                                                                                                                                                                                                | None |
| Maintenance / Cleaning                                                                                                                                                                                      | None |
| Use                                                                                                                                                                                                         | None |
| Decommissioning / Demolition                                                                                                                                                                                | None |

| Rev | Date     | Description                             | By | Chkd | Appd | Auth |
|-----|----------|-----------------------------------------|----|------|------|------|
| P04 | 18/01/19 | TO ADDRESS COMMENTS FROM CLIENT'S AGENT | IM | MC   | TE   | GD   |
| P03 | 15/11/18 | TO ADDRESS COMMENTS FROM CLIENT'S AGENT | IM | AP   | MC   | GD   |
| P02 | 13/09/18 | TO ADDRESS COMMENTS FROM CLIENT'S AGENT | IM | AP   | TE   | GD   |
| P01 | 18/12/17 | FOR REVIEW                              | IM | MC   | TE   | GD   |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client



Ulywodraeth Cymru  
Welsh Government

Delivery Team



Drawing Title

FIGURE 6.1B  
FEATURES AND CONSTRAINTS PLAN  
SHEET 2 OF 3

Suitability

S4 | SUITABLE FOR STAGE APPROVAL

Scale at A3

1:5,000

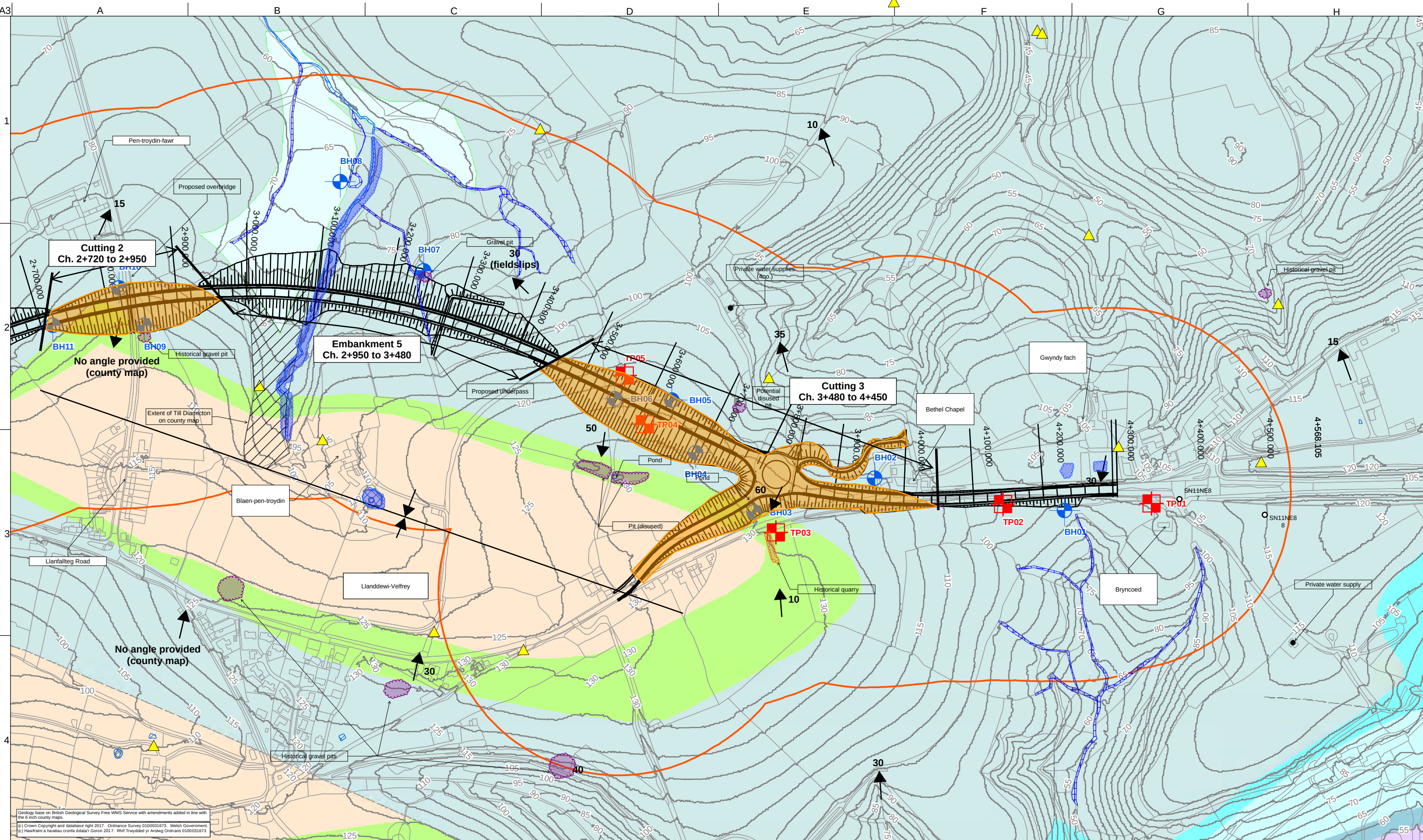
| Rev  | By         | Chkd       | Appd       | Auth       |
|------|------------|------------|------------|------------|
| P04  | IM         | MC         | TE         | GD         |
| Date | 18/01/2019 | 18/01/2019 | 18/01/2019 | 18/01/2019 |

Name

A40LVP - ARP EGT - SWI - DR - C - 0002

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |

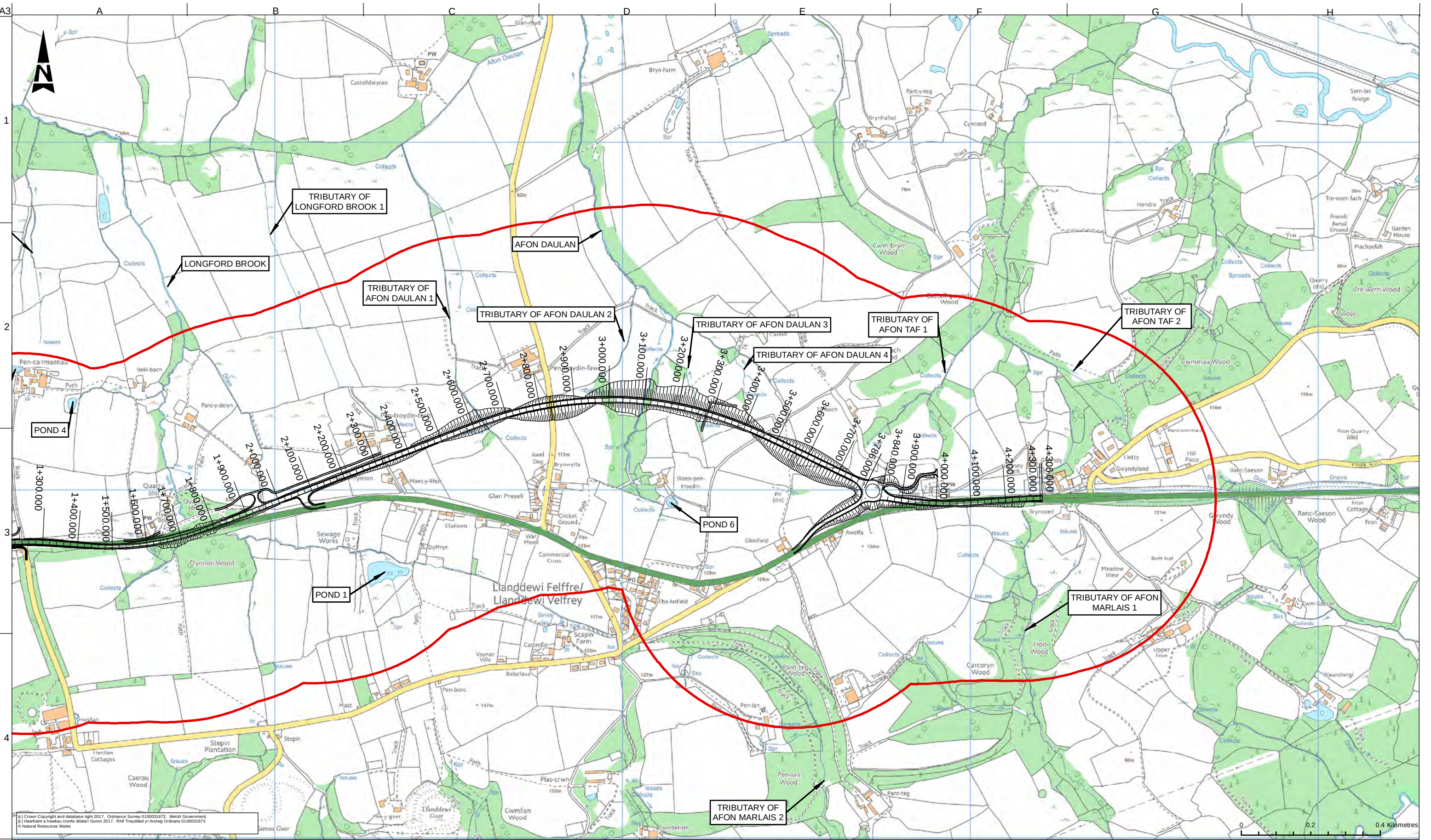


[illegible]









**LEGEND**

— PROPOSED ALIGNMENT

500M BUFFER

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P06 | 19/11/18 | UPDATE FOLLOWING COMMENTS | EB | TS   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
 

Drawing Title  
**FIGURE 7.1B  
SURFACE WATER FEATURES  
SHEET 2 OF 2**

Scale at A3  
1:10,000

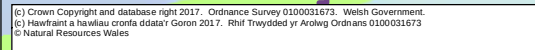
Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P06  | EB       | TS       | TE       | GD       |
| Date | 19/11/18 | 19/11/18 | 19/11/18 | 19/11/18 |

Name  
**A40LVP - ARP - EWE - SWI - DR - C - 0002**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





## GLACIOFLUVIAL DEPOSITS

---

|      |          |                           |    |      |      |      |
|------|----------|---------------------------|----|------|------|------|
| P03  | 17/09/18 | UPDATE FOLLOWING COMMENTS | EB | TS   | TE   | GD   |
| Rev. | Date     | Description               | By | Chkd | Appd | Auth |

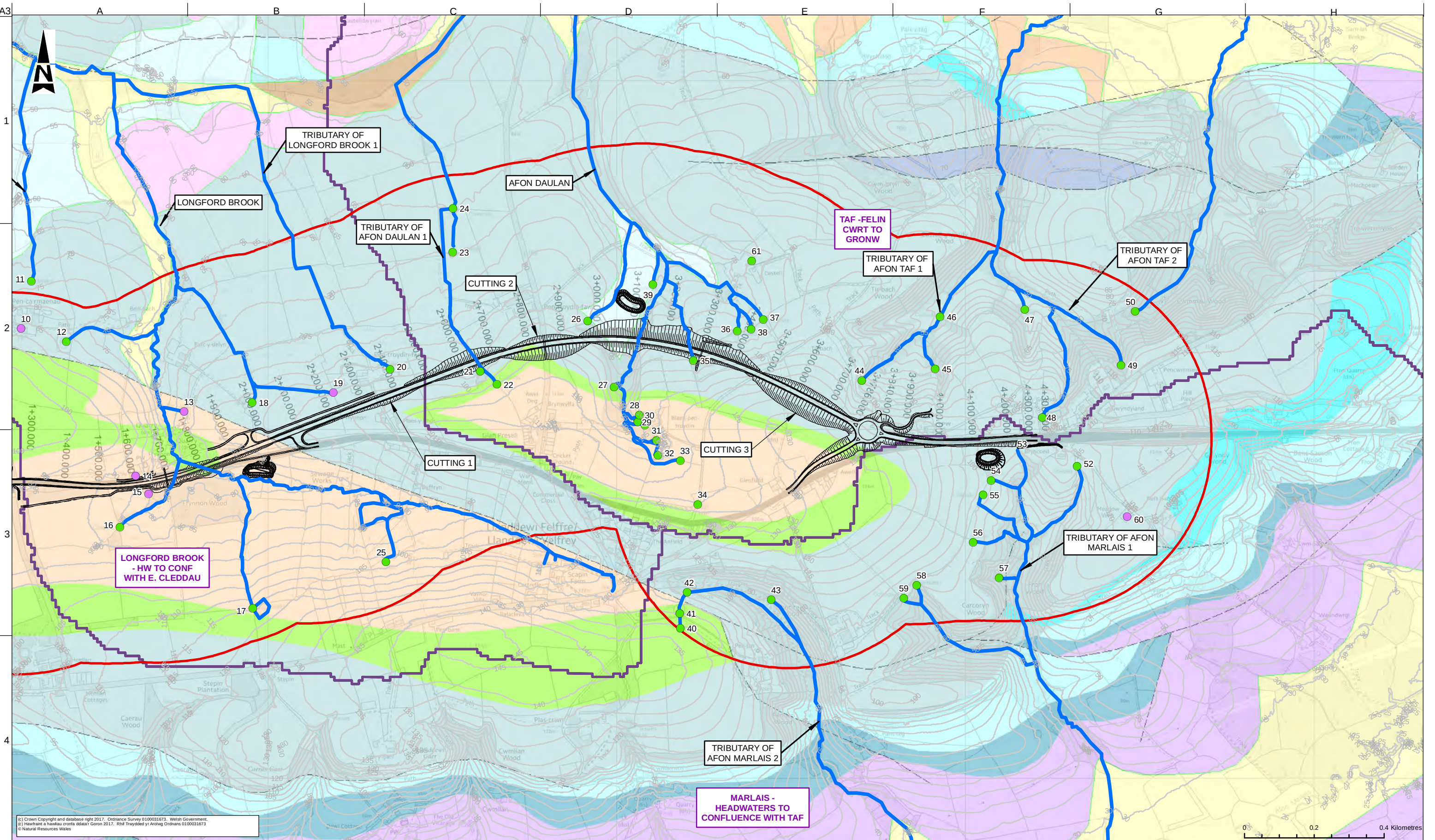
**RICHARDS**  
WYLLIIE & LLOYD LTD  
FLOORING • LAMINATE • CARPETING

A40LVP - ARP - EWE - SWI - DR - C - 0007

**A40LVP - ARP - EWE**

SWI - DR - C - 0007





**LEGEND**

- COLLECT/SRING/ISSUE
- WELL
- PROPOSED ALIGNMENT
- WATER FEATURE
- 500M BUFFER
- WFD SURFACE WATER BODIES

- GLACIAL TILL
- MYDRIM SHALES & LIMESTONE
- SLADE & REDHILL FORMATION
- LLANDEILO LIMESTONE
- HAVERFORD MUDSTONE FORMATION
- PORTFIELD & HAVERFORD MUDSTONE FORMATION
- GLACIOFLUVIAL DEPOSITS

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 18/12/18 | UPDATE FOLLOWING COMMENTS | EB | TS   | TE   | GD   |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 7.2B GROUND AND WATER FEATURES SHEET 2 OF 2**

Scale at A3  
**1:10,000**

Rev  
**P04**

By  
**EB**

Chkd  
**TS**

Appd  
**TE**

Auth  
**GD**

Date  
**18/12/18**

Date  
**18/12/18**

Date  
**18/12/18**

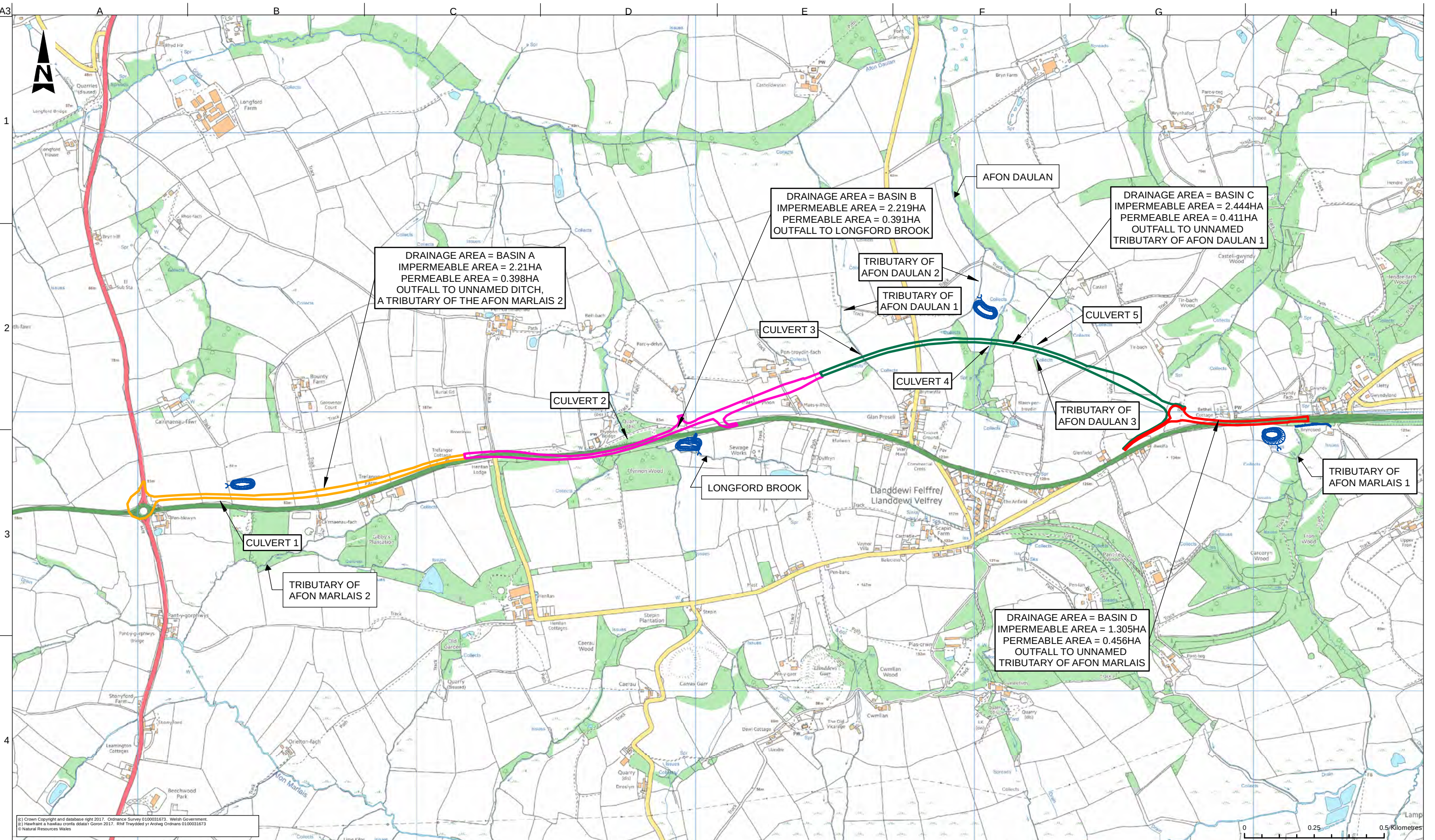
Date  
**18/12/18**

**S4 | SUITABLE FOR STAGE APPROVAL**

Name  
**A40LVP - ARP - EWE - SWI - DR - C - 0006**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

— DRAINAGE PONDS

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P06 | 18/12/18 | UPDATE FOLLOWING COMMENTS | EB | TS   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  

Drawing Title  
**FIGURE 7.3  
PROPOSED HIGHWAYS  
DRAINAGE CATCHMENTS**

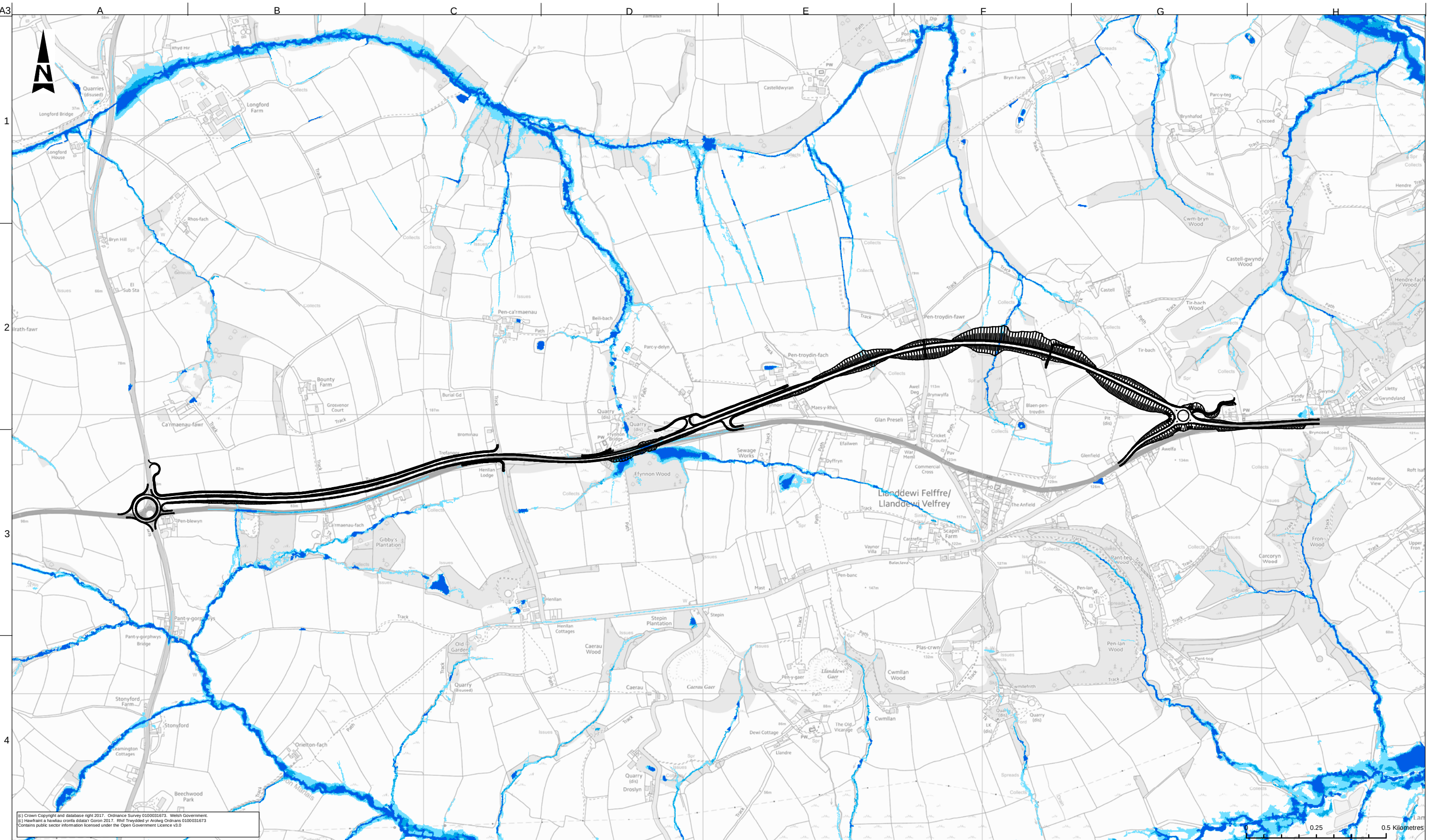
Scale at A3  
1:12,500

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P06  | EB       | TS       | TE       | GD       |
| Date | 18/12/18 | 18/12/18 | 18/12/18 | 18/12/18 |

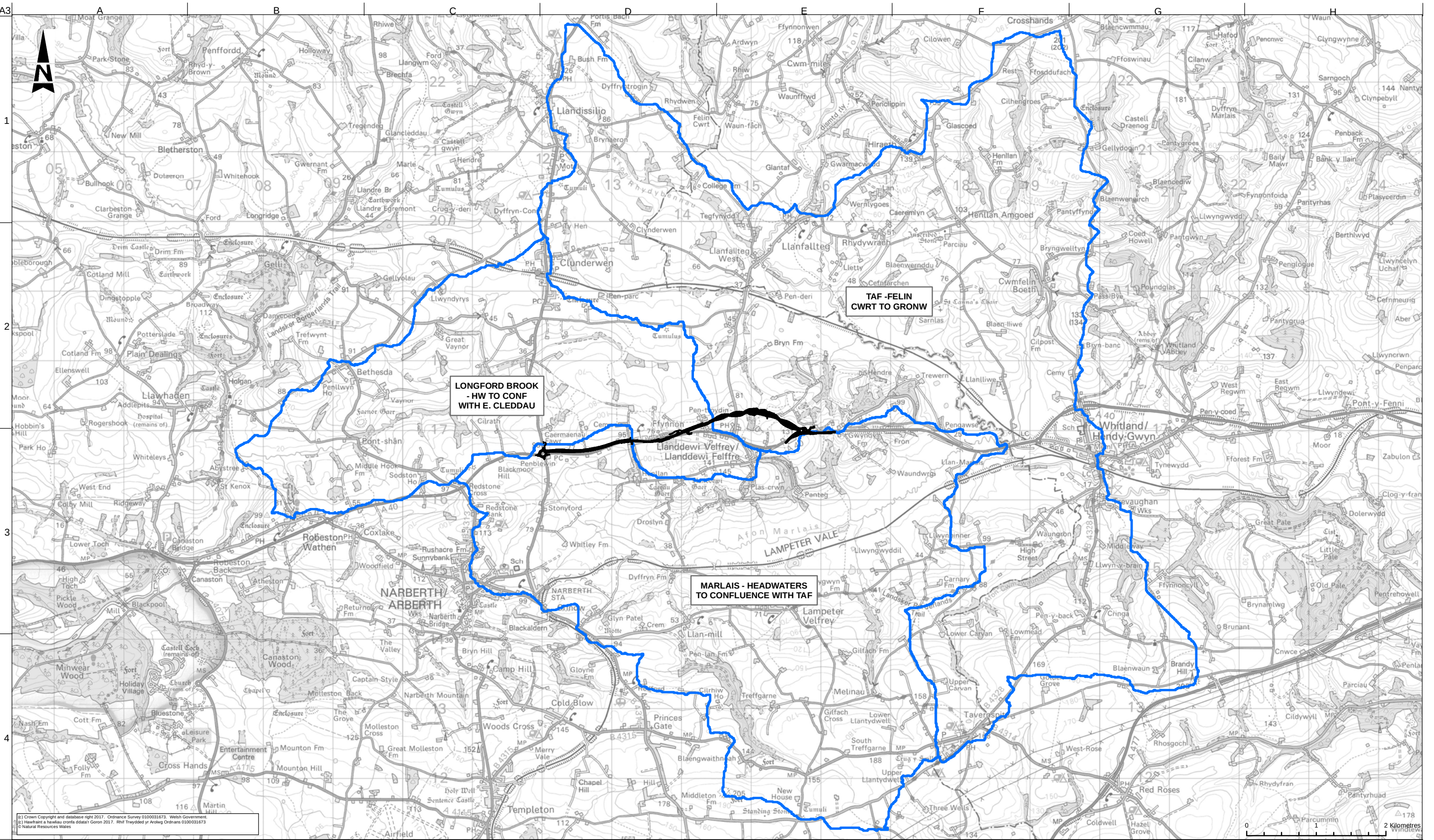
Name  
**A40LVP - ARP - EWE - SWI - DR - C - 0005**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|



[illegible]





**LEGEND**

— PROPOSED ALIGNMENT

WFD SURFACE WATER BODIES

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 17/09/18 | UPDATE FOLLOWING COMMENTS | EB | TS   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Ulywodraeth Cymru  
Welsh Government

Delivery Team

**ARUP**

**RICHARDS**

Drawing Title  
**FIGURE 7.5A  
WFD SURFACE WATER BODIES**

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3  
**1:50,000**

|            |           |           |           |           |
|------------|-----------|-----------|-----------|-----------|
| Rev        | By        | Chkd      | Appd      | Auth      |
| <b>P03</b> | <b>EB</b> | <b>TS</b> | <b>TE</b> | <b>GD</b> |
| Date       | 17/09/18  | 17/09/18  | 17/09/18  | 17/09/18  |

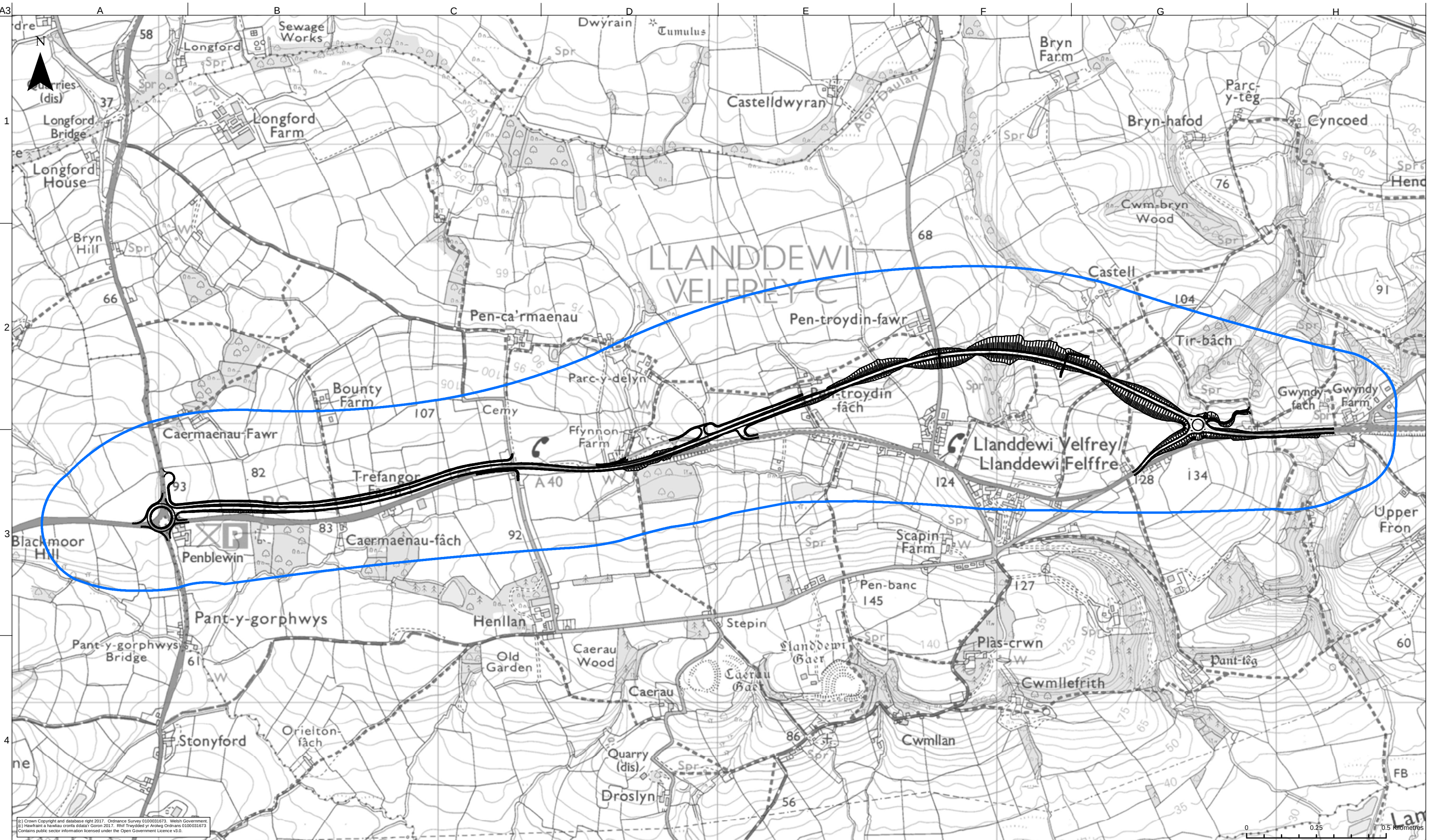
Name  
**A40LVP - ARP - EWE - SWI - DR - C - 0001**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|









**LEGEND**

— PROPOSED ALIGNMENT

▭ STUDY AREA

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P02 | 10/09/18 | UPDATE FOLLOWING COMMENTS | EB | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  
  
  


Drawing Title  
**FIGURE 8.1  
ECOLOGICAL SURVEY AREA**

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3  
1:12,500

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P02  | EB       | PW       | TE       | GD       |
| Date | 10/09/18 | 10/09/18 | 10/09/18 | 10/09/18 |

Name  
**A40LVP - ARP - EGN - SWI - DR - LE - 0003**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|













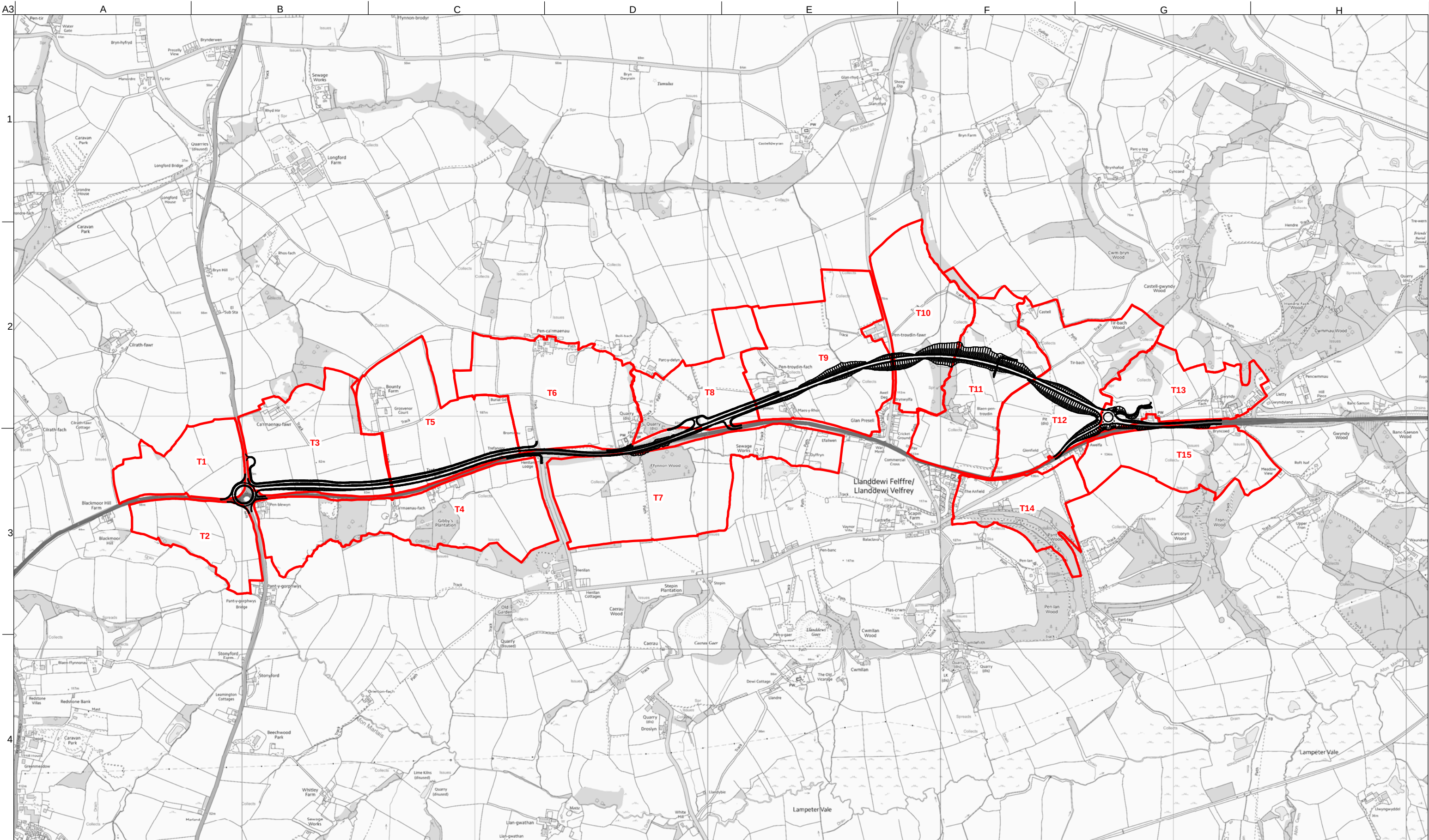












**LEGEND**

— PROPOSED ALIGNMENT

 BAT ACTIVITY TRANSECT AREAS

## SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |
|------------------------------|
| Construction                 |
| None                         |
| Maintenance / Cleaning       |
| None                         |
| Use                          |
| None                         |
| Decommissioning / Demolition |
| None                         |

| P02  | 11/09/18 | UPDATE FOLLOWING COMMENTS | EB | PW   | TE GD     |
|------|----------|---------------------------|----|------|-----------|
| Rev. | Date     | Description               | By | Chkd | Appd Auth |

Project Title

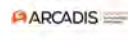
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

---

Client



Llywodraeth Cymru  
Welsh Government



**Delivery Team**



Drawing Title

**FIGURE 8.5**  
**BAT ACTIVITY TRANSECTS**

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3 1:15,000

|                   |                  |                  |                  |                  |
|-------------------|------------------|------------------|------------------|------------------|
| Rev<br><b>P02</b> | By<br>EB         | Chkd<br>PW       | Appd<br>TE       | Auth<br>GD       |
|                   | Date<br>11/09/18 | Date<br>11/09/18 | Date<br>11/09/18 | Date<br>11/09/18 |

Name

**A40LVP - ARP - VES - SWI - DR - LE - 0046**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|---------|------------|--------|----------|------|------|--------|

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|---------|------------|--------|----------|------|------|--------|





### LEGEND

 PROPOSED ALIGNMENT  
 2016 BAT ACTIVITY STATIC MONITORING LOCATIONS  
 2017 BAT ACTIVITY STATIC MONITORING LOCATIONS

## SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |
|------------------------------|
| Construction                 |
| None                         |
| Maintenance / Clearing       |
| None                         |
| Use                          |
| None                         |
| Decommissioning / Demolition |
| None                         |

| P03  | 11/09/18 | UPDATE FOLLOWING COMMENTS | EB | PW   | TE GD     |
|------|----------|---------------------------|----|------|-----------|
| Rev. | Date     | Description               | By | Chld | Appd Auth |

Project Title

**A40 LLANDDEWI VELFREY TO PENBLEWIN  
IMPROVEMENTS**



Drawing Title

**FIGURE 8.6**  
**BAT ACTIVITY STATIC MONITORING LOCATIONS**

|                                                  |                  |                  |                  |                  |  |
|--------------------------------------------------|------------------|------------------|------------------|------------------|--|
| Suitability                                      |                  |                  |                  |                  |  |
| <b>S4   SUITABLE FOR STAGE APPROVAL</b>          |                  |                  |                  |                  |  |
| Scale at A3                                      |                  |                  |                  |                  |  |
| 1:15,000                                         |                  |                  |                  |                  |  |
| Rev                                              | By               | Chkd             | Appd             | Auth             |  |
| <b>P03</b>                                       | EB               | PW               | TE               | GD               |  |
|                                                  | Date<br>11/09/18 | Date<br>11/09/18 | Date<br>11/09/18 | Date<br>11/09/18 |  |
| Name                                             |                  |                  |                  |                  |  |
| <b>A40LVP - ARP - VES - SWI - DR - LE - 0047</b> |                  |                  |                  |                  |  |





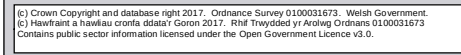












Contains OS data © Crown Copyright and database right 2018

 PROPOSED ALIGNMENT  
 SPECIAL AREAS OF CONSERVATION  
 SPECIAL PROTECTION AREA (SPA)

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |
|------------------------------|
| Construction                 |
| None                         |
| Maintenance / Clearing       |
| None                         |
| Use                          |
| None                         |
| Decommissioning / Demolition |
| None                         |

| P03 | 06/11/18 | UPDATE FOLLOWING COMMENTS |  |  |  | HC | PW   | TE   | GD   |
|-----|----------|---------------------------|--|--|--|----|------|------|------|
| Rev | Date     | Description               |  |  |  | By | Chad | Appd | Auth |

Delivery Team

**ARUP**

**RICHARDS**  
RICHARDS BROS. & CO. LTD.  
LONDON LONDON LONDON

|                                                         |                  |                  |                  |                  |
|---------------------------------------------------------|------------------|------------------|------------------|------------------|
| Rev                                                     | By               | Chkd             | Appd             | Auth             |
| <b>P03</b>                                              | HC               | PW               | TE               | GD               |
|                                                         | Date<br>06/11/18 | Date<br>06/11/18 | Date<br>06/11/18 | Date<br>06/11/18 |
| Name<br><b>A40LVP - ARP - EGN - SWI - DR - LE - 000</b> |                  |                  |                  |                  |









**LEGEND**

PROPOSED ALIGNMENT

SCRUB - SCATTERED

BROAD-LEAVED PARKLAND / SCATTERED TREES

DRY DITCH

FENCE

RUNNING WATER

DEFUNCT HEDGE - SPECIES POOR

HEDGE WITH TREES - SPECIES POOR

INTACT HEDGE - SPECIES POOR

WALL

**DESCRIPTION**

BROADLEAVED WOODLAND - SEMI-NATURAL

BROADLEAVED WOODLAND - PLANTATION

CONIFEROUS WOODLAND - PLANTATION

MIXED WOODLAND - SEMI-NATURAL

A1.3.2 - Mixed woodland - plantation

SCRUB - DENSE / CONTINUOUS

NEUTRAL GRASSLAND - SEMI-IMPROVED

IMPROVED GRASSLAND

MARSH / MARSHY GRASSLAND

C1.1 - Bracken - continuous

STANDING WATER

RUNNING WATER

J1.2 - Cultivated/disturbed land - amenity grassland

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 06/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | ME   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
 Uywodraeth Cymru  
Welsh Government

Delivery Team

Drawing Title  
FIGURE 8.11B  
PHASE 1 SURVEY  
SHEET 2 OF 3

Suitability  
S4 | SUITABLE FOR STAGE APPROVAL

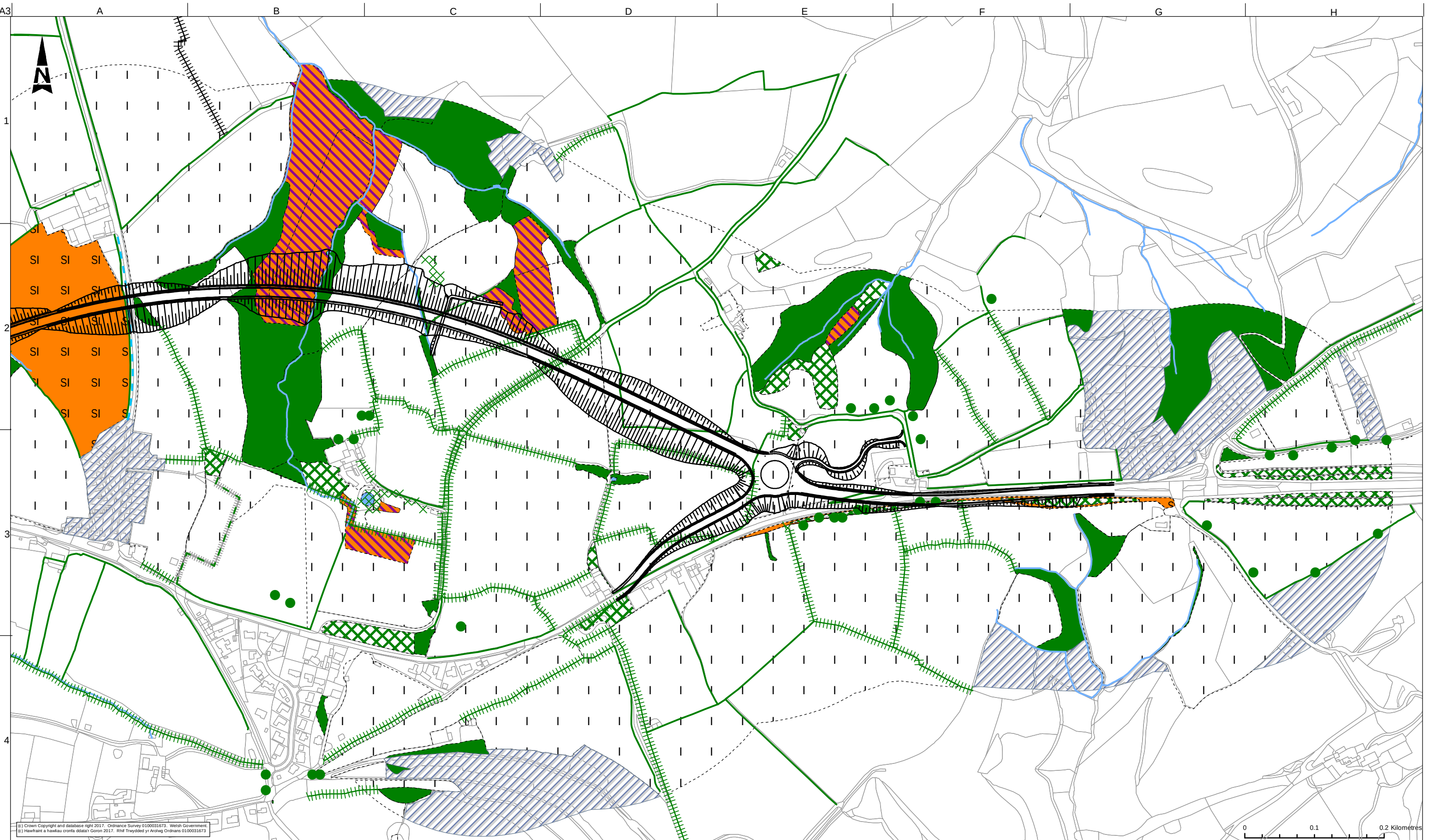
Scale at A3  
1:5,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | ME       |
| P03 | Date | 06/11/18 | Date | 06/11/18 | Date | 06/11/18 | Date | 06/11/18 |

Name  
A40LVP - ARP - VES - SWI - DR - LE - 0039

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

— PROPOSED ALIGNMENT

✕ SCRUB - SCATTERED

● BROAD-LEAVED PARKLAND / SCATTERED TREES

— DRY DITCH

||||| FENCE

— RUNNING WATER

||||| DEFUNCT HEDGE - SPECIES POOR

||||| HEDGE WITH TREES - SPECIES POOR

— INTACT HEDGE - SPECIES POOR

||||| BROADLEAVED WOODLAND - PLANTATION

■ BROADLEAVED WOODLAND - SEMI-NATURAL

||||| IMPROVED GRASSLAND

||||| MARSH / MARSHY GRASSLAND

||||| NEUTRAL GRASSLAND - SEMI-IMPROVED

||||| SCRUB - DENSE / CONTINUOUS

||||| STANDING WATER

||||| NO ACCESS

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| P03 | 06/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |

Project Title  
**A40 LLANDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  
  
  


Drawing Title  
**FIGURE 8.11C  
PHASE 1 SURVEY  
SHEET 3 OF 3**

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3  
1:5,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P03 | Date | 06/11/18 | Date | 06/11/18 | Date | 06/11/18 | Date | 06/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0040**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|

















**LEGEND**

**BAT TREE ROOST RESULTS**

Bat roost potential - trees

- Confirmed
- High
- Moderate
- Low
- Negligible

PROPOSED ALIGNMENT

**BAT ROOST POTENTIAL**

bat\_potential

- High
- Low

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |  |
|------------------------------|--|
| Construction                 |  |
| None                         |  |
| Maintenance / Cleaning       |  |
| None                         |  |
| Use                          |  |
| None                         |  |
| Decommissioning / Demolition |  |
| None                         |  |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 13/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Uywodraeth Cymru  
Welsh Government

Delivery Team

ARUP

RICHARDS

Drawing Title

FIGURE 8.15A  
BAT ROOST SUITABILITY RESULTS  
SHEET 1 OF 3

Suitability

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3

1:5,000

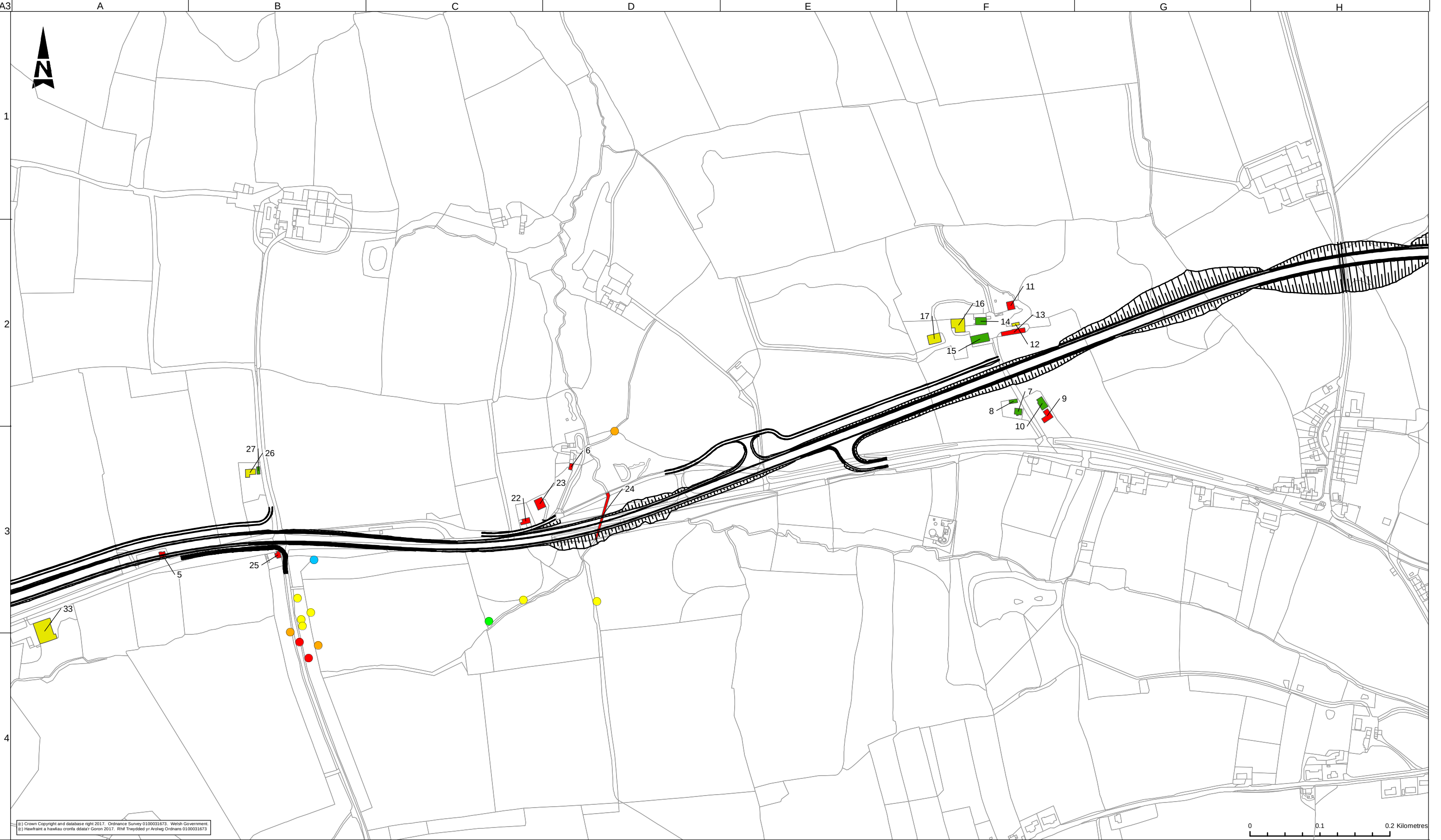
|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P03 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 |

Name

A40LVP - ARP - VES - SWI - DR - LE - 0148

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





(c) Crown Copyright and database right 2017. Ordnance Survey 0100031673. Welsh Government.  
(c) Hawffaint a hawlau cronfa ddata'r Goron 2017. Rhif Treydded yr Arolwg Ordnans 0100031673.

