



Llywodraeth Cymru  
Welsh Government

[www.cymru.gov.uk](http://www.cymru.gov.uk)

# A494 River Dee Bridge Replacement Scheme Environmental Statement Volume 2a: Figures September 2025



## Contents

---

### **Chapter 02 Figures**

|             |                                               |
|-------------|-----------------------------------------------|
| Figure 2-1  | Developed Design Highways General Arrangement |
| Figure 2-2a | Environmental Masterplan Sheet 1 of 4         |
| Figure 2-2b | Environmental Masterplan Sheet 2 of 4         |
| Figure 2-2c | Environmental Masterplan Sheet 3 of 4         |
| Figure 2-2d | Environmental Masterplan Sheet 4 of 4         |

### **Chapter 06 Figures**

|            |                                  |
|------------|----------------------------------|
| Figure 6-1 | Superficial Geology              |
| Figure 6-2 | Bedrock Geology                  |
| Figure 6-3 | Aquifer Designation Superficial  |
| Figure 6-4 | Aquifer Designation Bedrock      |
| Figure 6-5 | Agricultural Land Classification |
| Figure 6-6 | Potentially Contaminated Land    |
| Figure 6-7 | Stability and Mine Entries       |

### **Chapter 07 Figures**

|            |                                                      |
|------------|------------------------------------------------------|
| Figure 7-1 | Surface Waterbodies                                  |
| Figure 7-2 | WFD Waterbodies                                      |
| Figure 7-3 | Flood Risk from the Sea                              |
| Figure 7-4 | Flood Risk from Rivers                               |
| Figure 7-5 | Flood Risk from Surface Water and Small Watercourses |

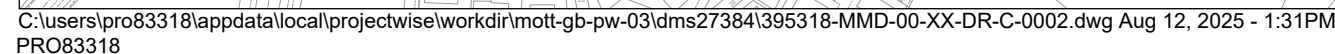
### **Chapter 08 Figures**

|             |                                                              |
|-------------|--------------------------------------------------------------|
| Figure 8-1  | Internationally Designated Nature Conservation Sites         |
| Figure 8-2  | Nationally Designated Nature Conservation and Wildlife Sites |
| Figure 8-3A | Phase 1 Survey Habitat Classification Sheet 1 of 6           |
| Figure 8-3B | Phase 1 Survey Habitat Classification Sheet 2 of 6           |
| Figure 8-3C | Phase 1 Survey Habitat Classification Sheet 3 of 6           |
| Figure 8-3D | Phase 1 Survey Habitat Classification Sheet 4 of 6           |
| Figure 8-3E | Phase 1 Survey Habitat Classification Sheet 5 of 6           |



|             |                                                                          |
|-------------|--------------------------------------------------------------------------|
| Figure 8-3F | Phase 1 Survey Habitat Classification Sheet 6 of 6                       |
| Figure 8-4A | GCN Survey Pond Locations Sheet 1 of 3                                   |
| Figure 8-4B | GCN Survey Pond Locations Sheet 2 of 3                                   |
| Figure 8-4C | GCN Survey Pond Locations Sheet 3 of 3                                   |
| Figure 8-5A | Bat Survey Results – 2018 Structures & Tree Roost Potential Sheet 1 of 3 |
| Figure 8-5B | Bat Survey Results – 2018 Structures & Tree Roost Potential Sheet 2 of 3 |
| Figure 8-5C | Bat Survey Results – 2018 Structures & Tree Roost Potential Sheet 3 of 3 |
| Figure 8-5D | Bat Survey Results – 2020 Structures & Tree Roost Potential Sheet 1 of 3 |
| Figure 8-5E | Bat Survey Results – 2020 Structures & Tree Roost Potential Sheet 2 of 3 |
| Figure 8-5F | Bat Survey Results – 2020 Structures & Tree Roost Potential Sheet 3 of 3 |
| Figure 8-5G | Bat Survey Results – 2022 Structures & Tree Roost Potential Sheet 1 of 3 |
| Figure 8-5H | Bat Survey Results – 2022 Structures & Tree Roost Potential Sheet 2 of 3 |
| Figure 8-5I | Bat Survey Results – 2022 Structures & Tree Roost Potential Sheet 3 of 3 |
| Figure 8-5J | Bat Survey Results – 2023 Structures & Tree Roost Potential Sheet 1 of 3 |
| Figure 8-5K | Bat Survey Results – 2023 Structures & Tree Roost Potential Sheet 2 of 3 |
| Figure 8-5L | Bat Survey Results – 2023 Structures & Tree Roost Potential Sheet 3 of 3 |
| Figure 8-5M | Bat Survey Results – 2024 Structures & Tree Roost Potential Sheet 1 of 3 |
| Figure 8-5N | Bat Survey Results – 2024 Structures & Tree Roost Potential Sheet 2 of 3 |
| Figure 8-5O | Bat Survey Results – 2024 Structures & Tree Roost Potential Sheet 3 of 3 |
| Figure 8-6  | Reptile Surveys Artificial Refugia Locations 2018-2023                   |
| Figure 8-7  | Badger Activity Survey 2018-2025                                         |
| Figure 8-8  | Otter & Water Vole Survey 2018-2024                                      |





- | Key to symbols |                                                                               |
|----------------|-------------------------------------------------------------------------------|
|                | Proposed Site Boundary                                                        |
|                | Proposed Shared use cycle track (for use by cyclists and pedestrians)         |
|                | Proposed carriageway                                                          |
|                | Central Reservation                                                           |
|                | Soft Estate (Refer to Environmental Master Plans for details)                 |
|                | Soft Verges                                                                   |
|                | Proposed footpath                                                             |
|                | Rail Bridge Deck                                                              |
|                | Proposed drainage swale/open channel                                          |
|                | Proposed maintenance access road / compound area                              |
|                | Proposed Gate                                                                 |
|                | Proposed 400x400mm Buff Tactile Paving                                        |
|                | Proposed Palisade Fence                                                       |
|                | Proposed Paladin Fencing                                                      |
|                | Proposed Railing Fence                                                        |
|                | Proposed Post and Rail Fence                                                  |
|                | Proposed Noise Barrier - Subject to EIA                                       |
|                | Proposed H2W1 Concrete VRS                                                    |
|                | Proposed H4bW2 Concrete VRS with railing (min 1400mm high)                    |
|                | Proposed N2W2 Steel VRS                                                       |
|                | Proposed N2W3 Bridge Parapet                                                  |
|                | Proposed Class 3C Pedestrian Parapet                                          |
|                | Proposed Culvert                                                              |
|                | Existing Retained Culvert                                                     |
|                | Proposed Drainage Headwall including retaining feature at connection to ditch |
|                | 10m Construction Exclusion Zone to Face of Pylons                             |
|                | Proposed Retaining Wall                                                       |
|                | Proposed Bollard                                                              |
|                | Proposed diverted Welsh Water outfall pipe - details TBC by Welsh Water       |