LEGEND

BAT TREE ROOST RESULTS

Bat roost potential - trees

Confirmed

High

Moderate

Low

Negligible

PROPOSED ALIGNMENT

BAT ROOST POTENTIAL

bat\_potential

High

Low

Moderate

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction

None

Maintenance / Cleaning

None

Use

None

Decommissioning / Demolition

None

P02

06/11/18

UPDATE FOLLOWING COMMENTS

HC

PW

TE

GD

Rev

Date

Description

By

Chkd

Appd

Auth

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Uywodraeth Cymru

Welsh Government

ARCADIS

MOTT MACDONALD

Delivery Team

ARUP

RICHARDS

WILLIAMS

Drawing Title

FIGURE 8.15B  
BAT ROOST SUITABILITY RESULTS  
SHEET 2 OF 3

Suitability

S4 | SUITABLE FOR STAGE APPROVAL

Scale at A3

1:5,000

Rev

By

HC

Date

06/11/18

Chkd

PW

Date

06/11/18

Appd

TE

Date

06/11/18

Auth

GD

Date

06/11/18

Name

A40LVP - ARP - VES - SWI - DR - LE - 0149

Project

Originator

Volume

Location

Type

Role

Number





























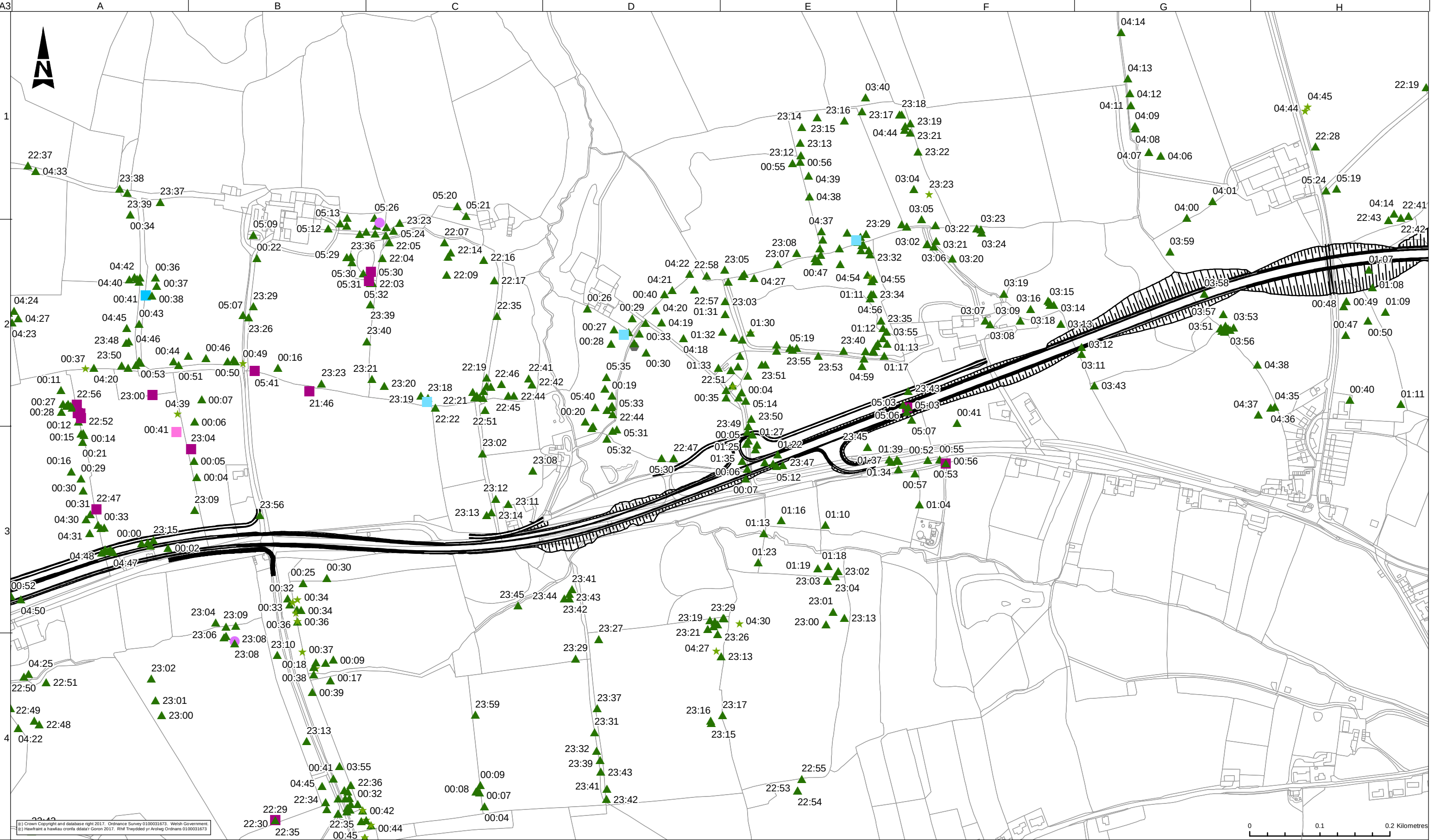












**LEGEND**

- PROPOSED ALIGNMENT
- UNIDENTIFIED BAT
- MYOTIS SPECIES
- PIPISTRELLE SPECIES
- LESSER HORSESHOE
- NOCTULE
- NYCTALUS SPECIES
- SEROTINE

INDICATIVE SUNRISE: 03:59:38  
INDICATIVE SUNSET: 20:38:19

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
ARUP

Drawing Title  
FIGURE 8.19B  
BAT ACTIVITY TRANSECT RESULTS JUNE  
SHEET 2 OF 3

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3  
1:5,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
A40LVP - ARP - VES - SWI - DR - LE - 0068

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|













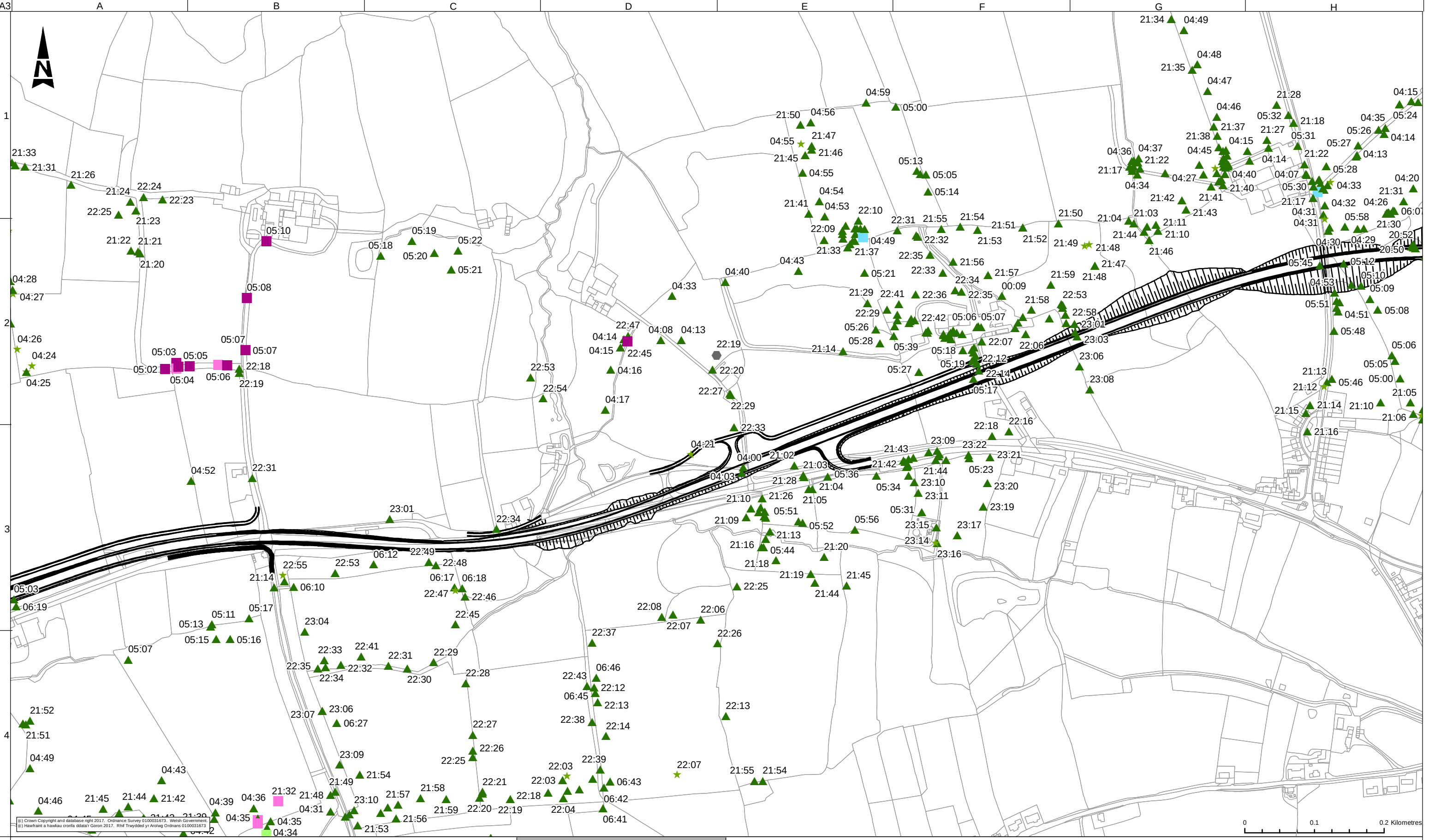












**LEGEND**

- PROPOSED ALIGNMENT
- UNIDENTIFIED BAT
- MYOTIS SPECIES
- PIPISTRELLE SPECIES
- LEISLER'S BAT
- NOCTULE
- NYCTALUS SPECIES
- LONG-EARED BAT

INDICATIVE SUNRISE: 05:03:19  
INDICATIVE SUNSET: 19:42:33

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  

Drawing Title  
**FIGURE 8.21B  
BAT ACTIVITY TRANSECT RESULTS AUGUST  
SHEET 2 OF 3**

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

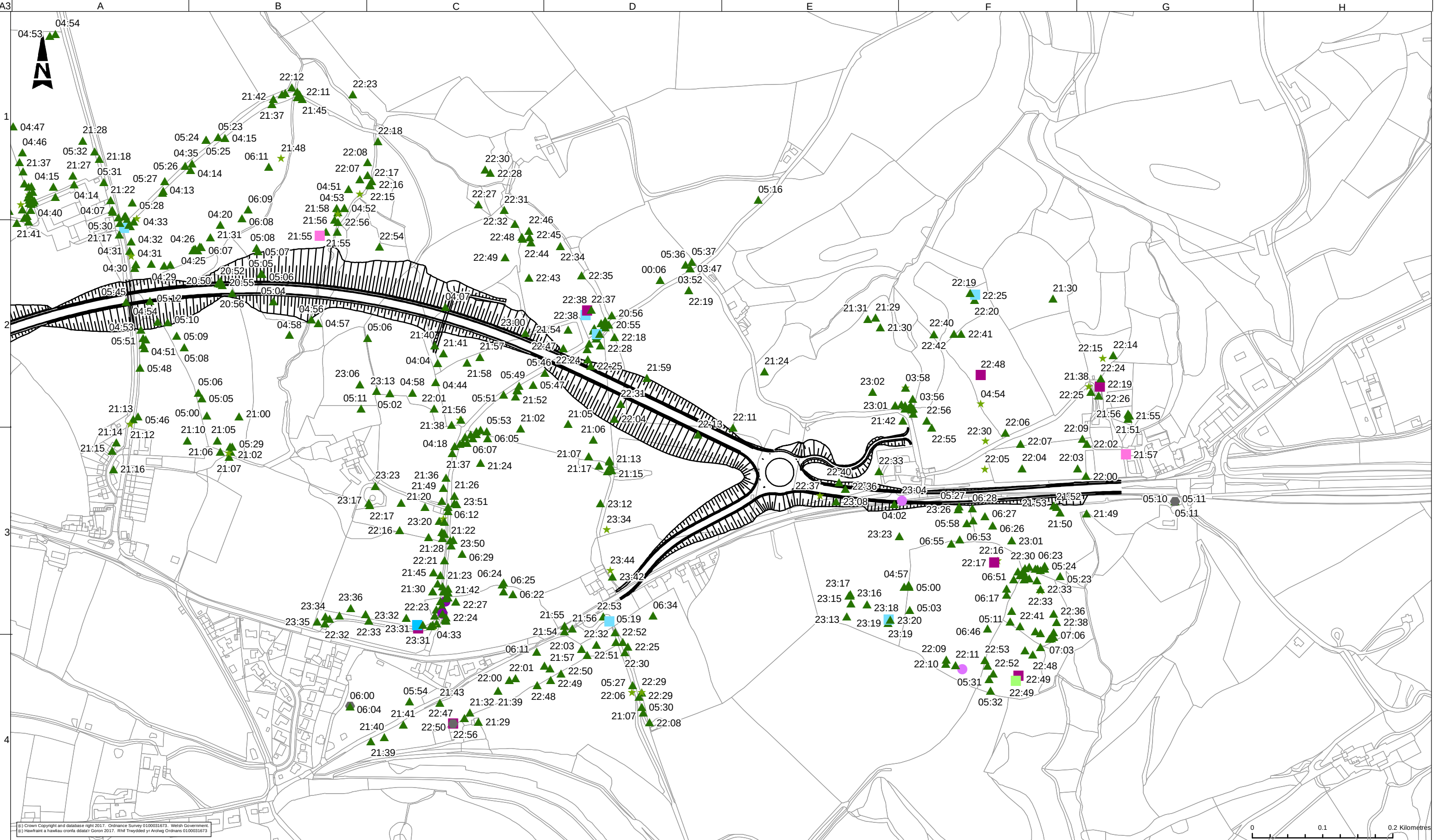
Scale at A3  
1:5,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0074**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

PROPOSED ALIGNMENT

UNIDENTIFIED BAT

MYOTIS SPECIES

PIPISTRELLE SPECIES

GREATER HORSESHOE

LESSER HORSESHOE

LEISLER'S BAT

NOCTULE

NYCTALUS SPECIES

SEROTINE

LONG-EARED BAT

INDICATIVE SUNRISE: 05:03:19  
INDICATIVE SUNSET: 19:42:33

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **RICHARDS**

Drawing Title  
**FIGURE 8.21C  
BAT ACTIVITY TRANSECT RESULTS AUGUST  
SHEET 3 OF 3**

Scale at A3  
**1:5,000**

|            |      |          |      |          |      |          |      |          |
|------------|------|----------|------|----------|------|----------|------|----------|
| Rev        | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| <b>P04</b> | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

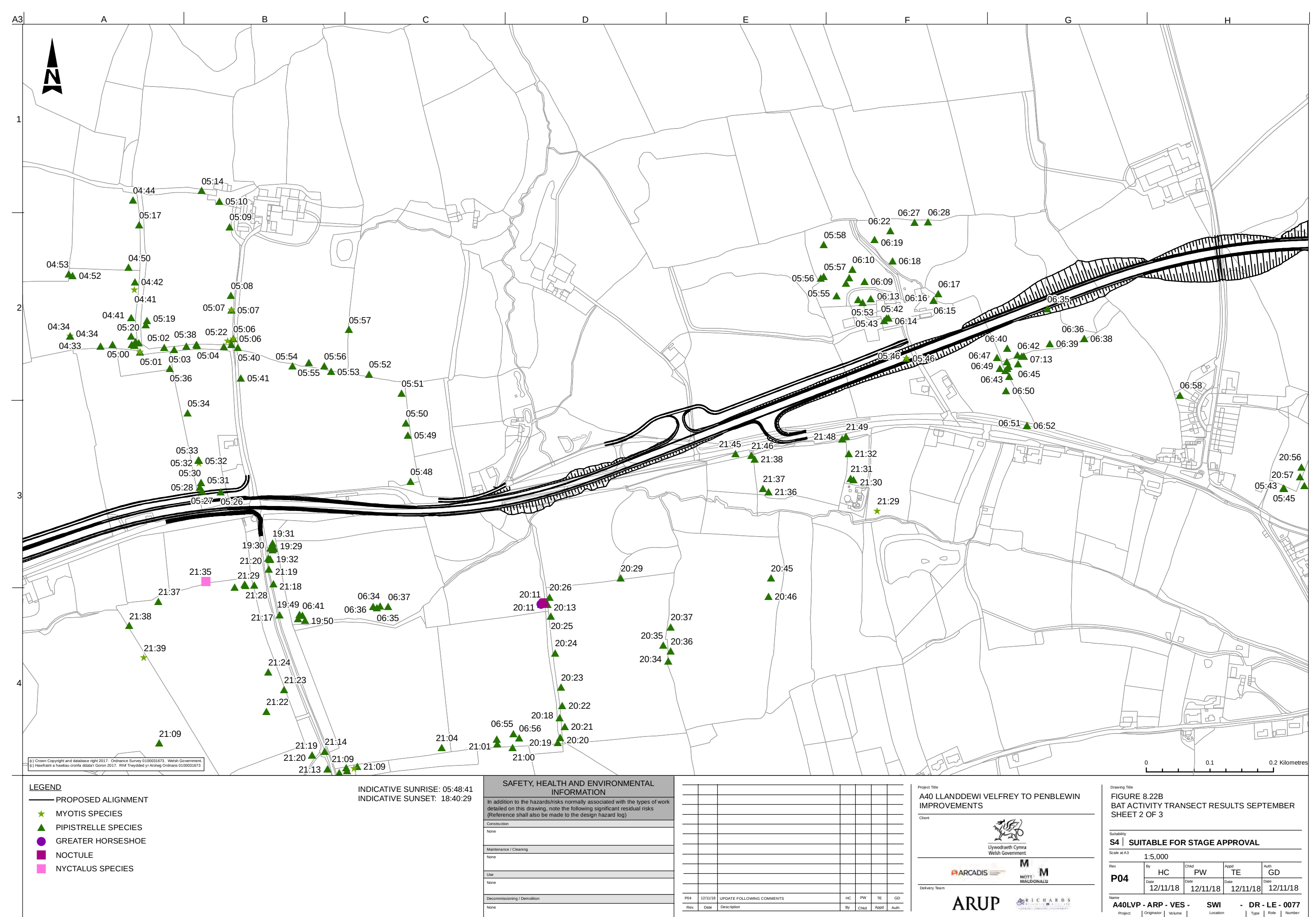
Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0075**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|

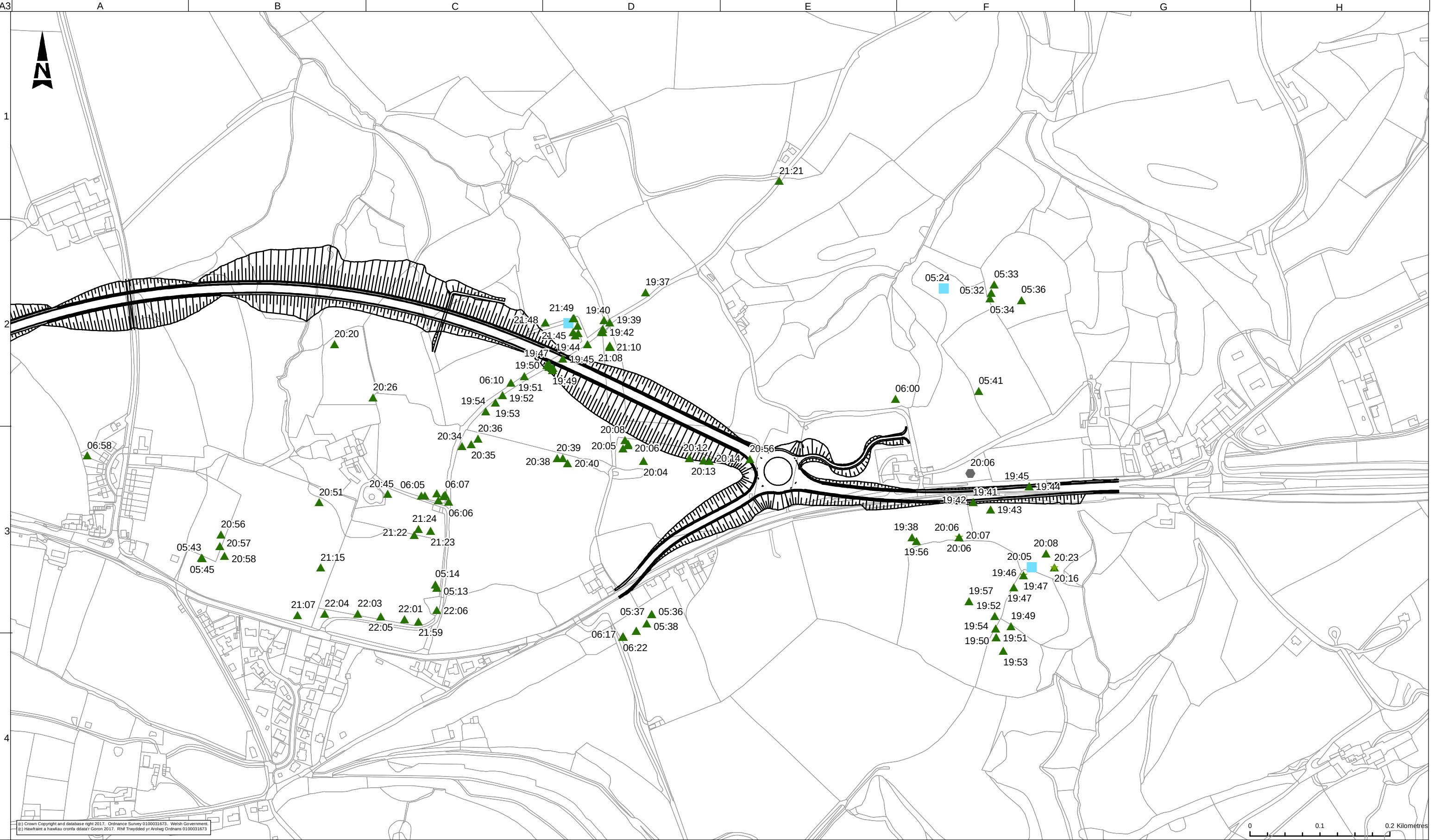












(c) Crown Copyright and database right 2017. Ordnance Survey 0100031673. Welsh Government.  
(c) Hawffraint a hawliau cronfa ddata'r Goron 2017. Rhif Treysdded yr Arolwg Ordnans 0100031673.

**LEGEND**

- PROPOSED ALIGNMENT
- UNIDENTIFIED BAT
- MYOTIS SPECIES
- PIPISTRELLE SPECIES
- LONG-EARED BAT

INDICATIVE SUNRISE: 05:48:41  
INDICATIVE SUNSET: 18:40:29

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |

Project Title  
**A40 LLANDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  

Drawing Title  
**FIGURE 8.22C  
BAT ACTIVITY TRANSECT RESULTS SEPTEMBER  
SHEET 3 OF 3**

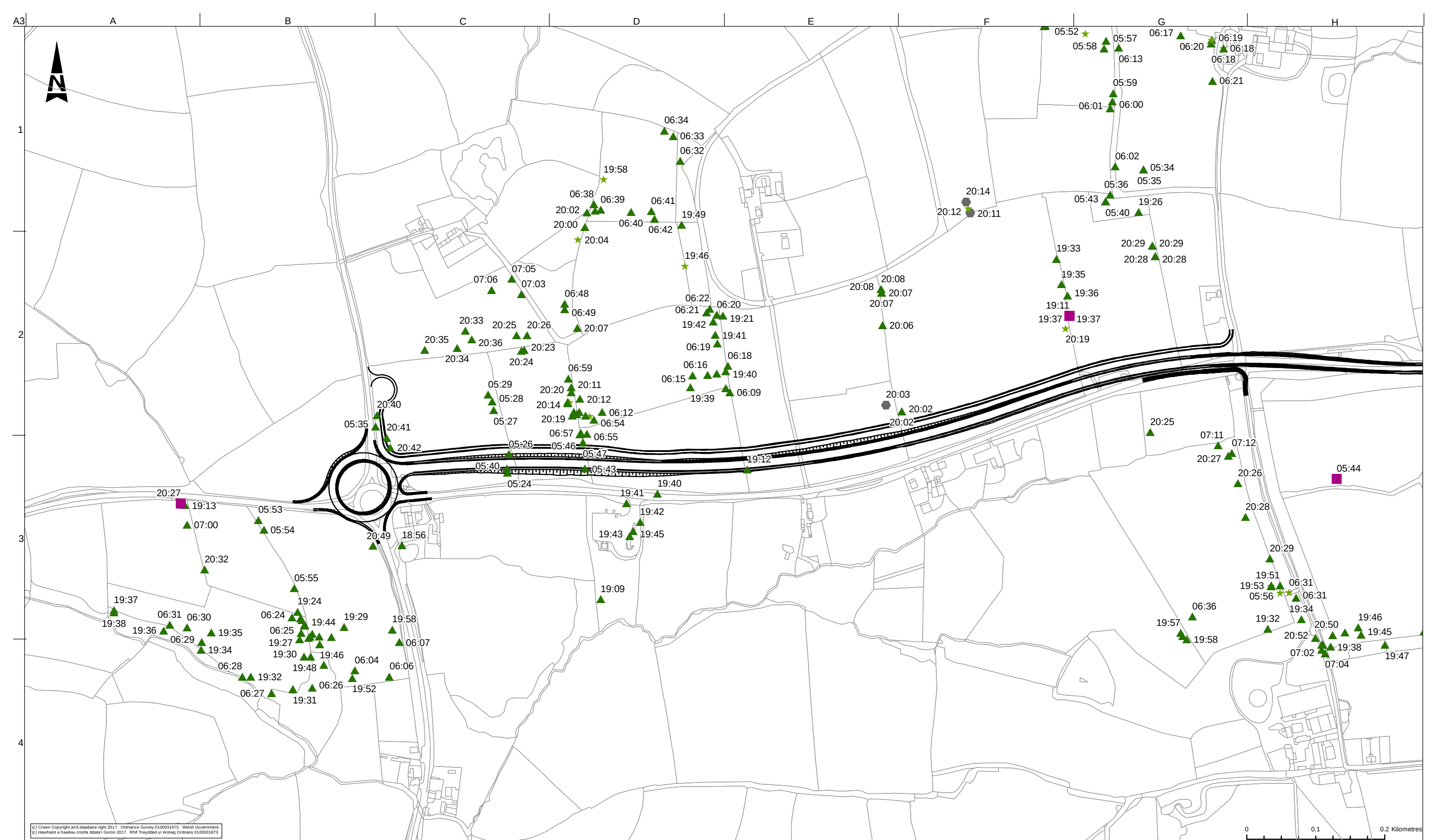
Scale at A3  
1:5,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0078**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





## LEGEND

-  PROPOSED ALIGNMENT  
 UNIDENTIFIED BAT  
 MYOTIS SPECIES  
 PIPISTRELLE SPECIES  
 NOCTULE  
 NYCTALUS SPECIES

INDICATIVE SUNRISE: 06:30:56  
INDICATIVE SUNSET: 17:40:54

## SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |   |   |
|------------------------------|---|---|
| Construction                 | 0 | 0 |
| None                         |   |   |
| Maintenance / Cleaning       |   |   |
| None                         |   |   |
| Use                          |   |   |
| None                         |   |   |
| Decommissioning / Demolition |   |   |
| None                         |   |   |

|      |          |                           |  |  |  |    |      |      |    |     |   |
|------|----------|---------------------------|--|--|--|----|------|------|----|-----|---|
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
|      |          |                           |  |  |  |    |      |      |    |     |   |
| P04  | 12/11/18 | UPDATE FOLLOWING COMMENTS |  |  |  |    | HC   | PW   | TE |     | G |
| Rev. | Date     | Description               |  |  |  | By | Chkd | Appd |    | Aut |   |

Project Title

**A40 LLANDDEWI VELFREY TO PENBLEWIN  
IMPROVEMENTS**



Llywodraeth Cymru  
Welsh Government



Delivery Team



Drawing Title

FIGURE 8.23A  
BAT ACTIVITY TRANSECT RESULTS OCTOBER  
SHEET 1 OF 3

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3

1:5,000

|            |                  |                  |                  |                  |
|------------|------------------|------------------|------------------|------------------|
| Rev        | By               | Chkd             | Appd             | Auth             |
| <b>P04</b> | HC               | PW               | TE               | GD               |
|            | Date<br>12/11/18 | Date<br>12/11/18 | Date<br>12/11/18 | Date<br>12/11/18 |

Name \_\_\_\_\_

A40LVP - ARP - VES - SWI - DR - LE - 0079

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|---------|------------|--------|----------|------|------|--------|









































LEGEND

PROPOSED ALIGNMENT

NO ACCESS

NO BATS RECORDED

VERY LOW (< 27.7)

LOW (27.7 - 76.2)

MEDIUM (76.2 - 132)

HIGH (132 - 378)

VERY HIGH (> 378)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT      |
|--------------|---------------------------------|
| 1            | 226.2                           |
| 2            | NO ACCESS                       |
| 3            | 158.4                           |
| 4            | 212                             |
| 5            | 135.8                           |
| 6            | 307.2                           |
| 7            | 27.4                            |
| 8            | 6.2                             |
| 9            | 11.4                            |
| 10           | 3.6                             |
| 11           | 220.8                           |
| 12           | 53.8                            |
| 13           | 556.8                           |
| 14           | NO BATS RECORDED - INTERFERENCE |
| 15           | 54.6                            |

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction

None

Maintenance / Cleaning

None

Use

None

Decommissioning / Demolition

None

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 09/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Delivery Team

Drawing Title

FIGURE 8.31  
2017 STATIC BAT ACTIVITY MONITORING  
JUNE: ALL BAT SPECIES

Scale at A3

1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 |

Name

A40LVP - ARP - VES - SWI - DR - LE - 0008

Project

Originator

Volume

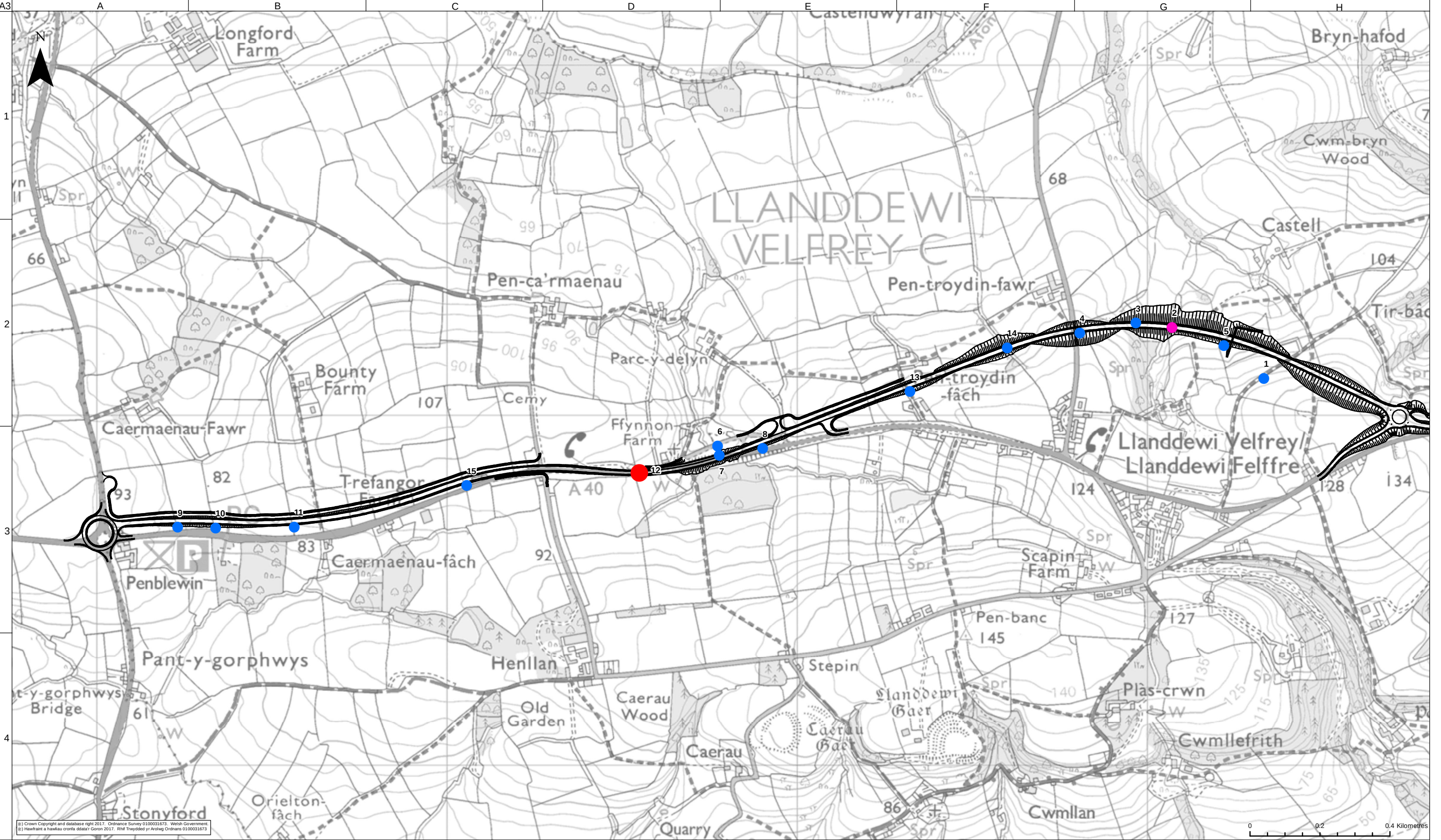
Location

Type

Role

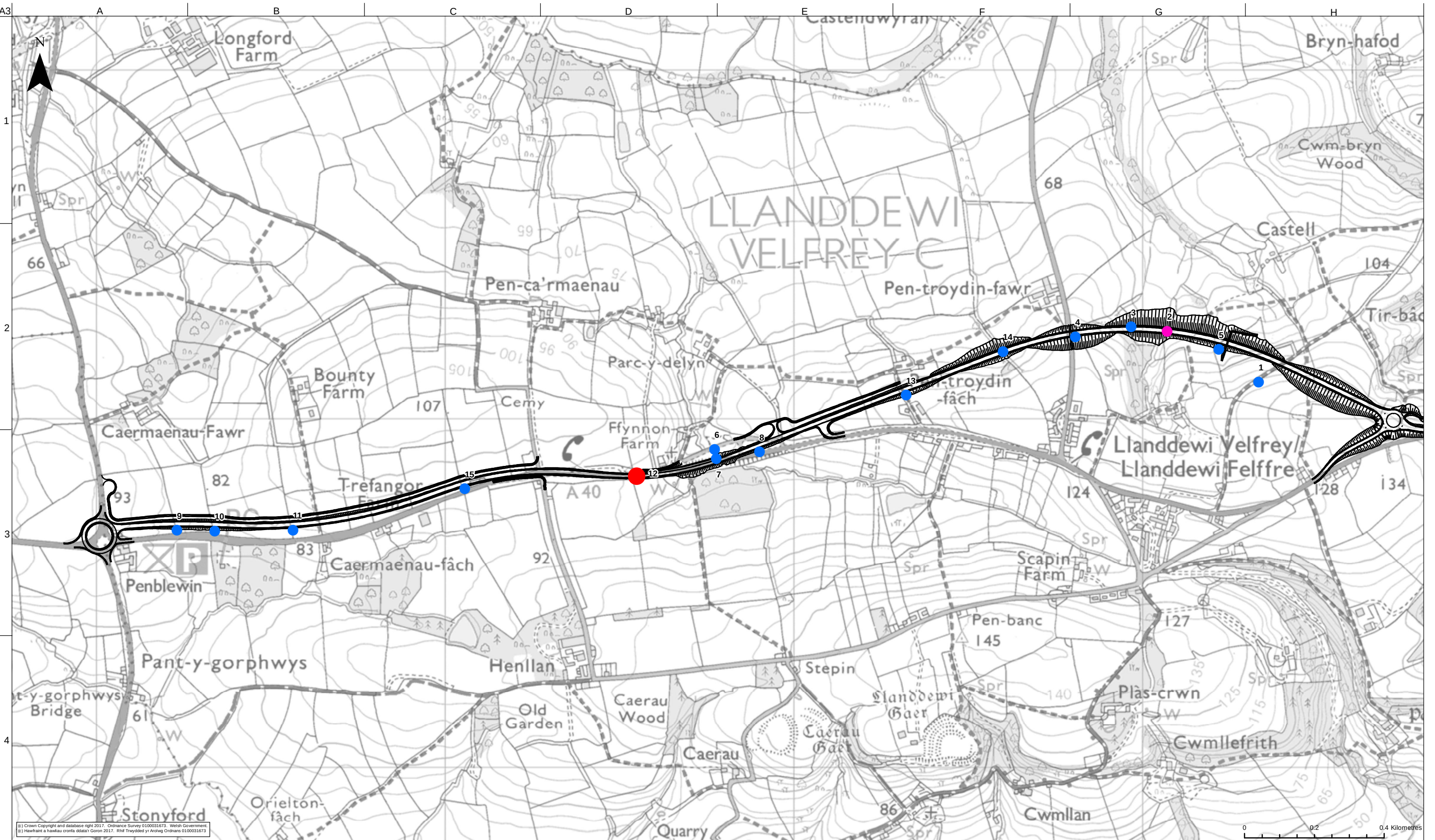
Number





| LEGEND               |  | LOCATION NO. BAT PASSES (EQ.) PER NIGHT |                                 | SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION                                                                                                                                                                |  |  |  | Project Title                                   |  | Drawing Title                       |  |
|----------------------|--|-----------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|-------------------------------------------------|--|-------------------------------------|--|
| — PROPOSED ALIGNMENT |  | 1                                       | 0                               | In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log) |  |  |  | A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS |  | FIGURE 8.32                         |  |
| ● NO ACCESS          |  | 2                                       | NO ACCESS                       | Construction                                                                                                                                                                                                |  |  |  | Client                                          |  | 2017 STATIC BAT ACTIVITY MONITORING |  |
| ● NO BATS RECORDED   |  | 3                                       | 0                               | None                                                                                                                                                                                                        |  |  |  | Uywodraeth Cymru<br>Welsh Government            |  | JUNE: BARBASTELLE                   |  |
| ● BATS RECORDED      |  | 4                                       | 0                               | Maintenance / Cleaning                                                                                                                                                                                      |  |  |  | MOTT MACDONALD                                  |  | S4   SUITABLE FOR STAGE APPROVAL    |  |
|                      |  | 5                                       | 0                               | None                                                                                                                                                                                                        |  |  |  | Delivery Team                                   |  | Scale at A3 1:10,000                |  |
|                      |  | 6                                       | 0                               | Use                                                                                                                                                                                                         |  |  |  | ARUP                                            |  | Rev                                 |  |
|                      |  | 7                                       | 0                               | None                                                                                                                                                                                                        |  |  |  | P04                                             |  | By                                  |  |
|                      |  | 8                                       | 0                               | Decommissioning / Demolition                                                                                                                                                                                |  |  |  | HC                                              |  | Date                                |  |
|                      |  | 9                                       | 0                               | None                                                                                                                                                                                                        |  |  |  | PW                                              |  | Date                                |  |
|                      |  | 10                                      | 0                               |                                                                                                                                                                                                             |  |  |  | TE                                              |  | Date                                |  |
|                      |  | 11                                      | 0                               |                                                                                                                                                                                                             |  |  |  | GD                                              |  | Date                                |  |
|                      |  | 12                                      | 0.2                             |                                                                                                                                                                                                             |  |  |  | Name                                            |  | P04                                 |  |
|                      |  | 13                                      | 0                               |                                                                                                                                                                                                             |  |  |  | A40LVP - ARP - VES -                            |  | 09/11/18                            |  |
|                      |  | 14                                      | NO BATS RECORDED - INTERFERENCE |                                                                                                                                                                                                             |  |  |  | SWI                                             |  | 09/11/18                            |  |
|                      |  | 15                                      | 0                               |                                                                                                                                                                                                             |  |  |  | - DR - LE - 0009                                |  | 09/11/18                            |  |





**LEGEND**

- PROPOSED ALIGNMENT
- NO ACCESS
- NO BATS RECORDED
- BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT      |
|--------------|---------------------------------|
| 1            | 0                               |
| 2            | NO ACCESS                       |
| 3            | 0                               |
| 4            | 0                               |
| 5            | 0                               |
| 6            | 0                               |
| 7            | 0                               |
| 8            | 0                               |
| 9            | 0                               |
| 10           | 0                               |
| 11           | 0                               |
| 12           | 2                               |
| 13           | 0                               |
| 14           | NO BATS RECORDED - INTERFERENCE |
| 15           | 0                               |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 09/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.33  
2017 STATIC BAT ACTIVITY MONITORING  
JUNE: SEROTINE**

Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0010**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO ACCESS
- NO BATS RECORDED
- LOW (0.2 - 1)
- MEDIUM (1 - 2)
- HIGH (2 - 12)
- VERY HIGH (> 12)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT      |
|--------------|---------------------------------|
| 1            | 6.2                             |
| 2            | NO ACCESS                       |
| 3            | 0.6                             |
| 4            | 0                               |
| 5            | 0                               |
| 6            | 37.8                            |
| 7            | 3.2                             |
| 8            | 0                               |
| 9            | 0                               |
| 10           | 0                               |
| 11           | 1.2                             |
| 12           | 1.4                             |
| 13           | 3.4                             |
| 14           | NO BATS RECORDED - INTERFERENCE |
| 15           | 4.2                             |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 09/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **MOTT MACDONALD**

Drawing Title  
**FIGURE 8.34**  
**2017 STATIC BAT ACTIVITY MONITORING**  
**JUNE: MYOTIS SPECIES**

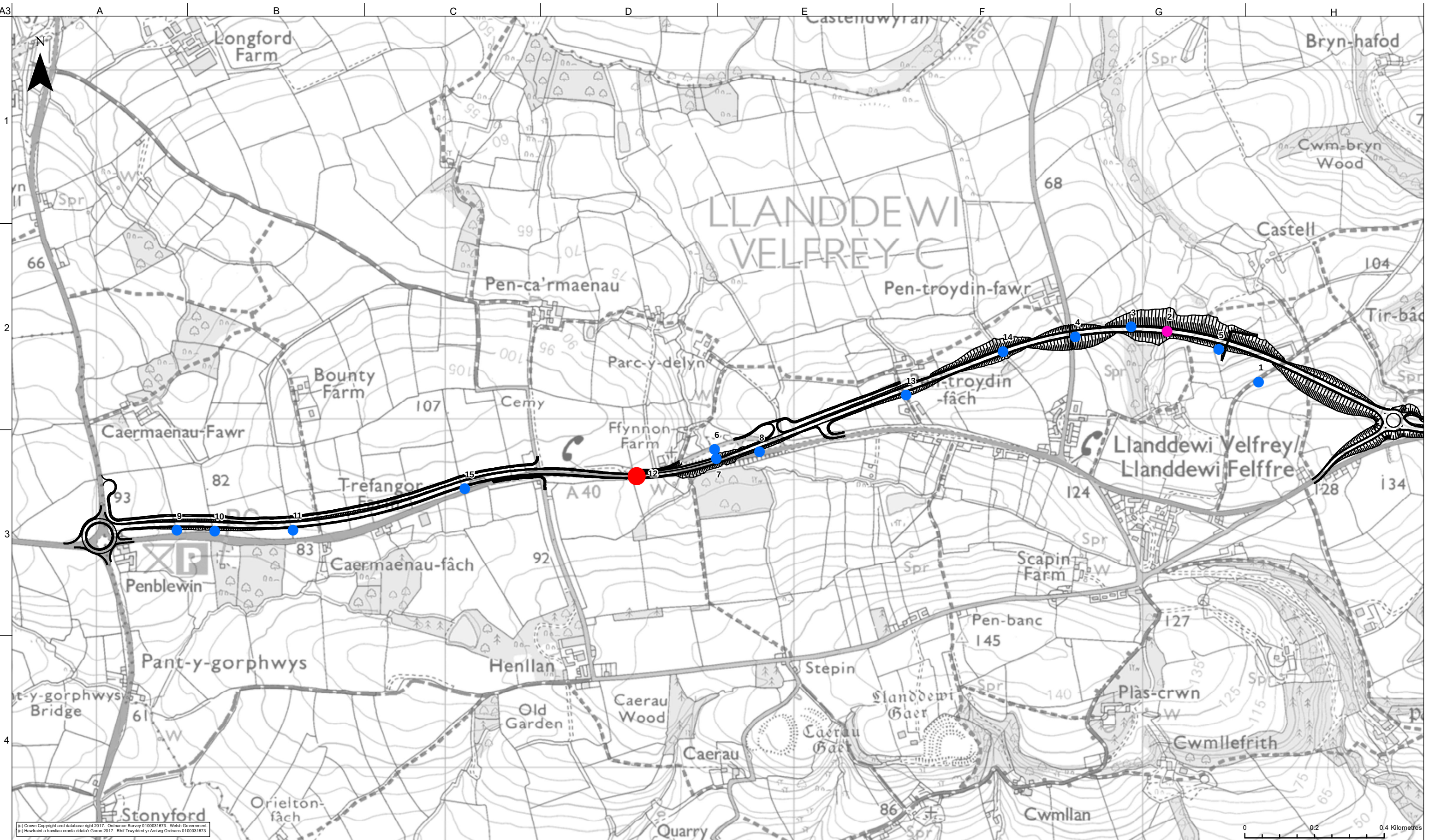
Scale at A3  
**1:10,000**

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0012**

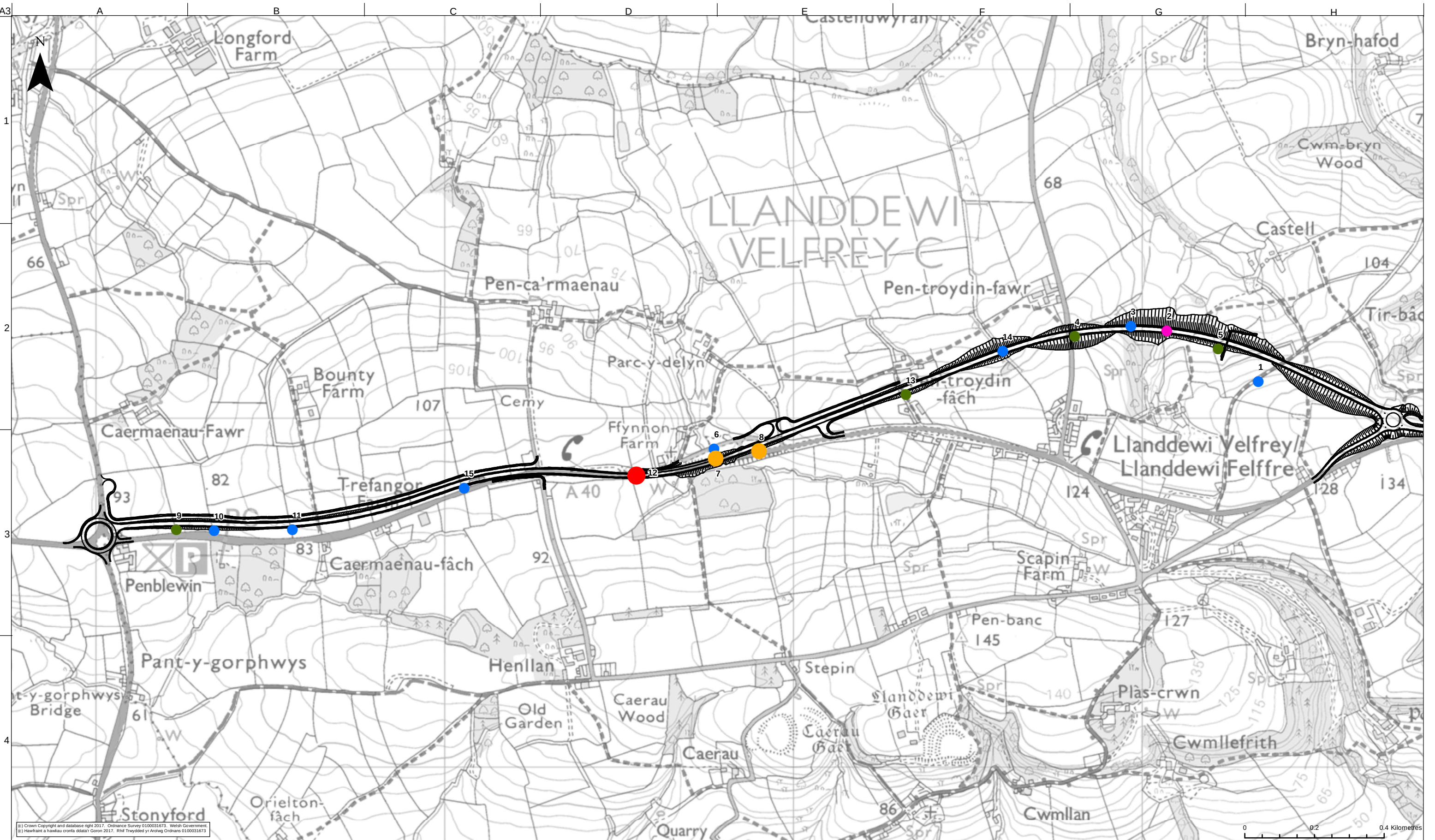
|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





| LEGEND               |  | LOCATION NO.      BAT PASSES (EQ.) PER NIGHT |                                 | SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION                                                                                                                                                                |  | Project Title                                                                                                                               |  |  |  |  |  | Drawing Title                                           |  |  |  |  |  |
|----------------------|--|----------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|---------------------------------------------------------|--|--|--|--|--|
| — PROPOSED ALIGNMENT |  | 1                                            | 0                               | In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log) |  | A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS                                                                                             |  |  |  |  |  | FIGURE 8.35                                             |  |  |  |  |  |
| ● NO ACCESS          |  | 2                                            | NO ACCESS                       |                                                                                                                                                                                                             |  | Client                                                                                                                                      |  |  |  |  |  | 2017 STATIC BAT ACTIVITY MONITORING                     |  |  |  |  |  |
| ● NO BATS RECORDED   |  | 3                                            | 0                               |                                                                                                                                                                                                             |  | <div><br/>Llywodraeth Cymru<br/>Welsh Government</div> |  |  |  |  |  | JUNE: LEISLER'S BAT                                     |  |  |  |  |  |
| ● BATS RECORDED      |  | 4                                            | 0                               |                                                                                                                                                                                                             |  |                                                                                                                                             |  |  |  |  |  | Suitability                                             |  |  |  |  |  |
|                      |  | 5                                            | 0                               |                                                                                                                                                                                                             |  |                                                                                                                                             |  |  |  |  |  | <b>S4   SUITABLE FOR STAGE APPROVAL</b>                 |  |  |  |  |  |
|                      |  | 6                                            | 0                               |                                                                                                                                                                                                             |  |                                                                                                                                             |  |  |  |  |  | Scale at A3                                             |  |  |  |  |  |
|                      |  | 7                                            | 0                               |                                                                                                                                                                                                             |  |                                                                                                                                             |  |  |  |  |  | 1:10,000                                                |  |  |  |  |  |
|                      |  | 8                                            | 0                               |                                                                                                                                                                                                             |  |                                                                                                                                             |  |  |  |  |  | Rev                                                     |  |  |  |  |  |
|                      |  | 9                                            | 0                               |                                                                                                                                                                                                             |  |                                                                                                                                             |  |  |  |  |  | By HC Chkd PW Appd TE Auth GD                           |  |  |  |  |  |
|                      |  | 10                                           | 0                               |                                                                                                                                                                                                             |  |                                                                                                                                             |  |  |  |  |  | Date 13/11/18 Date 13/11/18 Date 13/11/18 Date 13/11/18 |  |  |  |  |  |
|                      |  | 11                                           | 0                               | Date 13/11/18 Date 13/11/18 Date 13/11/18 Date 13/11/18                                                                                                                                                     |  |                                                                                                                                             |  |  |  |  |  |                                                         |  |  |  |  |  |
|                      |  | 12                                           | 7.2                             | Decommissioning / Demolition                                                                                                                                                                                |  | P04                                                                                                                                         |  |  |  |  |  | Name                                                    |  |  |  |  |  |
|                      |  | 13                                           | 0                               |                                                                                                                                                                                                             |  | Rev. Date Description By Chkd Appd Auth                                                                                                     |  |  |  |  |  | A40LVP - ARP - VES - SWI - DR - LE - 0013               |  |  |  |  |  |
|                      |  | 14                                           | NO BATS RECORDED - INTERFERENCE |                                                                                                                                                                                                             |  |                                                                                                                                             |  |  |  |  |  | Project Originator Volume Location Type Role Number     |  |  |  |  |  |
|                      |  | 15                                           | 0                               | None                                                                                                                                                                                                        |  | Delivery Team                                                                                                                               |  |  |  |  |  | Project Originator Volume Location Type Role Number     |  |  |  |  |  |





**LEGEND**

—

PROPOSED ALIGNMENT

●

NO ACCESS

●

NO BATS RECORDED

●

VERY LOW (<0.4)

●

LOW (0.4-0.8)

●

MEDIUM (0.8 - 1.4)

●

HIGH (1.4 - 7.8)

●

VERY HIGH (>7.8)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT      |
|--------------|---------------------------------|
| 1            | 0                               |
| 2            | NO ACCESS                       |
| 3            | 0                               |
| 4            | 0.2                             |
| 5            | 0.2                             |
| 6            | 0                               |
| 7            | 1.2                             |
| 8            | 1.2                             |
| 9            | 0.2                             |
| 10           | 0                               |
| 11           | 0                               |
| 12           | 2.8                             |
| 13           | 0.2                             |
| 14           | NO BATS RECORDED - INTERFERENCE |
| 15           | 0                               |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 09/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  
  


Drawing Title  
**FIGURE 8.36  
2017 STATIC BAT ACTIVITY MONITORING  
JUNE: NOCTULE**

Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0014**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

— PROPOSED ALIGNMENT

● NO ACCESS

● NO BATS RECORDED

● VERY LOW (< 27.7)

● LOW (27.7 - 76.2)

● HIGH (132 - 378.32)

● VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT      |
|--------------|---------------------------------|
| 1            | 10                              |
| 2            | NO ACCESS                       |
| 3            | 2.8                             |
| 4            | 57.4                            |
| 5            | 12.4                            |
| 6            | 3.2                             |
| 7            | 1.8                             |
| 8            | 1.6                             |
| 9            | 1.8                             |
| 10           | 1                               |
| 11           | 22.4                            |
| 12           | 6.4                             |
| 13           | 143.4                           |
| 14           | NO BATS RECORDED - INTERFERENCE |
| 15           | 5                               |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 09/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.37  
2017 STATIC BAT ACTIVITY MONITORING  
JUNE: COMMON PIPISTRELLE**

Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0016**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |



[illegible]





**LEGEND**

— PROPOSED ALIGNMENT

● NO ACCESS

● NO BATS RECORDED

● VERY LOW (< 27.7)

● LOW (27.7 - 76.2)

● MEDIUM (76.2 - 132)

● HIGH (132 - 378.32)

● VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 4                          |
| 2            | NO ACCESS                  |
| 3            | 0.8                        |
| 4            | 7.6                        |
| 5            | 6.2                        |
| 6            | 2.8                        |
| 7            | 1                          |
| 8            | 0                          |
| 9            | 0.2                        |
| 10           | 0                          |
| 11           | 26.4                       |
| 12           | 0.8                        |
| 13           | 6.6                        |
| 14           | NO BATS RECORDED -         |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 09/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  
  
  


Drawing Title  
**FIGURE 8.39  
2017 STATIC BAT ACTIVITY MONITORING  
JUNE: PIPISTRELLE SPECIES**

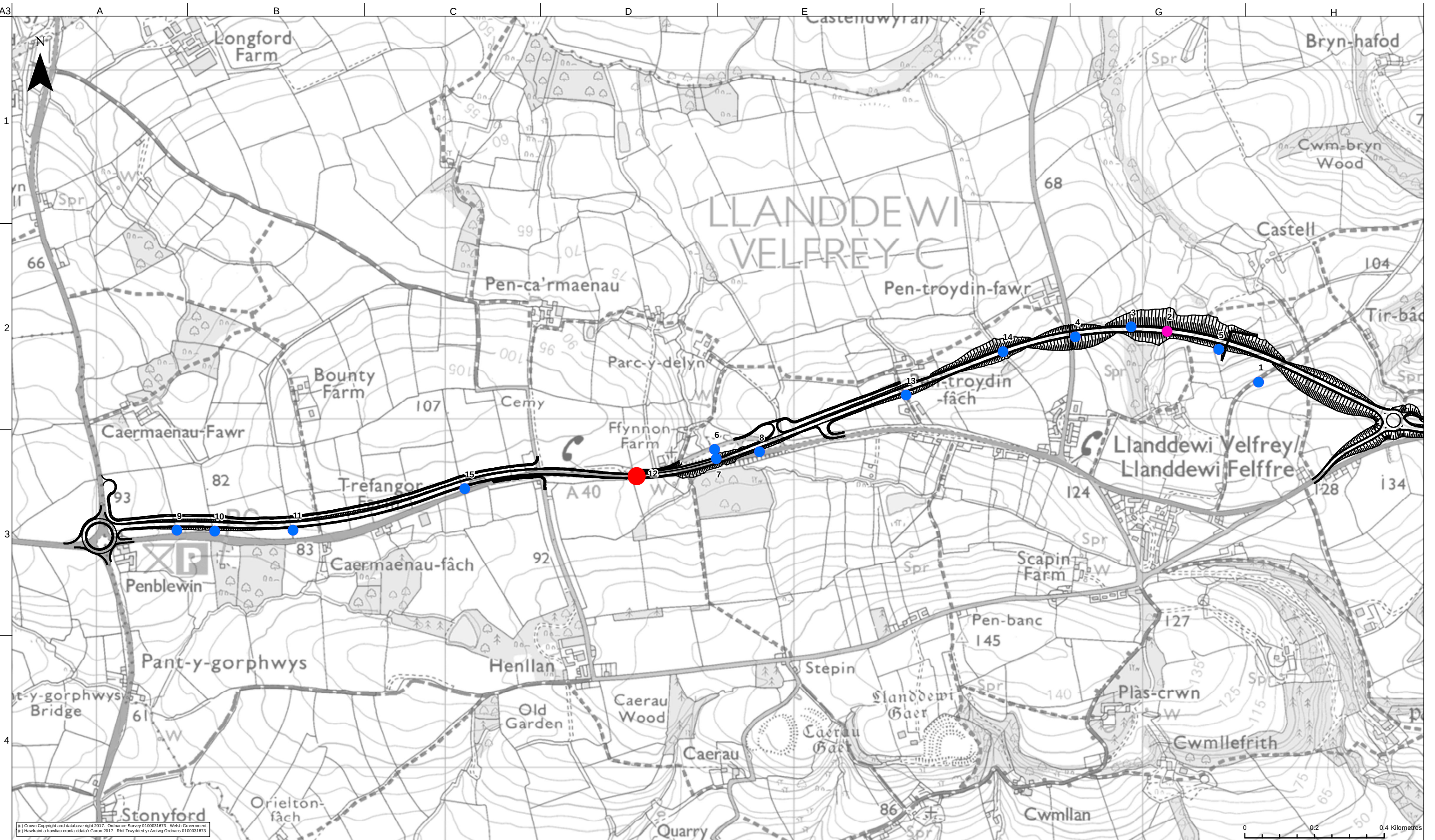
Scale at A3  
**1:10,000**

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0018**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- NO ACCESS
- BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT      |
|--------------|---------------------------------|
| 1            | 0                               |
| 2            | NO ACCESS                       |
| 3            | 0                               |
| 4            | 0                               |
| 5            | 0                               |
| 6            | 0                               |
| 7            | 0                               |
| 8            | 0                               |
| 9            | 0                               |
| 10           | 0                               |
| 11           | 0                               |
| 12           | 0.4                             |
| 13           | 0                               |
| 14           | NO BATS RECORDED - INTERFERENCE |
| 15           | 0                               |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 15/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.40  
2017 STATIC BAT ACTIVITY MONITORING  
JUNE: GREATER HORSESHOE BAT**

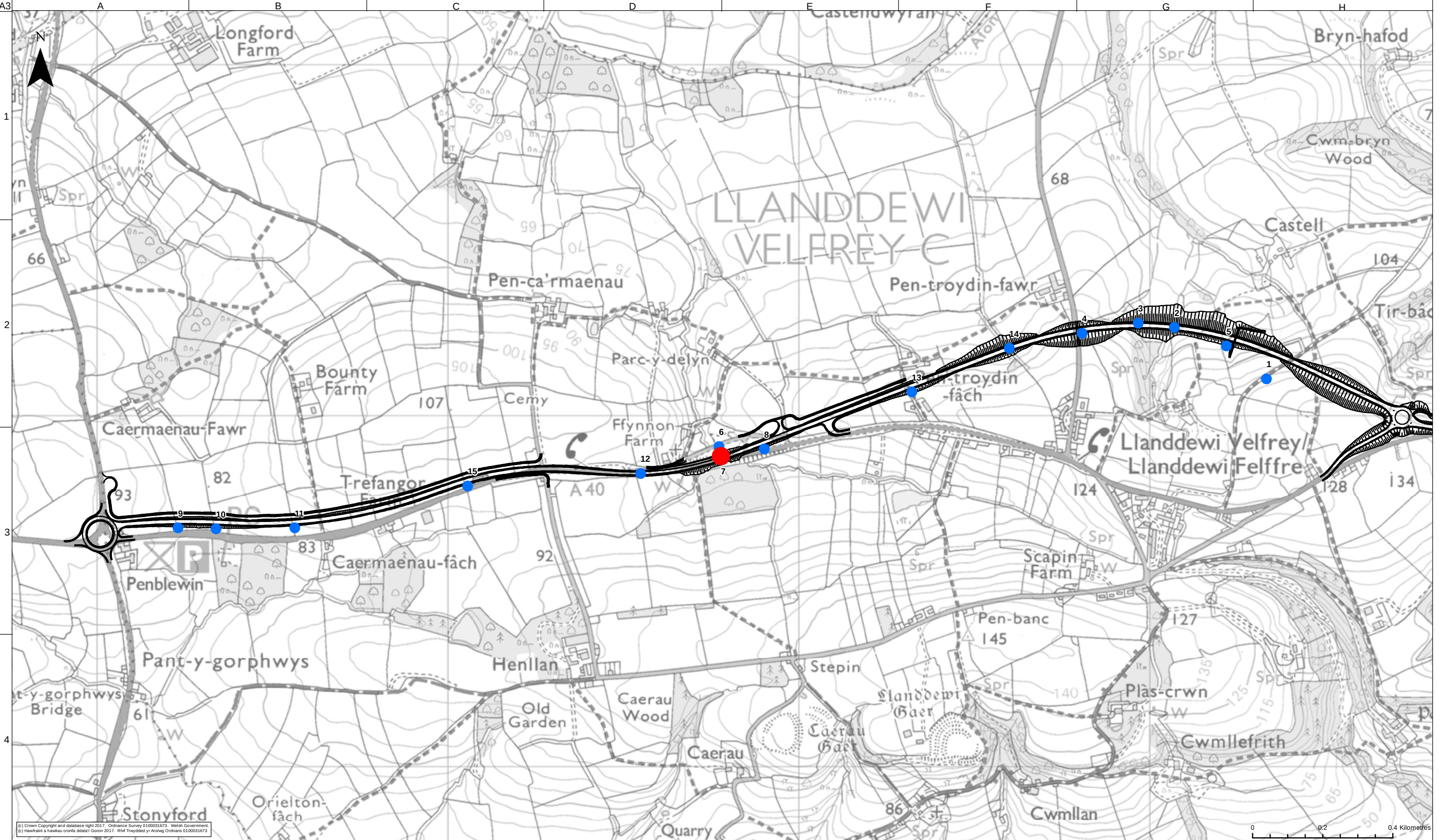
Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 15/11/18 | Date | 15/11/18 | Date | 15/11/18 | Date | 15/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0020**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

— PROPOSED ALIGNMENT

● NO BATS RECORDED

● BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT      |
|--------------|---------------------------------|
| 1            | 0                               |
| 2            | NO ACCESS                       |
| 3            | 0                               |
| 4            | 0                               |
| 5            | 0                               |
| 6            | 0                               |
| 7            | 0                               |
| 8            | 0                               |
| 9            | 0                               |
| 10           | 0                               |
| 11           | 0                               |
| 12           | 0.2                             |
| 13           | 0                               |
| 14           | NO BATS RECORDED - INTERFERENCE |
| 15           | 0                               |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction  
None

Maintenance / Cleaning  
None

Use  
None

Decommissioning / Demolition  
None

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 09/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  

Drawing Title  
**FIGURE 8.41  
2017 STATIC BAT ACTIVITY MONITORING  
JUNE: LESSER HORSESHOE BAT**

Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 |

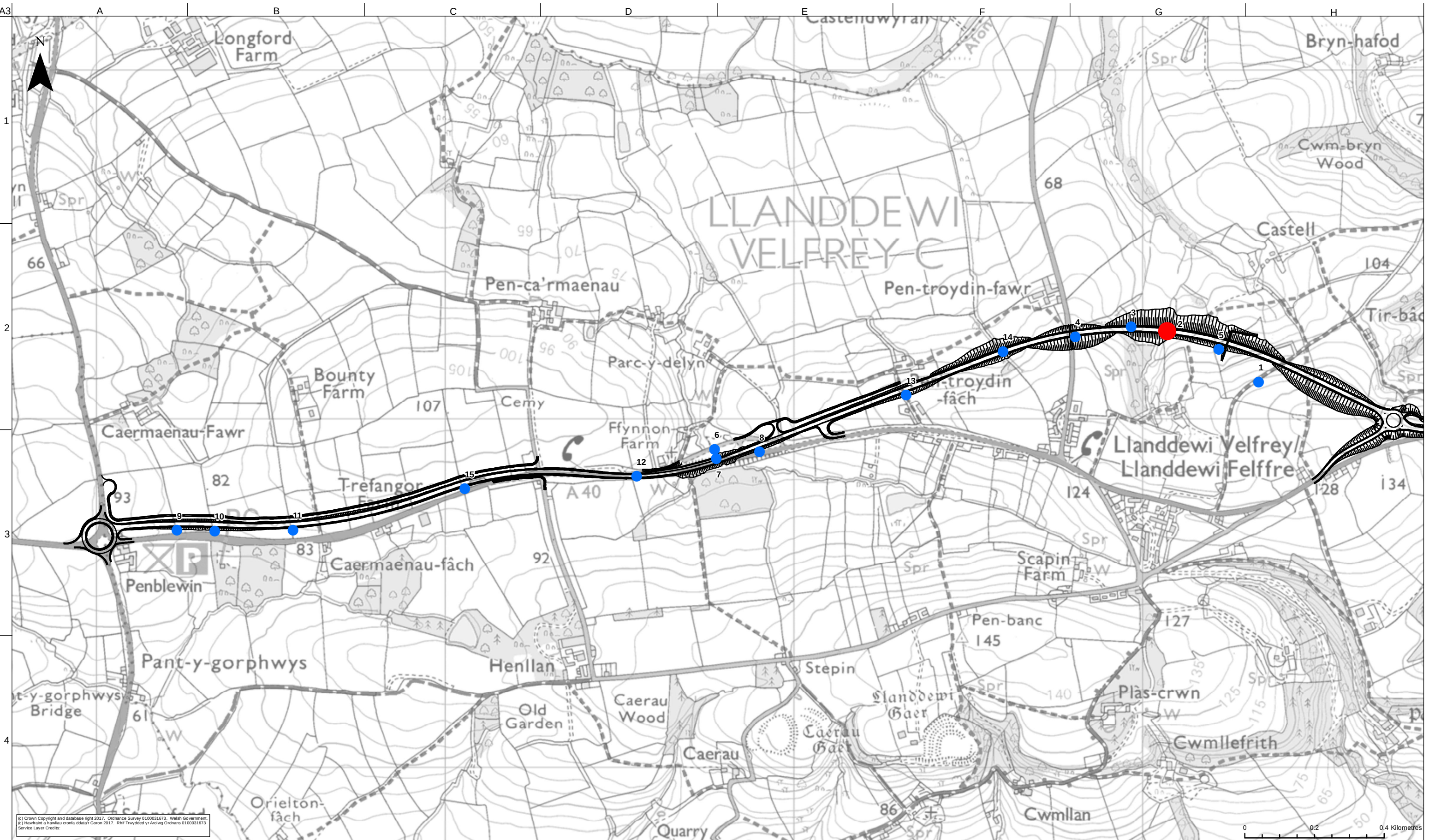
Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0021**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |



[illegible]





**LEGEND**

— PROPOSED ALIGNMENT

● NO BATS RECORDED

● BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0.2                        |
| 3            | 0                          |
| 4            | 0                          |
| 5            | 0                          |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 09/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **RICHARDS**

Drawing Title  
**FIGURE 8.43  
2017 STATIC BAT ACTIVITY MONITORING  
JULY: BARBASTELLE**

Scale at A3  
1:10,000

| Rev        | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|------------|------|----------|------|----------|------|----------|------|----------|
| <b>P04</b> | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 | Date | 09/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0024**

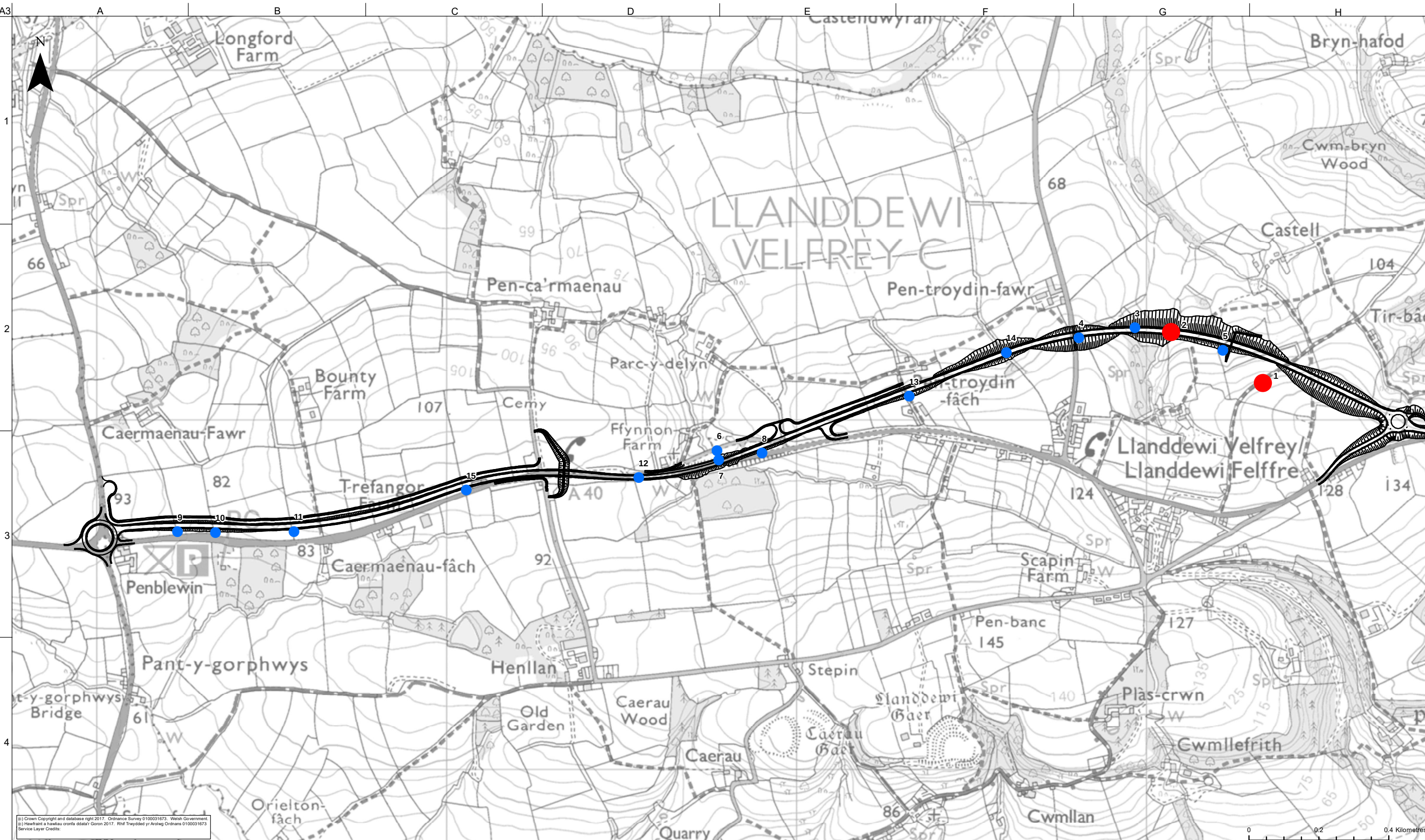
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





| LEGEND               |  | LOCATION NO. |  | BAT PASSES (EQ.) PER NIGHT |  | SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION                                                                                                                                                                |  |  |  | Project Title                                                                         |  | Drawing Title                       |  |
|----------------------|--|--------------|--|----------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------|--|-------------------------------------|--|
| — PROPOSED ALIGNMENT |  | 1            |  | 1.4                        |  | In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log) |  |  |  | A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS                                       |  | FIGURE 8.44                         |  |
| ● NO BATS RECORDED   |  | 2            |  | 11.4                       |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  | 2017 STATIC BAT ACTIVITY MONITORING |  |
| ● VERY LOW (< 0.2)   |  | 3            |  | 0.2                        |  |                                                                                                                                                                                                             |  |  |  | Client                                                                                |  | JULY: MYOTIS SPECIES                |  |
| ● LOW (0.2 - 1)      |  | 4            |  | 0.8                        |  |                                                                                                                                                                                                             |  |  |  |  |  |                                     |  |
| ● HIGH (2 - 12)      |  | 5            |  | 0                          |  |                                                                                                                                                                                                             |  |  |  |  |  |                                     |  |
|                      |  | 6            |  | 50                         |  |                                                                                                                                                                                                             |  |  |  |  |  |                                     |  |
|                      |  | 7            |  | 0.4                        |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  | 8            |  | 0.6                        |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  | 9            |  | 0.8                        |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  | 10           |  | 0                          |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  | 11           |  | 5.6                        |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  | 12           |  | 0                          |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  | 13           |  | 43.6                       |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  | 14           |  | 4                          |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  | 15           |  | 0.2                        |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |  |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |  |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |
|                      |  |              |  |                            |  |                                                                                                                                                                                                             |  |  |  |                                                                                       |  |                                     |  |



[illegible]





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- LOW (< 0.8)
- MEDIUM (0.8 - 1.4)
- HIGH (1.4 - 7.8)
- VERY HIGH (> 7.8)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0.8                        |
| 3            | 0.4                        |
| 4            | 0.4                        |
| 5            | 0                          |
| 6            | 0.2                        |
| 7            | 1.4                        |
| 8            | 0.8                        |
| 9            | 0.2                        |
| 10           | 0                          |
| 11           | 0.2                        |
| 12           | 0                          |
| 13           | 0.2                        |
| 14           | 0.6                        |
| 15           | 1.4                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.46  
2017 STATIC BAT ACTIVITY MONITORING  
JULY: NOCTULE**

Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0029**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 7.2                        |
| 2            | 60.6                       |
| 3            | 17.4                       |
| 4            | 20.4                       |
| 5            | 4.4                        |
| 6            | 0.6                        |
| 7            | 0.8                        |
| 8            | 2.2                        |
| 9            | 2.8                        |
| 10           | 0                          |
| 11           | 5.6                        |
| 12           | 1.6                        |
| 13           | 99.2                       |
| 14           | 7                          |
| 15           | 30.6                       |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **MOTT MACDONALD**

Drawing Title  
**FIGURE 8.47  
2017 STATIC BAT ACTIVITY MONITORING  
JULY: COMMON PIPISTRELLE**

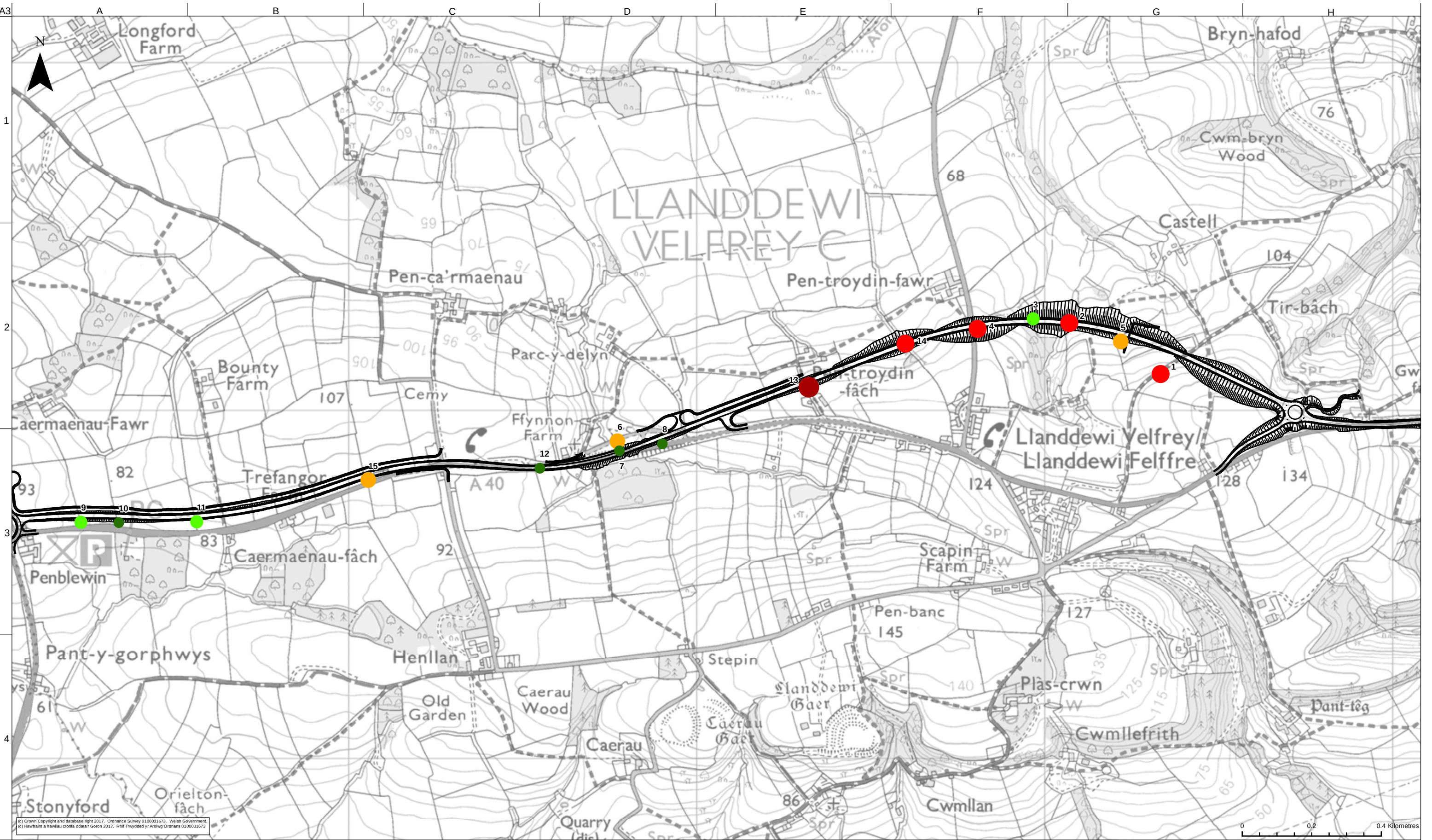
Scale at A3  
1:10,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0031**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 252.6                      |
| 2            | 256.8                      |
| 3            | 50.4                       |
| 4            | 356                        |
| 5            | 79.8                       |
| 6            | 123.6                      |
| 7            | 19                         |
| 8            | 6.2                        |
| 9            | 53.6                       |
| 10           | 12                         |
| 11           | 67.2                       |
| 12           | 0.2                        |
| 13           | 663.2                      |
| 14           | 285                        |
| 15           | 102.4                      |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
ARUP

Drawing Title  
FIGURE 8.48  
2017 STATIC BAT ACTIVITY MONITORING  
JULY: SOPRANO PIPISTRELLE

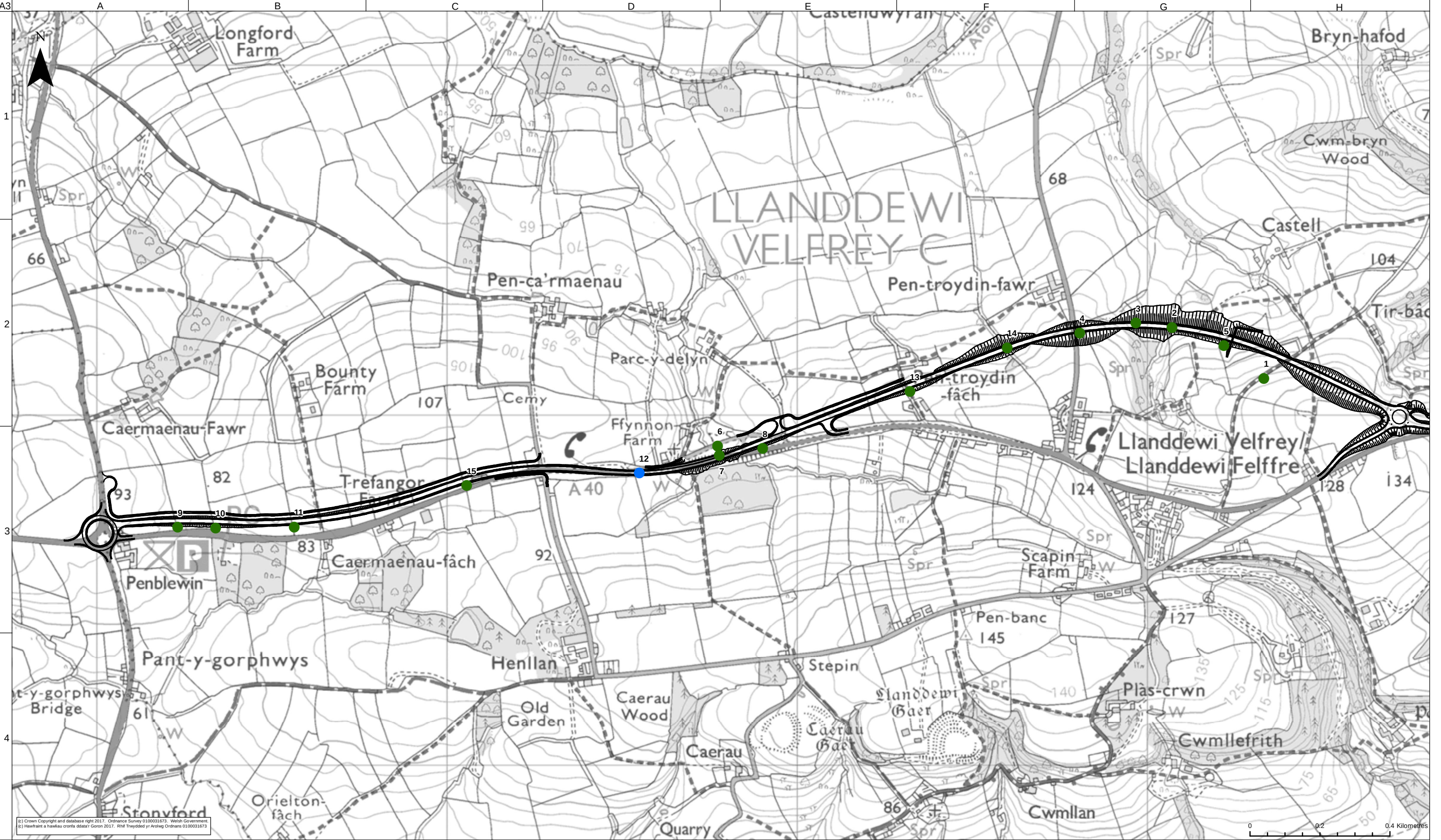
Scale at A3  
1:10,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
A40LVP - ARP - VES - SWI - DR - LE - 0032

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 7.6                        |
| 2            | 5.6                        |
| 3            | 7.6                        |
| 4            | 3.2                        |
| 5            | 7.6                        |
| 6            | 0.2                        |
| 7            | 0.6                        |
| 8            | 0.2                        |
| 9            | 0.2                        |
| 10           | 0.4                        |
| 11           | 2.2                        |
| 12           | 0                          |
| 13           | 9                          |
| 14           | 0.8                        |
| 15           | 0.2                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.49  
2017 STATIC BAT ACTIVITY MONITORING  
JULY: PIPISTRELLE SPECIES**

Scale at A3  
**1:10,000**

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0033**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0                          |
| 5            | 0.2                        |
| 6            | 2.2                        |
| 7            | 0.2                        |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0.2                        |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.50  
2017 STATIC BAT ACTIVITY MONITORING  
JULY: GREATER HORSESHOE BAT**

Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

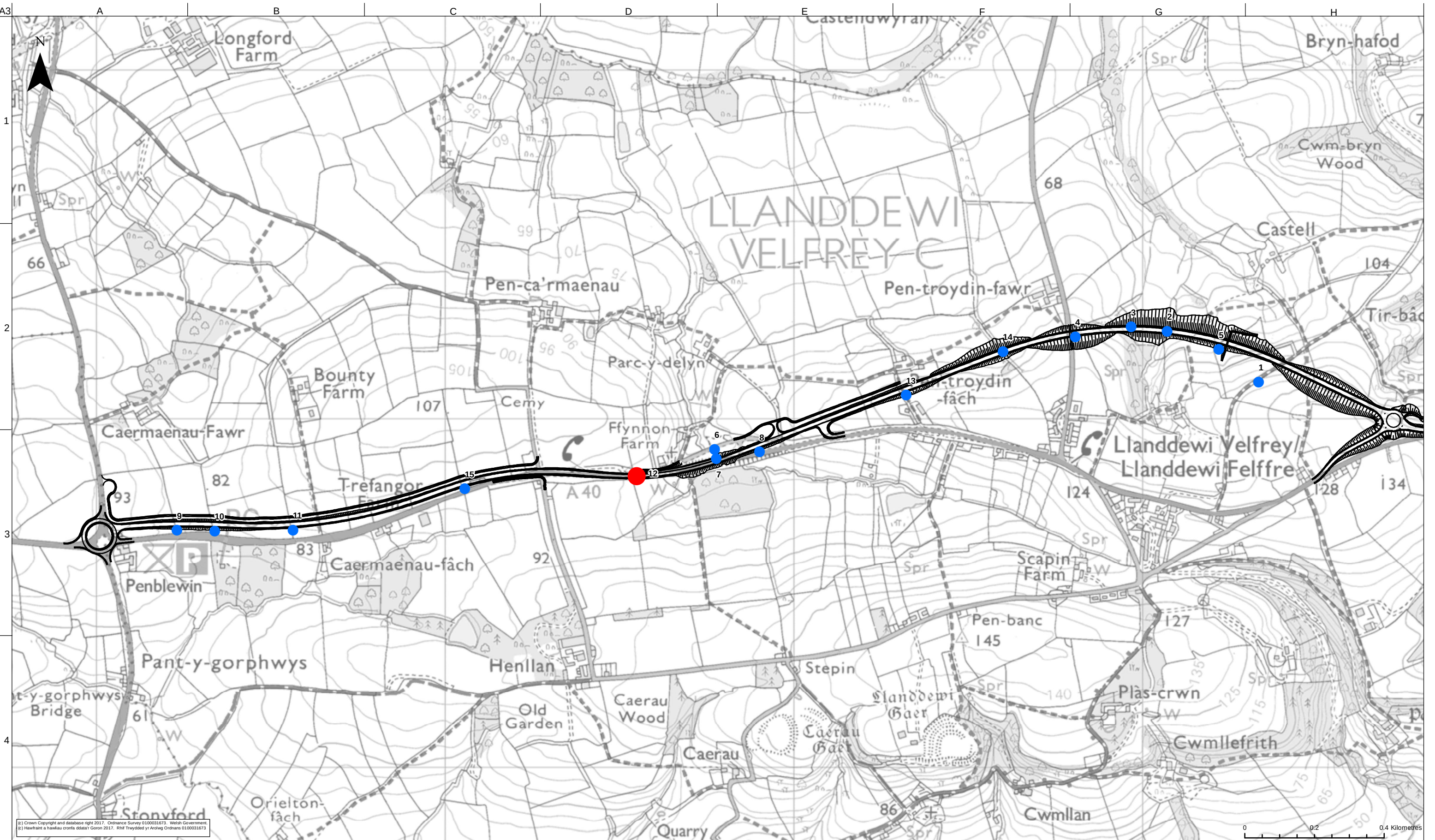
Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0035**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |



[illegible]





**LEGEND**

— PROPOSED ALIGNMENT

● NO BATS RECORDED

● BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0                          |
| 5            | 0.6                        |
| 6            | No Access                  |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.52  
2017 STATIC BAT ACTIVITY MONITORING  
AUGUST: SEROTINE**

Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0102**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- NO ACCESS
- LOW (0.2 - 1)
- HIGH (2 - 12)
- VERY HIGH (> 12)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 6                          |
| 2            | 7.6                        |
| 3            | 0                          |
| 4            | 3.2                        |
| 5            | No Access                  |
| 6            | 34.6                       |
| 7            | 0                          |
| 8            | 0.4                        |
| 9            | 0                          |
| 10           | 2.4                        |
| 11           | 0.6                        |
| 12           | 0                          |
| 13           | 81                         |
| 14           | 49.4                       |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.53  
2017 STATIC BAT ACTIVITY MONITORING  
AUGUST: MYOTIS SPECIES**

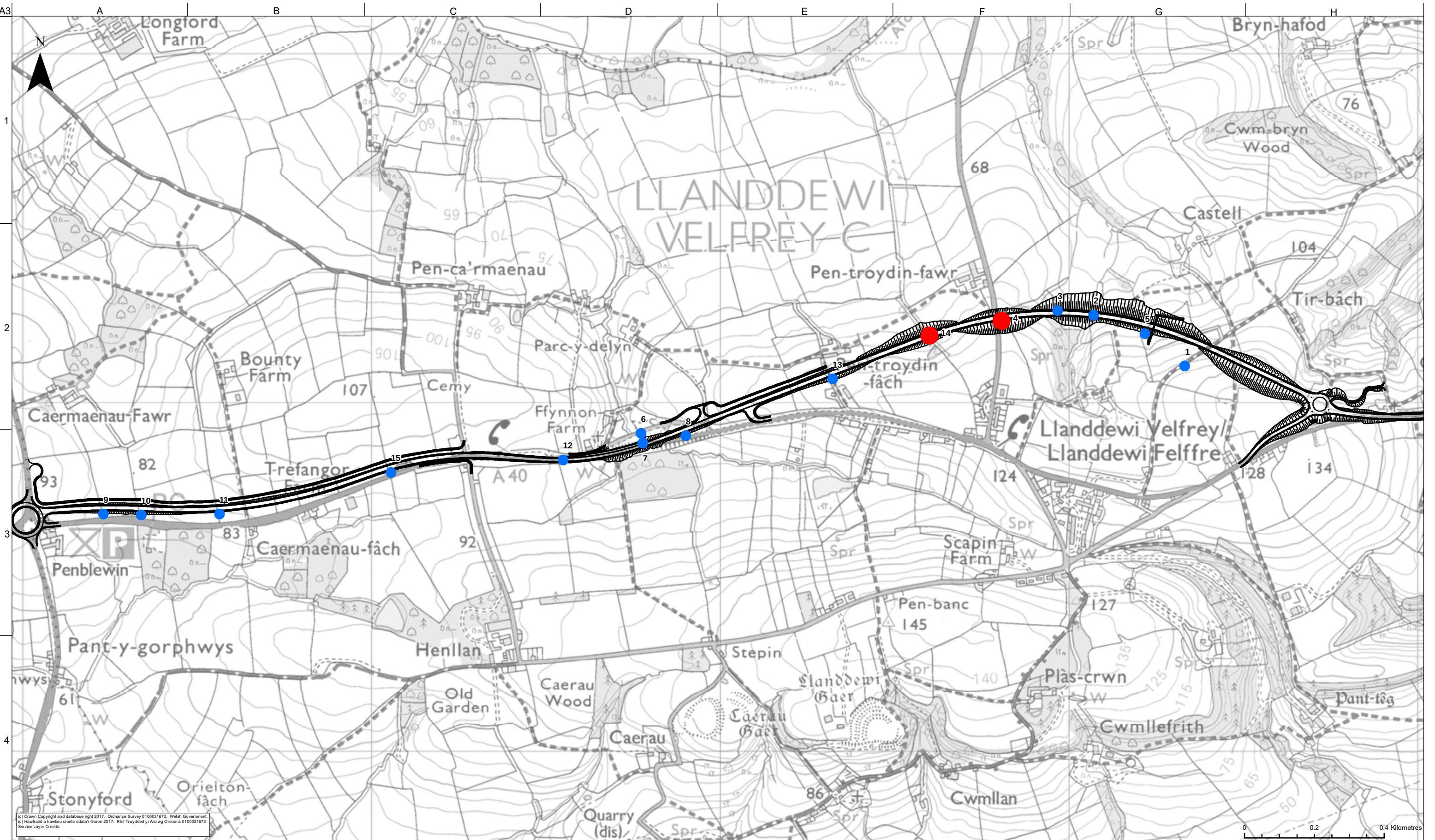
Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0104**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- NO BATS RECORDED
- BATS RECORDED
- PROPOSED ALIGNMENT

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0.6                        |
| 5            | No Access                  |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0.2                        |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Uywodraeth Cymru  
Welsh Government

Delivery Team

ARUP

Suitability

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3 1:10,000

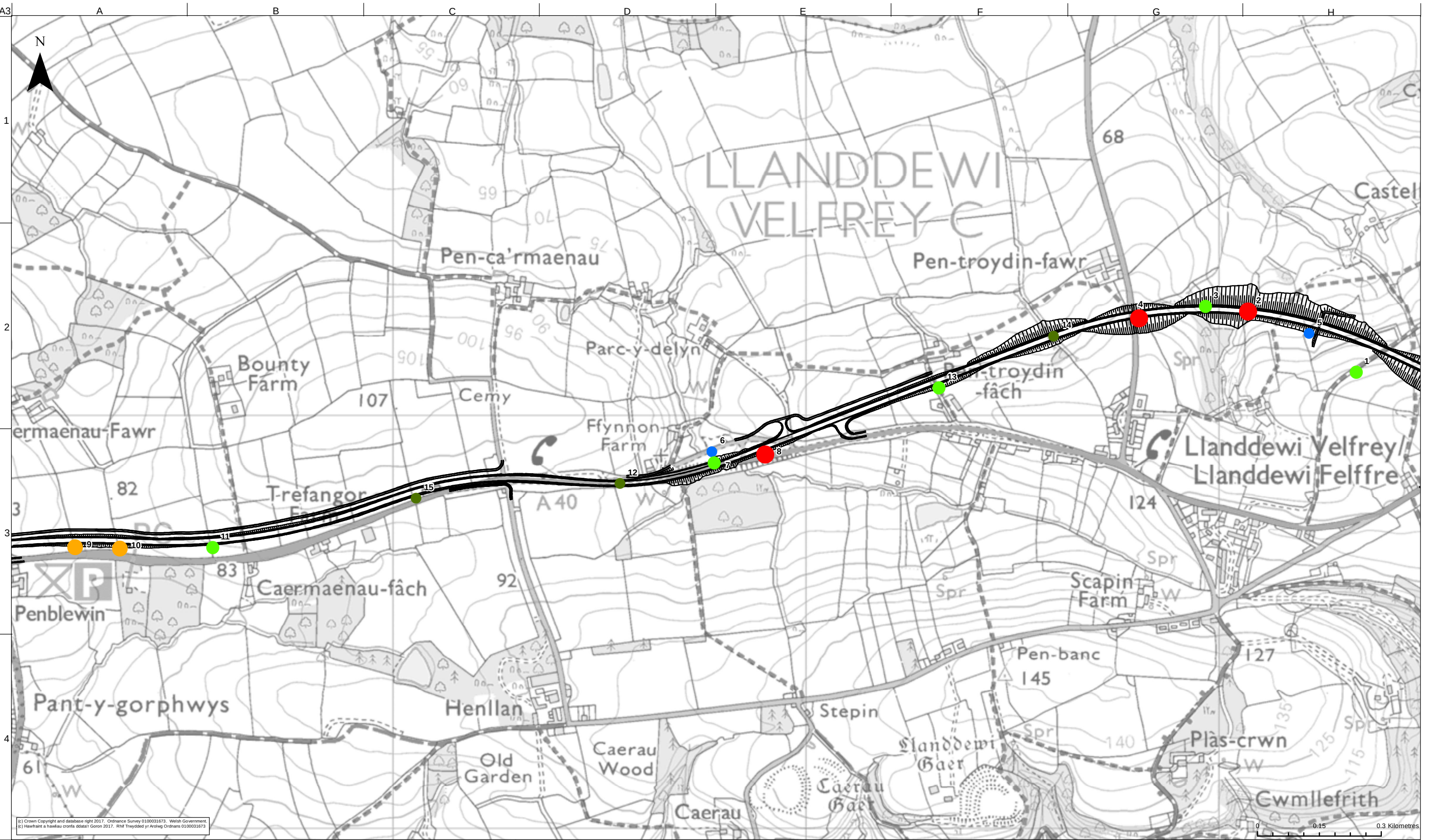
|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name