**MOTT  
MACDONALD**

 **RML**

1st Floor Bryn Eirias  
Abergele Road  
Colwyn Bay  
LL29 8BY  
United Kingdom  
T  
F  
W [www.mottmac.com](http://www.mottmac.com)

|       |                                                                                              |
|-------|----------------------------------------------------------------------------------------------|
| Title | A494 River Dee Bridge Replacement Scheme<br>Developed Design<br>Highways General Arrangement |
|-------|----------------------------------------------------------------------------------------------|

|                                                            |            |                              |              |            |                         |
|------------------------------------------------------------|------------|------------------------------|--------------|------------|-------------------------|
| Designed                                                   | B.Bowers   | BB                           | Eng check    | S.HORSFALL | SH                      |
| Drawn                                                      | E.PROBERT  | EP                           | Coordination | G.MORGAN   | GM                      |
| Dwg check                                                  | S.HORSFALL | SH                           | Approved     | G.MORGAN   | GM                      |
| MMD Project Number<br><b>395318</b>                        |            | Scale at A1<br><b>1:2500</b> |              |            | Security<br><b>Rstd</b> |
| Suitability Description<br><b>Suitable for Information</b> |            |                              |              |            | Suit. Code<br><b>S2</b> |
| Drawing Number<br><b>395318-MMD-00-XX-DR-C-0002</b>        |            |                              |              |            | Revision<br><b>P05</b>  |