A40LVP - ARP - VES - SWI - DR - LE - 0105

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (<0.4)
- LOW (0.4-0.8)
- MEDIUM (0.8 - 1.4)
- HIGH (1.4 - 7.8)
- VERY HIGH (>7.8)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0.6                        |
| 2            | 5.8                        |
| 3            | 0.6                        |
| 4            | 7.2                        |
| 5            | No Access                  |
| 6            | 0                          |
| 7            | 0.6                        |
| 8            | 1.8                        |
| 9            | 1                          |
| 10           | 1.2                        |
| 11           | 0.8                        |
| 12           | 0.4                        |
| 13           | 0.6                        |
| 14           | 0.4                        |
| 15           | 0.4                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
ARUP

Drawing Title  
FIGURE 8.55  
2017 STATIC BAT ACTIVITY MONITORING  
AUGUST: NOCTULE

Scale at A3  
1:8,427

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
A40LVP - ARP - VES - SWI - DR - LE - 0106

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- NO ACCESS
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 9.4                        |
| 2            | 33                         |
| 3            | 0.4                        |
| 4            | 7.2                        |
| 5            | NO ACCESS                  |
| 6            | 1                          |
| 7            | 1                          |
| 8            | 3.8                        |
| 9            | 0.2                        |
| 10           | 0.6                        |
| 11           | 1                          |
| 12           | 1                          |
| 13           | 66.4                       |
| 14           | 29.6                       |
| 15           | 0.4                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **RICHARDS**

Drawing Title  
**FIGURE 8.56**  
**2017 STATIC BAT ACTIVITY MONITORING**  
**AUGUST: COMMON PIPISTRELLE**

Scale at A3  
**1:10,000**

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0111**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- NO ACCESS
- NO BATS RECORDED
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 75.8                       |
| 2            | 273.6                      |
| 3            | 0                          |
| 4            | 294.6                      |
| 5            | NO ACCESS                  |
| 6            | 67.4                       |
| 7            | 27.6                       |
| 8            | 20.8                       |
| 9            | 7.2                        |
| 10           | 20.8                       |
| 11           | 4.4                        |
| 12           | 2                          |
| 13           | 1368.8                     |
| 14           | 1337.6                     |
| 15           | 5.4                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

| By | Chkd | Appd | Auth |
|----|------|------|------|
| HC | PW   | TE   | GD   |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.57  
2017 STATIC BAT ACTIVITY MONITORING  
AUGUST: SOPRANO PIPISTRELLE**

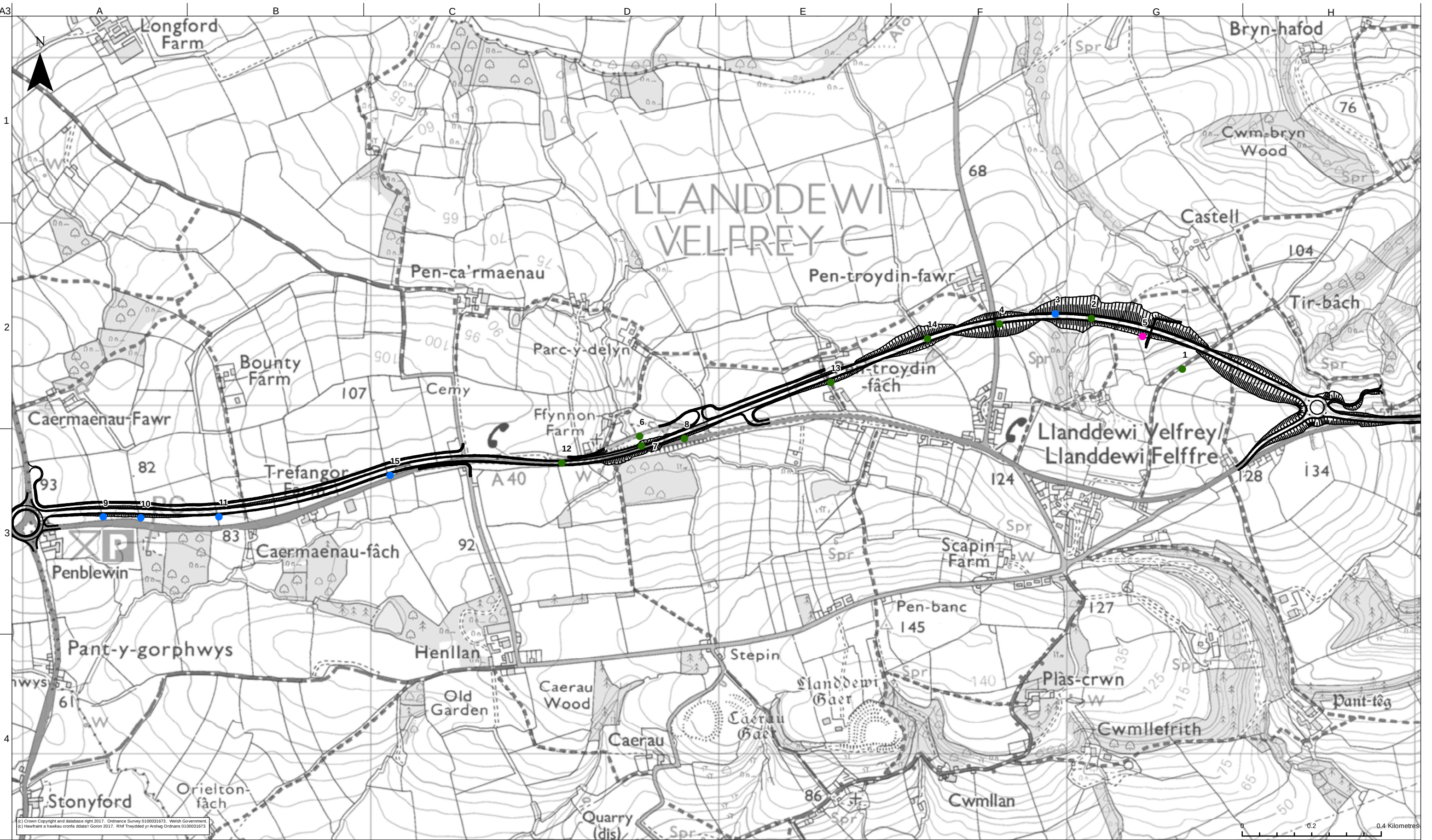
Scale at A3  
1:10,000

| Rev  | By       | Chkd     | Appd     | Auth     |
|------|----------|----------|----------|----------|
| P03  | HC       | PW       | TE       | GD       |
| Date | 12/11/18 | 12/11/18 | 12/11/18 | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0112**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO ACCESS
- NO BATS RECORDED
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0.4                        |
| 2            | 7.8                        |
| 3            | 0                          |
| 4            | 2.8                        |
| 5            | NO ACCESS                  |
| 6            | 0.6                        |
| 7            | 0.4                        |
| 8            | 1.2                        |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0.4                        |
| 13           | 2.6                        |
| 14           | 7.8                        |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.58  
2017 STATIC BAT ACTIVITY MONITORING  
AUGUST: PIPISTRELLE SPECIES**

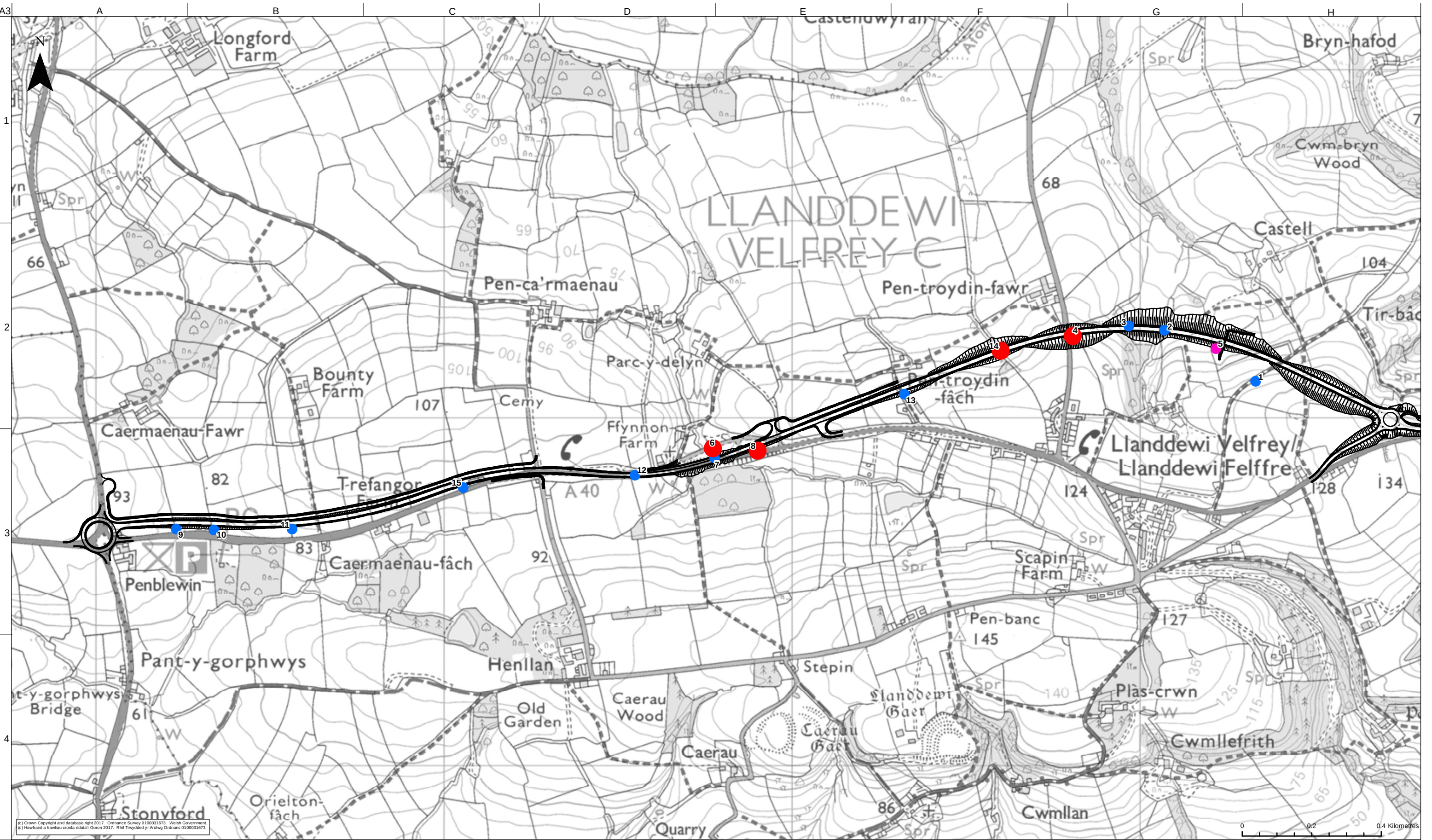
Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0113**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO ACCESS
- BATS RECORDED
- NO BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 4.6                        |
| 5            | NO ACCESS                  |
| 6            | 0.4                        |
| 7            | 0                          |
| 8            | 1.2                        |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0.8                        |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.59  
2017 STATIC BAT ACTIVITY MONITORING  
AUGUST: BROWN LONG EARED BAT**

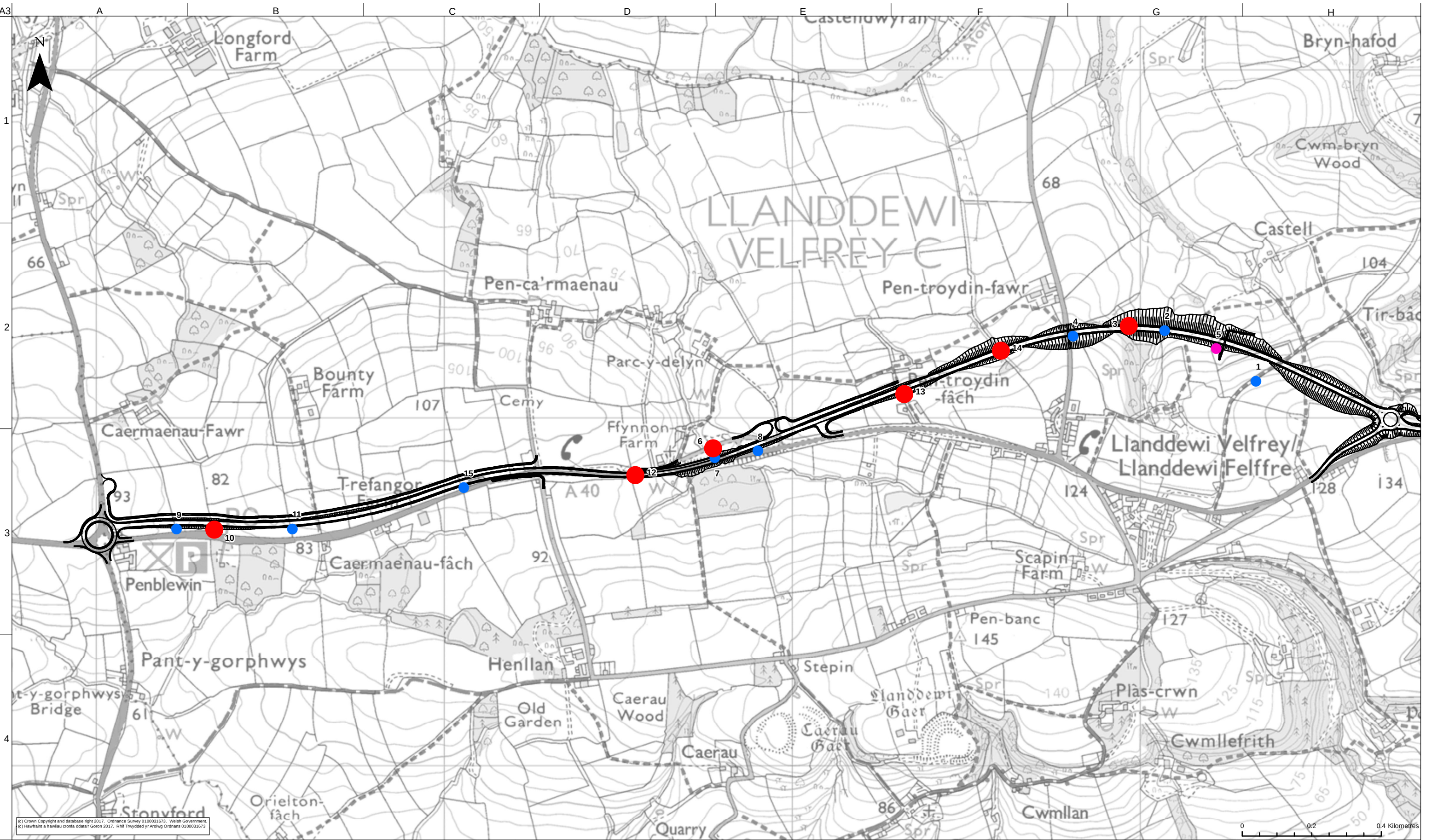
Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0114**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO ACCESS
- NO BATS RECORDED
- BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0.4                        |
| 4            | 0                          |
| 5            | NO ACCESS                  |
| 6            | 0.8                        |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0.2                        |
| 11           | 0                          |
| 12           | 0.2                        |
| 13           | 0.2                        |
| 14           | 0.2                        |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |    |
|-----|----------|---------------------------|----|------|------|------|----|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    | HC   | PW   | TE   | GD |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.60  
2017 STATIC BAT ACTIVITY MONITORING  
AUGUST: GREATER HORSESHOE BAT**

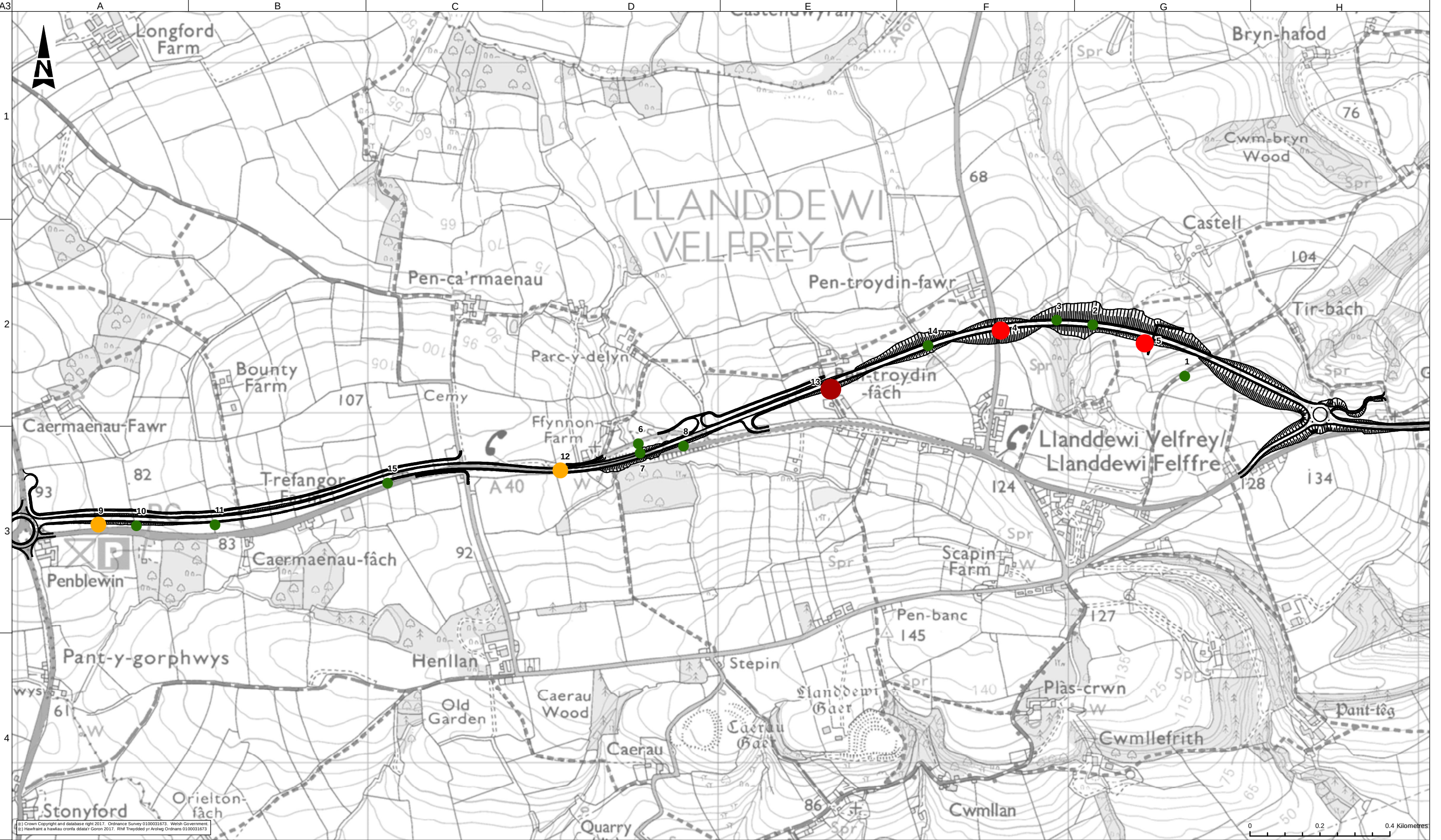
Scale at A3  
**1:10,000**

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0115**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

— PROPOSED ALIGNMENT

● NO BATS RECORDED

● VERY LOW (< 27.7)

● LOW (27.7 - 76.2)

● MEDIUM (76.2 - 132)

● HIGH (132 - 378)

● VERY HIGH (> 378)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 5.2                        |
| 2            | 0.2                        |
| 3            | 10.2                       |
| 4            | 355.8                      |
| 5            | 158.8                      |
| 6            | 2.4                        |
| 7            | 2.4                        |
| 8            | 4.8                        |
| 9            | 97                         |
| 10           | 2.2                        |
| 11           | 15.4                       |
| 12           | 86.4                       |
| 13           | 905.8                      |
| 14           | 7.8                        |
| 15           | 16.8                       |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction  
(Enter "None" if applicable)

Maintenance / Cleaning  
(Enter "None" if applicable)

Use  
(Enter "None" if applicable)

Decommissioning / Demolition  
(Enter "None" if applicable)

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 13/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **MOTT MACDONALD**

Drawing Title  
**FIGURE 8.61  
2017 STATIC BAT ACTIVITY MONITORING  
SEPTEMBER: ALL BAT SPECIES**

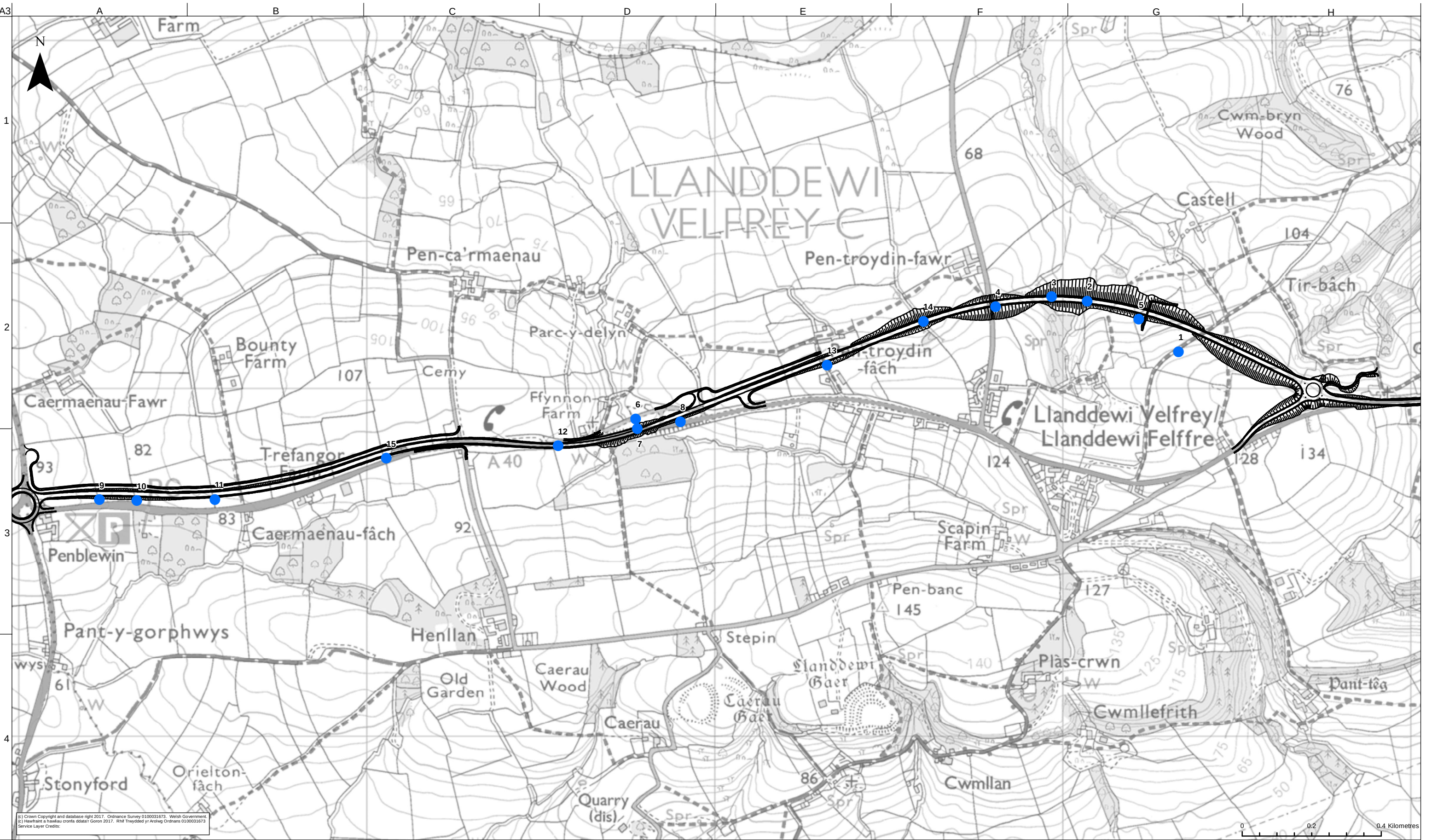
Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0132**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0                          |
| 5            | 0                          |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  

Drawing Title  
**FIGURE 8.62  
2017 STATIC BAT ACTIVITY MONITORING  
SEPTEMBER: BARBASTELLE**

Scale at A3  
**1:10,000**

|            |      |          |      |          |      |          |      |          |
|------------|------|----------|------|----------|------|----------|------|----------|
| Rev        | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| <b>P03</b> | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0118**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|









**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (< 0.2)
- LOW (0.2 - 1)
- MEDIUM (1 - 2)
- HIGH (2 - 12)
- VERY HIGH (> 12)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0.2                        |
| 3            | 0.2                        |
| 4            | 21.6                       |
| 5            | 19.6                       |
| 6            | 1                          |
| 7            | 0                          |
| 8            | 0.2                        |
| 9            | 0.4                        |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 11.6                       |
| 13           | 136                        |
| 14           | 0.2                        |
| 15           | 1.8                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 22/07/19 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **RICHARDS**

Drawing Title  
**FIGURE 8.64  
2017 STATIC BAT ACTIVITY MONITORING  
SEPTEMBER: MYOTIS SPECIES**

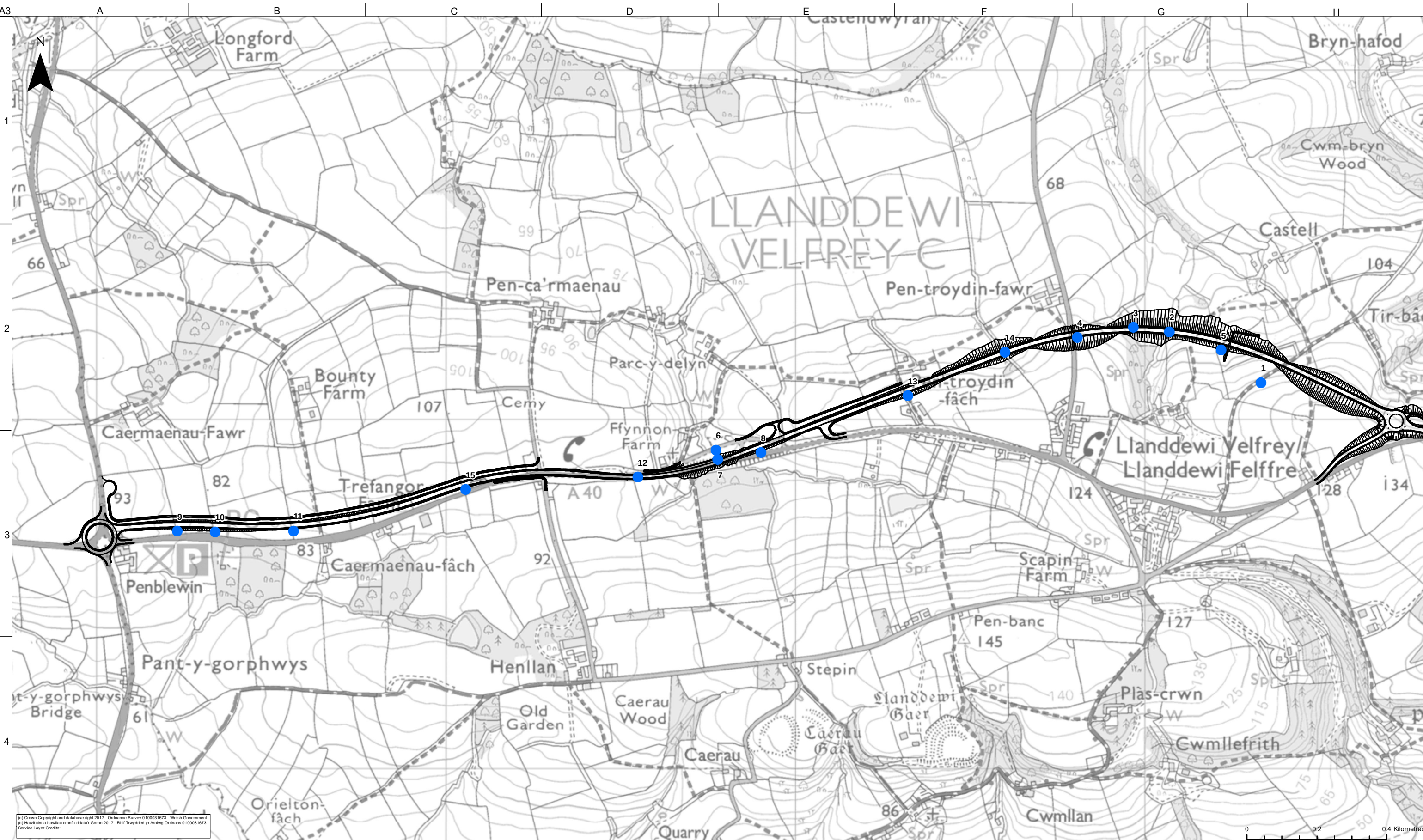
Scale at A3  
**1:10,000**

|            |      |          |      |          |      |          |      |          |
|------------|------|----------|------|----------|------|----------|------|----------|
| Rev        | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| <b>P03</b> | Date | 22/07/19 | Date | 22/07/19 | Date | 22/07/19 | Date | 22/07/19 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0121**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





|                    |                     |                                   |                                                                                                                                                                                                             |                                                     |                                                              |
|--------------------|---------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------|
| <b>LEGEND</b>      | <b>LOCATION NO.</b> | <b>BAT PASSES (EQ.) PER NIGHT</b> | <b>SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION</b>                                                                                                                                                         | <b>Project Title</b>                                | <b>Drawing Title</b>                                         |
| PROPOSED ALIGNMENT | 1                   | 0                                 | In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log) | A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS     | FIGURE 8.65                                                  |
| BATS RECORDED      | 2                   | 0                                 | Construction<br>None                                                                                                                                                                                        | Client<br><br>Llywodraeth Cymru<br>Welsh Government | 2017 STATIC BAT ACTIVITY MONITORING SEPTEMBER: LEISLER'S BAT |
| NO BATS RECORDED   | 3                   | 0                                 | Maintenance / Cleaning<br>None                                                                                                                                                                              |                                                     | Suitability<br><b>S4   SUITABLE FOR STAGE APPROVAL</b>       |
|                    | 4                   | 0                                 | Use<br>None                                                                                                                                                                                                 | Delivery Team                                       | Scale at A3<br>1:10,000                                      |
|                    | 5                   | 0                                 | Decommissioning / Demolition<br>None                                                                                                                                                                        | P03 12/11/18 UPDATE FOLLOWING COMMENTS HC PW TE GD  | Rev By Chkd Appd Auth                                        |
|                    | 6                   | 0                                 |                                                                                                                                                                                                             | Rev Date Description By Chkd Appd Auth              | Date Date Date Date                                          |
|                    | 7                   | 0                                 |                                                                                                                                                                                                             |                                                     | P03 12/11/18 12/11/18 12/11/18 12/11/18                      |
|                    | 8                   | 0                                 |                                                                                                                                                                                                             |                                                     | Name                                                         |
|                    | 9                   | 0                                 |                                                                                                                                                                                                             |                                                     | -A40LVP - ARP - VES - SWI - DR - LE - 0122                   |
|                    | 10                  | 0                                 |                                                                                                                                                                                                             |                                                     | Project Originator Volume Location Type Role Number          |
|                    | 11                  | 0                                 |                                                                                                                                                                                                             |                                                     |                                                              |
|                    | 12                  | 0                                 |                                                                                                                                                                                                             |                                                     |                                                              |
|                    | 13                  | 0                                 |                                                                                                                                                                                                             |                                                     |                                                              |
|                    | 14                  | 0                                 |                                                                                                                                                                                                             |                                                     |                                                              |
|                    | 15                  | 0                                 |                                                                                                                                                                                                             |                                                     |                                                              |





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- LOW (< 0.8)
- MEDIUM (0.8 - 1.4)
- HIGH (1.4 - 7.8)
- VERY HIGH (> 7.8)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0.2                        |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0.8                        |
| 5            | 0.2                        |
| 6            | 0                          |
| 7            | 0.2                        |
| 8            | 1                          |
| 9            | 1.4                        |
| 10           | 1.4                        |
| 11           | 3                          |
| 12           | 0.8                        |
| 13           | 0.2                        |
| 14           | 0.2                        |
| 15           | 2.8                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  

Drawing Title  
**FIGURE 8.66  
2017 STATIC BAT ACTIVITY MONITORING  
SEPTEMBER: NOCTULE**

Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0123**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0.2                        |
| 2            | 0                          |
| 3            | 4                          |
| 4            | 44.6                       |
| 5            | 4.6                        |
| 6            | 0                          |
| 7            | 0.4                        |
| 8            | 1                          |
| 9            | 27.4                       |
| 10           | 0                          |
| 11           | 4.6                        |
| 12           | 35.6                       |
| 13           | 118.8                      |
| 14           | 3                          |
| 15           | 1.2                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title

**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client



Uywodraeth Cymru  
Welsh Government

Delivery Team

FIGURE 8.67

2017 STATIC BAT ACTIVITY MONITORING

SEPTEMBER: COMMON PIPISTRELLE

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3 1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name **A40LVP - ARP - VES - SWI - DR - LE - 0125**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)
- NO BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 4.8                        |
| 2            | 0                          |
| 3            | 4.2                        |
| 4            | 288.2                      |
| 5            | 138.6                      |
| 6            | 1.4                        |
| 7            | 1.8                        |
| 8            | 2.6                        |
| 9            | 67.4                       |
| 10           | 0.8                        |
| 11           | 7.8                        |
| 12           | 47.4                       |
| 13           | 647..6                     |
| 14           | 4.4                        |
| 15           | 11                         |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **MOTT MACDONALD**

Drawing Title  
**FIGURE 8.68  
2017 STATIC BAT ACTIVITY MONITORING  
SEPTEMBER: SOPRANO PIPISTRELLE**

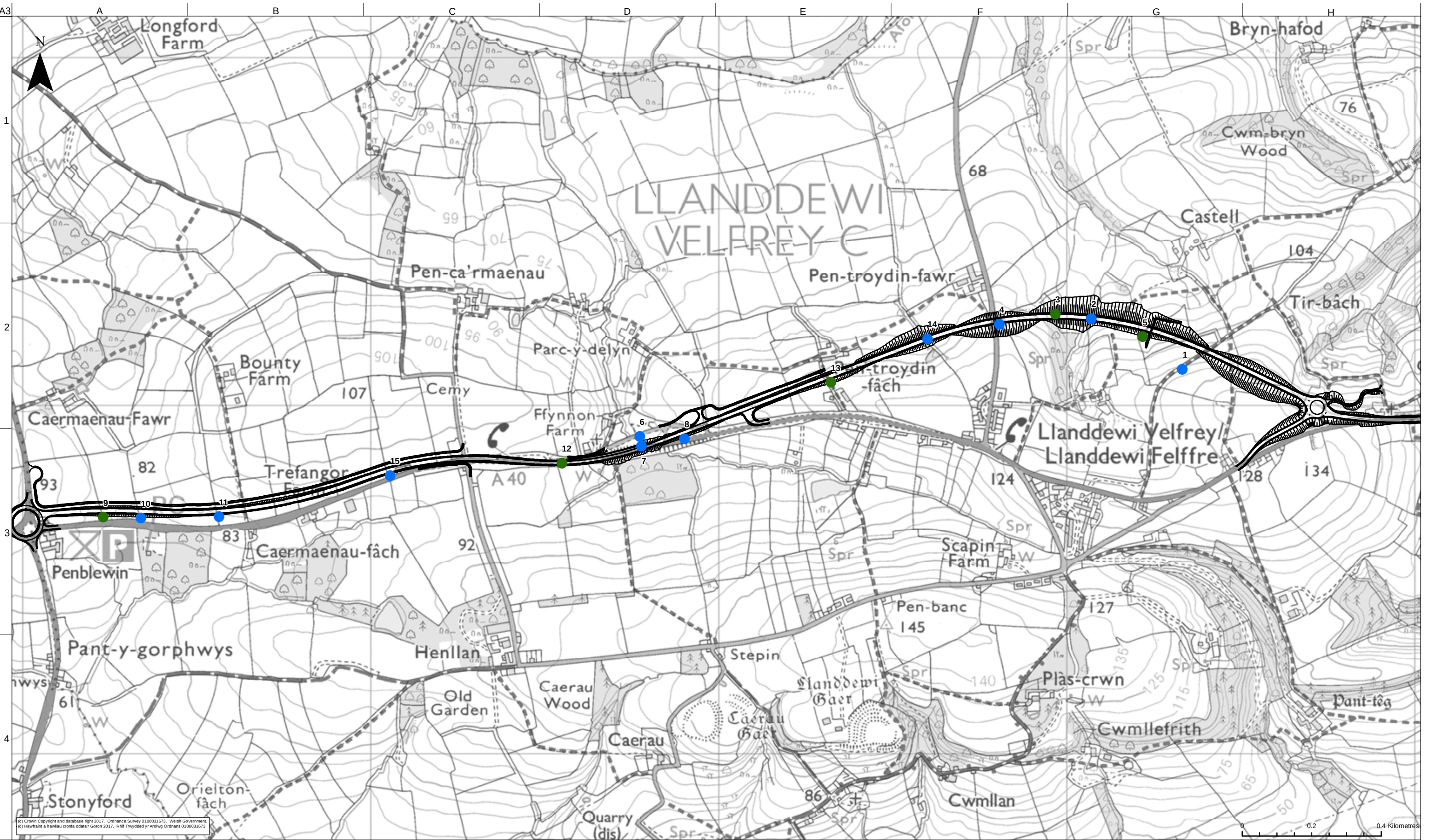
Scale at A3  
1:10,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0126**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 1.8                        |
| 4            | 0                          |
| 5            | 0.2                        |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0.4                        |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 1                          |
| 13           | 3.2                        |
| 14           | 0                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **RICHARDS**

Drawing Title  
**FIGURE 8.69  
2017 STATIC BAT ACTIVITY MONITORING  
SEPTEMBER: PIPISTRELLE SPECIES**

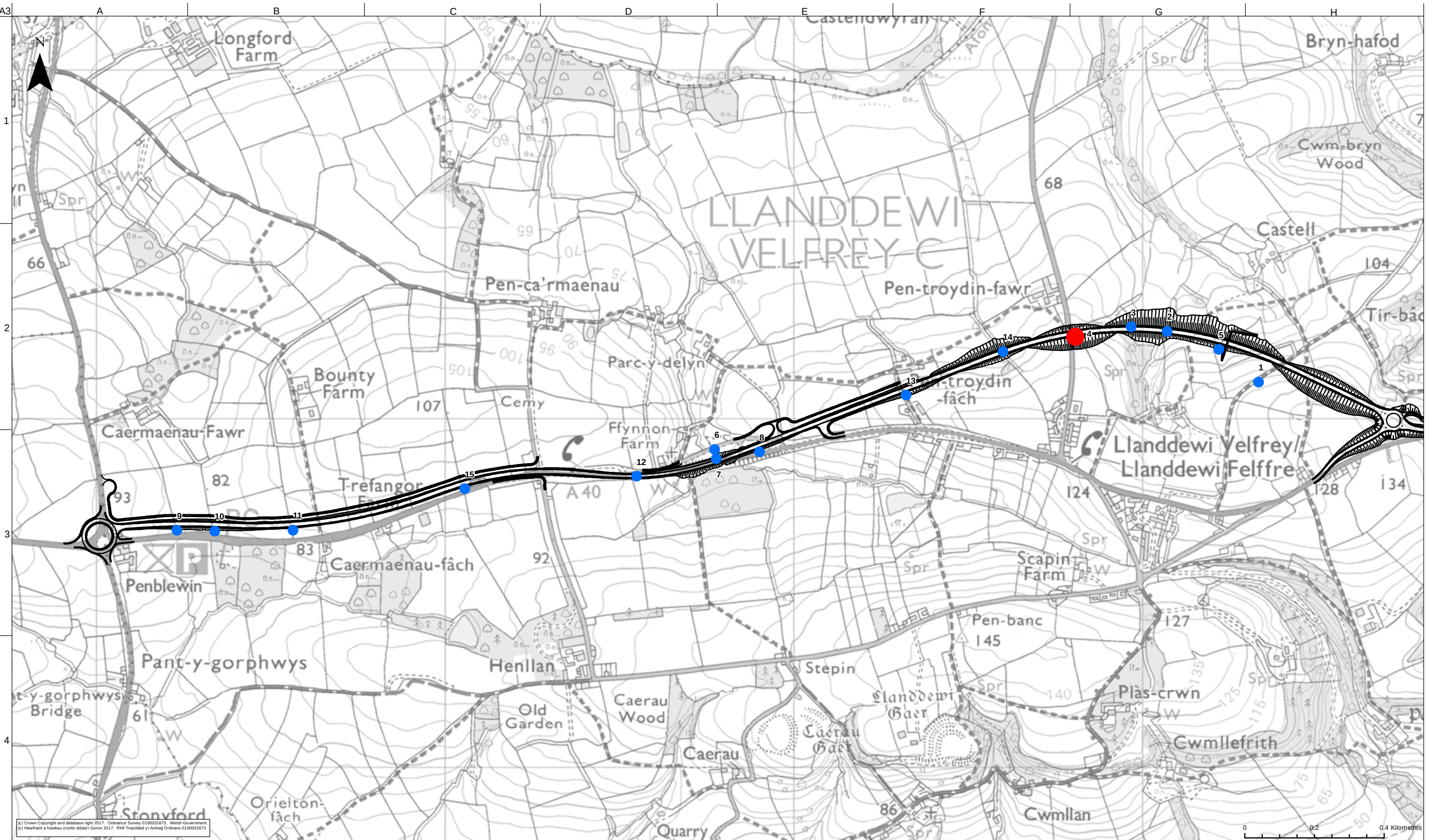
Scale at A3  
**1:10,000**

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0127**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

— PROPOSED ALIGNMENT

● NO BATS RECORDED

● BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0.2                        |
| 5            | 0                          |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.70  
2017 STATIC BAT ACTIVITY MONITORING  
SEPTEMBER: GREATER HORSESHOE BAT**

Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0129**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |









**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (< 0.2)
- LOW (0.2 - 1)
- MEDIUM (1 - 2)
- HIGH (2 - 12)
- VERY HIGH (> 12)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0.2                        |
| 2            | 0.4                        |
| 3            | 0                          |
| 4            | 0.6                        |
| 5            | 0.4                        |
| 6            | 17.6                       |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0.2                        |
| 11           | 0.2                        |
| 12           | 0                          |
| 13           | 1.6                        |
| 14           | 0.8                        |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.72  
2017 STATIC BAT ACTIVITY MONITORING  
OCTOBER: MYOTIS SPECIES**

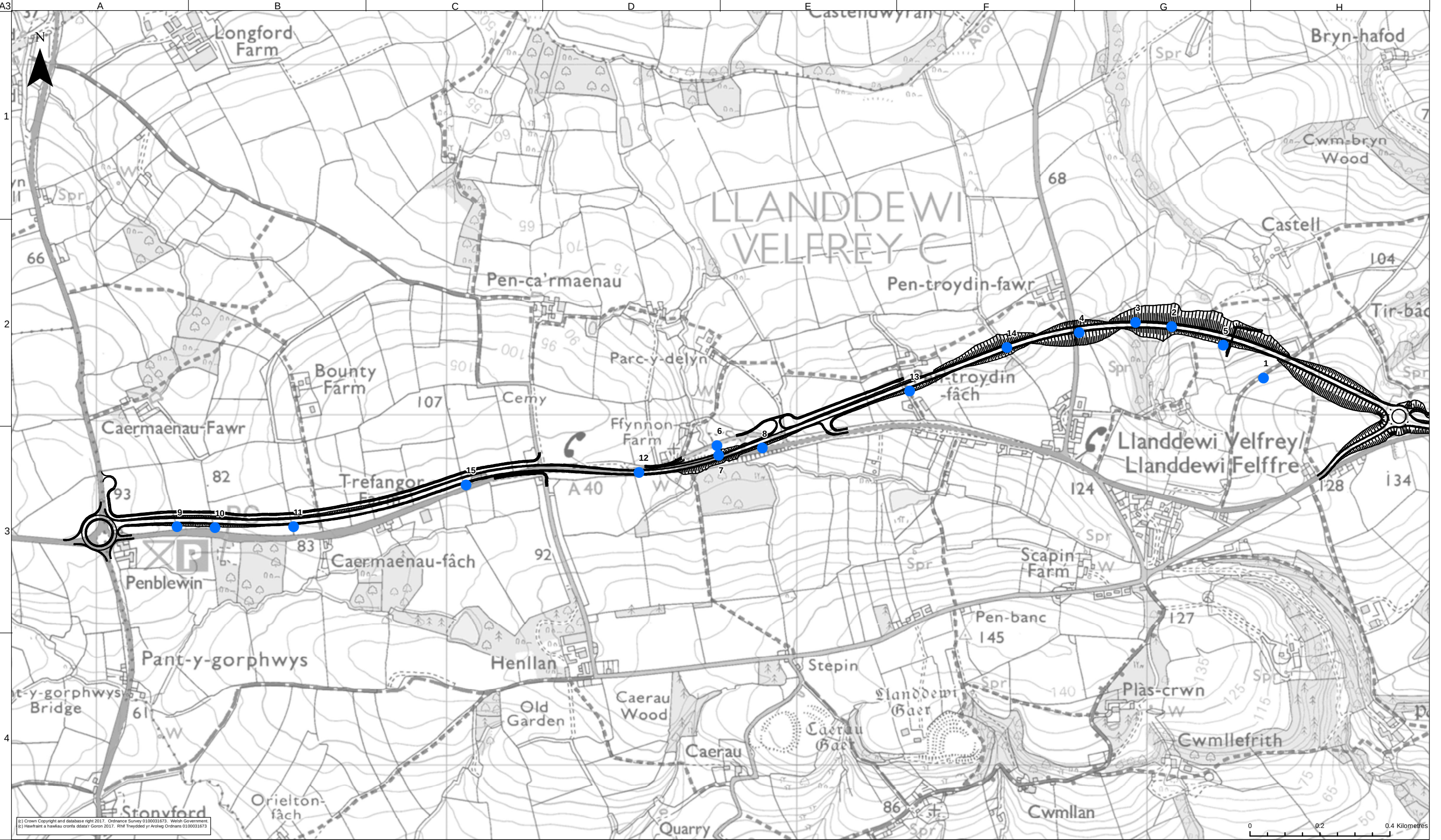
Scale at A3  
1:10,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0137**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- LOW (< 0.8)
- MEDIUM (0.8 - 1.4)
- HIGH (1.4 - 7.8)
- VERY HIGH (> 7.8)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0                          |
| 5            | 0                          |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 13/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.73  
2017 STATIC BAT ACTIVITY MONITORING  
OCTOBER: NOCTULE**

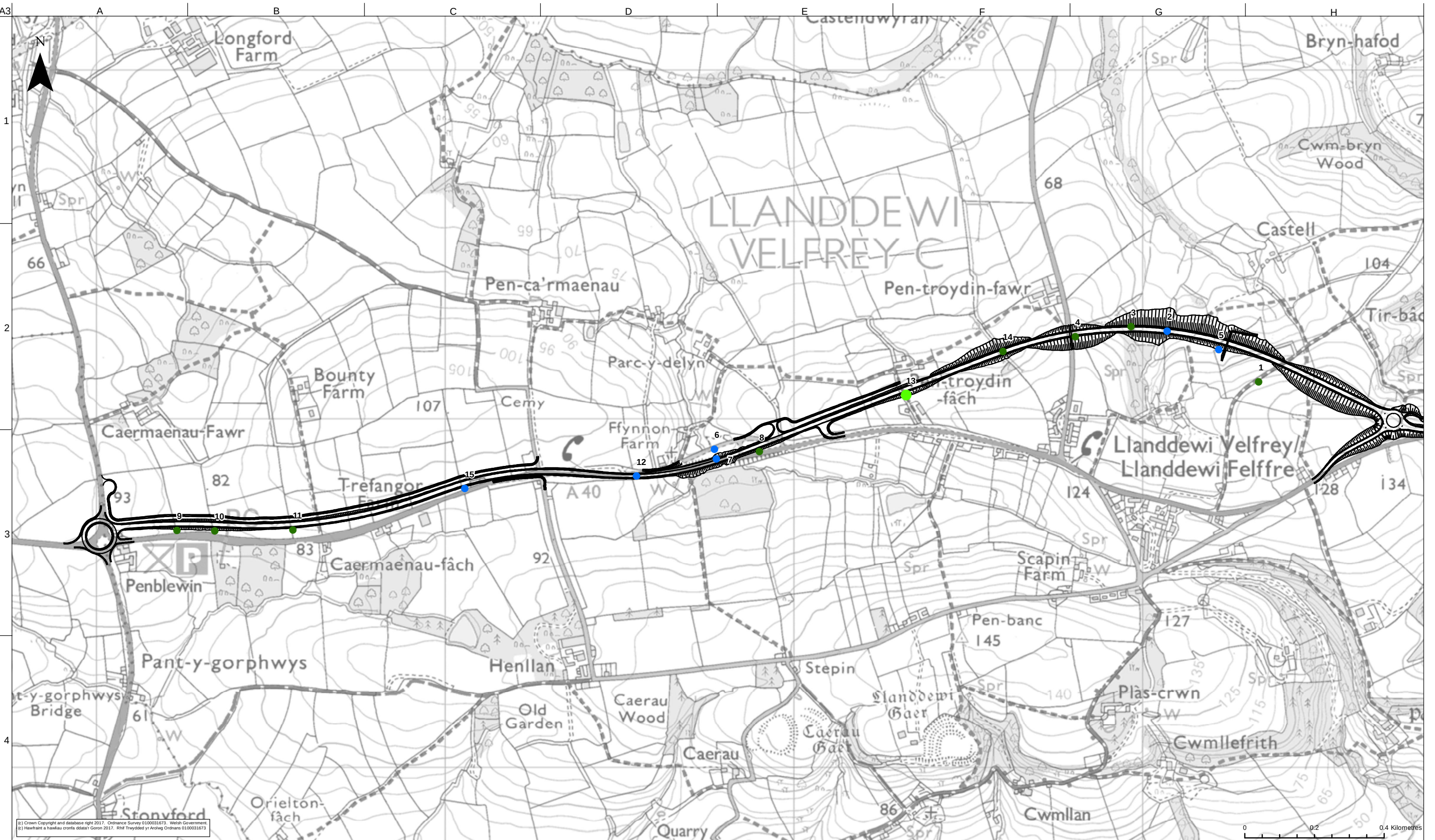
Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0139**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 10                         |
| 2            | 0                          |
| 3            | 0.4                        |
| 4            | 0.4                        |
| 5            | 0                          |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0.2                        |
| 9            | 0.2                        |
| 10           | 3.4                        |
| 11           | 1.4                        |
| 12           | 0                          |
| 13           | 69.6                       |
| 14           | 3                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 13/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.74  
2017 STATIC BAT ACTIVITY MONITORING  
OCTOBER: COMMON PIPISTRELLE**

Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0141**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 161.4                      |
| 2            | 1.6                        |
| 3            | 1.2                        |
| 4            | 1.2                        |
| 5            | 2                          |
| 6            | 3.8                        |
| 7            | 1                          |
| 8            | 3.6                        |
| 9            | 15.6                       |
| 10           | 122.4                      |
| 11           | 5                          |
| 12           | 1.4                        |
| 13           | 72.4                       |
| 14           | 13.2                       |
| 15           | 1.2                        |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 13/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
**ARUP** **RICHARDS**

Drawing Title  
**FIGURE 8.75**  
**2017 STATIC BAT ACTIVITY MONITORING**  
**OCTOBER: SOPRANO PIPISTRELLE**

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

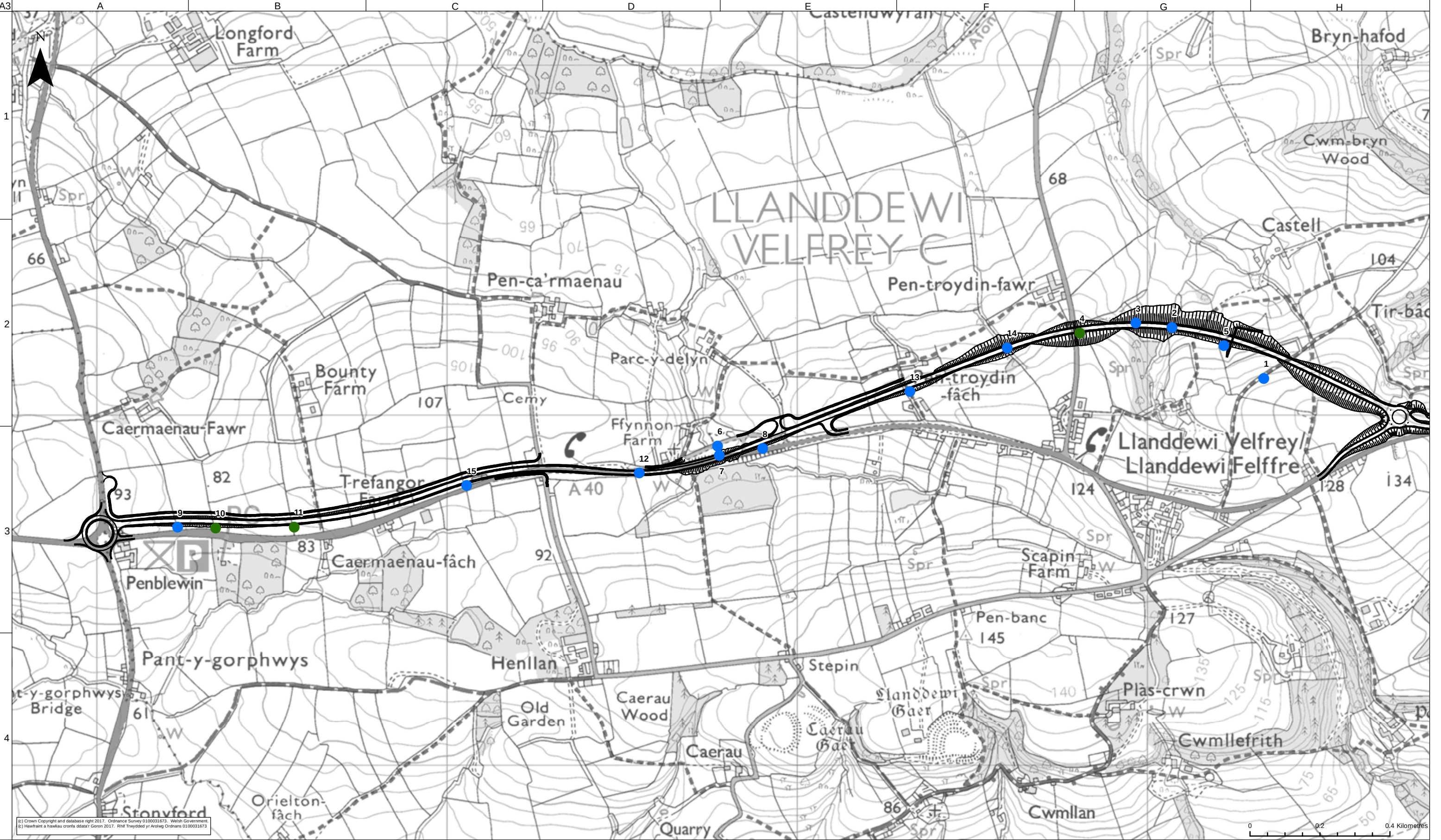
Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0142**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- VERY LOW (< 27.7)
- LOW (27.7 - 76.2)
- MEDIUM (76.2 - 132)
- HIGH (132 - 378.32)
- VERY HIGH (> 378.32)

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0                          |
| 5            | 0.2                        |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0                          |
| 9            | 0                          |
| 10           | 0.2                        |
| 11           | 0.2                        |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 13/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  

Drawing Title  
**FIGURE 8.76  
2017 STATIC BAT ACTIVITY MONITORING  
OCTOBER: PIPISTRELLE SPECIES**

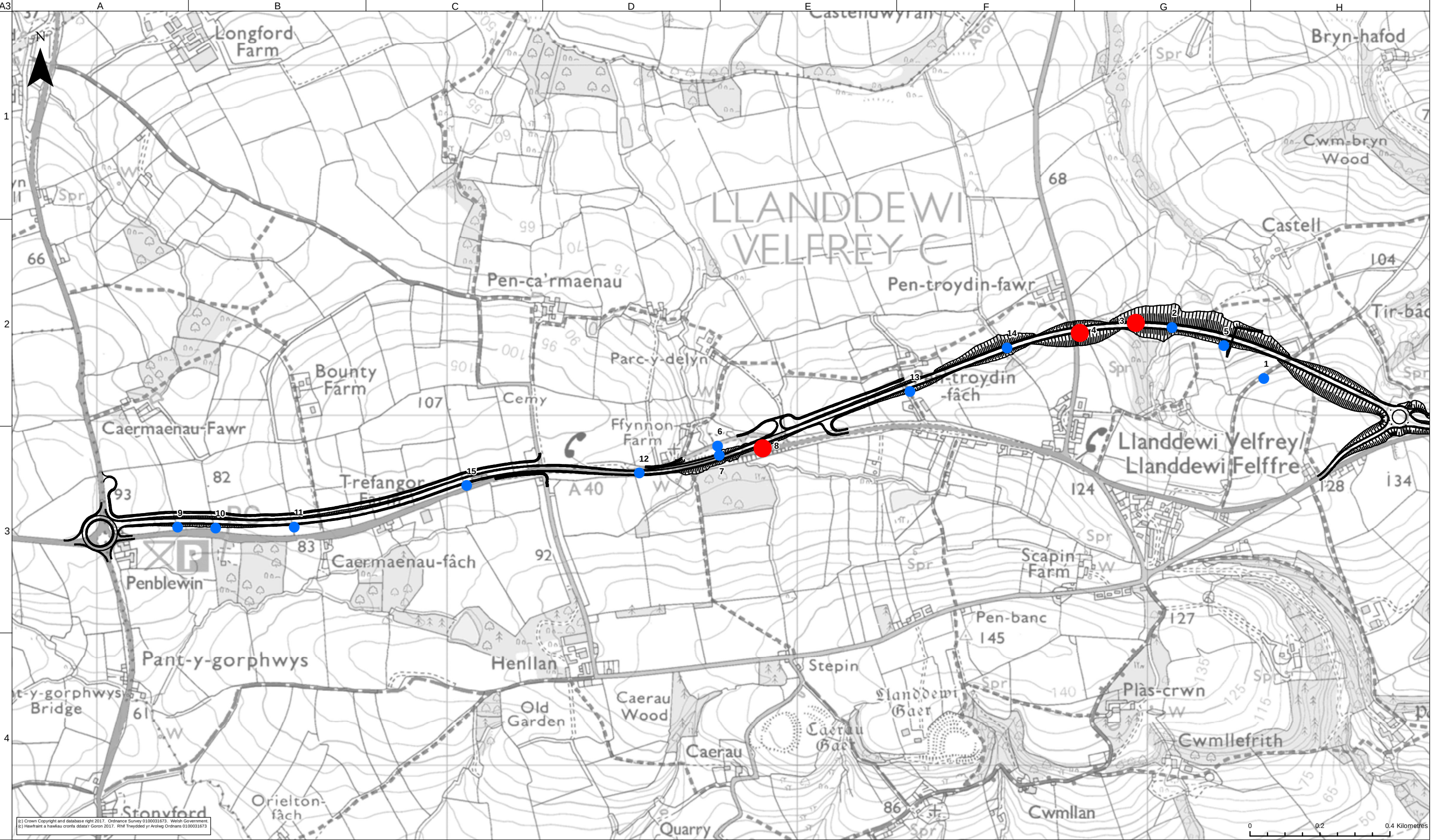
Scale at A3  
1:10,000

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0143**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

- PROPOSED ALIGNMENT
- NO BATS RECORDED
- BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0.4                        |
| 4            | 0.4                        |
| 5            | 0                          |
| 6            | 0                          |
| 7            | 0                          |
| 8            | 0.4                        |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 13/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.77  
2017 STATIC BAT ACTIVITY MONITORING  
OCTOBER: BROWN LONG-EARED BAT SPECIES**

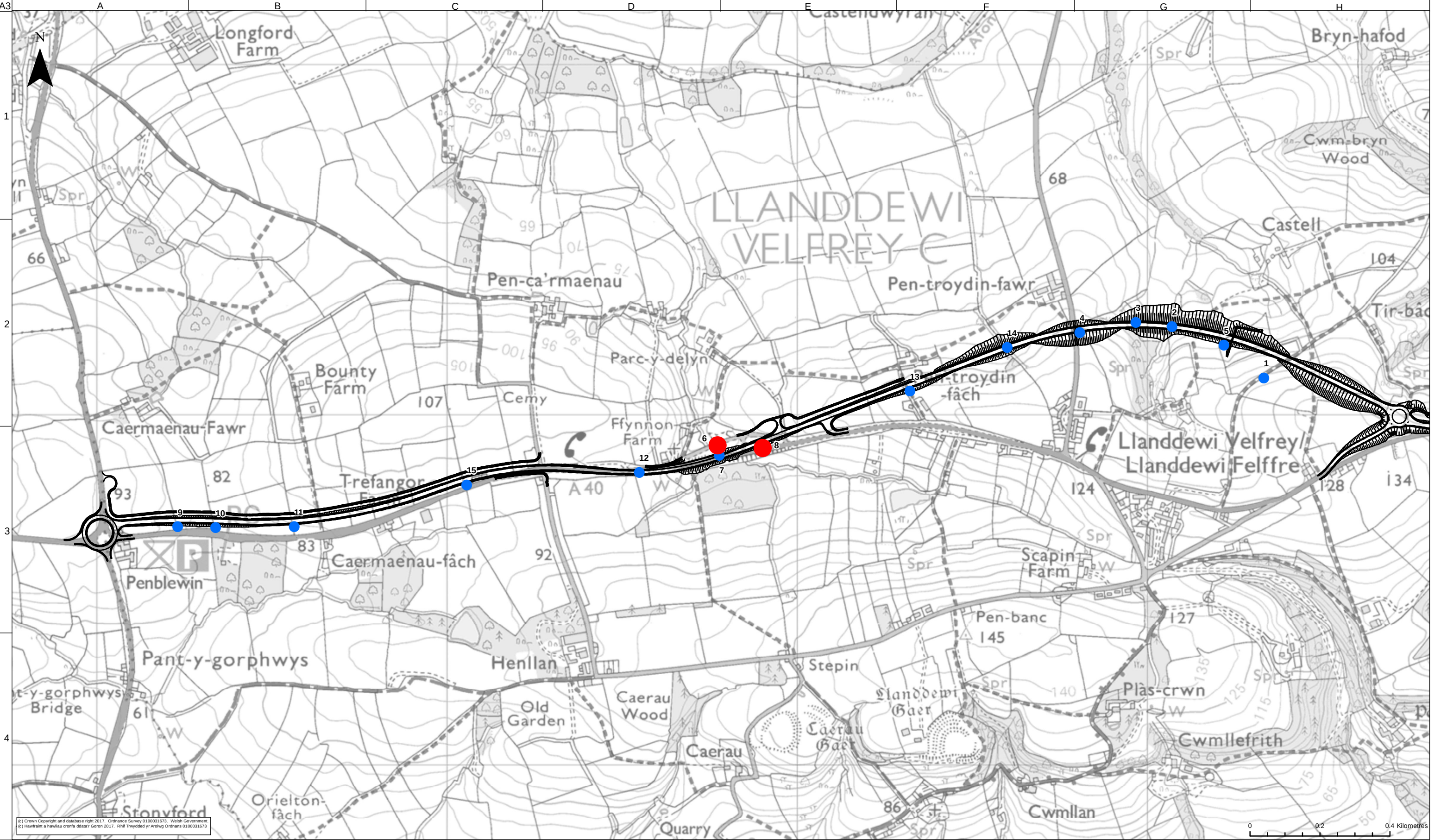
Scale at A3  
**1:10,000**

| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
|-----|------|----------|------|----------|------|----------|------|----------|
| P03 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0144**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |





**LEGEND**

— PROPOSED ALIGNMENT

● NO BATS RECORDED

● BATS RECORDED

| LOCATION NO. | BAT PASSES (EQ.) PER NIGHT |
|--------------|----------------------------|
| 1            | 0                          |
| 2            | 0                          |
| 3            | 0                          |
| 4            | 0                          |
| 5            | 0                          |
| 6            | 0.2                        |
| 7            | 0                          |
| 8            | 0.2                        |
| 9            | 0                          |
| 10           | 0                          |
| 11           | 0                          |
| 12           | 0                          |
| 13           | 0                          |
| 14           | 0                          |
| 15           | 0                          |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 13/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Uywodraeth Cymru  
Welsh Government

Delivery Team

ARUP

FIGURE 8.78

2017 STATIC BAT ACTIVITY MONITORING

OCTOBER: LESSER HORSESHOE BAT

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3 1:10,000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 | Date | 13/11/18 |

Name

A40LVP - ARP - VES - SWI - DR - LE - 0146

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|









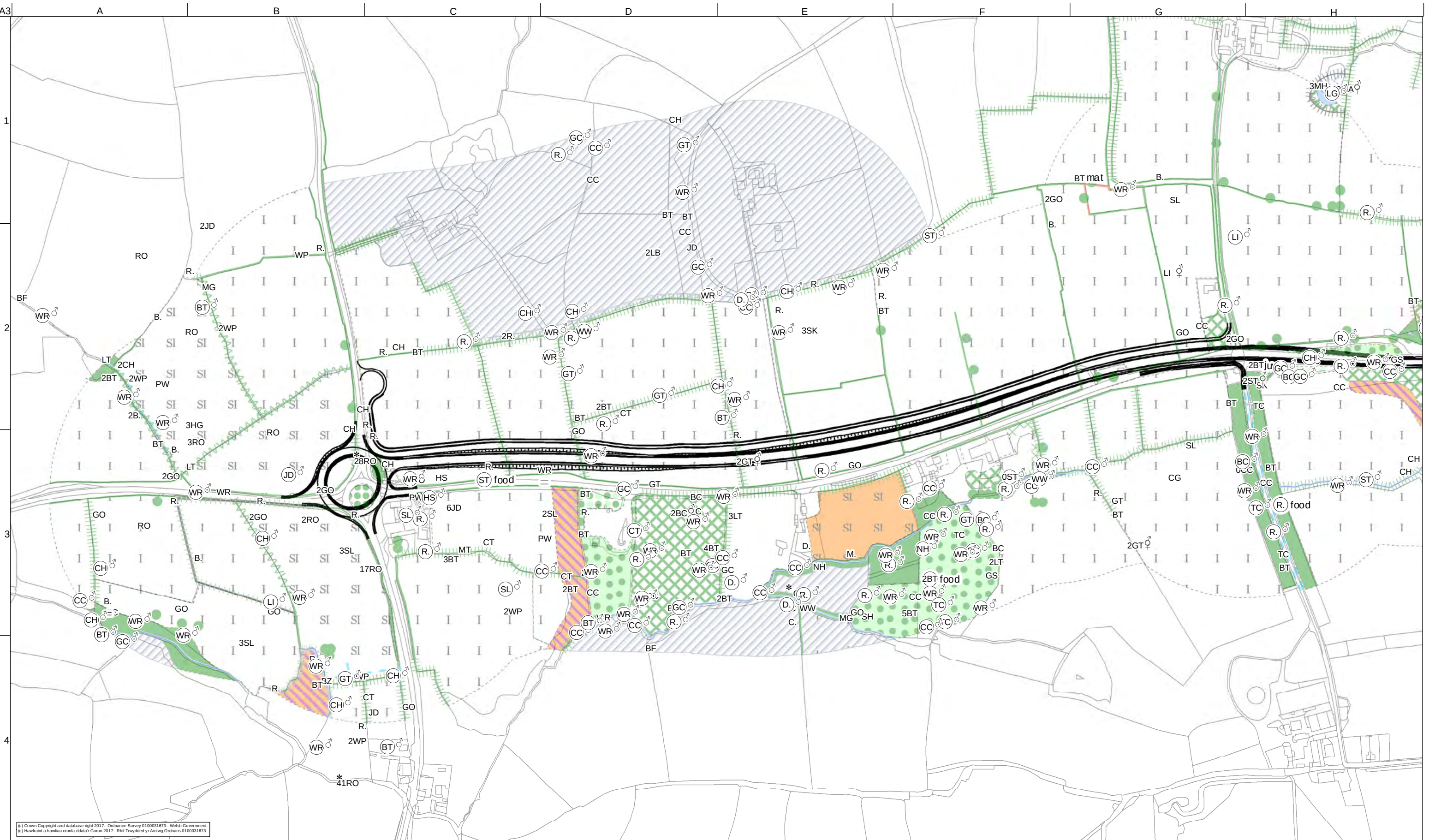






NB: Badger Sett Drawings have been withdrawn from this ES as the information displayed is confidential.



[illegible]





**LEGEND**

— PROPOSED ALIGNMENT

— CALLING

for FORAGING

\* OCCUPIER NEST

♂ SIGHT RECORD OF A PAIR

○ IN SONG

**SPECIES KEY**

|                             |                             |                   |
|-----------------------------|-----------------------------|-------------------|
| B. BLACKBIRD                | HC HERRING GULL             | MH MOORHAN        |
| BC BLACKCAP                 | HS HOUSE SPARROW            | PW PIED WAGTAIL   |
| BT BLUE TIT                 | J. JAY                      | R. ROBIN          |
| BZ BUZZARD                  | JD JACKDAW                  | RO ROOK           |
| C. CARRION CROW             | LG LESSER BLACK-BACKED GULL | SK SISKIN         |
| CC CHIFFCHAFF               | LB LITTLE GREBE             | SL SWALLOW        |
| CG CANADA GOOSE             | LI LINNET                   | ST SONG THRUSH    |
| CT COAL TIT                 | LT LONG-TAILED TIT          | TC TREECREEPER    |
| D. DUNNOCK                  | M. MISTLE THRUSH            | WP WOOD PIGEON    |
| FP FERAL PIDGEON            | MA MALLARD                  | WR WREN           |
| GB GREAT BLACK-BACKED GULL  | MG MAGPIE                   | WW WILLOW WARBLER |
| GC GOLDCREST                |                             | YW YELLOW WIGTAIL |
| GO GOLDFINCH                |                             |                   |
| GR GREENFINCH               |                             |                   |
| GS GREAT SPOTTED WOODPECKER |                             |                   |
| GT GREAT TIT                |                             |                   |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Ulywodraeth Cymru  
Welsh Government

Delivery Team  
  


Drawing Title  
**FIGURE 8.83B BREEDING BIRDS SURVEY RESULTS - APRIL SHEET 2 OF 3**

Scale at A3  
**1:5,000**

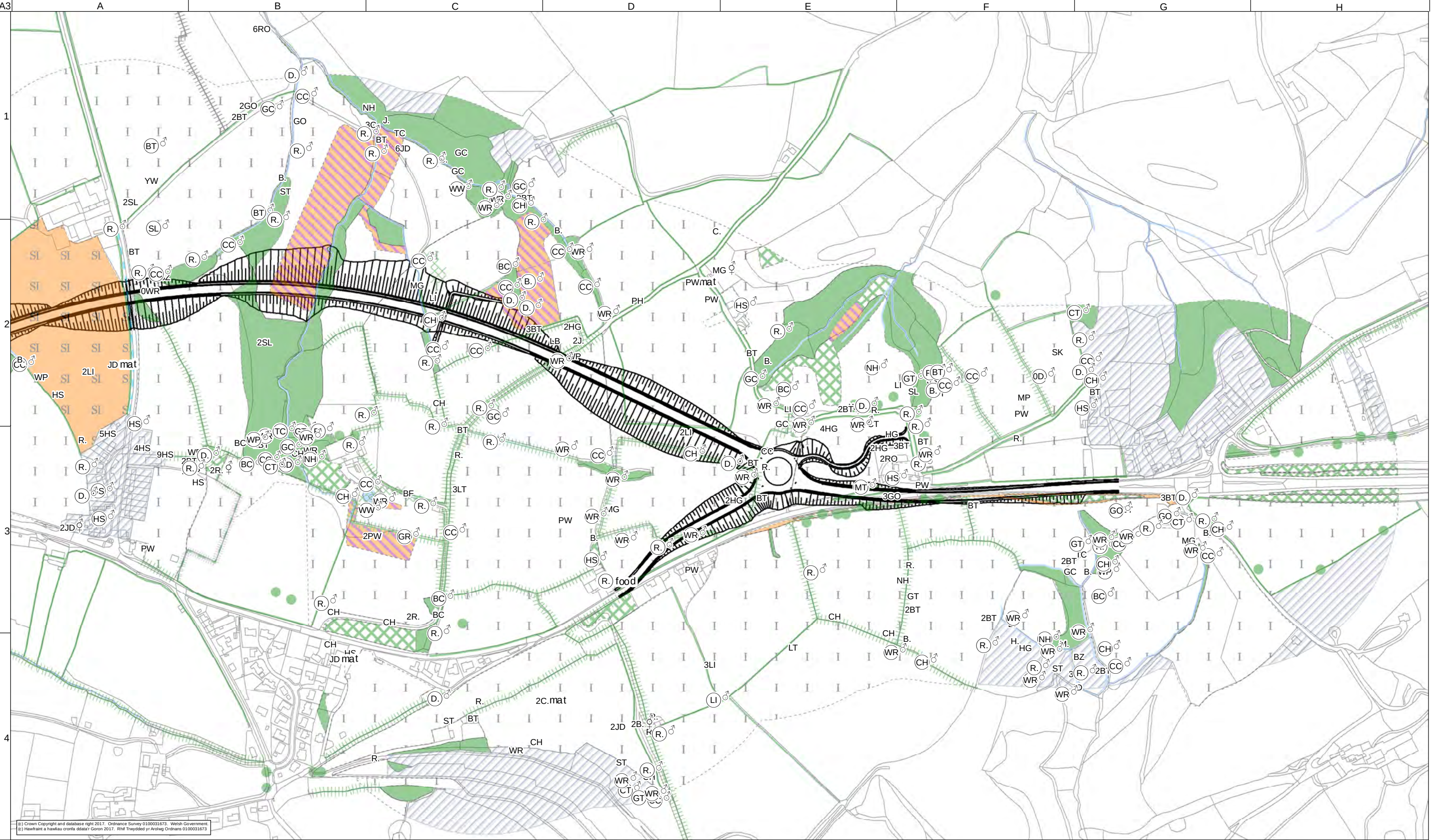
**S4 | SUITABLE FOR STAGE APPROVAL**

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P03  | HC       | PW       | TE       | GD       |
| Date | 12/11/18 | 12/11/18 | 12/11/18 | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0087**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





LEGEND

— PROPOSED ALIGNMENT

— CALLING

for FORAGING

\* OCCUPIER NEST

♂ SIGHT RECORD OF A PAIR

○ IN SONG

SPECIES KEY

B. BLACKBIRD

BC BLACKCAP

BF BULLFINCH

BT BLUE TIT

BZ BUZZARD

C. CARRION CROW

CC CHIFFCHAFF

CT COAL TIT

D. DUNNOCK

GC GOLDCREST

GO GOLDFINCH

GR GREENFINCH

GT GREAT TIT

H. GREY HERON

HG HERRING GULL

HS HOUSE SPARROW

J. JAY

JD JACKDAW

LB LESSER BLACK-BACKED GULL

LI LINNET

LT LONG-TAILED TIT

M. MISTLE THRUSH

MG MAGPIE

MP MEADOW PIPIT

MT MARSH TIT

NH NUTHATCH

PH PHEASANT

PW PIED WAGTAIL

R. ROBIN

RN RAVEN

RO ROOK

SD STOCK DOVE

SK SISKIN

SL SWALLOW

ST SONG THRUSH

TC TREECREEPER

WP WOOD PIGEON

WR WREN

WW WILLOW WARBLER

YW YELLOW WIGTAIL

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction

None

Maintenance / Cleaning

None

Use

None

Decommissioning / Demolition

None

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client



Uywodraeth Cymru  
Welsh Government

ARCADIS

MOTT MACDONALD

Delivery Team



Drawing Title

FIGURE 8.83C  
BREEDING BIRDS SURVEY  
RESULTS - APRIL  
SHEET 3 OF 3

Suitability

S4 | SUITABLE FOR STAGE APPROVAL

Scale at A3

1:5,000

| Rev  | By       | HC | Chkd | PW       | Appd | TE       | Auth | GD       |
|------|----------|----|------|----------|------|----------|------|----------|
| P03  |          |    |      |          |      |          |      |          |
| Date | 12/11/18 |    | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name

A40LVP - ARP - VES - SWI - DR - LE - 0088

Project

Originator

Volume

Location

Type

Role

Number

















(c) Crown Copyright and database right 2017. Ordnance Survey 0100031673. Welsh Government.  
(c) Hawffaint a hawlau crows ddata'y Goron 2017. Rhif Treidded yr Arolwg Ordnance 0100031673.

- LEGEND**
- PROPOSED ALIGNMENT
  - CALLING
  - FOR FORAGING
  - \* OCCUPIER NEST
  - ♂ SIGHT RECORD OF A PAIR
  - ♀ IN SONG

- SPECIES KEY**
- B. BLACKBIRD
  - BC. BLACKCAP
  - BF. BULLFINCH
  - BT. BLUE TIT
  - BZ. BUZZARD
  - C. CARRION CROW
  - CC. CHIFFCHAFF
  - CT. COAL TIT
  - D. DUNNOCK
  - GB. GREAT BLACK-BACKED GULL
  - GC. GOLDCREST
  - GO. GOLDFINCH
  - GS. GREAT SPOTTED WOODPECKER
  - GT. GREAT TIT
  - HS. HOUSE SPARROW

- JD. JACKDAW
- LB. LESSER BLACK-BACKED GULL
- LI. LINNET
- LT. LONG-TAILED TIT
- M. MISTLE THRUSH
- MG. MAGPIE
- NH. NUTHATCH
- PW. PIED WAGTAIL
- R. ROBIN
- RO. ROOK
- SL. SWALLOW
- ST. SONG THRUSH
- TC. TREECREEPER
- WP. WOOD PIGEON
- WR. WREN
- WW. WILLOW WARBLER

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      |      |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  
  
  


Drawing Title  
**FIGURE 8.85A  
BREEDING BIRDS SURVEY  
RESULTS - JUNE  
SHEET 1 OF 3**

Scale at A3  
1:5,000

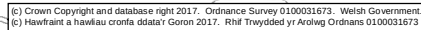
**S4 | SUITABLE FOR STAGE APPROVAL**

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P03  | HC       | PW       | TE       | GD       |
| Date | 12/11/18 | 12/11/18 | 12/11/18 | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0092**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





\_\_\_\_\_

B. BLACKBIRD  
BC BLACKCAP  
BT BLUE TIT  
BZ BUZZARD  
C. CARRION CROW  
CC CHIFFCHAFF  
CT COAL TIT  
D. DUNNOCK  
GB GREAT BLACK-BACKED GULL  
GC GOLDCREST  
GO GOLDFINCH  
GS GREAT SPOTTED WOODPECKER  
GT GREAT TIT  
JD HOUSE SPARROW  
JD JACKDAW  
LB LESSER BLACK-BACKED GULL

M. MISTLE THRUSH  
MG MAGPIE  
NH NUTHATCH  
PW PIED WAGTAIL  
R. ROBIN  
SD STOCK DOVE  
SL SWALLOW  
ST SONG THRUSH  
WP WOOD PIGEON  
WR WREN  
WW WILLOW WARBLER

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

| P03  | 12/11/18 | UPDATE FOLLOWING COMMENTS |    |      |      | HC   | PW | TE | GD |
|------|----------|---------------------------|----|------|------|------|----|----|----|
| Rev. | Date     | Description               | By | Chad | Appl | Auth |    |    |    |

ARUP

**RICHARD**  
WYATT LTD  
FLEETING, LEBURTON, CAMBRIDGE

Name **A40LVP - ARP - VES - SWI - DR - LE - 0093**





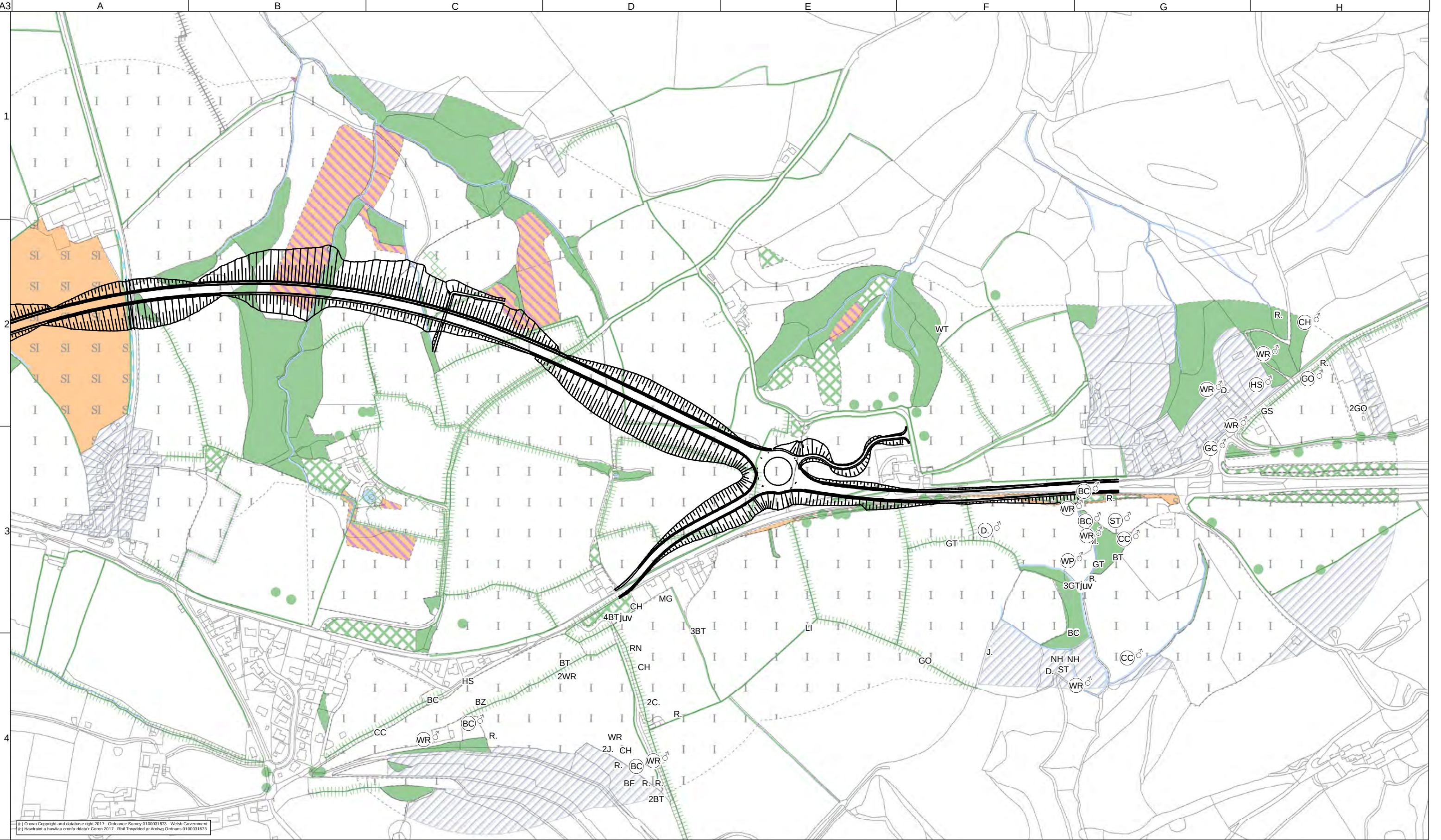












**LEGEND**

— PROPOSED ALIGNMENT

— CALLING

for FORAGING

\* OCCUPIER NEST

♂ ♀ SIGHT RECORD OF A PAIR

○ IN SONG

**SPECIES KEY**

B. BLACKBIRD  
BC BLACKCAP  
BF BULLFINCH  
BT BLUE TIT  
BZ BUZZARD  
C. CARRION CROW  
CC CHIFFCHAFF  
D. DUNNOCK  
GC GOLDCREST  
GO GOLDFINCH  
GS GREAT SPOTTED WOODPECKER  
GT GREAT TIT  
HS HOUSE SPARROW  
J. JAY  
LI LINNET

M. MISTLE THRUSH  
MG MAGPIE  
NH NUTHATCH  
R. ROBIN  
RN RAVEN  
ST SONG THRUSH  
WP WOOD PIGEON  
WR WREN

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 12/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
 

Drawing Title  
**FIGURE 8.86C  
BREEDING BIRDS SURVEY  
RESULTS - JULY  
SHEET 3 OF 3**

Scale at A3  
1:5,000

**S4 | SUITABLE FOR STAGE APPROVAL**

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P03 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0097**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- PROPOSED ALIGNMENT
- POTENTIAL NEST SITE
- TEMPORARY REST SITE
- OPTIMUM FORAGING HABITAT
- SUB-OPTIMAL FORAGING HABITAT
- POOR QUALITY FORAGING HABITAT

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 12/11/18 | UPDATE FOLLOWING COMMENTS | HC | PW   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 8.87 BARN OWL SURVEY RESULTS**

Scale at A3  
**1:12,500**

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | HC       | Chkd | PW       | Appd | TE       | Auth | GD       |
| P04 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 | Date | 12/11/18 |

Name  
**A40LVP - ARP - VES - SWI - DR - LE - 0085**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|

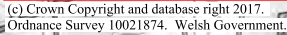






NB: Badger Sett Drawings have been withdrawn from this ES as the information displayed is confidential.





NOTE:  
VISIBILITY TAKES NO ACCOUNT OF BUILDINGS,  
VEGETATION OR OTHER SURFACE OBSTACLES.

Project Title

# A40 LLANDDEWI VLFREY TO PENBLEWIN IMPROVEMENTS

---

Client

---

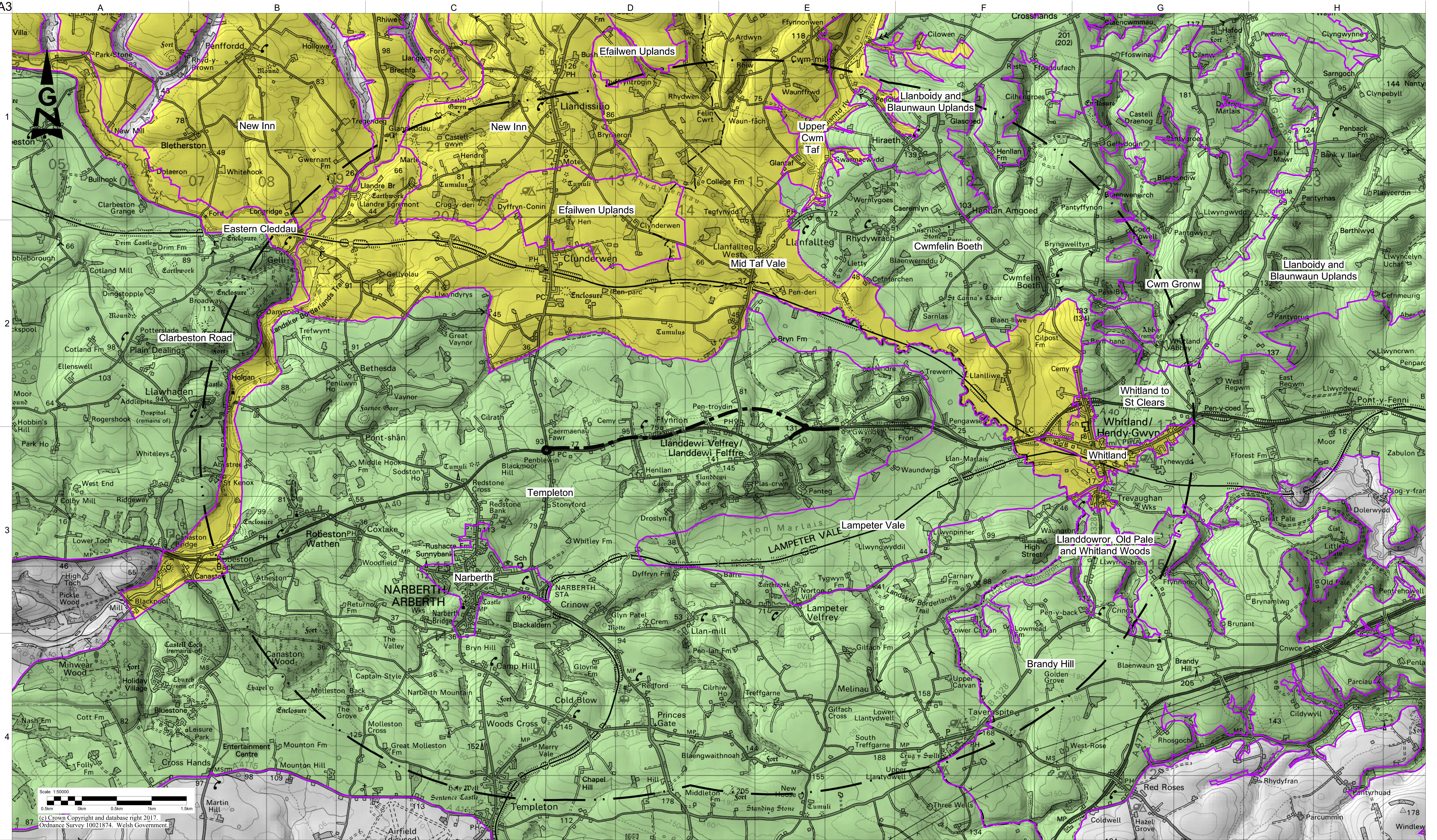
Delivery Team

Name  
**A40LVP-RML-ELS - SWI - DR- L - 000**









Legend

- Scheme centre-line
- 5 km study area boundary

Visual and Sensory Aspect Areas  
Overall Evaluation

- Outstanding
- High
- Moderate
- Low

Visual and Sensory Aspect Areas

- |                       |                                               |
|-----------------------|-----------------------------------------------|
| Pembrokeshire         | Carmarthenshire                               |
| 042 - Clarbeston Road | 103 - Brandy Hill                             |
| 044 - New Inn         | 115 - Whitland                                |
| 046 - Eastern Cleddau | 119 - Upper Cwm Taf                           |
| 047 - Templeton       | 259 - Llanboidy and Blaunwaun Uplands         |
| 048 - Narberth        | 446 - Llanddowor, Old Pale and Whitland Woods |
| 049 - Lampeter Vale   | 459 - Mid Taf Valley                          |
|                       | 718 - Cwm Gronw                               |
|                       | 747 - Cwmfelin Boeth                          |
|                       | 964 - Efailwen Uplands                        |
|                       | 995 - Whitland to St Clears                   |

|     |          |                                        |    |      |      |      |  |  |  |
|-----|----------|----------------------------------------|----|------|------|------|--|--|--|
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
|     |          |                                        |    |      |      |      |  |  |  |
| P01 | 02/10/18 | FIRST DRAFT ISSUE                      | RE | AS   | GD   | GD   |  |  |  |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |  |  |  |
| P03 | 22/01/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |  |  |  |
| P04 | 18/03/19 | RESPONSE TO ADDITIONAL COMMENTS        | RE | AS   | TE   | GD   |  |  |  |
| Rev | Date     | Description                            | By | Chkd | Appd | Auth |  |  |  |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Llywodraeth Cymru  
Welsh Government

Delivery Team  
ARUP  
RICHARDS

Drawing Title  
FIGURE 9.3.1  
LANDMAP EVALUATION  
VISUAL AND SENSORY ASPECT AREAS  
SHEET 1 OF 5

Suitability  
**S4 SUITABLE FOR STAGE APPROVAL**

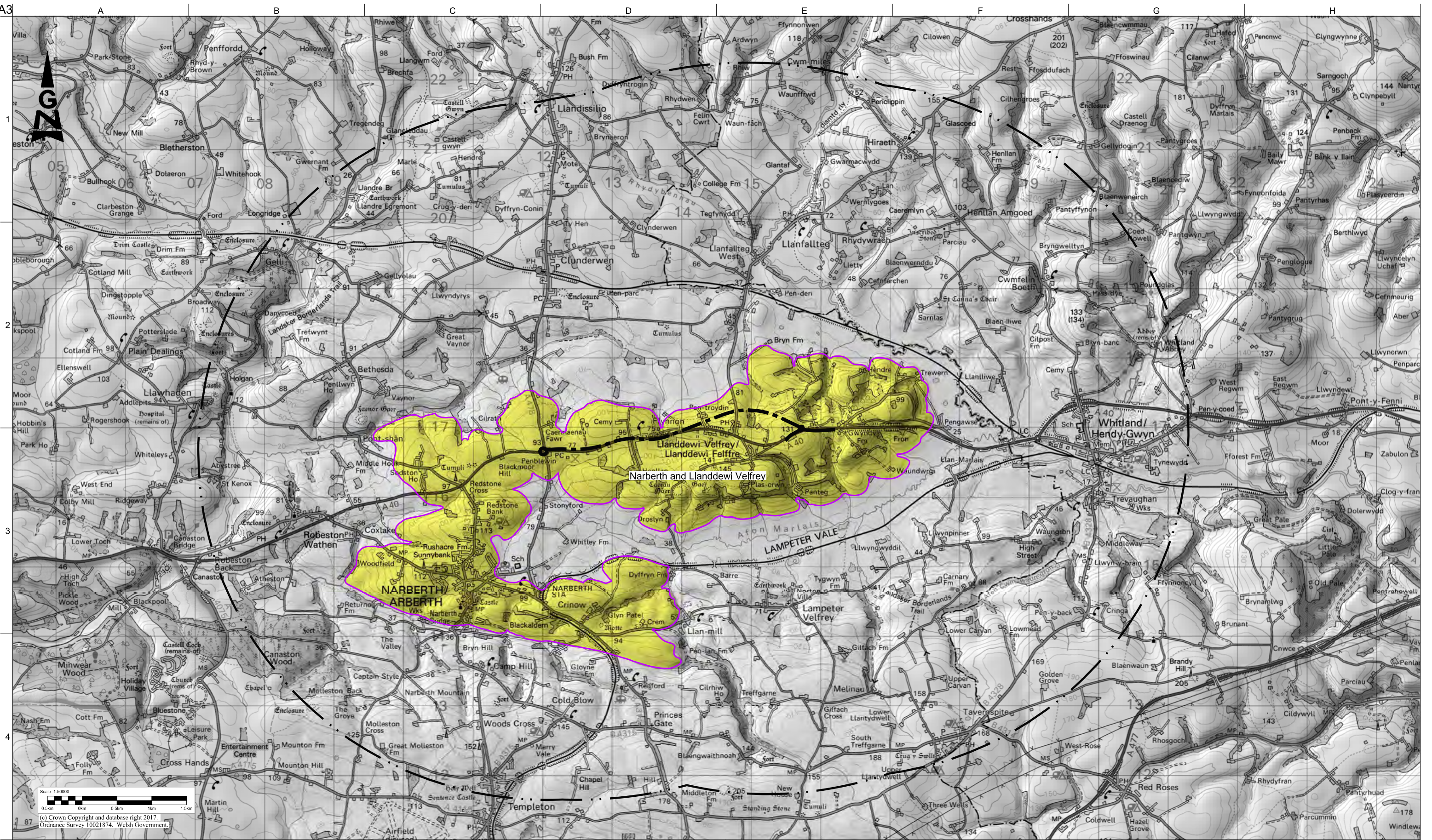
Scale at A3  
1:50000 @ A3

|      |          |      |          |      |          |      |          |
|------|----------|------|----------|------|----------|------|----------|
| Rev  | By       | Chkd | Appd     | Auth |          |      |          |
| P04  | RE       | AS   | TE       | GD   |          |      |          |
| Date | 05/02/19 | Date | 05/02/19 | Date | 18/03/19 | Date | 18/03/19 |

Name  
A40LVP-RML-ELS-SWI-DR-L-0003

Project Originator Volume Location Type Role Number





Legend

- Scheme centre-line
- ... 5 km study area boundary

Geological Landscape Aspect Areas  
Overall Evaluation

- Outstanding
- High
- Moderate
- Low

Geological Landscape Aspect Areas

Pembrokeshire  
195 - Narberth and Llanddewi Velfrey

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 | FIRST DRAFT ISSUE                      | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 22/01/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |
| P04 | 18/03/19 | RESPONSE TO ADDITIONAL COMMENTS        | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN  
IMPROVEMENTS

Client



Delivery Team



Drawing Title  
FIGURE 9.3.2  
LANDMAP EVALUATION  
GEOLOGICAL LANDSCAPE ASPECT AREA  
SHEET 2 OF 5

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A1 1:50000 @ A3

|                       |          |          |          |          |
|-----------------------|----------|----------|----------|----------|
| Rev<br><br><b>P04</b> | By       | Chkd     | Appd     | Auth     |
|                       | RE       | AS       | TE       | GD       |
|                       | Date     | Date     | Date     | Date     |
|                       | 05/02/19 | 05/02/19 | 18/03/19 | 18/03/19 |