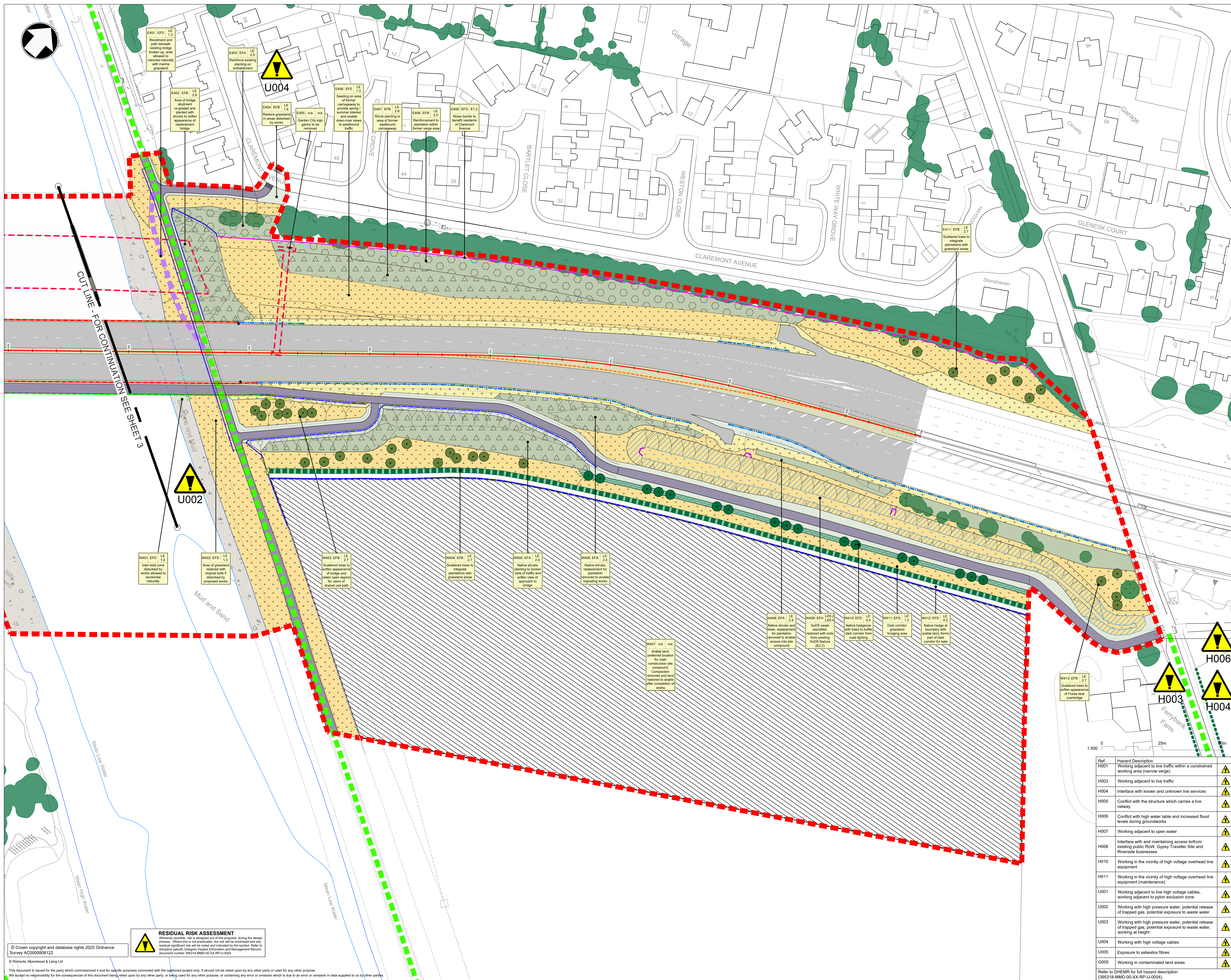






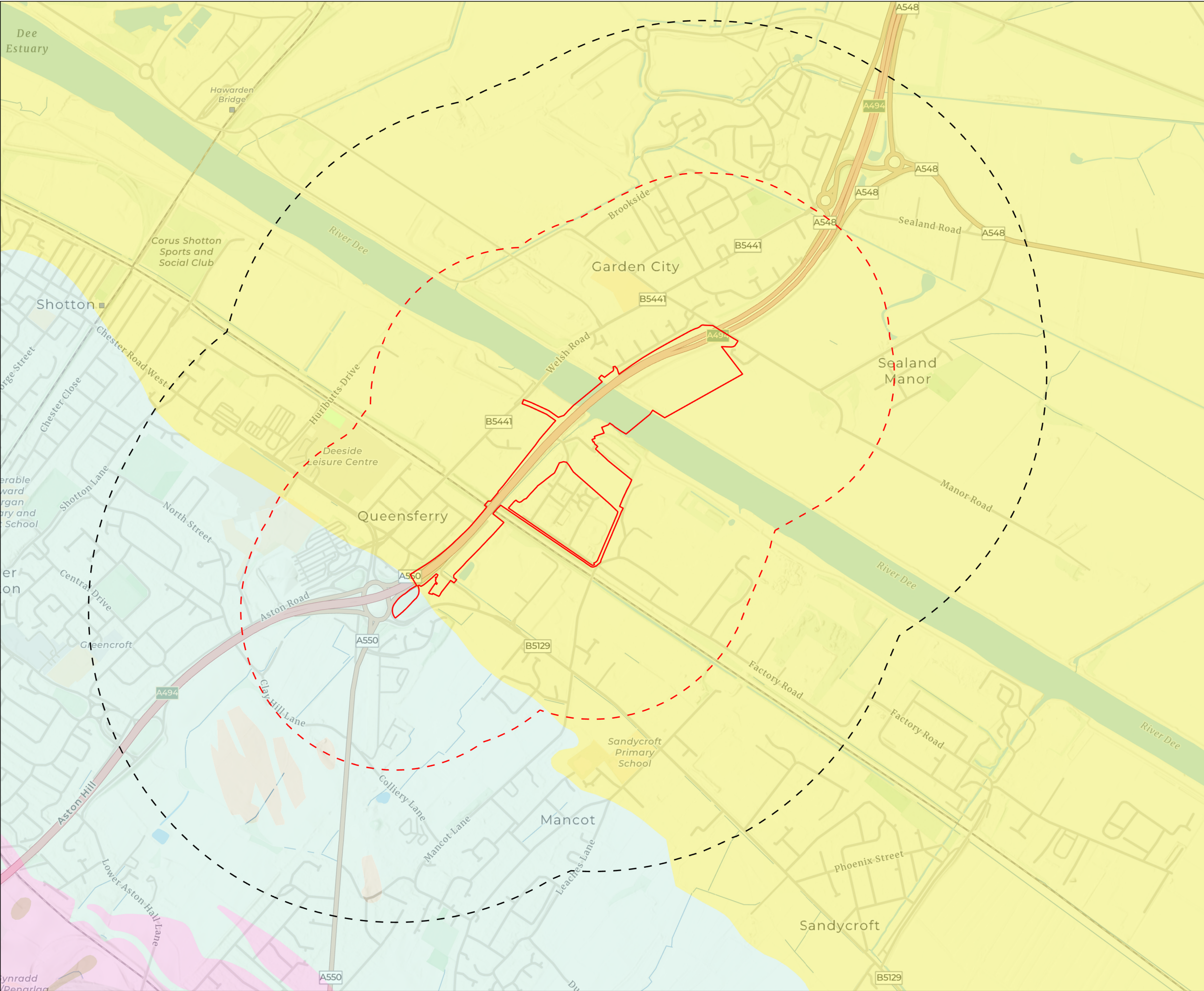






|                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------|-------|--|
| The following details the current Developed Design at Key Stage 3 of Welsh Government's Linear Stage Approval Process and is subject to further detail design development.                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| This drawing is to be read in conjunction with all other related Mott MacDonald and RML Drawings and specifications.                                                                                                                                                                                                                                                                                                                              |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).                                                                                                                                                                                                                                                                                                                                     |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| Information on this drawing is based on topographical data received from PM Survey 2018 for the site area and OS mapping data for all other areas.                                                                                                                                                                                                                                                                                                |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| Key / Functions and Elements                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| <br>Reference number<br>Site boundary                                                                                                                                                                                                                                                                                                                                                                                                             |             | <b>Environmental Functions (EF)</b><br>Ref Data Set<br>EFA Visual screening<br>EPF Landscape Integration<br>EFC Enhancing the built environment<br>EFF Nature conservation and biodiversity<br>EVG Visual amenity<br>VHJ Heritage<br>WQA Quality amenity<br>EPN Water quality                                                  |                                           |             |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| Proposed Landscaping (LE) and Environmental Elements (E)                                                                                                                                                                                                                                                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| <br>LE1 Grassland<br><br>LE2 LE2 Grassland with bulbs<br><br>LE3 LE3 Species rich grassland<br><br>LE4 LE4 Rock and scree<br><br>LE5 LE5 Open grassland                                                                                                                                                                                                                                                                                           |             | <br>LE7 LE2 Ornamental shrubs<br><br>LE3 LE3 Groundcover<br><br>LE4 LE4 Native species hedgess<br><br>LE4 LE4 Native hedegrows with trees<br><br>LE5 LE5 Individual trees<br><br>LE5 LE1 Water bodies and associated plants<br><br>LE6 LE6 Marsh and wetter grassland<br>ET None<br>ET1 None<br>ET2 None barrier built element |                                           |             |       |  |
| <br>LE2 LE2 Native planting<br><br>LE4 LE4 Linear belts with intermittent trees<br><br>LE5 LE5 Shrubs<br><br>LE6 LE6 Shrubbed trees<br><br>LE7 LE7 Shrub                                                                                                                                                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| <br>ES1 ES1 One mounted bat roost<br>X ES1 Two mounted bat roost<br>X ES1 Bat roost building                                                                                                                                                                                                                                                                                                                                                      |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| Proposed Highway Estate (Refer to Highways General Arrangement)                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| <br>Proposed Structure:<br><br>Brick wall                                                                                                                                                                                                                                                                                                                                                                                                         |             | <br>Proposed Drainage Structures:<br><br>DCCW drainage infrastructure                                                                                                                                                                                                                                                          |                                           |             |       |  |
| Environmental (E) / Planning and Policy Elements (P) Element Codes                                                                                                                                                                                                                                                                                                                                                                                |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| E11 Noise-reducing surfaces.<br>E12 Noise barrier built elements.<br>E13 Noise reducing earthworks.<br>E21 Water pollution control measures.<br>E22 Surface water runoff.<br>E31 Sewerages.<br>E32 Ecological protection measures.<br>E33 Hazardous wastes.<br>E42 Legally protected sites.<br>P1 Cultural heritage feature.<br>P12 Conservation area.                                                                                            |             | Acronyms used<br><b>DCCW</b> Dair Cymru Welsh Water<br><b>NMWS</b> National Monuments Record Wales<br><b>SUSI</b> Sustainable Drainage System<br><b>TPO</b> Tree Preservation Order<br><b>SAC</b> Special Areas of Conservation<br><b>SSSI</b> Sites of Special Scientific Interest                                            |                                           |             |       |  |
| Sheet Layout                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| Reference drawings                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| /dmsr273833395318-MMD-00-XX-M2-C-0002.dwg<br>/dmsr273833395318-MMD-00-XX-M2-C-0003.dwg<br>/dmsr273833395318-MMD-00-XX-M2-C-0004.dwg<br>/dmsr273833395318-MMD-00-XX-M2-C-0009.dwg<br>/dmsr273833395318-MMD-00-XX-M2-C-0011.dwg<br>/dmsr273833395318-MMD-00-XX-M2-C-0019.dwg<br>/dmsr274033395318-MMD-00-XX-M2-B-0500.dwg<br>/dmsr274033395318-MMD-00-XX-M2-B-0501.dwg<br>/dmsr275583395318-MMD-00-XX-M2-Z-0002.dwg<br>./395318-RML-00-XX-XR-L-2006 |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| P08                                                                                                                                                                                                                                                                                                                                                                                                                                               | 19/09/2025  | RHE                                                                                                                                                                                                                                                                                                                            | Updated boundary                          | RJ          | JIS   |  |
| P09                                                                                                                                                                                                                                                                                                                                                                                                                                               | 07/10/2025  | RHE                                                                                                                                                                                                                                                                                                                            | Reviewed after Coordinator comments       | RJ          | JIS   |  |
| P04                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20/08/2025  | RHE                                                                                                                                                                                                                                                                                                                            | Updated alignment and boundary            | RJ          | AS    |  |
| P03                                                                                                                                                                                                                                                                                                                                                                                                                                               | 30/05/2025  | RHE                                                                                                                                                                                                                                                                                                                            | Existing bridge plans reinstated to model | RJ          | JIS   |  |
| P02                                                                                                                                                                                                                                                                                                                                                                                                                                               | 22/05/2025  | RHE                                                                                                                                                                                                                                                                                                                            | Reviewed after Coordinator comments       | RJ          | JIS   |  |
| P01                                                                                                                                                                                                                                                                                                                                                                                                                                               | 15/04/2025  | RHE                                                                                                                                                                                                                                                                                                                            | First issue for comment                   | RJ          | JIS   |  |
| Rev                                                                                                                                                                                                                                                                                                                                                                                                                                               | Date        | Drawn                                                                                                                                                                                                                                                                                                                          | Description                               | On k'd      | App'd |  |
| Status Stamp NOT FOR CONSTRUCTION                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| <br>Client                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| <br>Client                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| <br>Client                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| <br>Client                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| Title<br>A494 River Dee Bridge Replacement Scheme<br>Figure 2.2D<br>Environmental Masterplan<br>Sheet 04 of 04                                                                                                                                                                                                                                                                                                                                    |             |                                                                                                                                                                                                                                                                                                                                |                                           |             |       |  |
| Designed                                                                                                                                                                                                                                                                                                                                                                                                                                          | Rh. Edwards | RHE                                                                                                                                                                                                                                                                                                                            | Eng check                                 | J. Stoddard | JMS   |  |
| Drawn                                                                                                                                                                                                                                                                                                                                                                                                                                             | Rh. Edwards | RHE                                                                                                                                                                                                                                                                                                                            | Coordination                              | G. Griffin  | RG    |  |
| Dwg check                                                                                                                                                                                                                                                                                                                                                                                                                                         | R. Jones    | RJ                                                                                                                                                                                                                                                                                                                             | Approved                                  | M. Giffins  | RM    |  |
| MMO Project Number                                                                                                                                                                                                                                                                                                                                                                                                                                |             | Scale at Ratio                                                                                                                                                                                                                                                                                                                 |                                           | Security    |       |  |
| 395318                                                                                                                                                                                                                                                                                                                                                                                                                                            |             | 1:500                                                                                                                                                                                                                                                                                                                          |                                           | Rstd        |       |  |
| Suitability Description                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                                                                                                                                                                                                                                                                                                                                |                                           | Suit. Code  |       |  |
| Suitable for Information                                                                                                                                                                                                                                                                                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                                                                |                                           | S2          |       |  |
| Drawing Number                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                                                                                                                                                                                                                                                                                                                                |                                           | Revision    |       |  |
| 395318-RML-00-XX-DR-L-2009                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                |                                           | P06         |       |  |