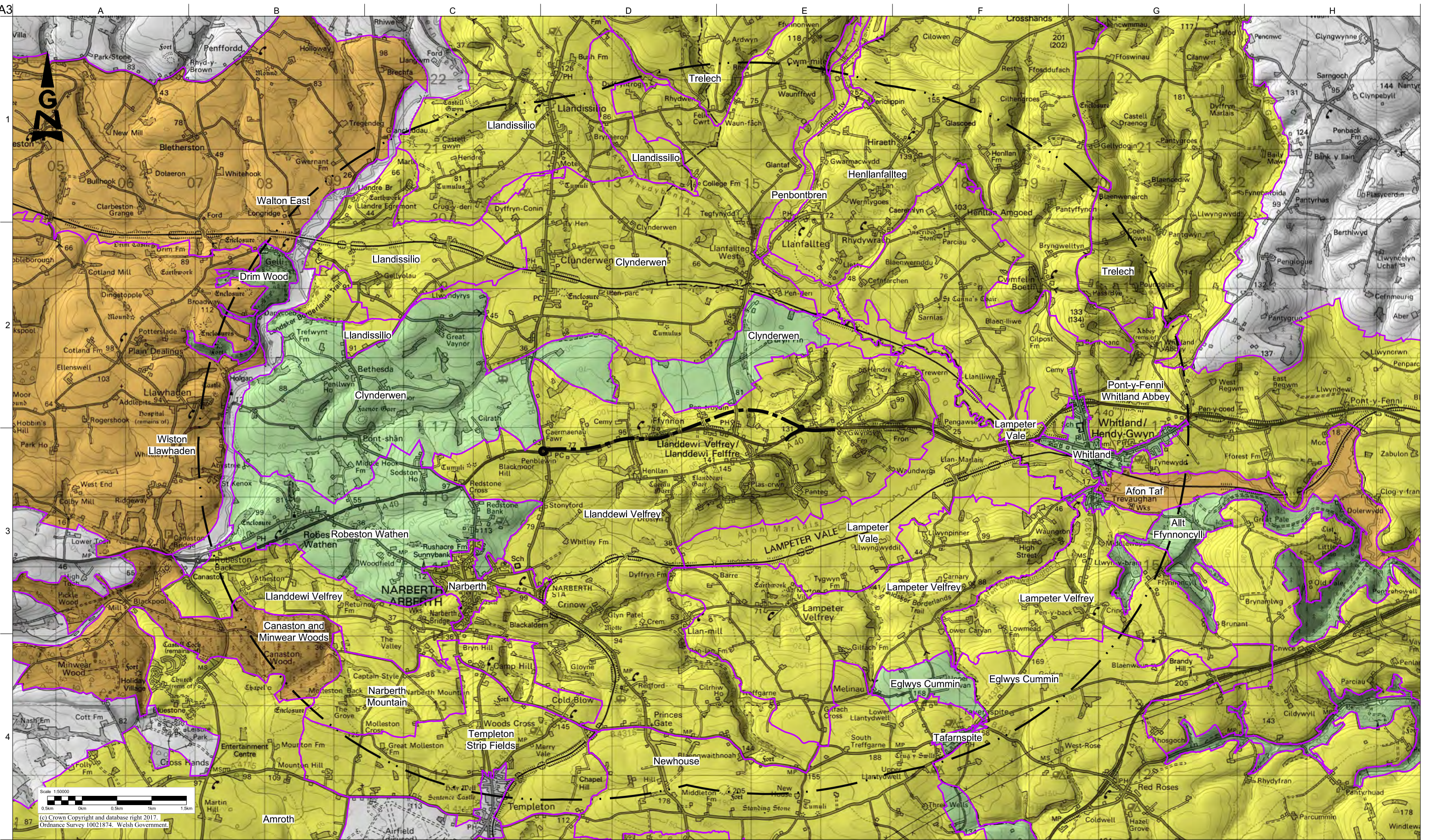
Name  
**A40LPV-RML-ELS-SWI-DR-L-0008**

Project Originator Volume Location Type Role Number









**Legend**

--- Scheme centre-line

--- 5 km study area boundary

**Historic Landscape Aspect Areas**

**Overall Evaluation**

Outstanding

High

Moderate

Low

**Historic Landscape Aspect Areas**

Pembrokeshire

40349 - Lampeter Velfrey

40350 - Eglwys Cumin

40353 - Lampeter Vale

42472 - Llandissilio

42473 - Clynderwen

43906 - Canaston and Minwear Woods

46162 - Amroth

46163 - Tafarnspite

46164 - Newhouse

46166 - Templeton Strip Fields

46168 - Narberth Mountain

46204 - Wlston - Llawhaden

Carmarthenshire

40345 - Afon Taf

40346 - Pont-y-Fenni, Whitland Abbey

40347 - Whitland

40348 - Allt Ffynnoncynll

40349 - Lampeter Velfrey

40350 - Eglwys Cumin

40353 - Lampeter Vale

40354 - Penbontbren

42460 - Henllanfallteg

42472 - Llandissilio

42473 - Clynderwen

42474 - Trelech

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 |                                        |    |      |      |      |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 22/01/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |
| P04 | 18/03/19 | RESPONSE TO ADDITIONAL COMMENTS        | RE | AS   | TE   | GD   |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Ulywodraeth Cymru Welsh Government

ARCADIS

MOTT MACDONALD

ARUP

RICHARDS

Drawing Title

FIGURE 9.3.4

LANDMAP EVALUATION

HISTORIC LANDSCAPE ASPECT AREAS

SHEET 4 OF 5

Suitable

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A1: 1:50000 @ A3

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | RE       | Chkd | AS       | Appd | TE       | Auth | GD       |
| P04 | Date | 05/02/19 | Date | 05/02/19 | Date | 18/03/19 | Date | 18/03/19 |

Name

A40LVP-RML-ELS-SWI-DR-L-0010

Project

Originator

Volume

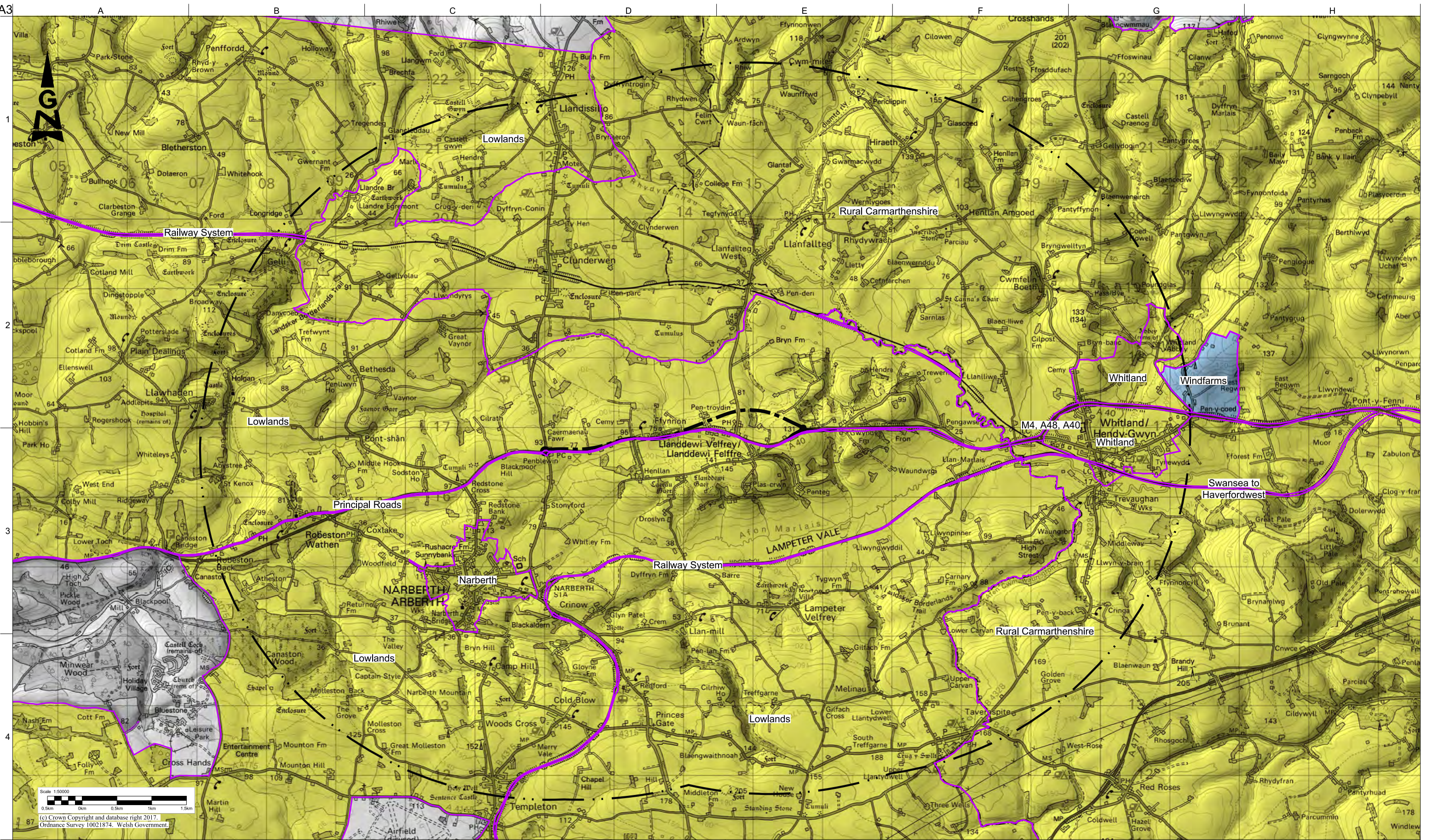
Location

Type

Role

Number





Legend

- Scheme centre-line
- 5 km study area boundary

Cultural Landscape Aspect Areas

Overall Evaluation

- Outstanding
- High
- Moderate
- Low

Cultural Landscape Aspect Areas

- Pembrokeshire
- 009 - Railway System
- 196 - Lowlands
- 829 - Narberth
- 977 - Principal Roads
- Carmarthenshire
- 001 - M4, A48, A40
- 005 - Swansea to Haverfordwest Railway
- 033 - Windfarms
- 050 - Whitland
- 061 - Rural Carmarthenshire

| Rev | Date     | Description                            | By  | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|-----|------|------|------|
| --- | ---      | ---                                    | --- | ---  | ---  | ---  |
| P01 | 02/10/18 | ---                                    | RE  | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE  | AS   | TE   | GD   |
| P03 | 22/01/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE  | AS   | TE   | GD   |
| P04 | 18/03/19 | RESPONSE TO ADDITIONAL COMMENTS        | RE  | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VElfREY TO PENBLEWIN IMPROVEMENTS



Drawing Title  
FIGURE 9.3.5  
LANDMAP EVALUATION  
CULTURAL LANDSCAPE ASPECT AREAS  
SHEET 5 OF 5

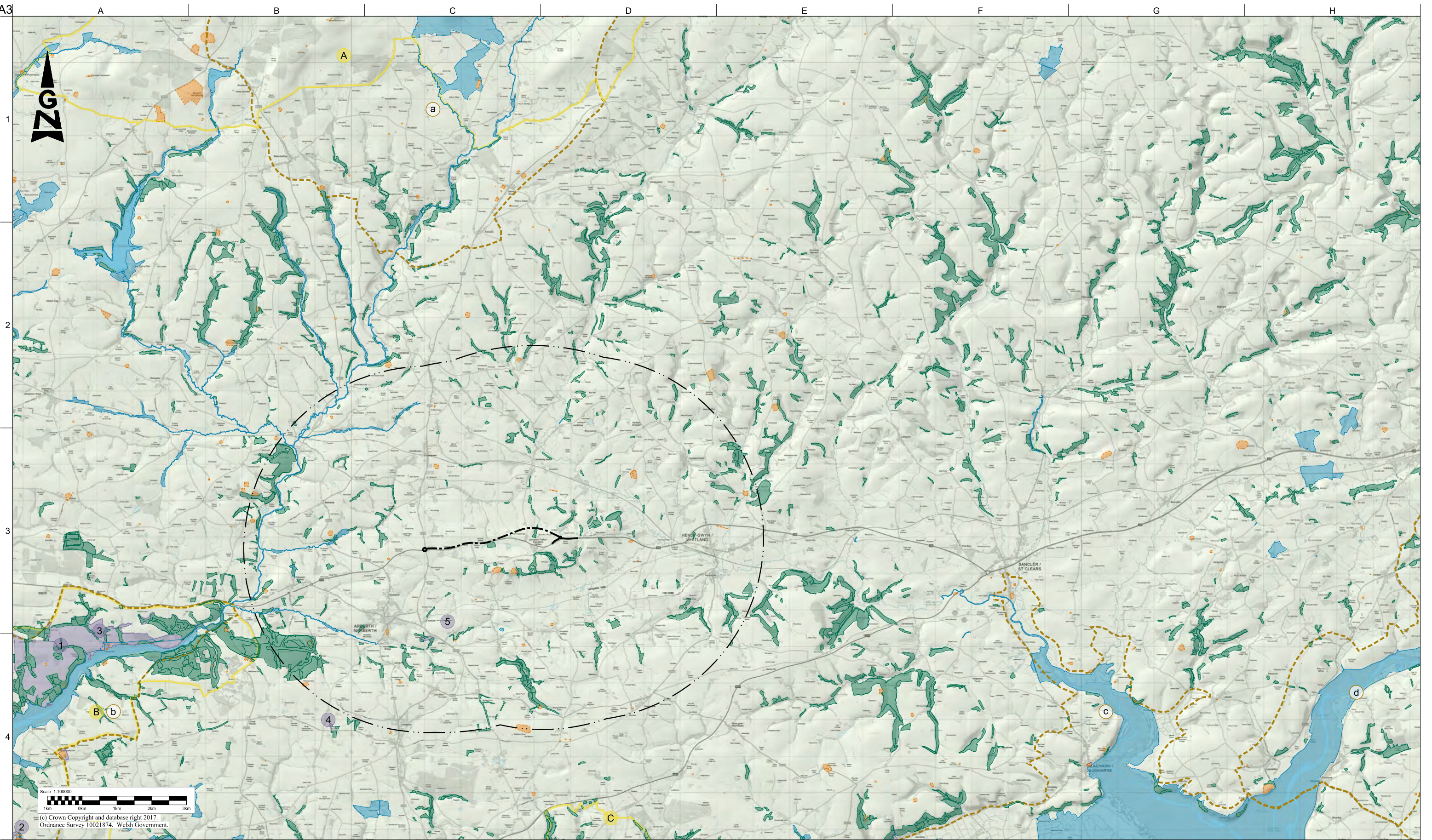
Suitability  
S4 | SUITABLE FOR STAGE APPROVAL

Scale at A1  
1:50,000 @ A3

| Rev  | By       | Chkd     | Appd     | Auth     |
|------|----------|----------|----------|----------|
| P04  | RE       | AS       | TE       | GD       |
| Date | 05/02/19 | 05/02/19 | 18/03/19 | 18/03/19 |

Name  
A40LVP-RML-ELS-SWI-DR-L-0011





Legend

- Scheme centre-line
- - - - - 5 km study area boundary

\*Source date reproduced with permission of:  
1. Natural Resources Wales  
2. Dyfed Archaeological Trust  
3. Cadw

Designated Areas

- Pembrokeshire Coast National Park\*<sup>1</sup>
- Historic Landscape Character Area\*<sup>2</sup>
- Registered Historic Park and Garden\*<sup>3</sup>
- Registered Ancient Woodland\*<sup>1</sup>
- Cultural Heritage Designation (SAM)\*<sup>3</sup>
- Nature Conservation Designation (SSSI / SAC / SPA / Country Park)\*<sup>1</sup>

Sites

- Pembrokeshire Coast National Park
- A. Mynydd Preseli
  - B. Daugleddau
  - C. Saundersfoot Settled Coast
- Historic Landscapes
- a. Preseli
  - b. Milford Haven Waterway
  - c. Taf and Tywi Estuary
  - d. Tywi Valley
- Registered Park and Garden
- 1. Slebech Park
  - 2. Lanshipping
  - 3. Picton Castle
  - 4. Molleston Baptist Chapel
  - 5. Blackaldern

| Rev | Date     | Description                            | By  | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|-----|------|------|------|
| --- | ---      | ---                                    | --- | ---  | ---  | ---  |
| P01 | 02/10/18 | FIRST DRAFT ISSUE                      | RE  | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE  | AS   | TE   | GD   |
| P03 | 22/01/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE  | AS   | TE   | GD   |
| P04 | 18/03/19 | RESPONSE TO ADDITIONAL COMMENTS        | RE  | AS   | TE   | GD   |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Ulywodraeth Cymru  
Welsh Government

Delivery Team  
 

Drawing Title  
**FIGURE 9.4 OVERVIEW OF DESIGNATED LANDSCAPE**

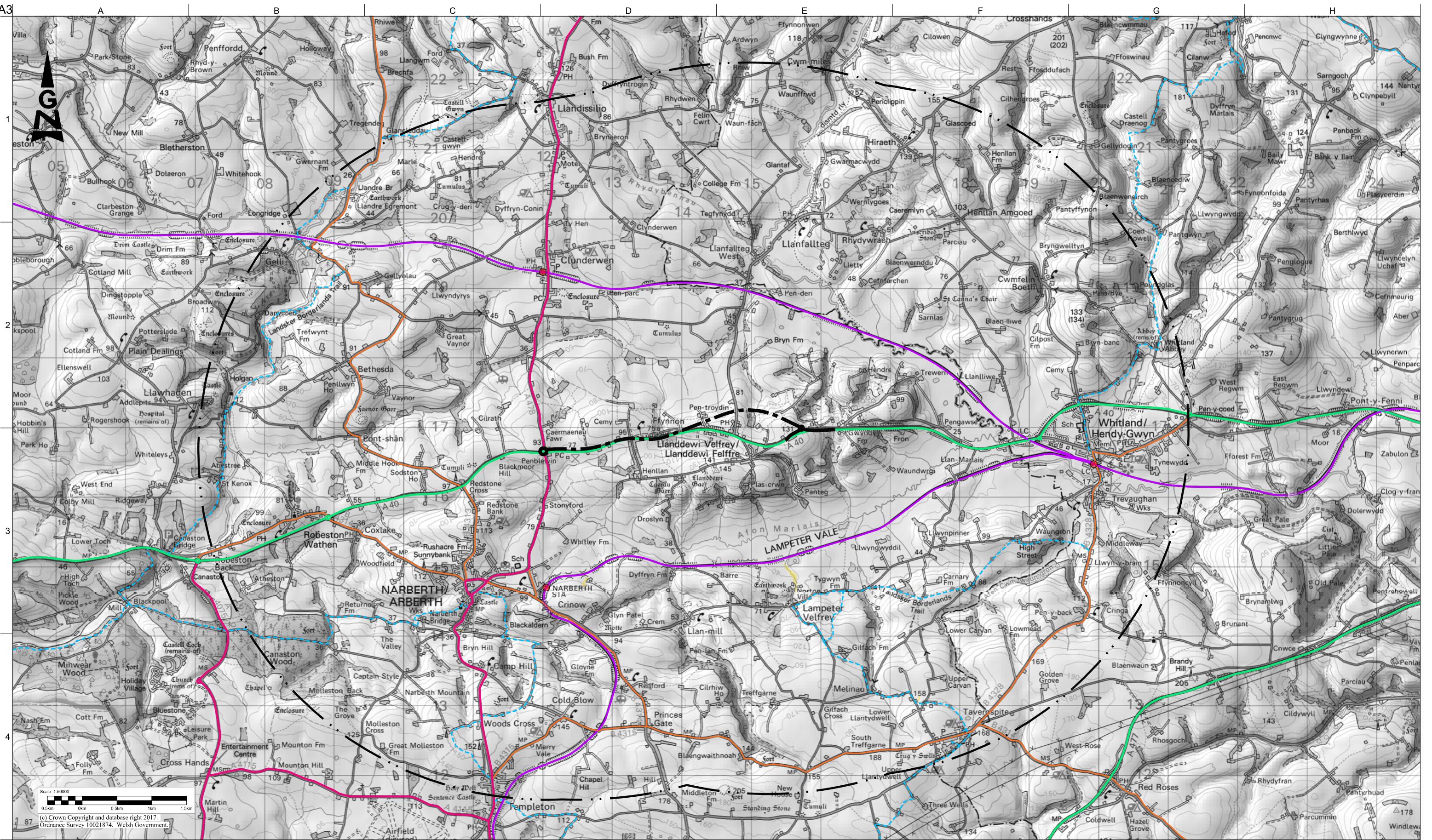
Scale at A3  
N/A

|            |      |          |      |          |      |          |      |          |
|------------|------|----------|------|----------|------|----------|------|----------|
| Rev        | By   | RE       | Chkd | AS       | Appd | TE       | Auth | GD       |
| <b>P04</b> | Date | 05/02/19 | Date | 05/02/19 | Date | 18/03/19 | Date | 18/03/19 |

Name  
**A40LVP-RML-ELS-SWI-DR-L-0004**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





Legend

- Scheme centre-line
- 5 km study area boundary

Roads and Recreational Routes/Areas

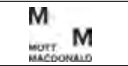
- A-Road (Trunk Road Network)\*1
- A-Road\*1
- B-Road\*1
- Railway Line\*1
- Long Distance Path\*2
- Common Land\*3

\*Source date reproduced with permission of:  
1. Ordnance Survey Great Britain  
2. Long Distance Walkers Association  
3. Natural Resources Wales

|     |          |                                        |    |      |      |      |  |
|-----|----------|----------------------------------------|----|------|------|------|--|
|     |          |                                        |    |      |      |      |  |
|     |          |                                        |    |      |      |      |  |
|     |          |                                        |    |      |      |      |  |
|     |          |                                        |    |      |      |      |  |
|     |          |                                        |    |      |      |      |  |
|     |          |                                        |    |      |      |      |  |
|     |          |                                        |    |      |      |      |  |
|     |          |                                        |    |      |      |      |  |
| P01 | 02/10/18 | FIRST DRAFT ISSUE                      | RE | AS   | GD   | GD   |  |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |  |
| P03 | 22/01/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |  |
| P04 | 18/03/19 | RESPONSE TO ADDITIONAL COMMENTS        | RE | AS   | TE   | GD   |  |
| Rev | Date     | Description                            | By | Chkd | Appd | Auth |  |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client



Delivery Team



Drawing Title  
FIGURE 9.5  
ROADS AND RECREATION

Suitability  
S4 | SUITABLE FOR STAGE APPROVAL

Scale at A3

N/A

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | RE       | Chkd | AS       | Appd | TE       | Auth | GD       |
| P04 | Date | 05/02/19 | Date | 05/02/19 | Date | 18/03/19 | Date | 18/03/19 |

Name  
A40LPV-RML-ELS-SWI-DR-L-0005

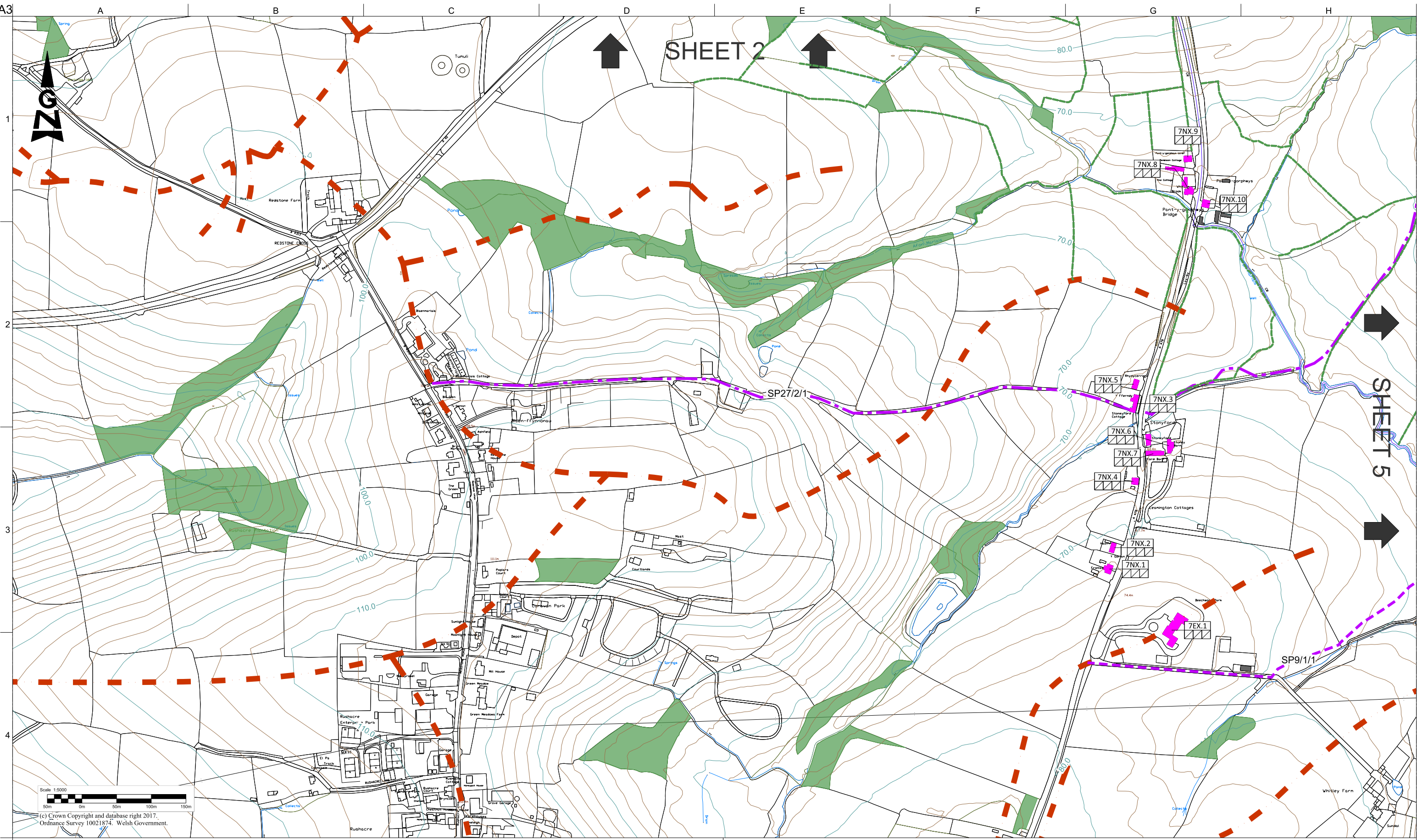












**Legend**

- Proposed road surface
- Earthworks cutting
- Earthworks embankment
- Surface contours
- 10 m major interval
- 2.5 m minor interval
- Location of representative viewpoint

**Visual barriers**

- Ridge lines
- Tree belts and woodland
- Hedgerow / Hedge-bank
- Non-residential building

**Visual Receptors**

- Right Of Way - Bridleway
- Right Of Way - Public Footpath
- Receptor Buildings (refer to Visual Effects Schedule)
- Visual effect reference number
- Construction Summer Year 15
- Winter Year 0

**Significance of visual effect**

- Very large adverse
- Large adverse
- Moderate adverse
- Slight adverse
- Neutral
- Slight benefit
- Moderate benefit
- Large benefit
- Very large benefit

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 | FIRST DRAFT ISSUE                      | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Ulywodraeth Cymru  
Welsh Government

Delivery Team  
  
  


Drawing Title  
**FIGURE 9.8.1  
VISUAL EFFECTS DRAWING  
SHEET 1 OF 16**

Scale at A1  
1:5000 @ A3

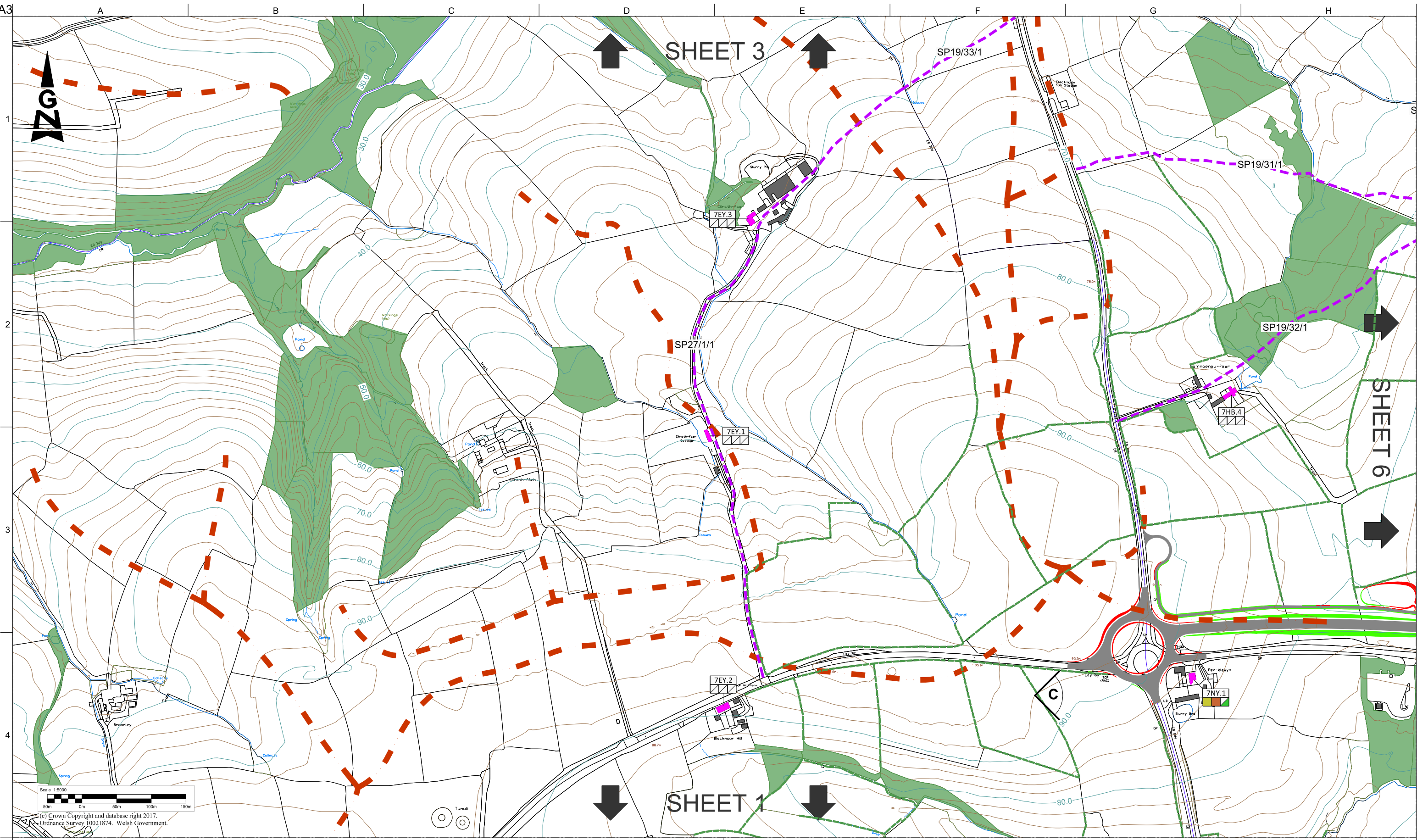
Rev  
**P03**

| By   | RE       | Chkd | AS       | Appd | TE       | Auth | GD       |
|------|----------|------|----------|------|----------|------|----------|
| Date | 22/01/19 | Date | 22/01/19 | Date | 18/03/19 | Date | 18/03/19 |

Name  
**A40LVP-RML-ELS-SWI-DR-L-0012**

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|---------|------------|--------|----------|------|------|--------|





**Legend**

- Proposed road surface
- Earthworks cutting
- Earthworks embankment
- Surface contours
- 10 m major interval
- 2.5 m minor interval
- Location of representative viewpoint

**Visual barriers**

- Ridge lines
- Tree belts and woodland
- Hedgerow / Hedge-bank
- Non-residential building

**Visual Receptors**

- Right Of Way - Bridleway
- Right Of Way - Public Footpath
- Receptor Buildings (refer to Visual Effects Schedule)
- Visual effect reference number
- Construction
- Summer Year 15
- Winter Year 0

**Significance of visual effect**

- Very large adverse
- Large adverse
- Moderate adverse
- Slight adverse
- Neutral
- Slight benefit
- Moderate benefit
- Large benefit
- Very large benefit

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 |                                        | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uywodaeth Cymru  
Welsh Government

Delivery Team  
ARUP RICHARDS

Drawing Title  
FIGURE 9.8.2  
VISUAL EFFECTS DRAWING  
SHEET 2 OF 16

Scale at A1  
1:5000 @ A3

Rev  
P03

By  
RE

Date  
22/01/19

Chkd  
AS

Date  
22/01/19

Appd  
TE

Date  
18/03/19

Auth  
GD

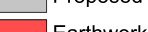
Date  
18/03/19

Name  
A40LVP-RML-ELS-SWI-DR-L-0013

Project  
Originator  
Volume  
Location  
Type  
Role  
Number



### Legend

- 
 Proposed road surface  
 Earthworks cutting  
 Earthworks embankment  
 Surface contours  
 10 m major interval  
 2.5 m minor interval  
 Location of representative viewpoint

## Visual barriers

-  Ridge lines
-  Tree belts and woodland
-  Hedgerow / Hedge-bank
-  Non-residential building

## Visual Receptors

-  Right Of Way - Bridleway  
 Right Of Way - Public Footpath  
 Receptor Buildings  
 (refer to Visual Effects Schedule)  
 Visual effect reference number  
 Summer Year 15  
 Winter Year 0

### Significance of visual effect

- |                                                                                       |                    |
|---------------------------------------------------------------------------------------|--------------------|
|  | Very large adverse |
|  | Large adverse      |
|  | Moderate adverse   |
|  | Slight adverse     |
|  | Neutral            |
|  | Slight benefit     |
|  | Moderate benefit   |
|  | Large benefit      |
|  | Very large benefit |

|     |          |                                        |  |  |  |    |      |      |     |
|-----|----------|----------------------------------------|--|--|--|----|------|------|-----|
|     |          |                                        |  |  |  |    |      |      |     |
|     |          |                                        |  |  |  |    |      |      |     |
|     |          |                                        |  |  |  |    |      |      |     |
|     |          |                                        |  |  |  |    |      |      |     |
|     |          |                                        |  |  |  |    |      |      |     |
|     |          |                                        |  |  |  |    |      |      |     |
|     |          |                                        |  |  |  |    |      |      |     |
|     |          |                                        |  |  |  |    |      |      |     |
| P01 | 02/10/18 | --                                     |  |  |  | RE | AS   | GD   | GD  |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             |  |  |  | RE | AS   | TE   | GD  |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS |  |  |  | RE | AS   | TE   | GD  |
| Rev | Date     | Description                            |  |  |  | By | Chkd | Appd | Aud |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN  
IMPROVEMENTS**



Llywodraeth Cymru  
Welsh Government



Delivery Team

ARUP

**RICHARD**  
WATSON & PARTNERS  
PLANNING | LANDSCAPE | INTERIOR

Drawing Title

FIGURE 9.8.3  
VISUAL EFFECTS DRAWING  
SHEET 3 OF 16

Suitability

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A1 1:5000 @ A3

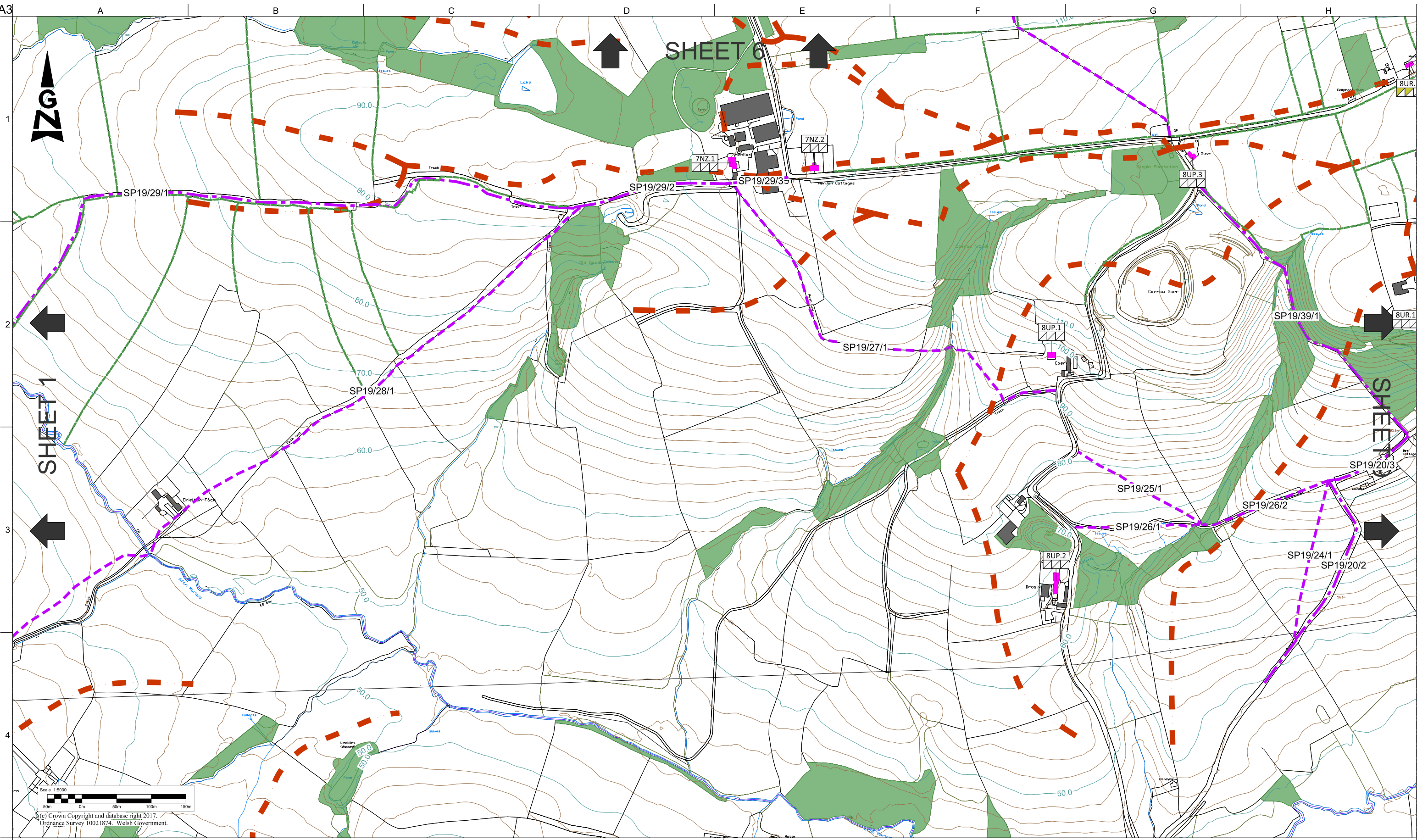
|            |                  |                  |                  |                  |
|------------|------------------|------------------|------------------|------------------|
| Rev        | By               | Chkd             | Appd             | Auth             |
| <b>P03</b> | RE               | AS               | TE               | GD               |
|            | Date<br>22/01/19 | Date<br>22/01/19 | Date<br>18/03/19 | Date<br>18/03/19 |

Name  
**A40LVP-RML-ELS-SWI-DR-L-0014**









**Legend**

- Proposed road surface
- Earthworks cutting
- Earthworks embankment
- Surface contours
- 10 m major interval
- 2.5 m minor interval
- Location of representative viewpoint

**Visual barriers**

- Ridge lines
- Tree belts and woodland
- Hedgerow / Hedge-bank
- Non-residential building

**Visual Receptors**

- Right Of Way - Bridleway
- Right Of Way - Public Footpath
- Receptor Buildings (refer to Visual Effects Schedule)
- Visual effect reference number

**Significance of visual effect**

- Very large adverse
- Large adverse
- Moderate adverse
- Slight adverse
- Neutral
- Slight benefit
- Moderate benefit
- Large benefit
- Very large benefit

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 |                                        | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Delivery Team

Drawing Title  
FIGURE 9.8.5  
VISUAL EFFECTS DRAWING  
SHEET 5 OF 16

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A1  
1:5000 @ A3

| Rev | By | Chkd | Appd | Auth |
|-----|----|------|------|------|
| P03 | RE | AS   | TE   | GD   |

Date  
22/01/19 22/01/19 18/03/19 18/03/19

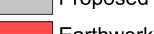
Name  
A40LVP-RML-ELS-SWI-DR-L-0016

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|         |            |        |          |      |      |        |

Do not scale



### Legend

- 
 Proposed road surface  
 Earthworks cutting  
 Earthworks embankment  
 Surface contours  
 10 m major interval  
 2.5 m minor interval  
 Location of representative viewpoint

## Visual barriers

-  Ridge lines
-  Tree belts and woodland
-  Hedgerow / Hedge-bank
-  Non-residential building

## Visual Receptors

-  Right Of Way - Bridleway  
 Right Of Way - Public Footpath  
 Receptor Buildings  
 (refer to Visual Effects Schedule)  
  
 Visual effect reference number  
 Summer Year 15  
 Winter Year 0

### Significance of visual effect

- |                                                                                       |                    |
|---------------------------------------------------------------------------------------|--------------------|
|  | Very large adverse |
|  | Large adverse      |
|  | Moderate adverse   |
|  | Slight adverse     |
|  | Neutral            |
|  | Slight benefit     |
|  | Moderate benefit   |
|  | Large benefit      |
|  | Very large benefit |

|      |          |                                        |  |  |  |  |  |      |
|------|----------|----------------------------------------|--|--|--|--|--|------|
|      |          |                                        |  |  |  |  |  |      |
|      |          |                                        |  |  |  |  |  |      |
| ---- | ----     | -----                                  |  |  |  |  |  | ---- |
| ---- | ----     | -----                                  |  |  |  |  |  | ---- |
| ---- | ----     | -----                                  |  |  |  |  |  | ---- |
| ---- | ----     | -----                                  |  |  |  |  |  | ---- |
| ---- | ----     | -----                                  |  |  |  |  |  | ---- |
| ---- | ----     | -----                                  |  |  |  |  |  | ---- |
| ---- | ----     | -----                                  |  |  |  |  |  | ---- |
| P01  | 02/10/18 | ---                                    |  |  |  |  |  |      |
| P02  | 19/11/18 | RE-LINK OF REFERENCE FILES             |  |  |  |  |  |      |
| P03  | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS |  |  |  |  |  |      |
| Rev  | Date     | Description                            |  |  |  |  |  |      |

Project Title

**A40 LLANDDEWI VELFREY TO PENBLEWIN  
IMPROVEMENTS**



**S** | [www.southwest.com](http://www.southwest.com)  
on Southwest  
with you

ARUP

**RICHARDS**  
ARCHITECTS  
PLANNING | LANDSCAPE | ENVIRONMENT

Drawing Title

FIGURE 9.8.6  
VISUAL EFFECTS DRAWING  
SHEET 6 OF 16

Suitability

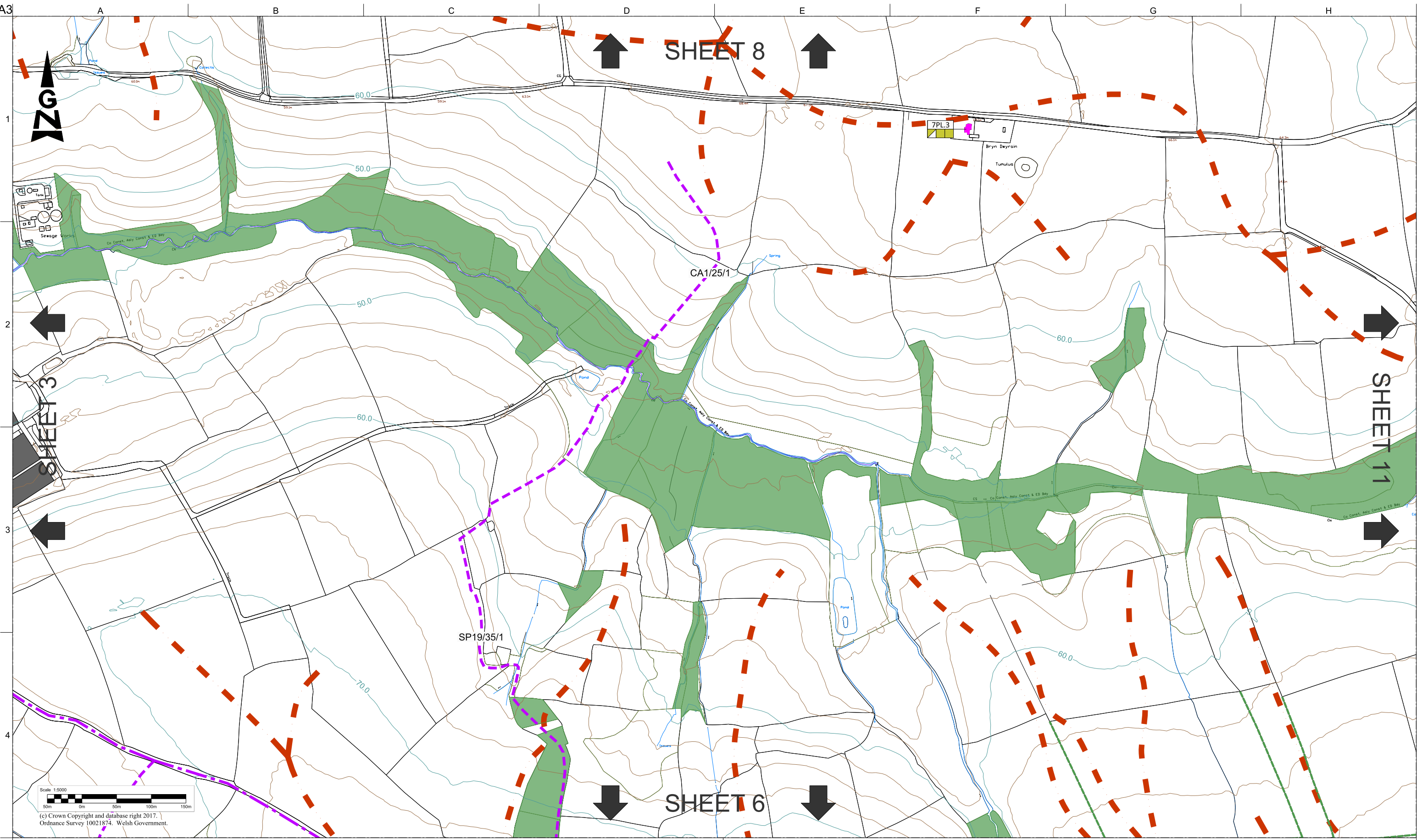
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A1 1:5000 @ A3

|            |                  |                  |                  |                  |
|------------|------------------|------------------|------------------|------------------|
| Rev        | By               | Chkd             | Appd             | Auth             |
| <b>P03</b> | RE               | AS               | TE               | GD               |
|            | Date<br>22/01/19 | Date<br>22/01/19 | Date<br>18/03/19 | Date<br>18/03/19 |

|         |            |                      |          |      |      |                 |  |
|---------|------------|----------------------|----------|------|------|-----------------|--|
| Name    |            | A40LVP - RML - ELS - |          | SWI  |      | - DR - L - 0017 |  |
| Project | Originator | Volume               | Location | Type | Role | Number          |  |





Legend

- Proposed road surface
- Earthworks cutting
- Earthworks embankment
- Surface contours
- 10 m major interval
- 2.5 m minor interval
- Location of representative viewpoint

Visual barriers

- Ridge lines
- Tree belts and woodland
- Hedgerow / Hedge-bank
- Non-residential building

Visual Receptors

- Right Of Way - Bridleway
- Right Of Way - Public Footpath
- Receptor Buildings (refer to Visual Effects Schedule)
- Visual effect reference number
- Construction
- Summer Year 15
- Winter Year 0

Significance of visual effect

- Very large adverse
- Large adverse
- Moderate adverse
- Slight adverse
- Neutral
- Slight benefit
- Moderate benefit
- Large benefit
- Very large benefit

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 |                                        | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uydwodaeth Cymru  
Welsh Government

Delivery Team  
ARUP RICHARDS

Drawing Title  
FIGURE 9.8.7  
VISUAL EFFECTS DRAWING  
SHEET 7 OF 16

Suitability  
S4 | SUITABLE FOR STAGE APPROVAL

Scale at A1  
1:5000 @ A3

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P03  | RE       | AS       | TE       | GD       |
| Date | 22/01/19 | 22/01/19 | 18/03/19 | 18/03/19 |

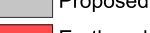
Name  
A40LVP-RML-ELS-SWI-DR-L-0018

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





### Legend

- 
 Proposed road surface  
 Earthworks cutting  
 Earthworks embankment  
 Surface contours  
 10 m major interval  
 2.5 m minor interval  
 Location of representative viewpoint

## Visual barriers

-  Ridge lines  
 Tree belts and woodland  
 Hedgerow / Hedge-bank  
 Non-residential building

## Visual Receptors

-  Right Of Way - Bridleway  
 Right Of Way - Public Footpath  
 Receptor Buildings  
 (refer to Visual Effects Schedule)  
 Visual effect reference number  
 Summer Year 15  
 Winter Year 0

### Significance of visual effect

- 
- Very large adverse  
Large adverse  
Moderate adverse  
Slight adverse  
Neutral  
Slight benefit  
Moderate benefit  
Large benefit  
Very large benefit

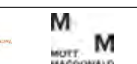
|     |          |                                        |  |  |  |    |      |      |    |
|-----|----------|----------------------------------------|--|--|--|----|------|------|----|
|     |          |                                        |  |  |  |    |      |      |    |
|     |          |                                        |  |  |  |    |      |      |    |
|     |          |                                        |  |  |  |    |      |      |    |
|     |          |                                        |  |  |  |    |      |      |    |
|     |          |                                        |  |  |  |    |      |      |    |
|     |          |                                        |  |  |  |    |      |      |    |
|     |          |                                        |  |  |  |    |      |      |    |
|     |          |                                        |  |  |  |    |      |      |    |
| P01 | 02/10/18 | --                                     |  |  |  | RE | AS   | G0   | G  |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             |  |  |  | RE | AS   | TE   | G  |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS |  |  |  | RE | AS   | TE   | G  |
| Rev | Date     | Description                            |  |  |  | By | Chkd | Appd | Au |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN  
IMPROVEMENTS

Client



Llywodraeth Cymru  
Welsh Government



Delivery Team

ARUP



Drawing Title

FIGURE 9.8.8  
VISUAL EFFECTS DRAWING  
SHEET 8 OF 16

Suitability

**S4 | SUITABLE FOR S**

Scale at A1 1:5000 @ A3

Rev  
PC

Date 22/01/19

Name A40LVP - RML - ELS -

|      |                 |     |              |
|------|-----------------|-----|--------------|
| name | A40LVP-RML-ELS- | SWI | -DR- L -0019 |
|------|-----------------|-----|--------------|