- Red Line Boundary
- 500m buffer
- 1000m Buffer
- TIDAL FLAT DEPOSITS - CLAY, SILT AND SAND
- TILL, DEVENSIAN - DIAMICTON

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS, Esri, Intermap, NASA, NGA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS  
Contains British Geological Survey materials © UKRI 2025



Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

Client



Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent



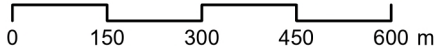
Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

## A494 River Dee Bridge Improvement

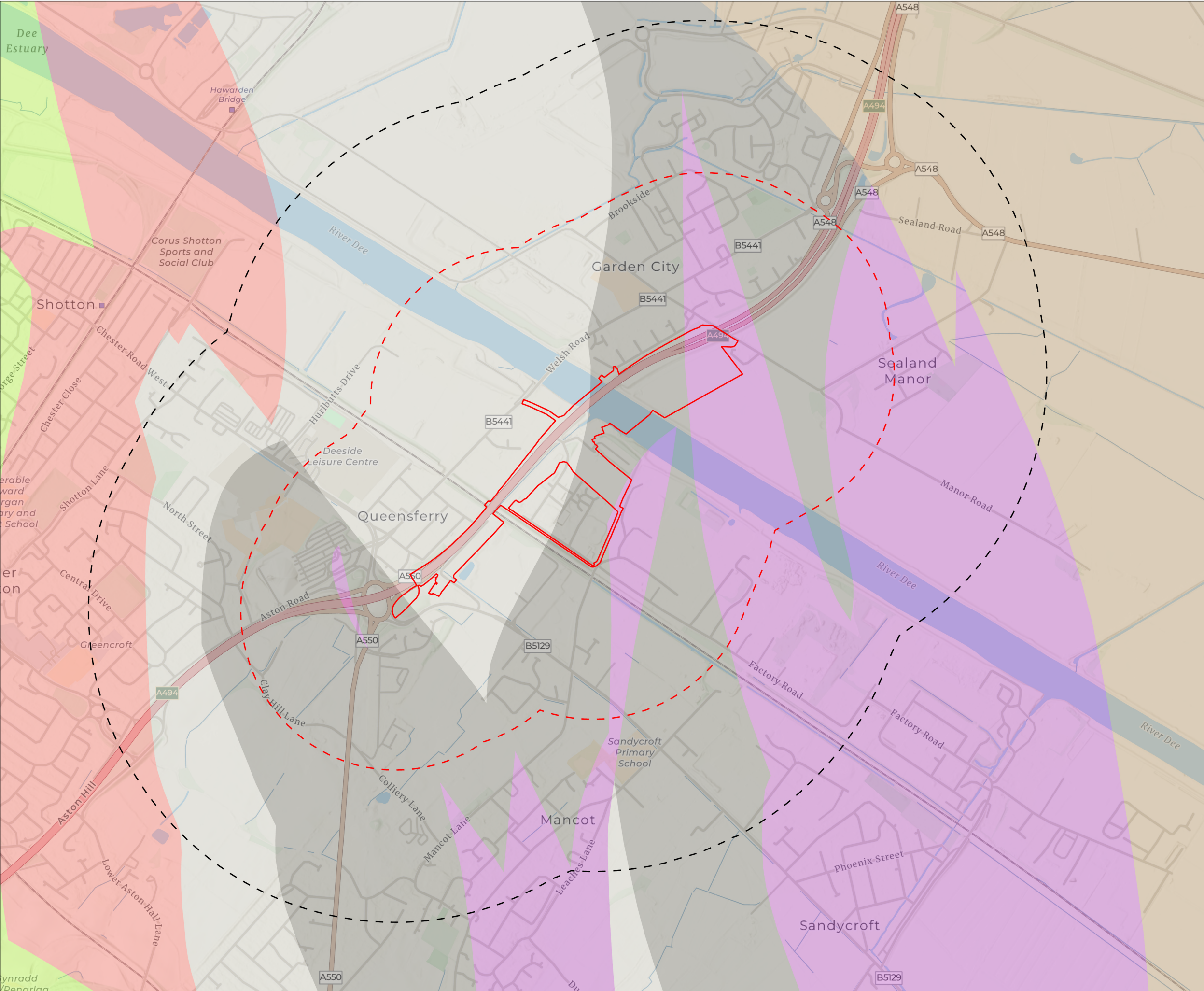
### Superficial Deposit Geology

|                         |                        |                        |                        |
|-------------------------|------------------------|------------------------|------------------------|
| Drawn<br>D Evans        | GIS Checked<br>L James | Checked<br>E Forrester | Approved<br>C Williams |
| Scale at A3<br>1:12,000 | Status<br>INF          | Revision<br>01         | Security<br>STD        |

Fig 6-1 Superficial Geology







- Red Line Boundary
- 1000m Buffer
- 500m buffer
- ETRURIA FORMATION - MUDSTONE, SANDSTONE AND CONGLOMERATE
- KINNERTON SANDSTONE FORMATION - SANDSTONE
- PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE
- PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE
- GWESPYR SANDSTONE - SANDSTONE AND [SUBEQUAL/ SUBORDINATE] ARGILLACEOUS ROCKS, INTERBEDDED

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS, Esri, Intermap, NASA, NGA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS  
Contains British Geological Survey materials © UKRI 2025



Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

Client



Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent

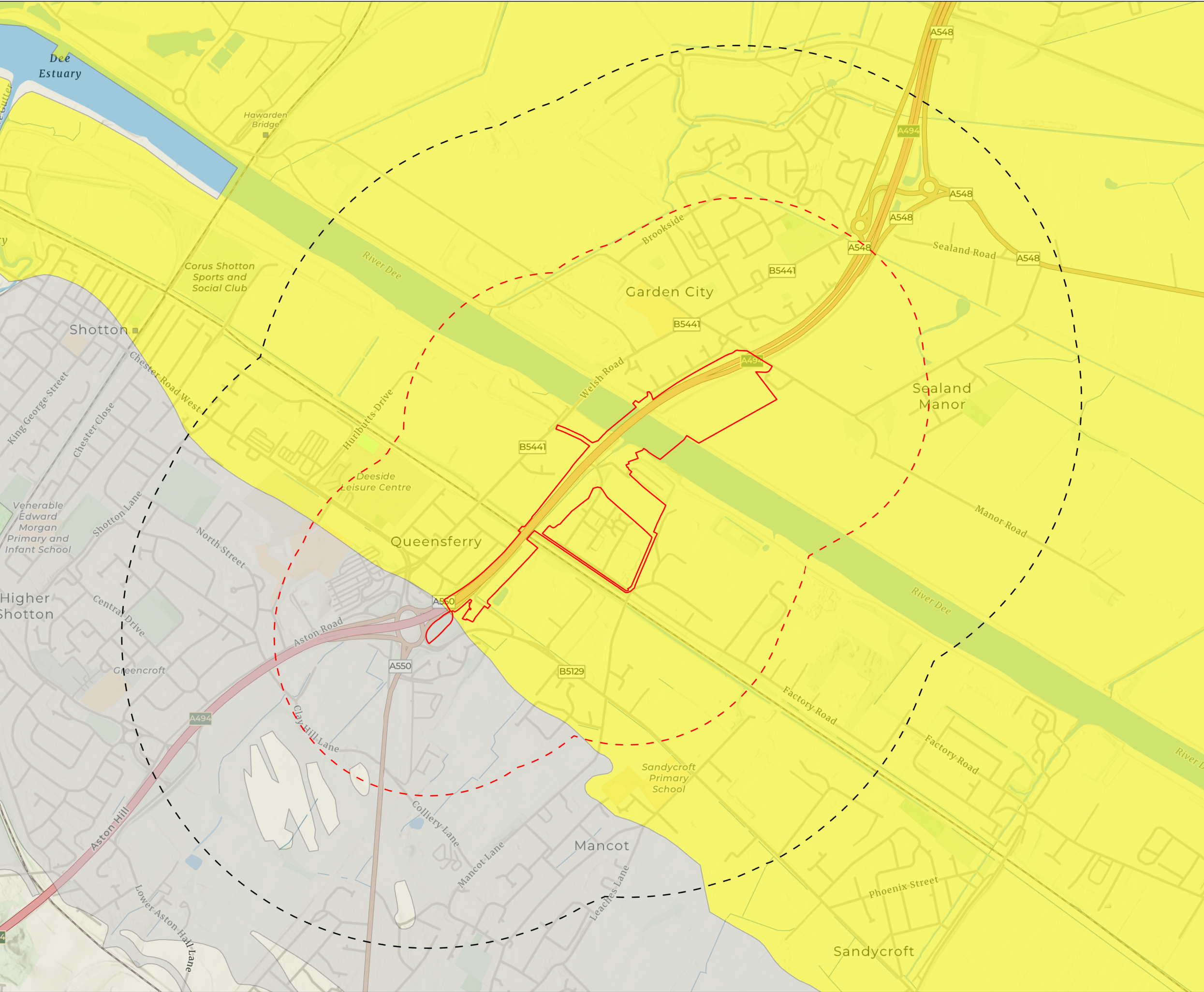
Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

A494 River Dee Bridge Improvement

Bedrock Geology

|                         |                        |                        |                        |
|-------------------------|------------------------|------------------------|------------------------|
| Drawn<br>D Evans        | GIS Checked<br>L James | Checked<br>E Forrester | Approved<br>C Williams |
| Scale at A3<br>1:12,000 | Status<br>INF          | Revision<br>01         | Security<br>STD        |





- Red Line Boundary
- 1000m Buffer
- 500m Buffer
- Superficial aquifer designation
  - Secondary (undifferentiated)
  - Unproductive

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS, Esri, Intermap, NASA, NGA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS  
Contains British Geological Survey materials © UKRI 2025



Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

Client



Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent



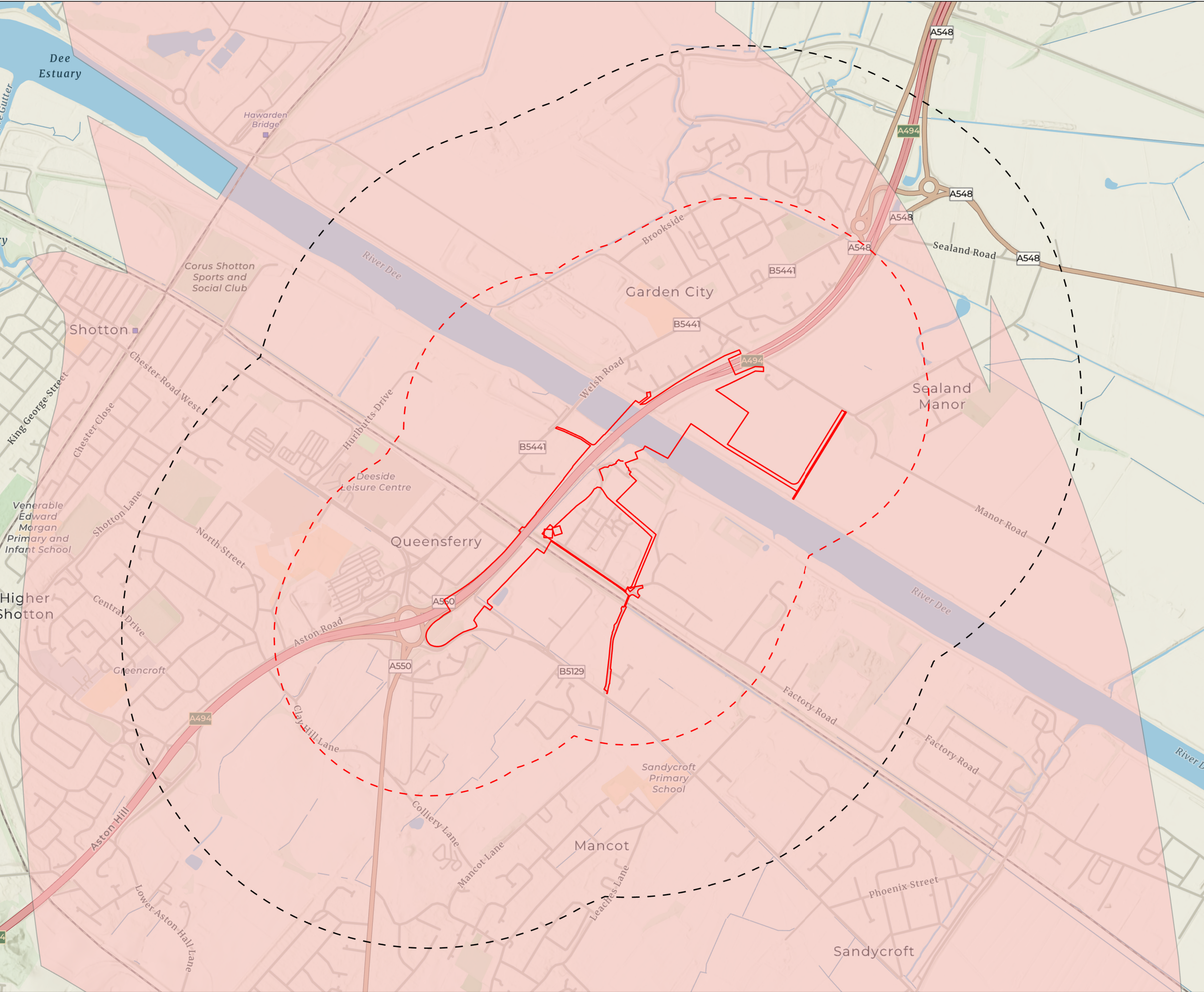
Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

A494 River Dee Bridge Improvement

Aquifer designation superficial

|                         |                        |                        |                        |
|-------------------------|------------------------|------------------------|------------------------|
| Drawn<br>D Evans        | GIS Checked<br>L James | Checked<br>E Forrester | Approved<br>C Williams |
| Scale at A3<br>1:12,000 | Status<br>INF          | Revision<br>01         | Security<br>STD        |





- Red Line Boundary
- 1000m Buffer
- 500m buffer
- Bedrock aquifer designation
- Secondary A

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS, Esri, Intermap, NASA, NGA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS  
Contains British Geological Survey materials © UKRI 2025



Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

Client



Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent



Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

### A494 River Dee Bridge Improvement

### Aquifer designation bedrock

|                         |                        |                        |                        |
|-------------------------|------------------------|------------------------|------------------------|
| Drawn<br>D Evans        | GIS Checked<br>L James | Checked<br>E Forrester | Approved<br>C Williams |
| Scale at A3<br>1:12,000 | Status<br>INF          | Revision<br>01         | Security<br>STD        |

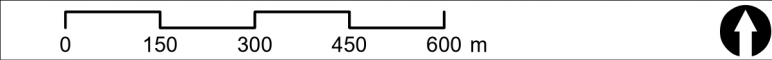
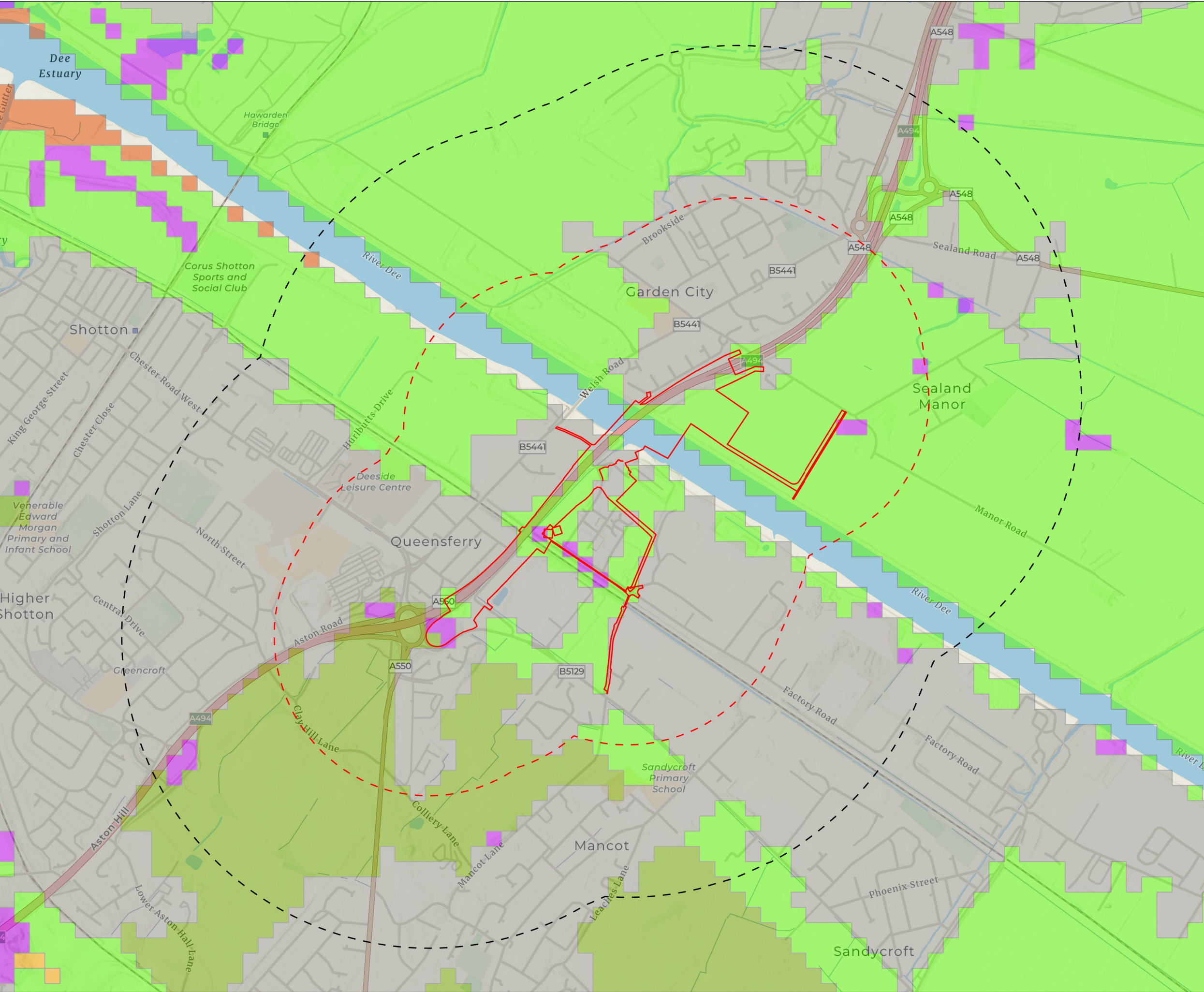


Fig 6-4 Aquifer designation bedrock





— Red Line Boundary  
- - - 500m buffer  
- - - 1000m Buffer

Agricultural land classification (grade)

- 2
- 3a
- 3b
- 5
- NA
- U

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS, Esri, Intermap, NASA, NGA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS  
Contains British Geological Survey materials © UKRI 2025

**MOTT  
MACDONALD**

Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

**Client**

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent

Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

## A494 River Dee Bridge Improvement

### Agricultural Land Classification

|                         |                        |                        |                        |
|-------------------------|------------------------|------------------------|------------------------|
| Drawn<br>D Evans        | GIS Checked<br>L James | Checked<br>E Forrester | Approved<br>C Williams |
| Scale at A3<br>1:12,000 | Status<br>INF          | Revision<br>01         | Security<br>STD        |









- Red Line Boundary
- 500m buffer
- 1000m Buffer
- Approximate mine shaft locations

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS, Esri, Intermap, NASA, NGA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS  
Contains British Geological Survey materials © UKRI 2025



Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

Client



Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

### A494 River Dee Bridge Improvement

#### Stability and Mine Entries

|                         |                        |                        |                        |
|-------------------------|------------------------|------------------------|------------------------|
| Drawn<br>D Evans        | GIS Checked<br>L James | Checked<br>E Forrester | Approved<br>C Williams |
| Scale at A3<br>1:12,000 | Status<br>INF          | Revision<br>01         | Security<br>STD        |