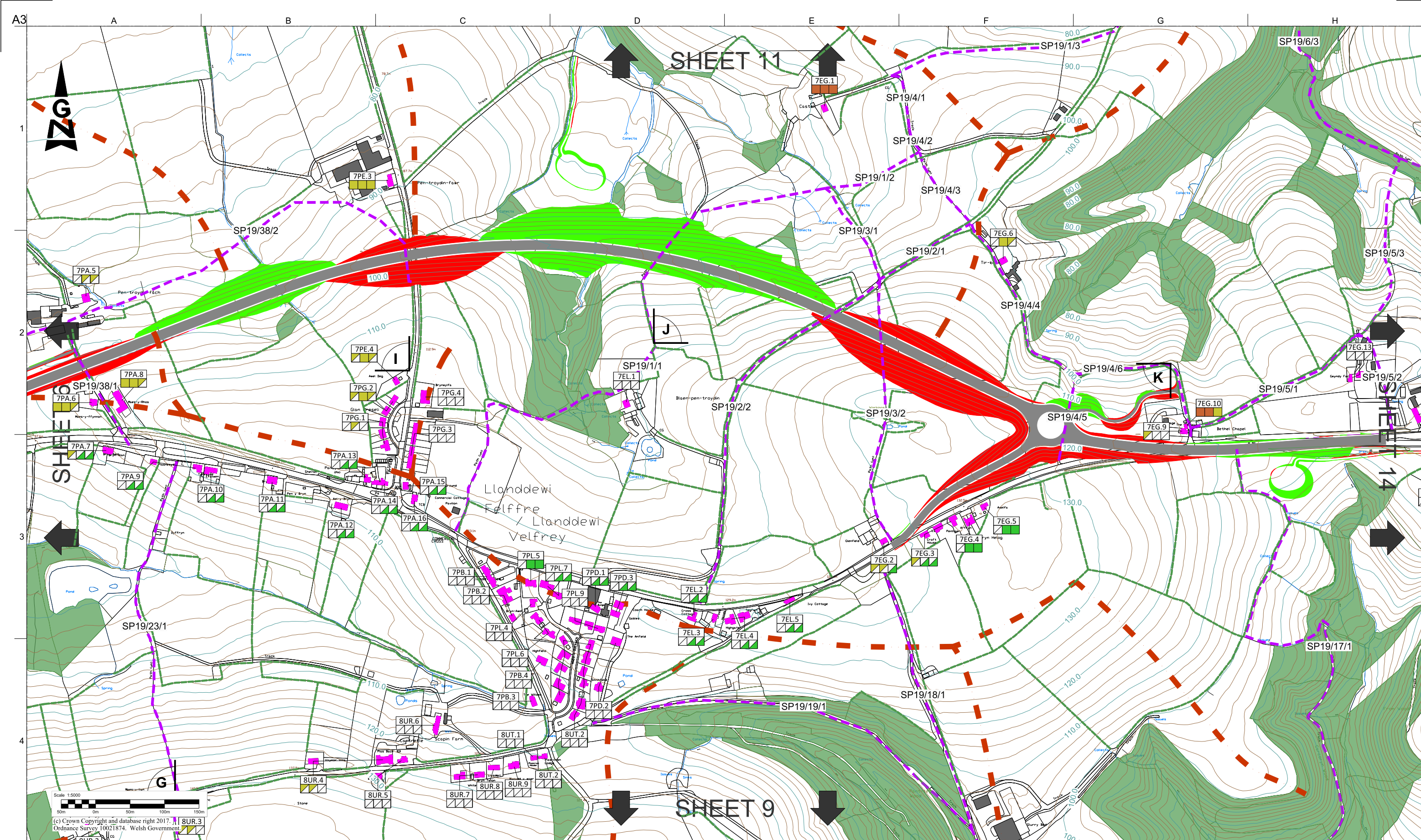
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|---------|------------|--------|----------|------|------|--------|

Do not scale

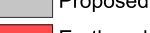








### Legend

- 
 Proposed road surface  
 Earthworks cutting  
 Earthworks embankment  
 Surface contours  
 10 m major interval  
 2.5 m minor interval  
 Location of representative viewpoint

## Visual barriers

-  Ridge lines  
 Tree belts and woodland  
 Hedgerow / Hedge-bank  
 Non-residential building

## Visual Receptors

-  Right Of Way - Bridleway  
 Right Of Way - Public Footpath  
 Receptor Buildings  
 (refer to Visual Effects Schedule)  
 Visual effect reference number  
 Summer Year 15  
 Winter Year 0

### Significance of visual effect

- 
- Very large adverse  
Large adverse  
Moderate adverse  
Slight adverse  
Neutral  
Slight benefit  
Moderate benefit  
Large benefit  
Very large benefit

|     |          |                                        |    |      |      |
|-----|----------|----------------------------------------|----|------|------|
|     |          |                                        |    |      |      |
|     |          |                                        |    |      |      |
|     |          |                                        |    |      |      |
|     |          |                                        |    |      |      |
|     |          |                                        |    |      |      |
|     |          |                                        |    |      |      |
|     |          |                                        |    |      |      |
|     |          |                                        |    |      |      |
| P01 | 02/10/18 | --                                     | RE | AS   | G0   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   |
| Rev | Date     | Description                            | By | Chkd | Appd |

Project Title

**A40 LLANDDEWI VELFREY TO PENBLEWIN  
IMPROVEMENTS**



Drawing Title

**FIGURE 9.8.10**  
**VISUAL EFFECTS DRAWING**  
**SHEET 10 OF 16**

Suitability

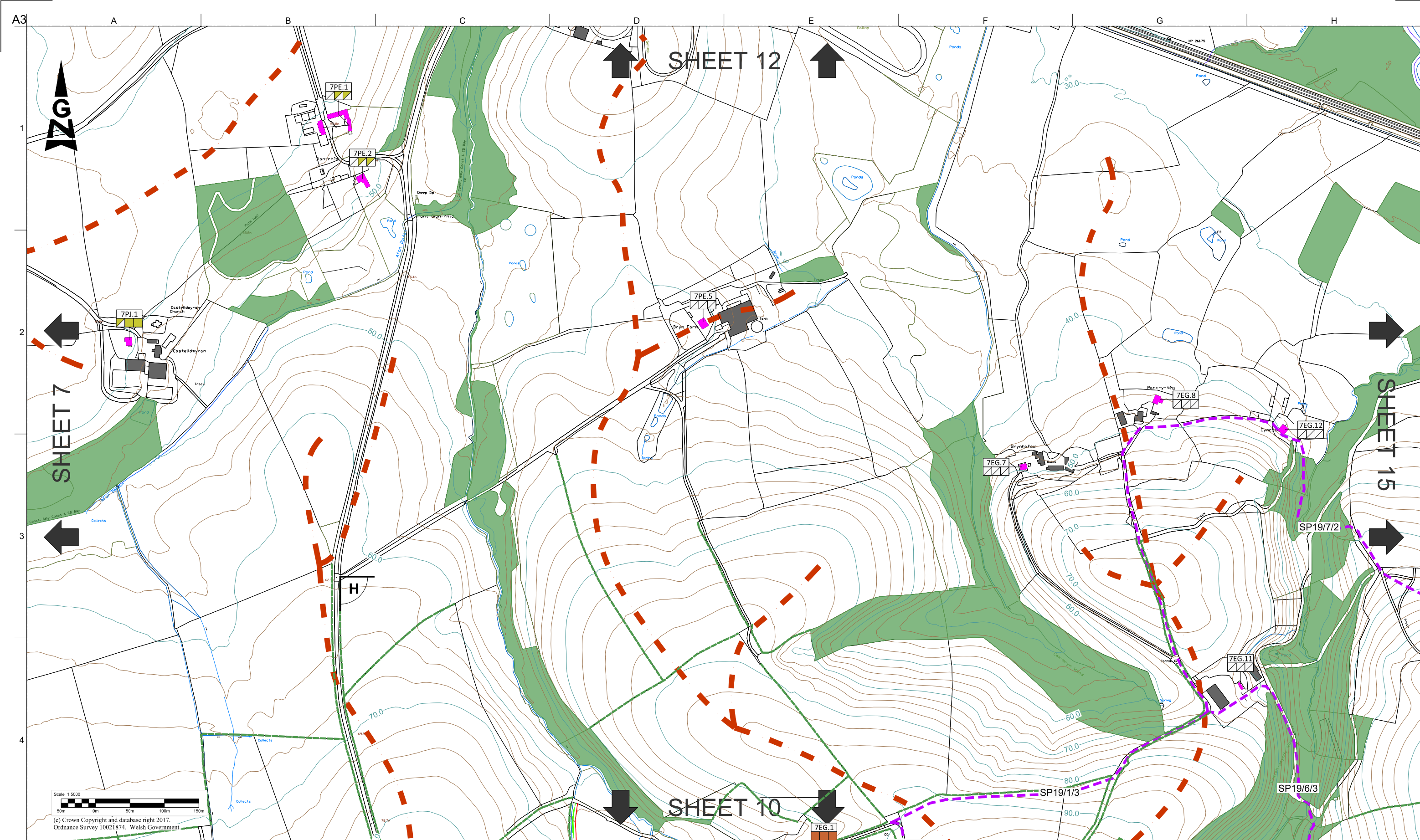
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A1

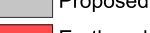
|            |          |          |          |          |
|------------|----------|----------|----------|----------|
| Rev        | By       | Chkd     | Appd     | Auth     |
|            | RE       | AS       | TE       | GD       |
| <b>P03</b> | Date     | Date     | Date     | Date     |
|            | 22/01/19 | 22/01/19 | 18/03/19 | 18/03/19 |

|         |                                          |        |          |                      |
|---------|------------------------------------------|--------|----------|----------------------|
| Name    | A40LVP - RML - ELS - SWI - DR - L - 0021 |        |          |                      |
| Project | Originator                               | Volume | Location | Type   Role   Number |





### Legend

- 
 Proposed road surface  
 Earthworks cutting  
 Earthworks embankment  
 Surface contours  
 10 m major interval  
 2.5 m minor interval  
 Location of representative viewpoint

## Visual barriers

-  Ridge lines  
 Tree belts and woodland  
 Hedgerow / Hedge-bank  
 Non-residential building

## Visual Receptors

-  Right Of Way - Bridleway  
 Right Of Way - Public Footpath  
 Receptor Buildings  
 (refer to Visual Effects Schedule)  
 Visual effect reference number  
 Summer Year 15  
 Winter Year 0

### Significance of visual effect

- 
- 10 Very large adverse  
9 Large adverse  
8 Moderate adverse  
7 Slight adverse  
6 Neutral  
5 Slight benefit  
4 Moderate benefit  
3 Large benefit  
2 Very large benefit  
1

[illegible]

Project Title

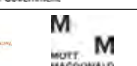
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

---

Client



Llywodraeth Cymru  
Welsh Government



Delivery Team

ARUP

**RICHARD**  
WHEELER & PARTNERS LLP  
PLANNING | LANDSCAPE | ENVIRONMENT

Drawing Title

FIGURE 9.8.11  
VISUAL EFFECTS DRAWING  
SHEET 11 OF 16

Suitability

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A1

Rev  
**P03**

100

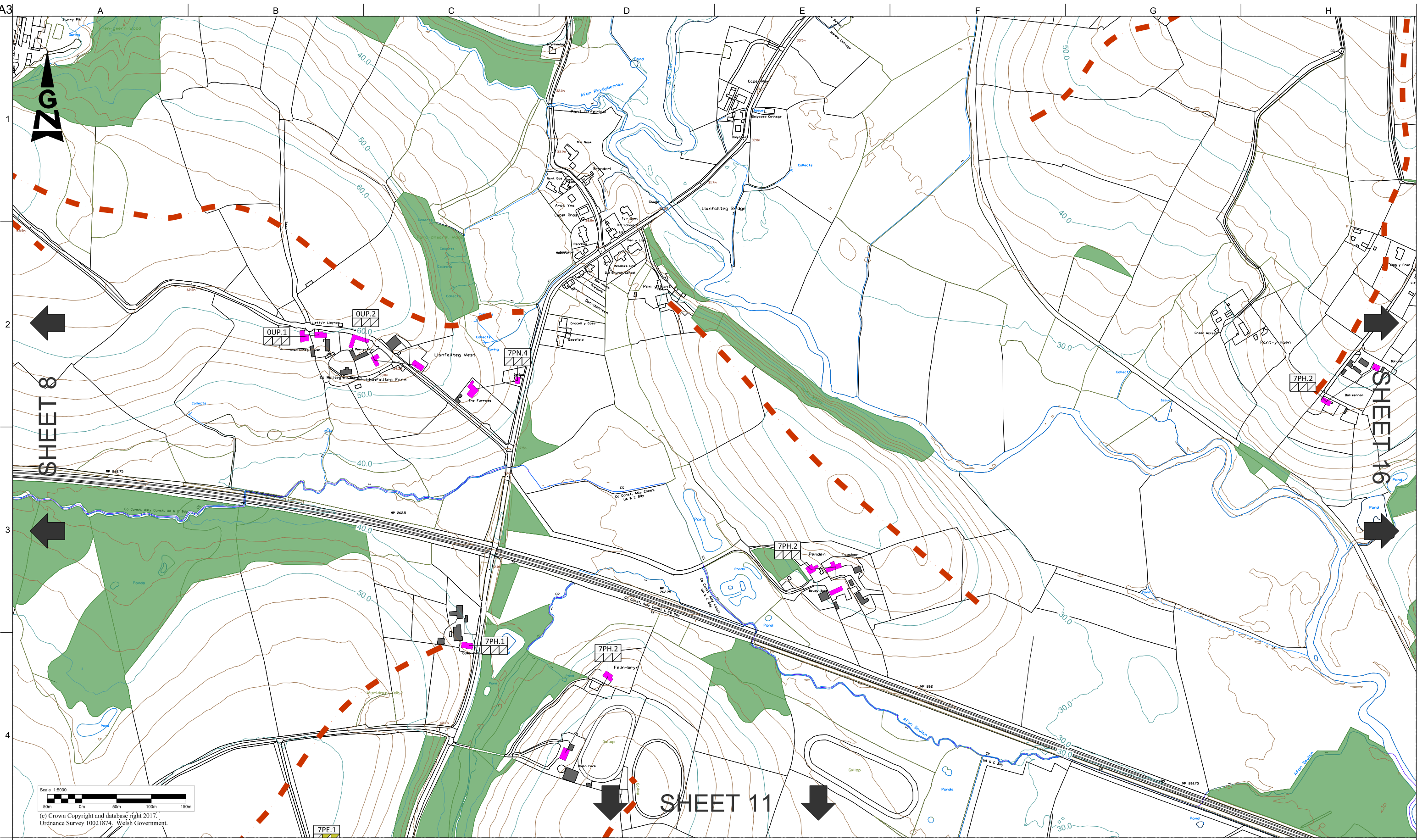
Name **A40LVP - RML - ELS -**

SWI

- DR - L - 0022

Do not scale





**Legend**

- Proposed road surface
- Earthworks cutting
- Earthworks embankment
- Surface contours
- 10 m major interval
- 2.5 m minor interval
- Location of representative viewpoint

**Visual barriers**

- Ridge lines
- Tree belts and woodland
- Hedgerow / Hedge-bank
- Non-residential building

**Visual Receptors**

- Right Of Way - Bridleway
- Right Of Way - Public Footpath
- Receptor Buildings (refer to Visual Effects Schedule)
- Visual effect reference number
- Construction
- Summer Year 15
- Winter Year 0

**Significance of visual effect**

- Very large adverse
- Large adverse
- Moderate adverse
- Slight adverse
- Neutral
- Slight benefit
- Moderate benefit
- Large benefit
- Very large benefit

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 |                                        | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Ulywodraeth Cymru  
Welsh Government

Delivery Team  
ARUP RICHARDS

Drawing Title  
FIGURE 9.8.12  
VISUAL EFFECTS DRAWING  
SHEET 12 OF 16

Scale at A1  
1:5000 @ A3

Rev  
P03

By  
RE

Date  
22/01/19

Chkd  
AS

Date  
22/01/19

Appd  
TE

Date  
18/03/19

Auth  
GD

Date  
18/03/19

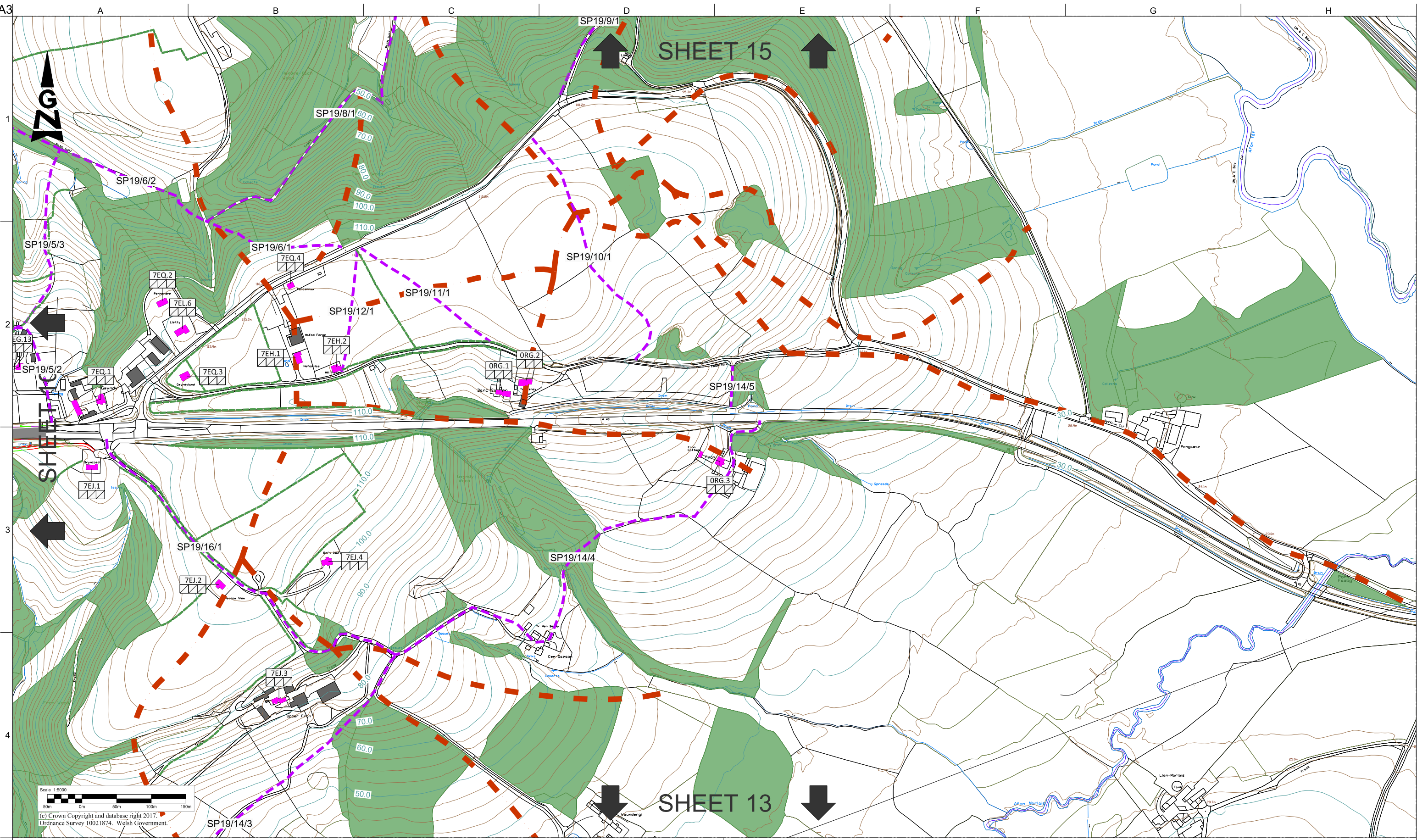
Name  
A40LVP-RML-ELS-SWI-DR-L-0023

Project  
Originator  
Volume  
Location  
Type  
Role  
Number









Legend

- Proposed road surface
- Earthworks cutting
- Earthworks embankment
- Surface contours
- 10 m major interval
- 2.5 m minor interval
- Location of representative viewpoint

Visual barriers

- Ridge lines
- Tree belts and woodland
- Hedgerow / Hedge-bank
- Non-residential building

Visual Receptors

- Right Of Way - Bridleway
- Right Of Way - Public Footpath
- Receptor Buildings (refer to Visual Effects Schedule)
- Visual effect reference number
- Construction
- Summer Year 15
- Winter Year 0

Significance of visual effect

- Very large adverse
- Large adverse
- Moderate adverse
- Slight adverse
- Neutral
- Slight benefit
- Moderate benefit
- Large benefit
- Very large benefit

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 |                                        | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uydwodraeth Cymru  
Welsh Government

Delivery Team  
ARUP RICHARDS

Drawing Title  
FIGURE 9.8.14  
VISUAL EFFECTS DRAWING  
SHEET 14 OF 16

S4 | SUITABLE FOR STAGE APPROVAL

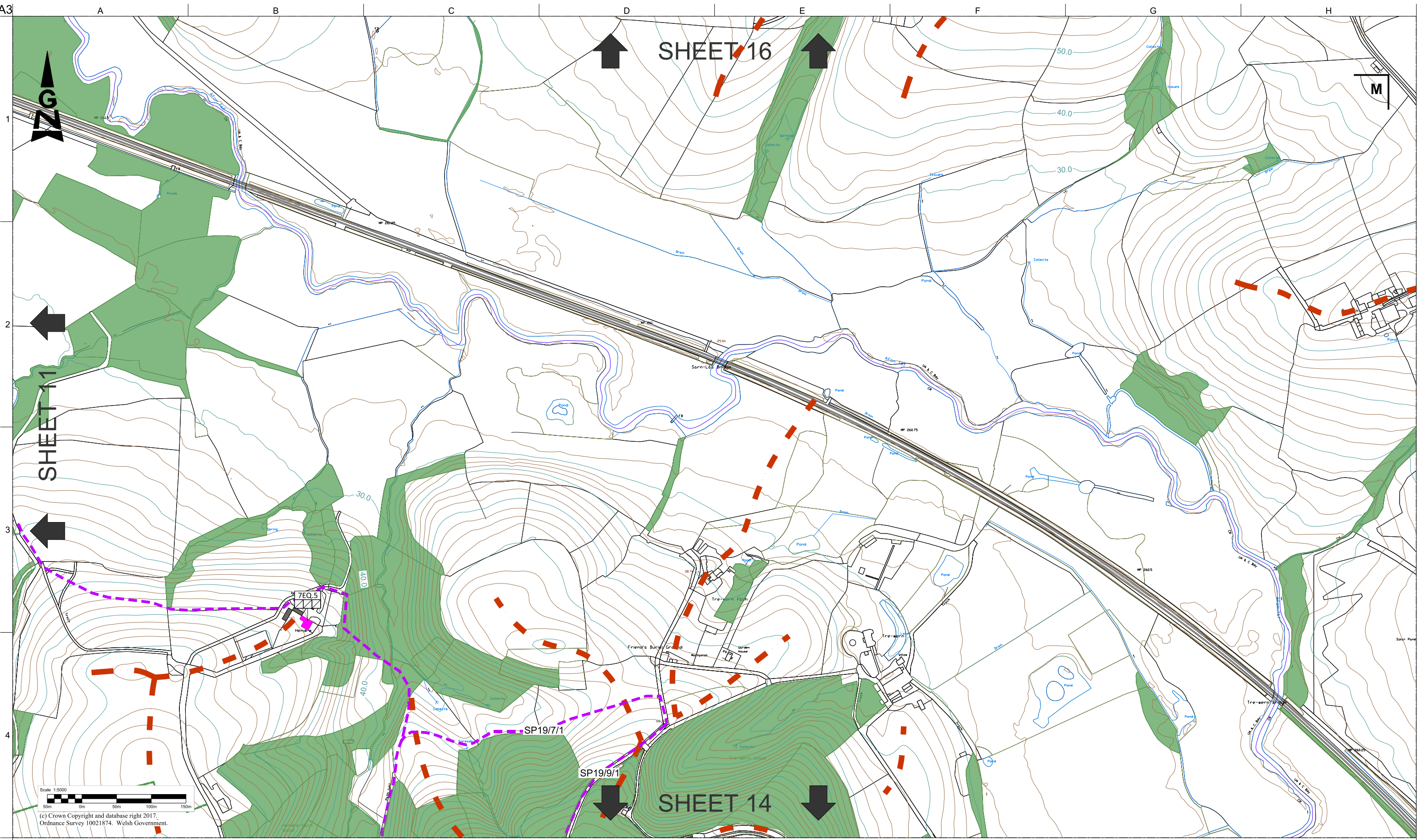
Scale at A1: 1:5000 @ A3

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P03  | RE       | AS       | TE       | GD       |
| Date | 22/01/19 | 22/01/19 | 18/03/19 | 18/03/19 |

Name  
A40LVP-RML-ELS-SWI-DR-L-0025

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





Legend

- Proposed road surface
- Earthworks cutting
- Earthworks embankment
- Surface contours
- 10 m major interval
- 2.5 m minor interval
- Location of representative viewpoint

Visual barriers

- Ridge lines
- Tree belts and woodland
- Hedgerow / Hedge-bank
- Non-residential building

Visual Receptors

- Right Of Way - Bridleway
- Right Of Way - Public Footpath
- Receptor Buildings (refer to Visual Effects Schedule)
- Visual effect reference number
- Construction
- Summer Year 15
- Winter Year 0

Significance of visual effect

- Very large adverse
- Large adverse
- Moderate adverse
- Slight adverse
- Neutral
- Slight benefit
- Moderate benefit
- Large benefit
- Very large benefit

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 |                                        | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uydwraeth Cymru  
Welsh Government

Delivery Team  
ARUP RICHARDS

Drawing Title  
FIGURE 9.8.15  
VISUAL EFFECTS DRAWING  
SHEET 15 OF 16

Suitability  
S4 | SUITABLE FOR STAGE APPROVAL

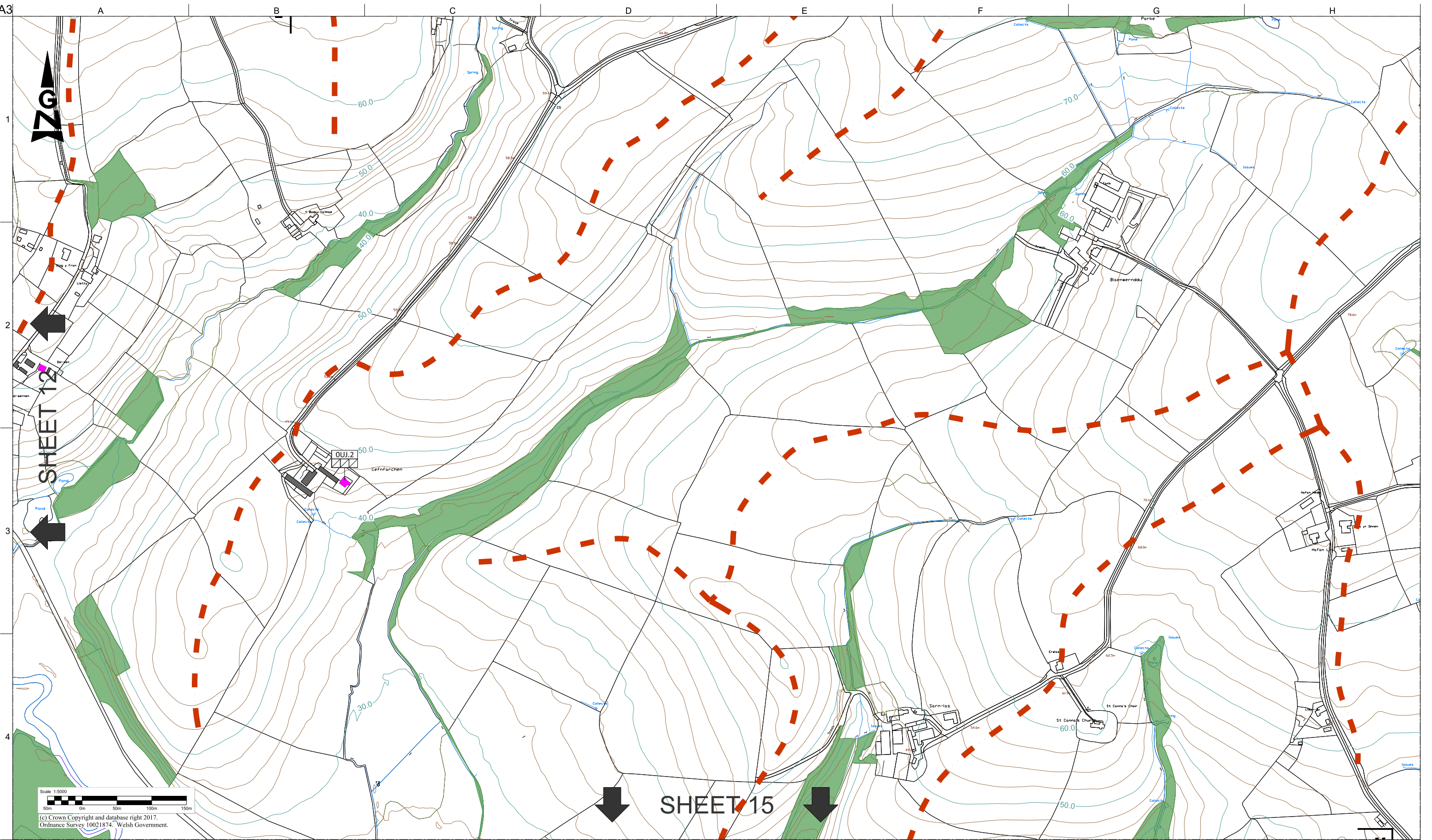
Scale at A1  
1:5000 @ A3

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P03  | RE       | AS       | TE       | GD       |
| Date | 22/01/19 | 22/01/19 | 18/03/19 | 18/03/19 |

Name  
A40LVP-RML-ELS-SWI-DR-L-0026

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





Legend

- Proposed road surface
- Earthworks cutting
- Earthworks embankment
- Surface contours
- 10 m major interval
- 2.5 m minor interval
- Location of representative viewpoint

Visual barriers

- Ridge lines
- Tree belts and woodland
- Hedgerow / Hedge-bank
- Non-residential building

Visual Receptors

- Right Of Way - Bridleway
- Right Of Way - Public Footpath
- Receptor Buildings (refer to Visual Effects Schedule)
- Visual effect reference number
- Construction
- Summer Year 15
- Winter Year 0

Significance of visual effect

- Very large adverse
- Large adverse
- Moderate adverse
- Slight adverse
- Neutral
- Slight benefit
- Moderate benefit
- Large benefit
- Very large benefit

| Rev | Date     | Description                            | By | Chkd | Appd | Auth |
|-----|----------|----------------------------------------|----|------|------|------|
| P01 | 02/10/18 |                                        | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES             | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | ADDRESSING INDEPENDENT REVIEW COMMENTS | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Ulywodraeth Cymru  
Welsh Government

Delivery Team  
ARUP RICHARDS

Drawing Title  
FIGURE 9.8.16  
VISUAL EFFECTS DRAWING  
SHEET 16 OF 16

Scale at A1  
1:5000 @ A3

Rev  
P03

By  
RE

Date  
22/01/19

Chkd  
AS

Date  
22/01/19

Appd  
TE

Date  
18/03/19

Auth  
GD

Date  
18/03/19

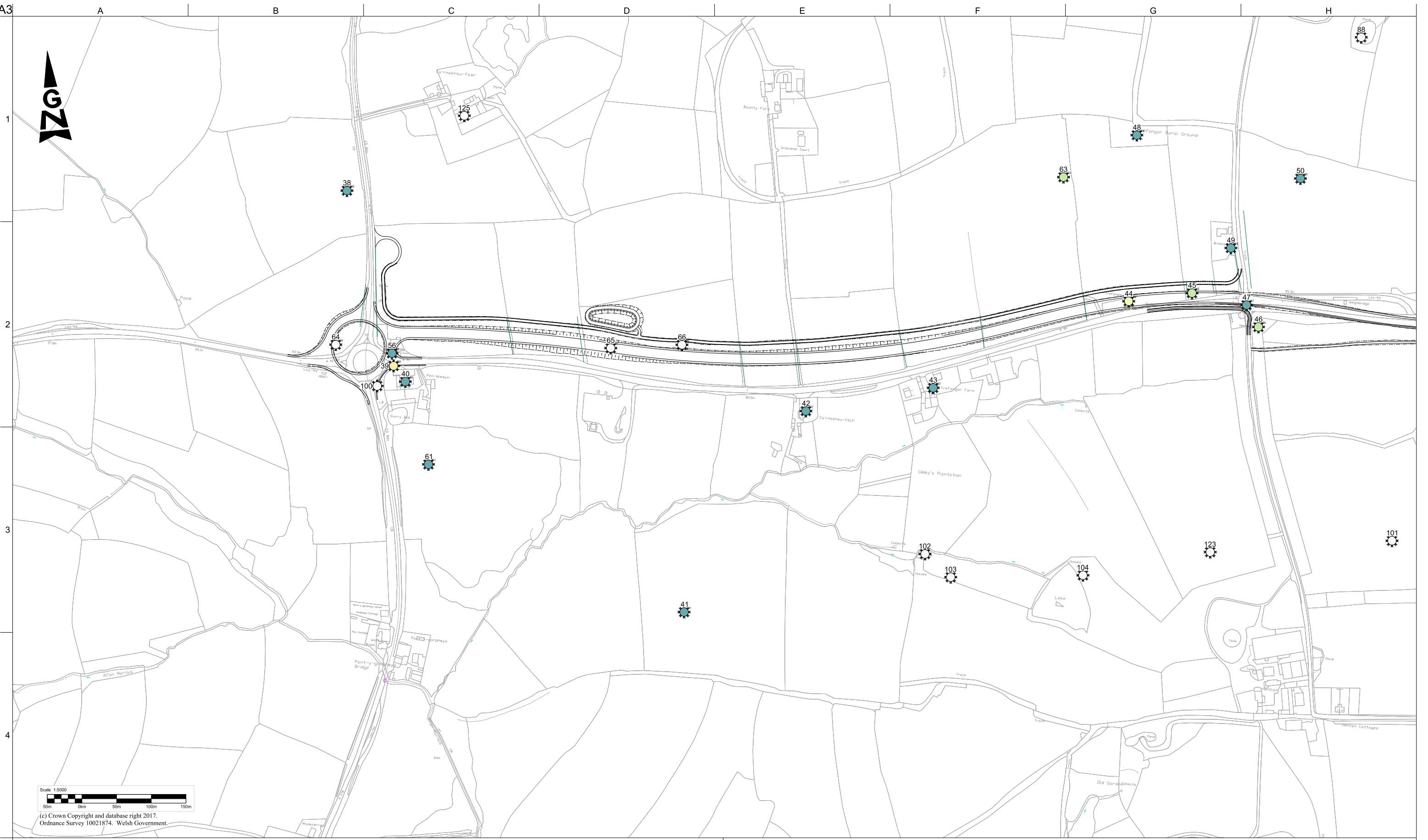
Name  
A40LVP-RML-ELS-SWI-DR-L-0027

Project  
Originator  
Volume  
Location  
Type  
Role  
Number









Legend

- Scheduled Ancient Monument
- Grade II\* Listed Building
- Grade II Listed Building
- Hedgerow Register

Significance of effect

- Very Large
- Large / Very Large
- Large
- Large / Moderate
- Moderate
- Moderate / Slight
- Slight
- Slight / Neutral
- Neutral
- Unknown

| Rev | Date     | Description                | By | Chkd | Appd | Auth |
|-----|----------|----------------------------|----|------|------|------|
| P01 | 02/10/18 | FIRST DRAFT ISSUE          | RE | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | MARCH 2019 ISSUE           | RE | AS   | TE   | GD   |
| P04 | 10/07/19 | RESPONSE TO COMMENTS       | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
ARUP RICHARDS

Drawing Title  
FIGURE 10.2A  
EFFECTS ON CULTURAL HERITAGE  
SHEET 1 OF 4

Suitability  
S4 | SUITABLE FOR STAGE APPROVAL

Scale at A3  
1:5000

|     |      |          |      |          |      |          |      |          |
|-----|------|----------|------|----------|------|----------|------|----------|
| Rev | By   | RE       | Chkd | AS       | Appd | TE       | Auth | GD       |
| P04 | Date | 18/04/19 | Date | 18/04/19 | Date | 18/04/19 | Date | 10/07/19 |

Name  
A40LVP-RML-EHR-SWI-DR-LH-0002

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





Legend

- Scheduled Ancient Monument
- Grade II\* Listed Building
- Grade II Listed Building
- Hedgerow Register

Significance of effect

- Very Large
- Large / Very Large
- Large
- Large / Moderate
- Moderate
- Moderate / Slight
- Slight
- Slight / Neutral
- Neutral
- Unknown

|     |          |                            |     |      |           |
|-----|----------|----------------------------|-----|------|-----------|
|     |          |                            |     |      |           |
| --- | ---      | ---                        | --- | ---  | ---       |
| --- | ---      | ---                        | --- | ---  | ---       |
| --- | ---      | ---                        | --- | ---  | ---       |
| --- | ---      | ---                        | --- | ---  | ---       |
| --- | ---      | ---                        | --- | ---  | ---       |
| P01 | 02/10/18 | FIRST DRAFT ISSUE          | AS  | AS   | GD GD     |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES | RE  | AS   | TE GD     |
| P03 | 18/03/19 | MARCH 2019 ISSUE           | RE  | AS   | TE GD     |
| P04 | 10/07/19 | RESPONSE TO COMMENTS       | RE  | AS   | TE GD     |
| Rev | Date     | Description                | By  | Chkd | Appd Auth |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

  
Ulywodraeth Cymru  
Welsh Government



Delivery Team



Drawing Title

FIGURE 10.2B  
EFFECTS ON CULTURAL HERITAGE  
SHEET 2 OF 4

Suitability

S4 | SUITABLE FOR STAGE APPROVAL

Scale at A1

1:5000

|      |          |      |          |      |          |
|------|----------|------|----------|------|----------|
| Rev  | By       | Chkd | Appd     | Auth |          |
| P04  | RE       | AS   | TE       | GD   |          |
| Date | 18/04/19 | Date | 18/04/19 | Date | 10/07/19 |

Name

A40LVP-RML-EHR-SWI-DR-LH-0004

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





Legend

- Scheduled Ancient Monument
- Grade II\* Listed Building
- Grade II Listed Building
- Hedgerow Register

Significance of effect

- Very Large
- Large / Very Large
- Large
- Large / Moderate
- Moderate

- Moderate / Slight
- Slight
- Slight / Neutral
- Neutral
- Unknown

| Rev | Date     | Description                | By | Chkd | Appd | Auth |
|-----|----------|----------------------------|----|------|------|------|
| P01 | 02/10/18 | FIRST DRAFT ISSUE          | AS | AS   | GD   | GD   |
| P02 | 19/11/18 | RE-LINK OF REFERENCE FILES | RE | AS   | TE   | GD   |
| P03 | 18/03/19 | MARCH 2019 ISSUE           | RE | AS   | TE   | GD   |
| P04 | 10/07/19 | RESPONSE TO COMMENTS       | RE | AS   | TE   | GD   |

Project Title  
A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client  
Uywoedraeth Cymru  
Welsh Government

Delivery Team  
ARUP RICHARDS

Drawing Title  
FIGURE 10.2C  
EFFECTS ON CULTURAL HERITAGE  
SHEET 3 OF 4

Scale at A1  
1:5000

Rev  
P04

By  
RE

Date  
18/04/19

Chkd  
AS

Date  
18/04/19

Appd  
TE

Date  
18/04/19

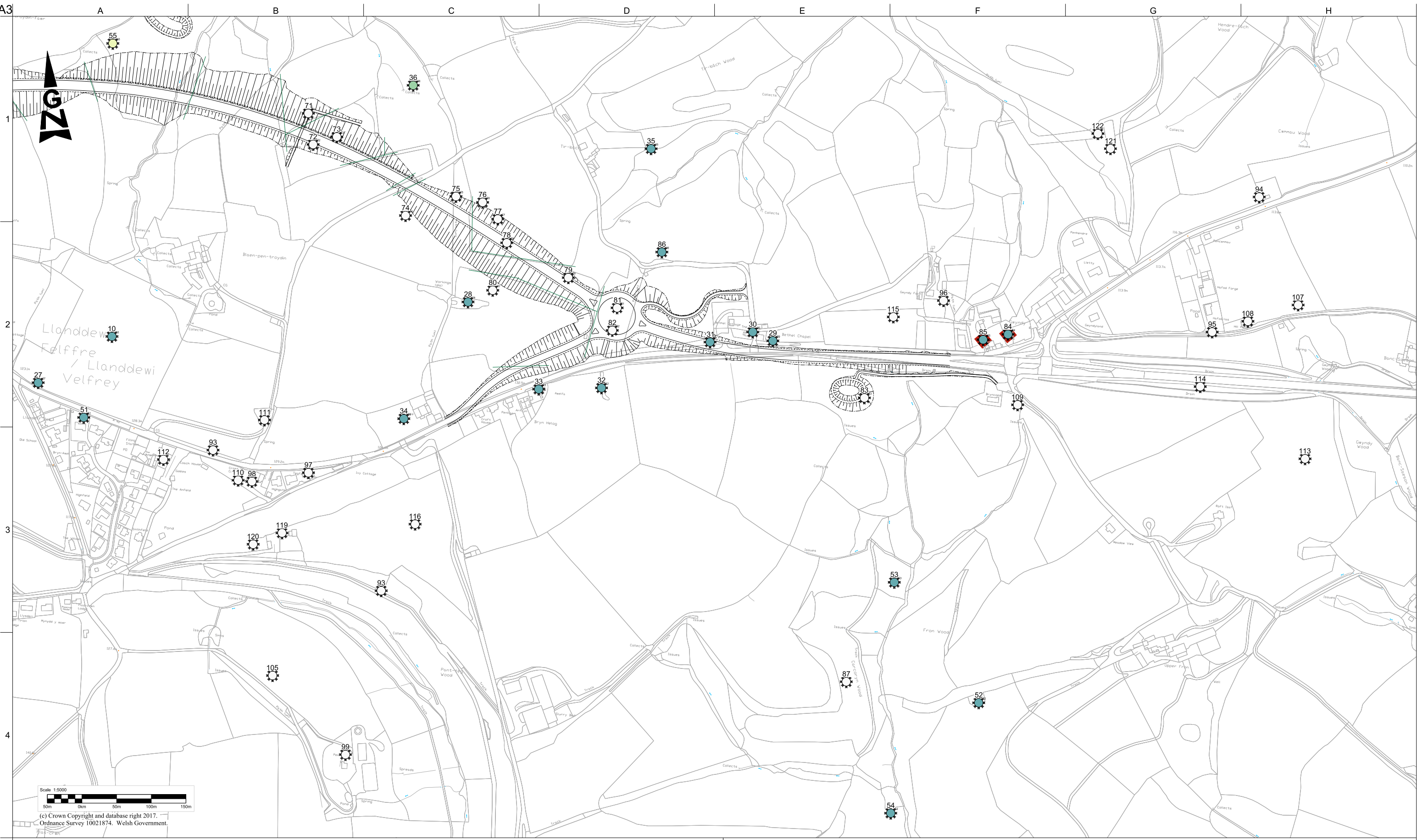
Auth  
GD

Date  
10/07/19

Name  
A40LVP-RML-EHR-SWI-DR-LH-0005

Project  
Originator  
Volume  
Location  
Type  
Role  
Number





Scheduled Ancient Monument

★

Grade II\* Listed Building

◆

Grade II Listed Building

-----

Hedgerow Register

Very Large

Large / Very Large

Large

Large / Moderate

Moderate

Moderate / Slight

Slight

Slight / Neutral

Neutral

Unknown

|     |          |                   |     |      |           |
|-----|----------|-------------------|-----|------|-----------|
|     |          |                   |     |      |           |
| --- | ---      | ---               | --- | ---  | ---       |
| --- | ---      | ---               | --- | ---  | ---       |
| --- | ---      | ---               | --- | ---  | ---       |
| --- | ---      | ---               | --- | ---  | ---       |
| --- | ---      | ---               | --- | ---  | ---       |
| --- | ---      | ---               | --- | ---  | ---       |
| --- | ---      | ---               | --- | ---  | ---       |
| --- | ---      | ---               | --- | ---  | ---       |
| P01 | 10/07/19 | FIRST DRAFT ISSUE | RE  | AS   | TE GD     |
| Rev | Date     | Description       | By  | Chkd | Appd Auth |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Delivery Team

ARUP

Drawing Title

FIGURE 10.2D EFFECTS ON CULTURAL HERITAGE SHEET 4 OF 4

Suitability

S4 | SUITABLE FOR STAGE APPROVAL

Scale at A1

1:5000

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P01  | RE       | AS       | TE       | GD       |
| Date | 18/04/19 | 18/04/19 | 18/04/19 | 10/07/19 |

Name

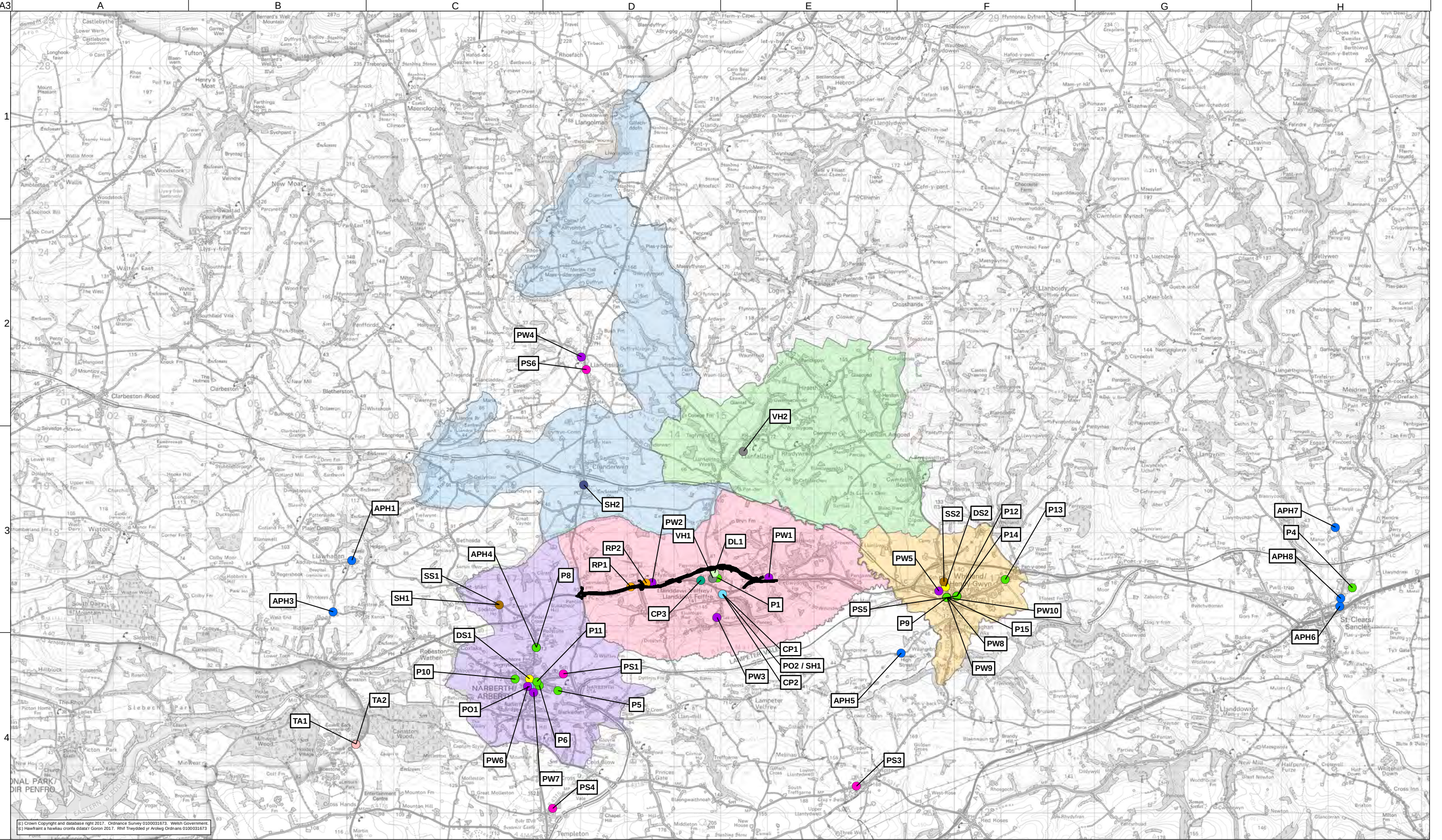
A40LVP-RML-EHR-SWI-DR-LH-0006

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|









LEGEND

— PROPOSED ALIGNMENT

● AGED PERSON HOME (APH)

● COMMERCIAL PROPERTY (CP)

● DEVELOPMENT LAND (DL)

● DOCTOR'S SURGERIES (DS)

● PARKS, PLAY AREAS, SPORTS CENTRES (P)

● PLACES OF WORSHIP (PW)

● POST OFFICES (PO)

● PRIMARY SCHOOLS (PS)

● RESIDENTIAL PROPERTY (RP)

● SECONDARY SCHOOLS (SS)

● SHOPS (SH)

● TOURIST/VISITOR ATTRACTIONS (TA)

● VILLAGE HALLS (VH)

● CLYNDERWEN

● LLANFALLTEG

● LLANDEWY VELFREY

● NARBERTH

● WHITLAND

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction

None

Maintenance / Cleaning

None

Use

None

Decommissioning / Demolition

None

| Rev | Date     | Description               | By | Chkd | Appd | Auth |
|-----|----------|---------------------------|----|------|------|------|
| P01 | 10/09/18 | UPDATE FOLLOWING COMMENTS | EB | MG   | TE   | GD   |

Project Title

A40 LLANDEWY VELFREY TO PENBLEWIN IMPROVEMENTS

Client

Uywodraeth Cymru  
Welsh Government

ARCADIS

MOTT MACDONALD

Delivery Team

ARUP

RICHARDS

Drawing Title

FIGURE 11.2  
LOCAL COMMUNITY ASSETS

Subsidiary

S4 | SUITABLE FOR STAGE APPROVAL

Scale at A3

1:75,000

| Rev | By | Chkd | Appd | Auth |
|-----|----|------|------|------|
| P01 | EB | MG   | TE   | GD   |