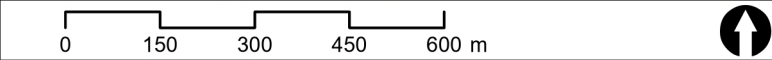
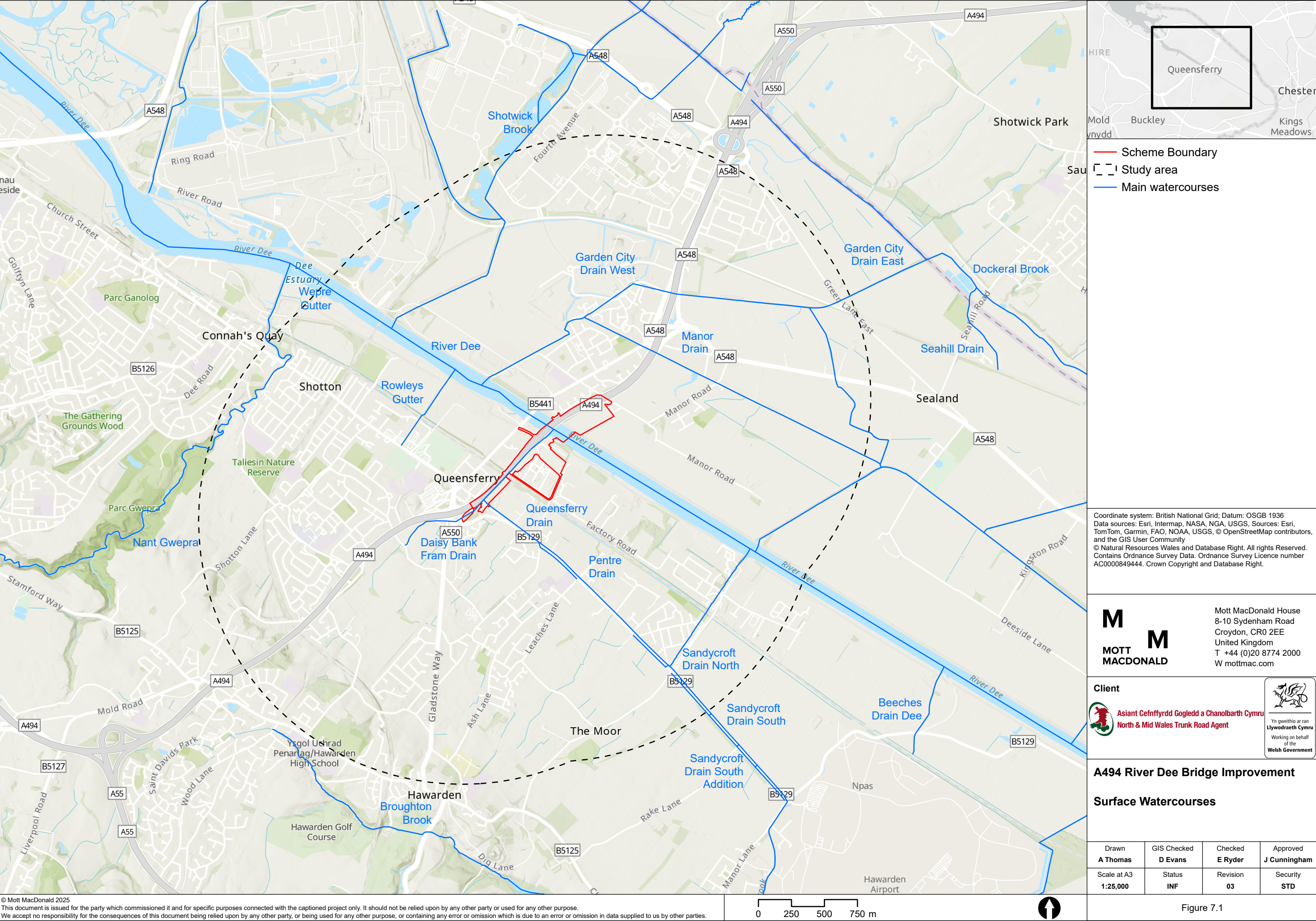


Fig 6-7 Stability and Mine Entries





- Scheme Boundary
- Study area
- Main watercourses

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri, Intermap, NASA, NGA, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community  
© Natural Resources Wales and Database Right. All rights Reserved. Contains Ordnance Survey Data. Ordnance Survey Licence number AC0000849444. Crown Copyright and Database Right.

M

M

MOTT  
MACDONALD

Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

Client

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent

Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

A494 River Dee Bridge Improvement

Surface Watercourses

|                         |                        |                    |                          |
|-------------------------|------------------------|--------------------|--------------------------|
| Drawn<br>A Thomas       | GIS Checked<br>D Evans | Checked<br>E Ryder | Approved<br>J Cunningham |
| Scale at A3<br>1:25,000 | Status<br>INF          | Revision<br>03     | Security<br>STD          |

Figure 7.1







- Scheme Boundary
- Study area
- Scoped in WFD surface water bodies
- Scoped out WFD surface water bodies
- Scoped in Dee Carboniferous Coal Measures WFD groundwater body

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri, Intermap, NASA, NGA, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community  
© Environment Agency copyright and/or database right 2025. All rights reserved.  
Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved.



Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

Client



Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent



Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

A494 River Dee Bridge Improvement

WFD Water bodies

|                         |                        |                    |                          |
|-------------------------|------------------------|--------------------|--------------------------|
| Drawn<br>A Thomas       | GIS Checked<br>D Evans | Checked<br>E Ryder | Approved<br>J Cunningham |
| Scale at A3<br>1:25,000 | Status<br>INF          | Revision<br>02     | Security<br>STD          |

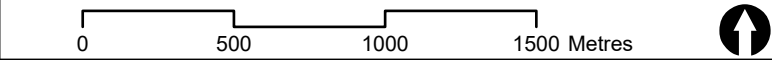
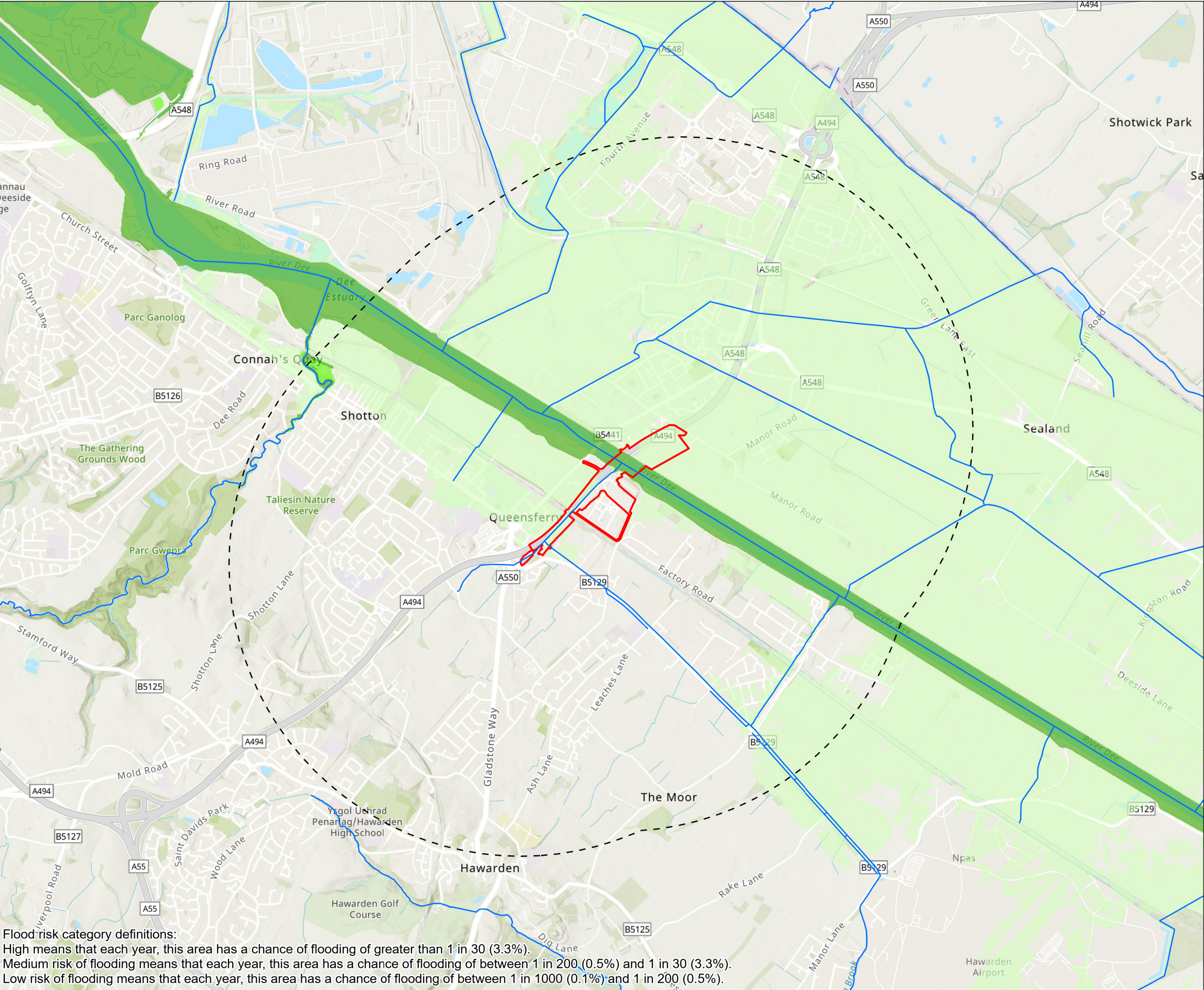