Date

10/09/18

Date

10/09/18

Date

10/09/18

Date

10/09/18

Name

A40LVP - ARP - GEN - SWI - DR - G - 0002

Project

Originator

Volume

Location

Type

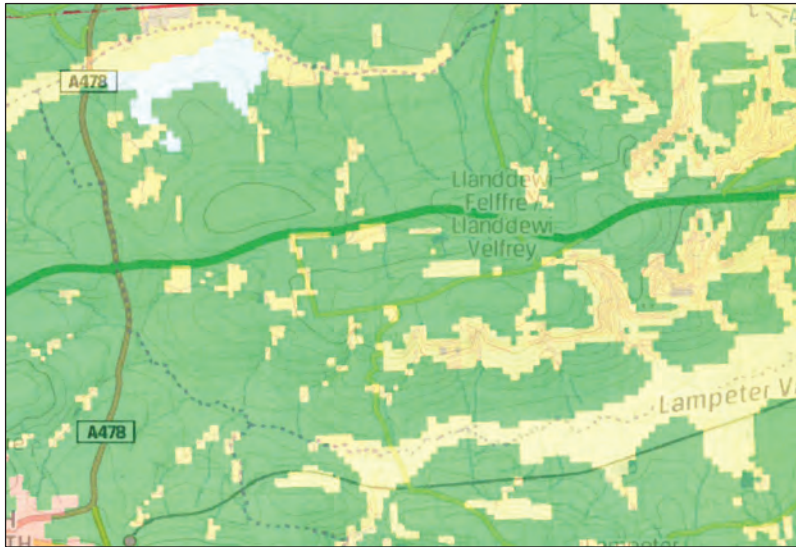
Role

Number



FIGURE 12.1A

PREDICTIVE AGRICULTURAL LAND CLASSIFICATION MAP (2017)



Key

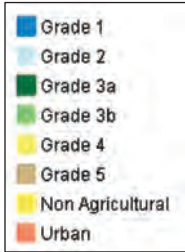
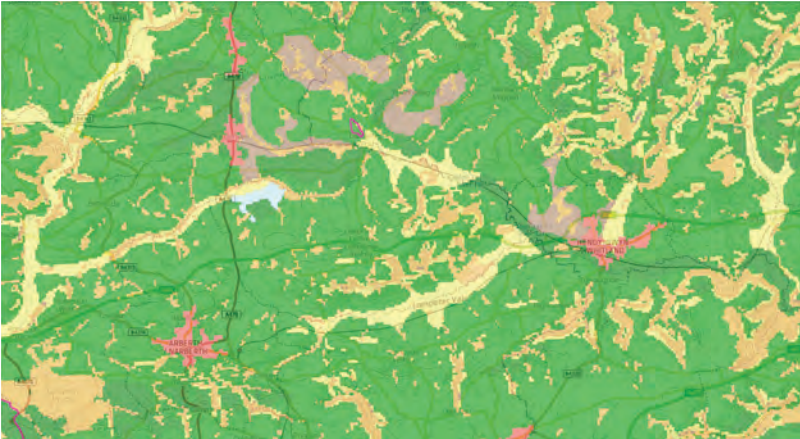
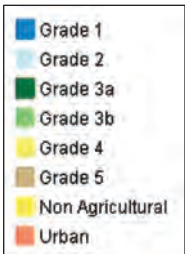


FIGURE 12.1B

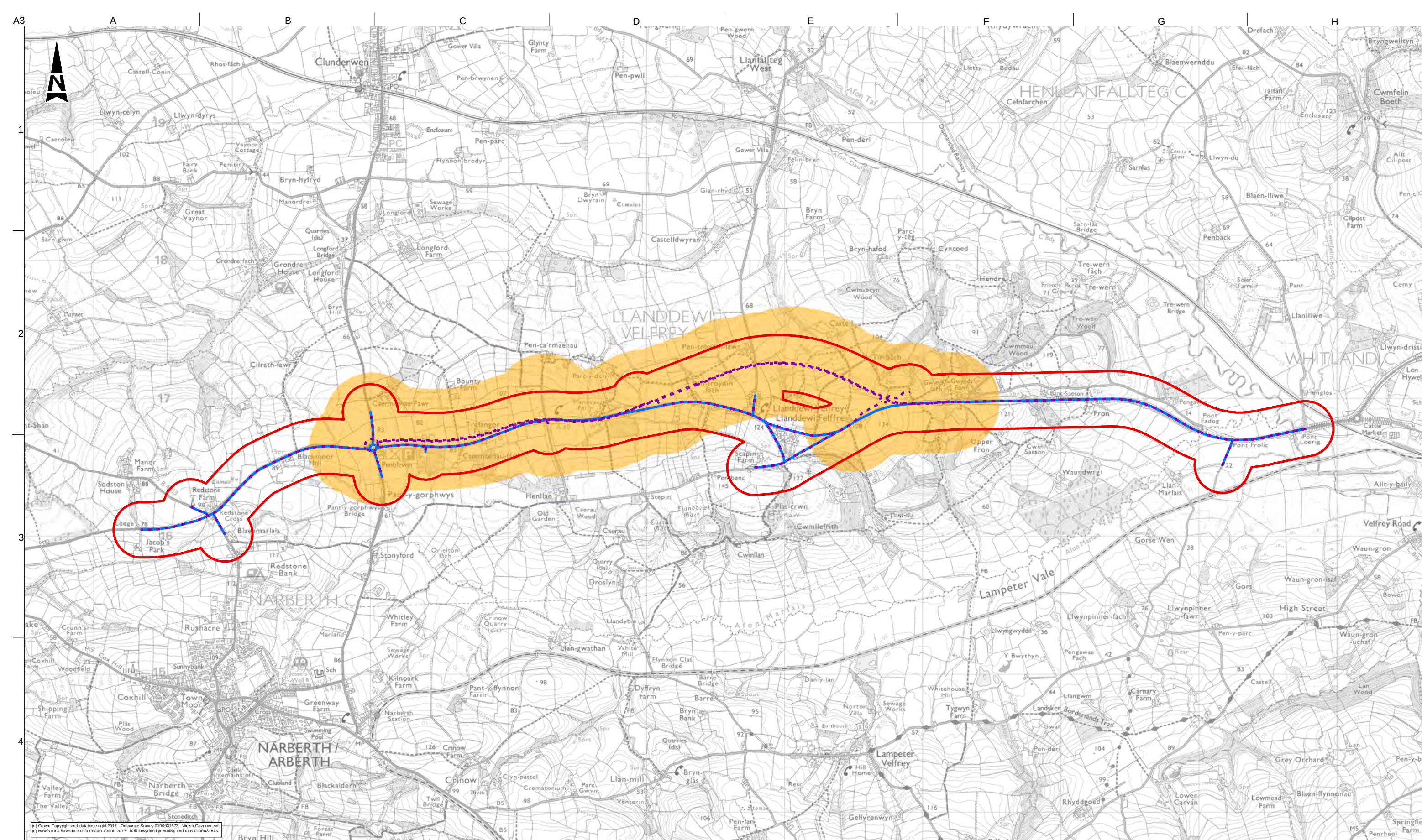
WIDER AREA PREDICTIVE ALC MAP (2017)



Key







LEGEND

-  MODELLED ROADS IN BASELINE AND DO MINIMUM SCENARIO  
 MODELLED ROADS IN DO SOMETHING SCENARIO  
 OPERATIONAL PHASE  
 CONSTRUCTION PHASE

## SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |
|------------------------------|
| Construction                 |
| None                         |
| Maintenance / Cleaning       |
| None                         |
| Use                          |
| None                         |
| Decommissioning / Demolition |
| None                         |

| P03  | 10/09/18 | UPDATE FOLLOWING COMMENTS |  |  |  | EB | LAS  | TE   | GD   |
|------|----------|---------------------------|--|--|--|----|------|------|------|
| Rev. | Date     | Description               |  |  |  | By | Crsd | Appd | Auth |

Project Title

A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client



Llywodraeth Cymru  
Welsh Government



Delivery Team



Drawing Title

FIGURE 13.1  
STUDY AREA OF THE AIR  
QUALITY ASSESSMENT

Suitability

**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3

1:25,000

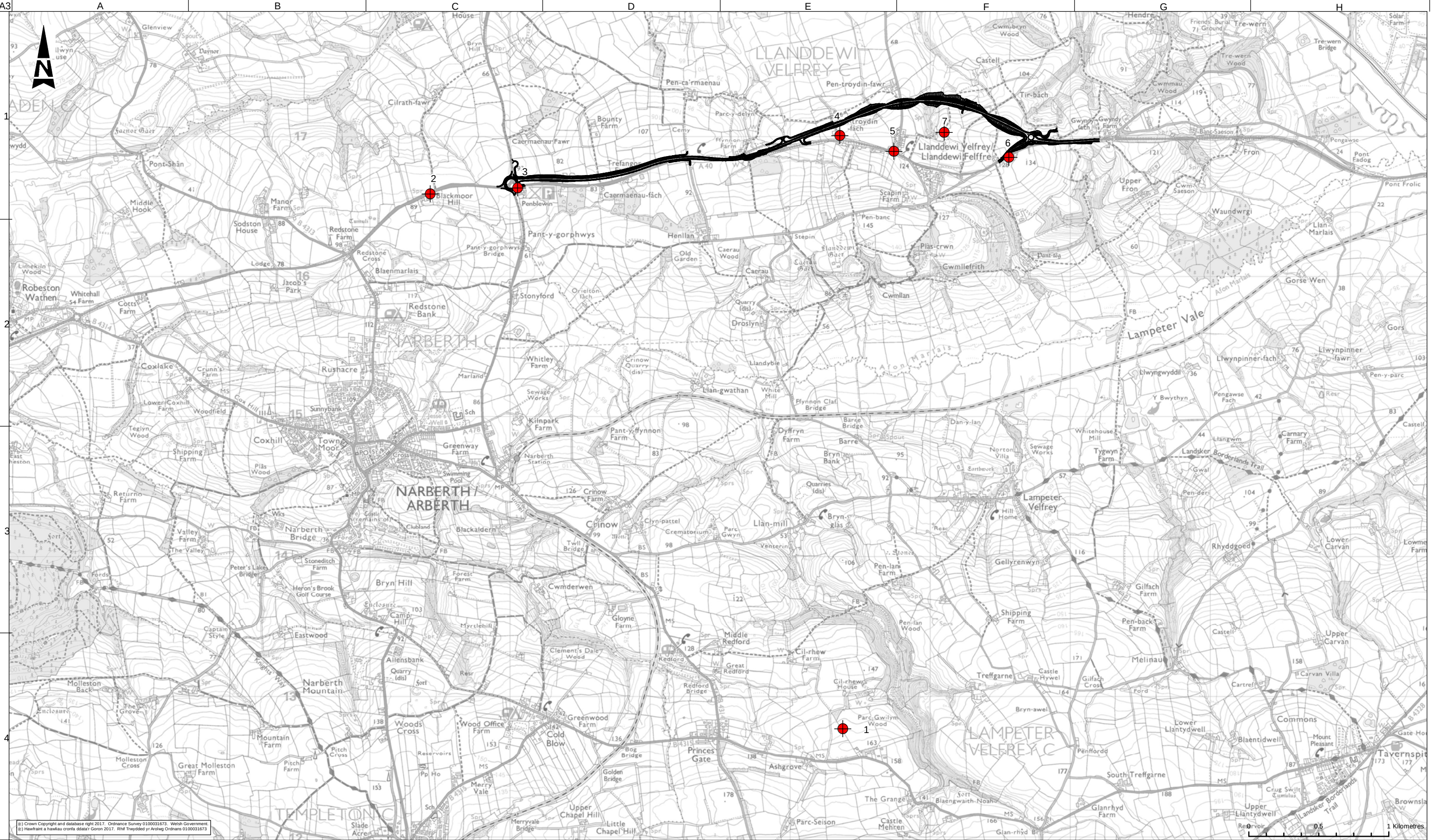
|            |                  |                  |                  |                  |
|------------|------------------|------------------|------------------|------------------|
| Rev        | By               | Chkd             | Appd             | Auth             |
| <b>P03</b> | EB               | LAS              | TE               | GD               |
|            | Date<br>10/09/18 | Date<br>10/09/18 | Date<br>10/09/18 | Date<br>10/09/18 |

Name \_\_\_\_\_

A40LVP - ARP - VAQ - SWI - DR - LA - 0002

| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

AIR QUALITY MONITORING LOCATIONS

PROPOSED ALIGNMENT

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |
|------------------------------|
| Construction                 |
| None                         |
| Maintenance / Cleaning       |
| None                         |
| Use                          |
| None                         |
| Decommissioning / Demolition |
| None                         |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| PO5 | 06/02/19 | UPDATE FOLLOWING COMMENTS | EB | LAS  | TE   | -    |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 13.2 AIR QUALITY MONITORING LOCATIONS**

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

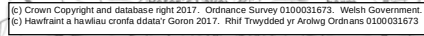
Scale at A3  
1:25,000

|      |          |          |          |      |
|------|----------|----------|----------|------|
| Rev  | By       | Chkd     | Appd     | Auth |
| PO5  | EB       | LAS      | TE       | --   |
| Date | 06/02/19 | 06/02/19 | 06/02/19 | --   |

Name  
**A40LVP - ARP - VAQ - SWI - DR - LA - 0001**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





- LA -

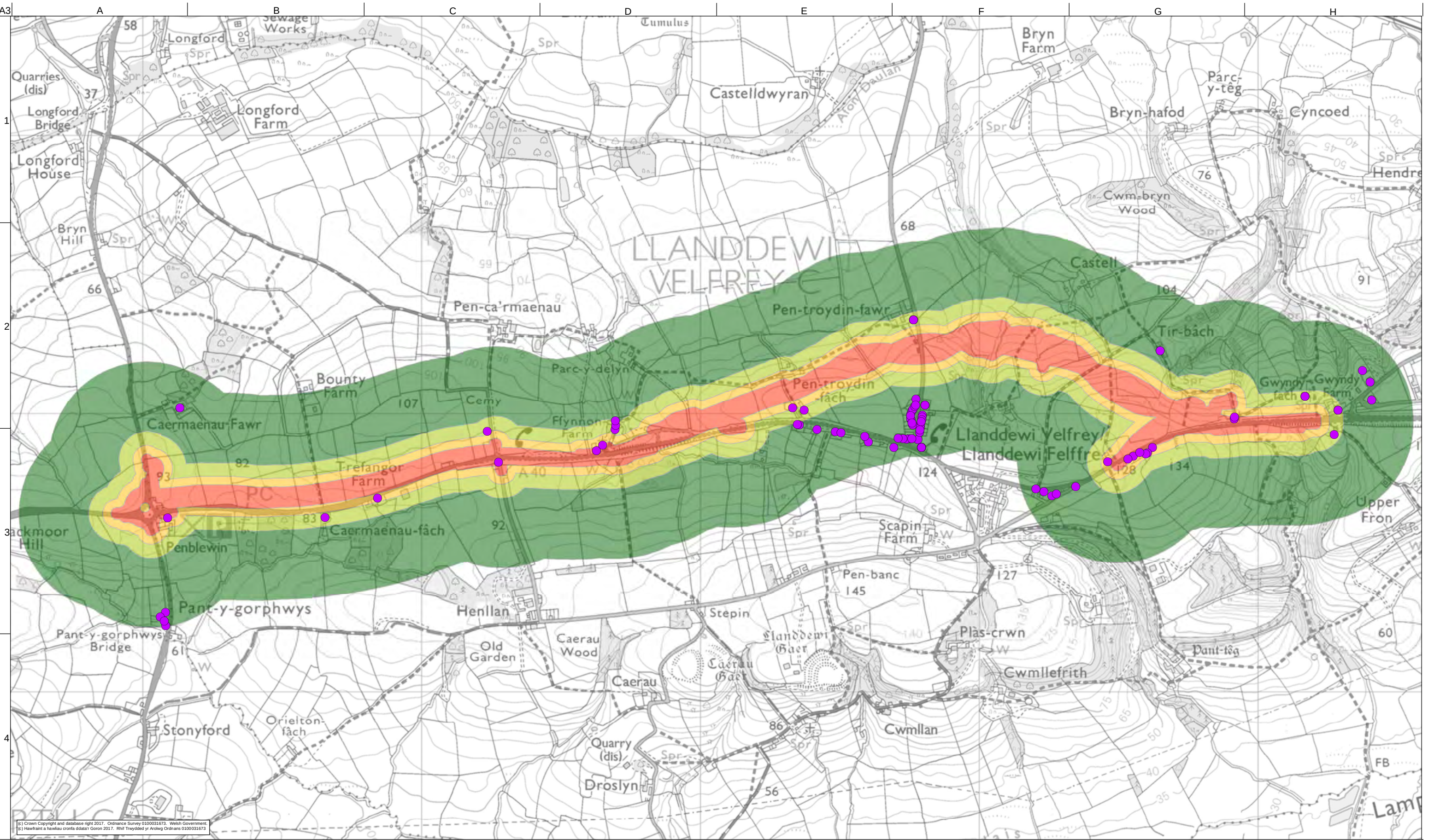












**LEGEND**

- RECEPTORS SENSITIVE TO DUST
- 20 METRES
- 50 METRES
- 100 METRES
- 350 METRES

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

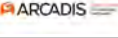
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| P03 | 10/09/18 | UPDATE FOLLOWING COMMENTS | EB | LAS  | TE   | GD   |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Ulywodraeth Cymru  
Welsh Government

Delivery Team  
  
  
  


Drawing Title  
**FIGURE 13.8 CONSTRUCTION DUST BUFFERS**

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3  
1:12,500

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P03  | EB       | LAS      | TE       | GD       |
| Date | 10/09/18 | 10/09/18 | 10/09/18 | 10/09/18 |

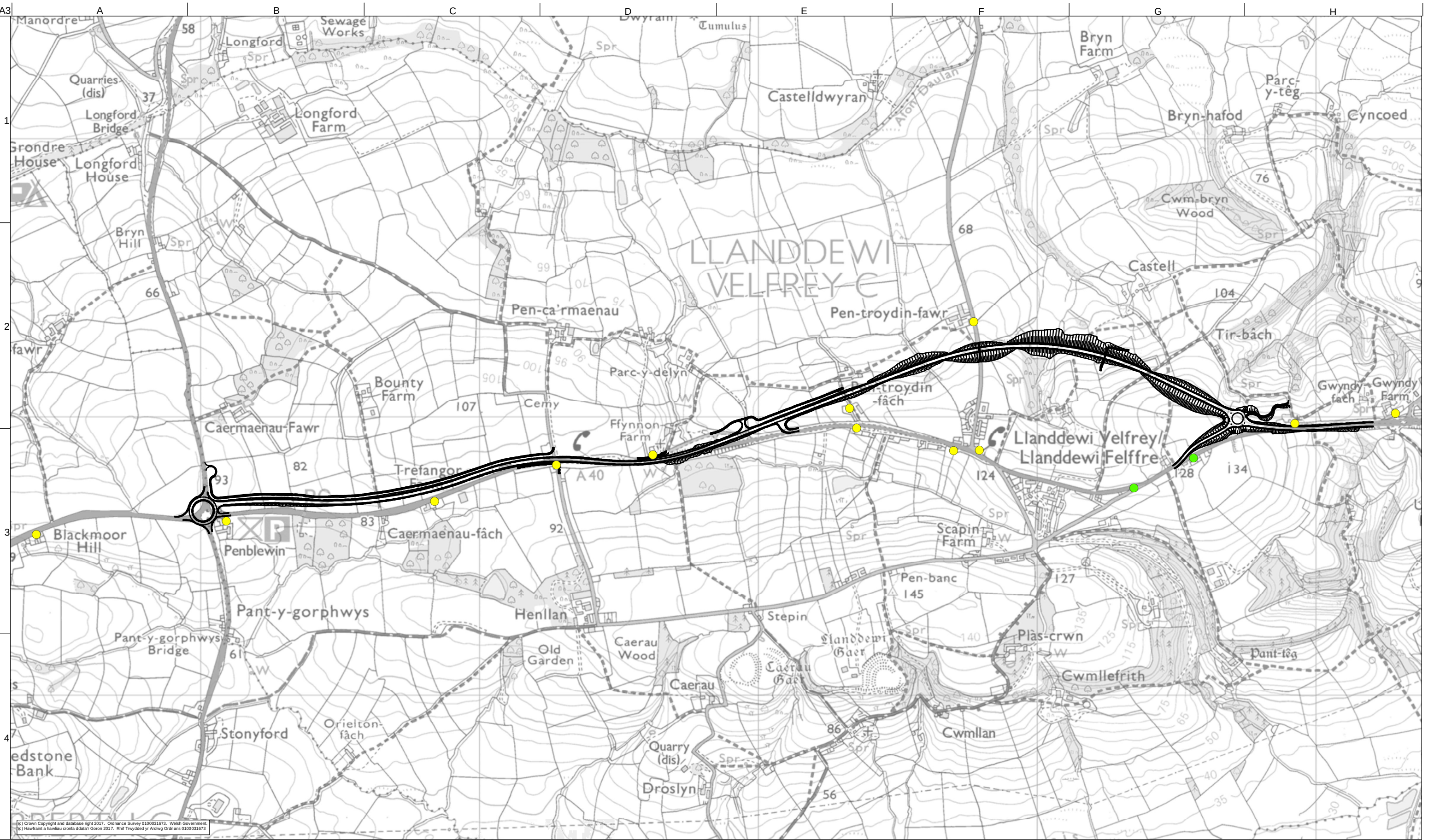
Name  
**A40LVP - ARP - VAQ - SWI - DR - LA - 0002**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|









**LEGEND**

- PROPOSED ALIGNMENT
- MINOR BENEFICIAL IMPACT
- NEGLECTIBLE IMPACT

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P03 | 10/09/18 | UPDATE FOLLOWING COMMENTS | EB | LAS  | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Ulywodraeth Cymru  
Welsh Government

Delivery Team  
  

Drawing Title  
**FIGURE 13.11  
IMPACT OF THE SCHEME ON  
PM<sub>10</sub> CONCENTRATIONS 2020**

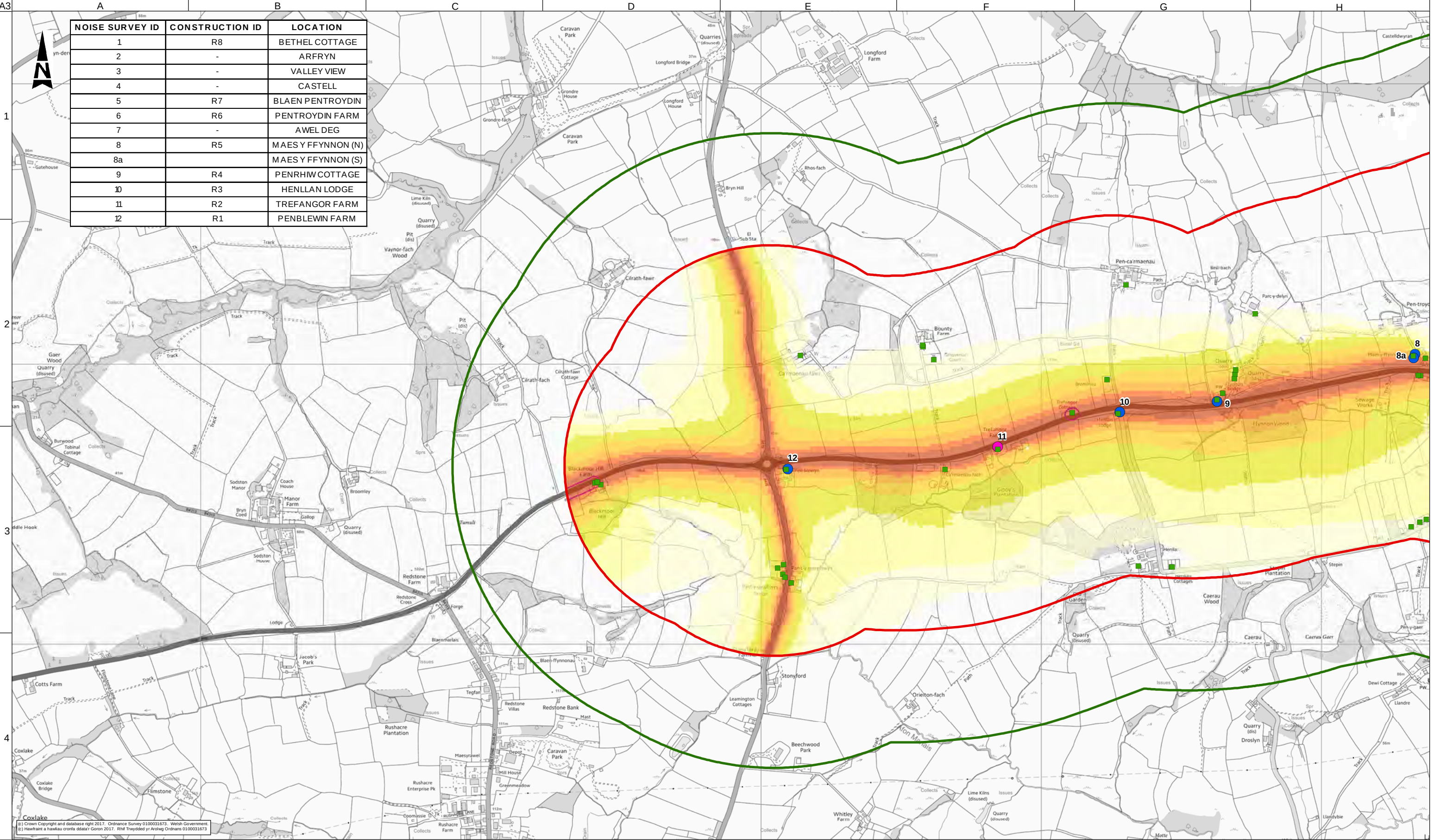
Scale at A3  
**1:12,500**

|            |          |          |          |          |
|------------|----------|----------|----------|----------|
| Rev        | By       | Chkd     | Appd     | Auth     |
| <b>P03</b> | EB       | LAS      | TE       | GD       |
| Date       | 10/09/18 | 10/09/18 | 10/09/18 | 10/09/18 |

Name  
**A40LVP - ARP - VAQ - SWI - DR - LA - 0006**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

- NOISE ACTION PLANNING PRIORITY AREAS
- 1KM BOUNDARY
- DETAILED NOISE CALCULATION AREA
- RESIDENTIAL OPERATIONAL ASSESSMENT LOCATION
- NON-RESIDENTIAL OPERATIONAL ASSESSMENT LOCATION
- NOISE MONITORING LOCATIONS**
- ATTENDED
- UNATTENDED LOGGER

**PREDICTED BASELINE NOISE LEVEL dB LA10, 18HR FREE-FIELD**

|         |
|---------|
| < 47    |
| 47 - 50 |
| 50 - 53 |
| 53 - 56 |
| 56 - 59 |
| 59 - 62 |
| 62 - 65 |
| > 65    |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| POS | 15/01/19 | UPDATE FOLLOWING COMMENTS | EB | GH   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  
  


Drawing Title  
**FIGURE 14.1A  
NOISE STUDY AREA, NOISE SURVEY AND  
ASSESSMENT LOCATIONS AND BASELINE  
NOISE CONTOUR IN 2021**

Scale at A3  
**1:12,500**

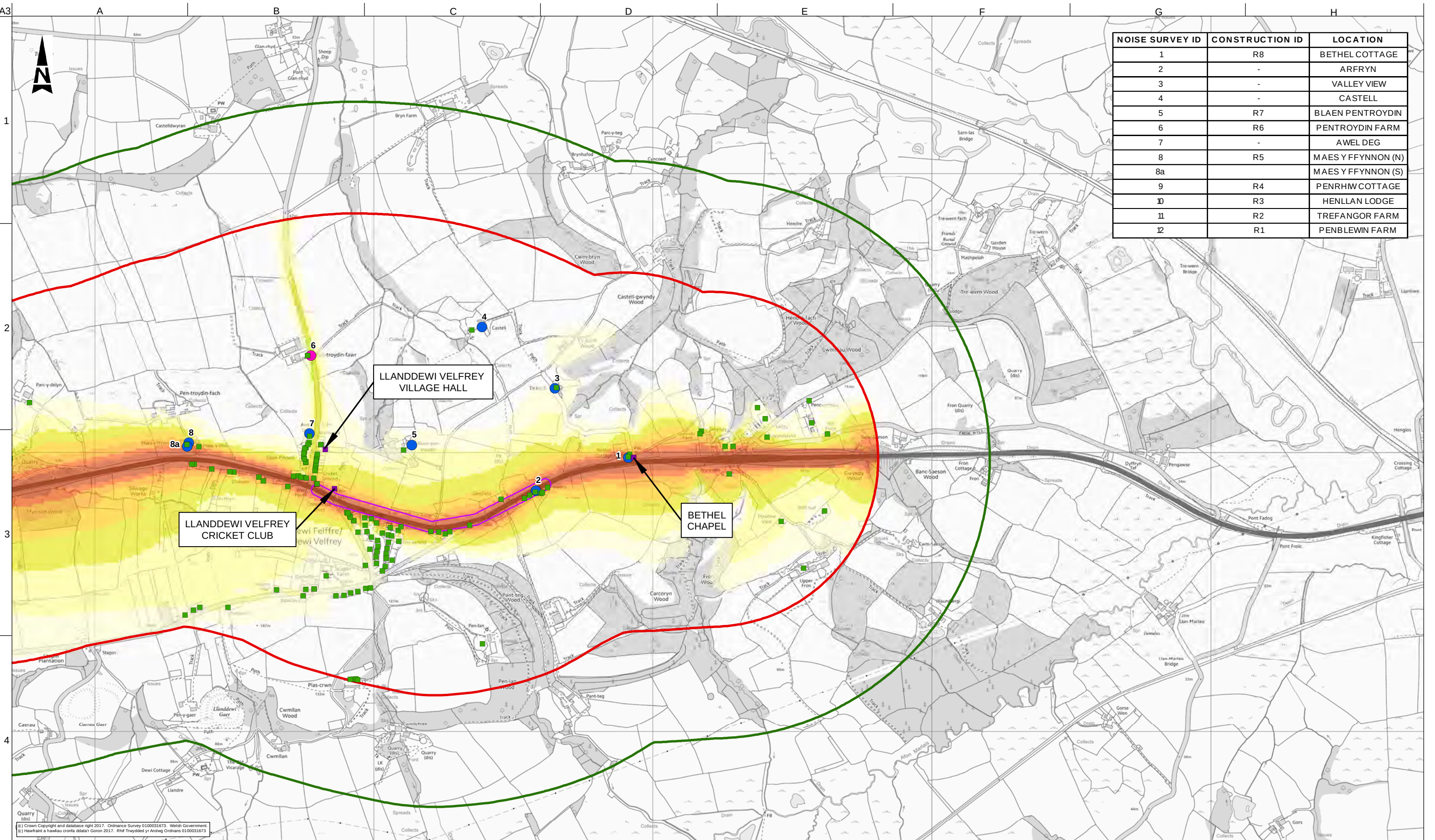
|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P05  | EB       | GH       | TE       | GD       |
| Date | 15/01/19 | 15/01/19 | 15/01/19 | 15/01/19 |

Name  
**A40LVP - ARP - ENV - SWI - DR - LA - 0001**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|

Note 1. Equivalent façade noise levels can be obtained by adding 2.5dB to the displayed level





| NOISE SURVEY ID | CONSTRUCTION ID | LOCATION           |
|-----------------|-----------------|--------------------|
| 1               | R8              | BETHEL COTTAGE     |
| 2               | -               | ARFRYN             |
| 3               | -               | VALLEY VIEW        |
| 4               | -               | CASTELL            |
| 5               | R7              | BLAEN PENTROYDIN   |
| 6               | R6              | PENTROYDIN FARM    |
| 7               | -               | AWEL DEG           |
| 8               | R5              | MAES Y FFYNNON (N) |
| 8a              |                 | MAES Y FFYNNON (S) |
| 9               | R4              | PENRHW COTTAGE     |
| 10              | R3              | HENLLAN LODGE      |
| 11              | R2              | TREFANGOR FARM     |
| 12              | R1              | PENBLEWIN FARM     |

**LEGEND**

- NOISE ACTION PLANNING PRIORITY AREAS
- 1KM BOUNDARY
- DETAILED NOISE CALCULATION AREA
- RESIDENTIAL OPERATIONAL ASSESSMENT LOCATION
- NON-RESIDENTIAL OPERATIONAL ASSESSMENT LOCATION
- NOISE MONITORING LOCATIONS
- ATTENDED
- UNATTENDED LOGGER

**PREDICTED BASELINE NOISE LEVEL dBA LA10, 18HR FREE-FIELD**

|         |
|---------|
| < 47    |
| 47 - 50 |
| 50 - 53 |
| 53 - 56 |
| 56 - 59 |
| 59 - 62 |
| 62 - 65 |
| > 65    |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

**FIGURE 14.1B**

**NOISE STUDY AREA, NOISE SURVEY AND ASSESSMENT LOCATIONS AND BASELINE NOISE CONTOUR IN 2021**

Scale at A3: 1:12,500

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P05  | EB       | GH       | TE       | GD       |
| Date | 15/01/19 | 15/01/19 | 15/01/19 | 15/01/19 |

Name: A40LVP - ARP - ENV - SWI - DR - LA - 0005

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|

Project Title: A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS

Client: Uywodraeth Cymru Welsh Government

Delivery Team: ARCADIS, MOTT MACDONALD, ARUP, RICHARDS

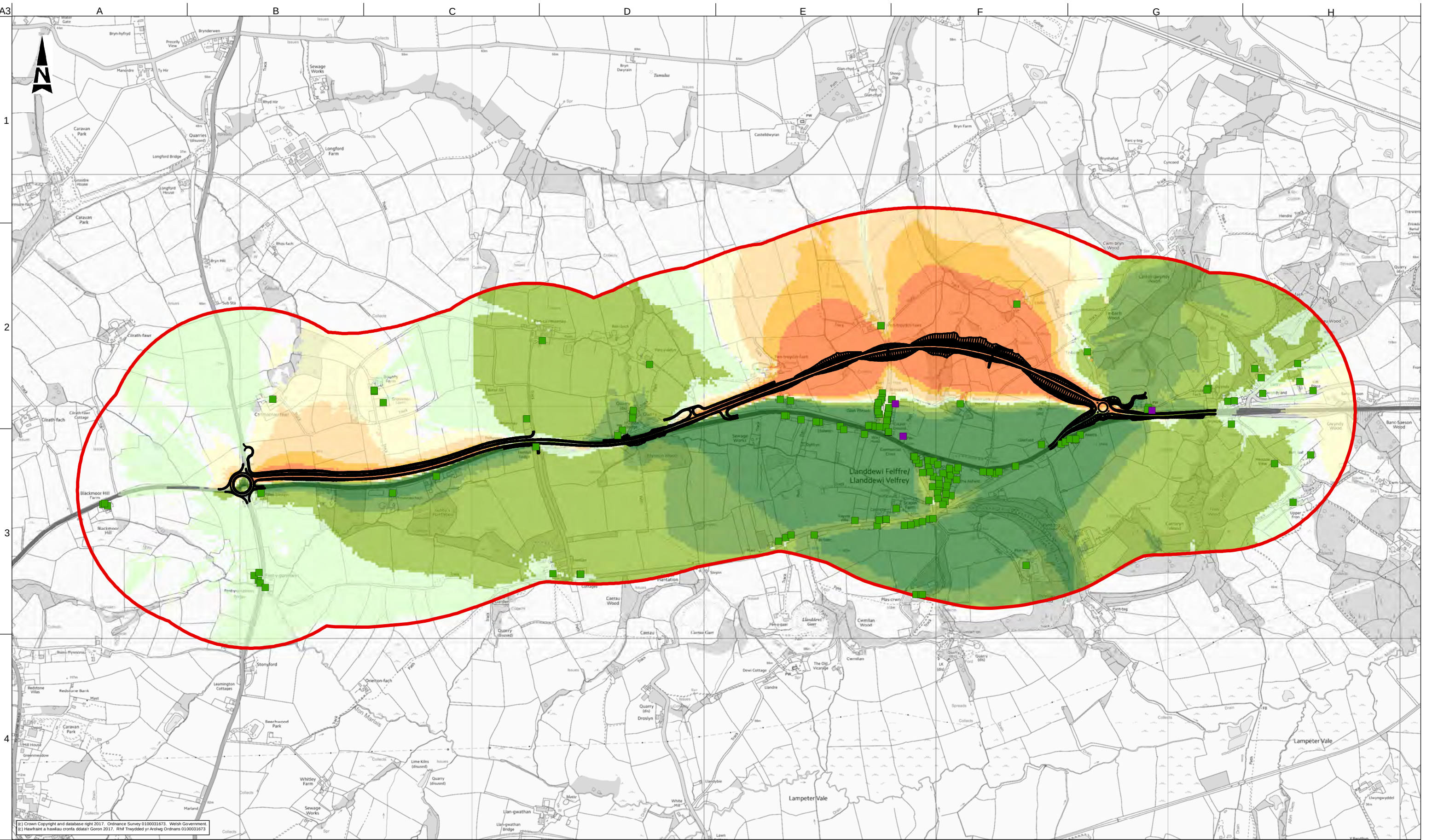
Rev: 15/02/19 UPDATE FOLLOWING COMMENTS

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| 1   | 15/02/19 | UPDATE FOLLOWING COMMENTS | EB | GH   | TE   | GD   |









**LEGEND**

- PROPOSED ALIGNMENT
- NON-RESIDENTIAL OPERATIONAL ASSESSMENT LOCATION
- RESIDENTIAL OPERATIONAL ASSESSMENT LOCATION
- DETAILED NOISE CALCULATION AREA

**SHORT TERM NOISE CHANGE (dB LA10, 18HR)**

- < -5
- 5 to -3
- 3 to -1
- 1 to -0.1
- 0.1 to 1
- 0.1 to 1
- 1 to 3
- 3 to 5
- > 5

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| P05 | 15/01/19 | UPDATE FOLLOWING COMMENTS | EB | GH   | TE   | GD   |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Uywodraeth Cymru  
Welsh Government

Delivery Team  
  
  


Drawing Title  
**FIGURE 14.3  
NOISE CHANGES (LA10,18HR) AS A RESULT  
OF THE SCHEME IN THE BASELINE YEAR**

Scale at A3  
1:15,000

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P05  | EB       | GH       | TE       | GD       |
| Date | 15/01/19 | 15/01/19 | 15/01/19 | 15/01/19 |

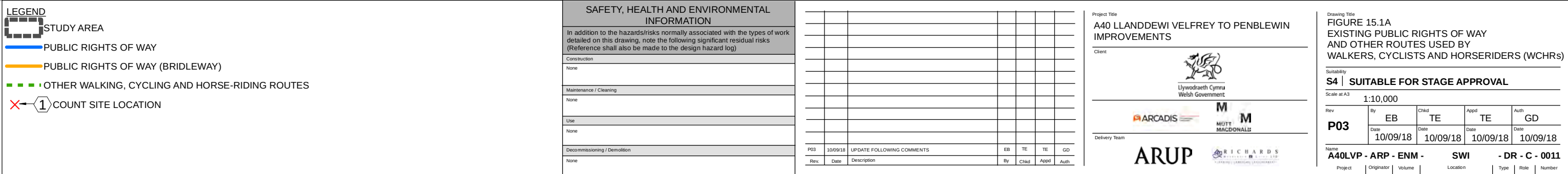
Name  
**A40LVP - ARP - ENV - SWI - DR - LA - 0003**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|

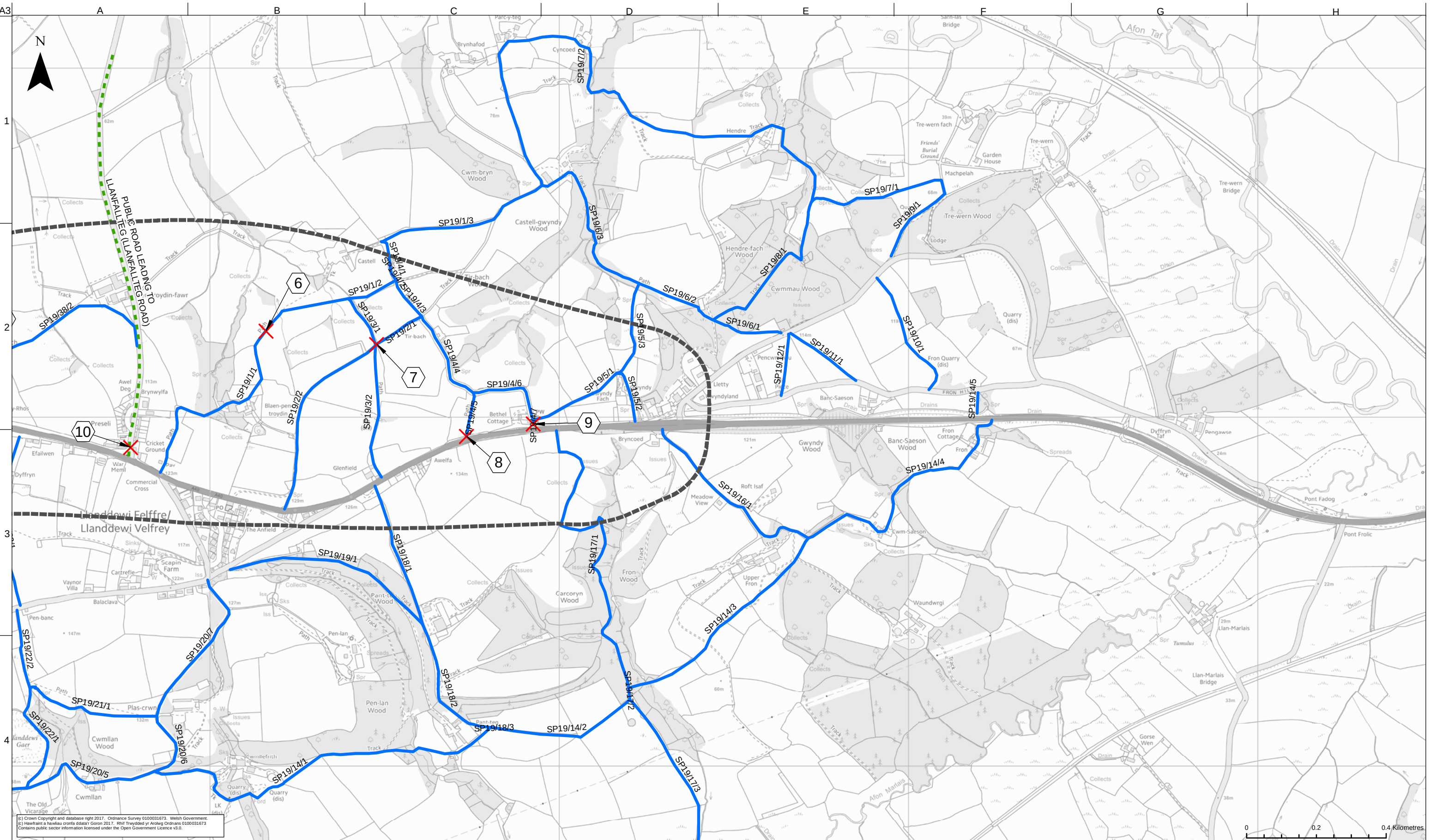












**LEGEND**

- STUDY AREA
- PUBLIC RIGHTS OF WAY (BRIDLEWAY)
- OTHER WALKING, CYCLING AND HORSE-RIDING ROUTES
- COUNT SITE LOCATION

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| Rev | Date     | Description               | By | Chkd | Appd | Auth |
| P03 | 10/09/18 | UPDATE FOLLOWING COMMENTS | EB | TE   | TE   | GD   |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client

Delivery Team

Drawing Title  
**FIGURE 15.1B EXISTING PUBLIC RIGHTS OF WAY AND OTHER ROUTES USED BY WALKERS, CYCLISTS AND HORSE RIDERS (WCHRS)**

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

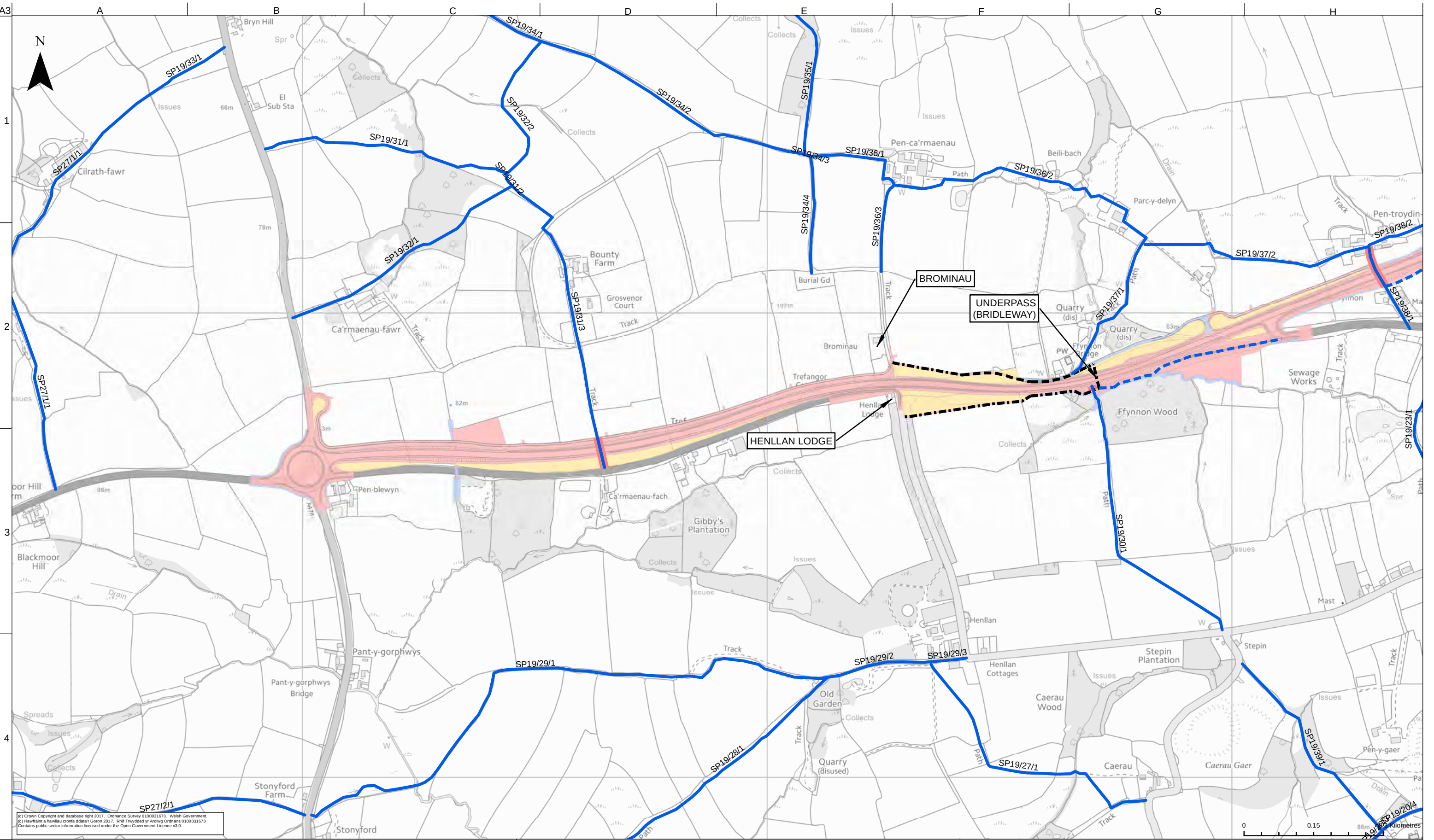
Scale at A3  
1:10,000

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P03  | EB       | TE       | TE       | GD       |
| Date | 10/09/18 | 10/09/18 | 10/09/18 | 10/09/18 |

Name  
**A40LVP - ARP - ENM - SWI - DR - C - 0012**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|





**LEGEND**

PERMANENT HIGHWAY LAND WITHIN FENCELINE, INCLUDING WATER TREATMENT AREAS

TEMPORARY CONSTRUCTION LAND

OTHER PERMANENT LAND TAKE E.G. MITIGATION PLANTING

NEW SECTION OF TRUNK ROAD

NO CHANGE

NEW PUBLIC BRIDLEWAY

NEW PUBLIC FOOTPATH

PUBLIC RIGHT OF WAY (PROW) PERMANENTLY DIVERTED

PUBLIC RIGHT OF WAY (PROW) PERMANENTLY STOPPED UP

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

|                              |      |
|------------------------------|------|
| Construction                 | None |
| Maintenance / Cleaning       | None |
| Use                          | None |
| Decommissioning / Demolition | None |

|     |          |                           |    |      |      |      |
|-----|----------|---------------------------|----|------|------|------|
| P04 | 10/09/18 | UPDATE FOLLOWING COMMENTS | EB | TE   | TE   | GD   |
| Rev | Date     | Description               | By | Chkd | Appd | Auth |

Project Title  
**A40 LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENTS**

Client  
  
Ulywodraeth Cymru  
Welsh Government

Suitability  
**S4 | SUITABLE FOR STAGE APPROVAL**

Scale at A3  
1:7,500

|      |          |          |          |          |
|------|----------|----------|----------|----------|
| Rev  | By       | Chkd     | Appd     | Auth     |
| P04  | EB       | TE       | TE       | GD       |
| Date | 10/09/18 | 10/09/18 | 10/09/18 | 10/09/18 |

Name  
**A40LVP - ARP - ENM - SWI - DR - C - 0013**

|         |            |        |          |      |      |        |
|---------|------------|--------|----------|------|------|--------|
| Project | Originator | Volume | Location | Type | Role | Number |
|---------|------------|--------|----------|------|------|--------|