Figure 7.2





- Scheme Boundary
- - - Study area
- Main watercourses
- Flood risk from the sea (tidal)
  - High
  - Medium
  - Low

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri, Intermap, NASA, NGA, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community  
Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Derived in part from 1:50,000 and 1:250,000 scale digital data under permission from British Geological Survey. ©NERC.

M

MOTT MACDONALD

M

MOTT MACDONALD

Mott MacDonald House  
8-10 Sydenham Road  
Croydon, CR0 2EE  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

Client



Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent



Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

### A494 River Dee Bridge Improvement Flood Risk from the Sea

|                         |               |                    |                          |
|-------------------------|---------------|--------------------|--------------------------|
| Drawn<br>D Evans        | GIS Checked   | Checked<br>E Ryder | Approved<br>J Cunningham |
| Scale at A3<br>1:25,000 | Status<br>INF | Revision<br>01     | Security<br>STD          |

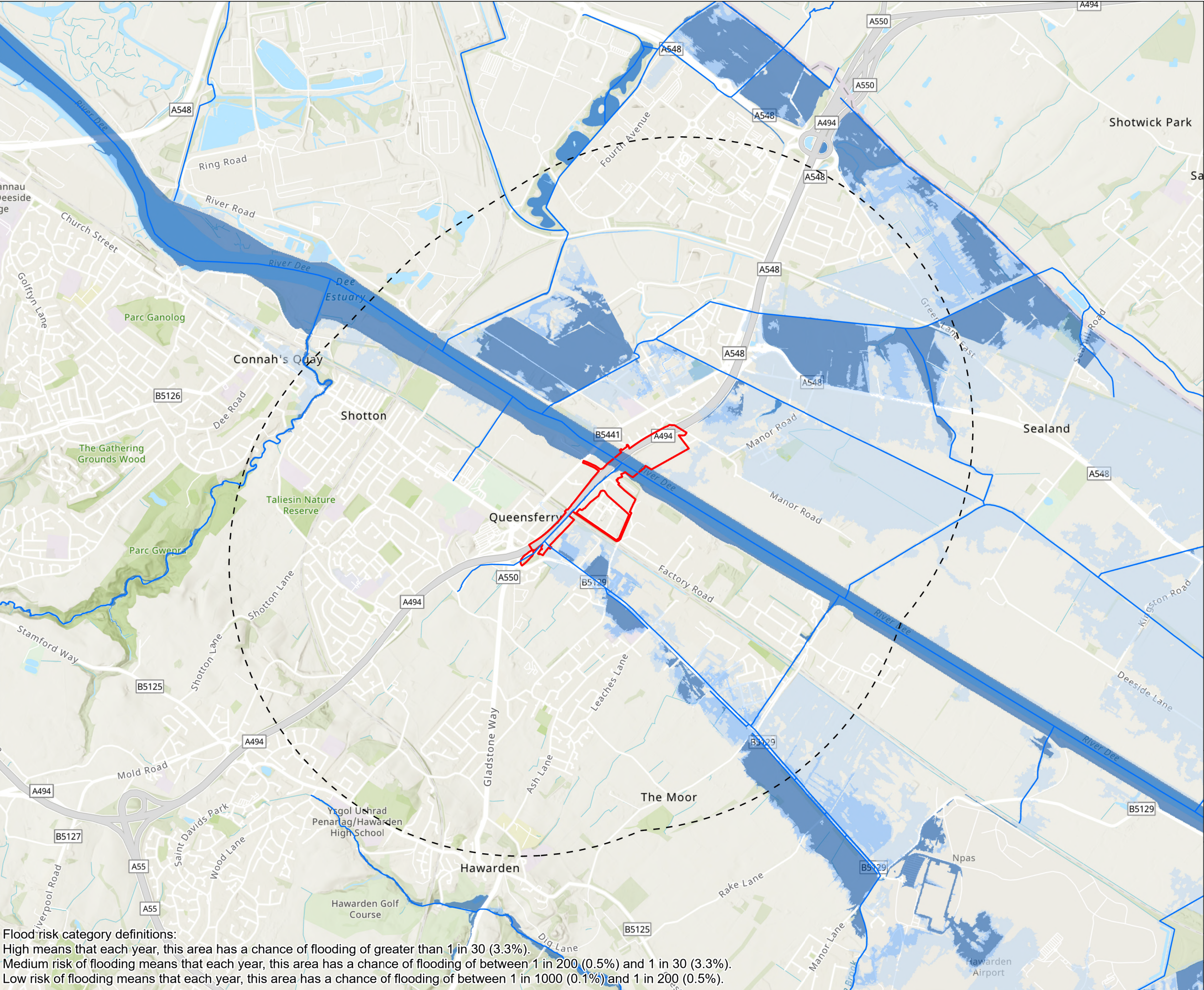
Flood risk category definitions:  
High means that each year, this area has a chance of flooding of greater than 1 in 30 (3.3%).  
Medium risk of flooding means that each year, this area has a chance of flooding of between 1 in 200 (0.5%) and 1 in 30 (3.3%).  
Low risk of flooding means that each year, this area has a chance of flooding of between 1 in 1000 (0.1%) and 1 in 200 (0.5%).

© Mott MacDonald 2025  
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.  
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

Figure 7.3

A494\_Environment\_Chapter | Figure 7.3 | 08 Aug 2025





Scheme Boundary

Study area

Main watercourses

Flood risk from rivers (fluvial)

High

Medium

Low

Coordinate system: British National Grid; Datum: OSGB 1936  
Data sources: Esri, Intermap, NASA, NGA, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community  
Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Derived in part from 1:50,000 and 1:250,000 scale digital data under permission from British Geological Survey. ©NERC.

M

MOTT MACDONALD

Mott MacDonald House

8-10 Sydenham Road

Croydon, CR0 2EE

United Kingdom

T +44 (0)20 8774 2000

W mottmac.com

Client

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru

North & Mid Wales Trunk Road Agent

Yn gweithio ar ran

Llywodraeth Cymru

Working on behalf

of the

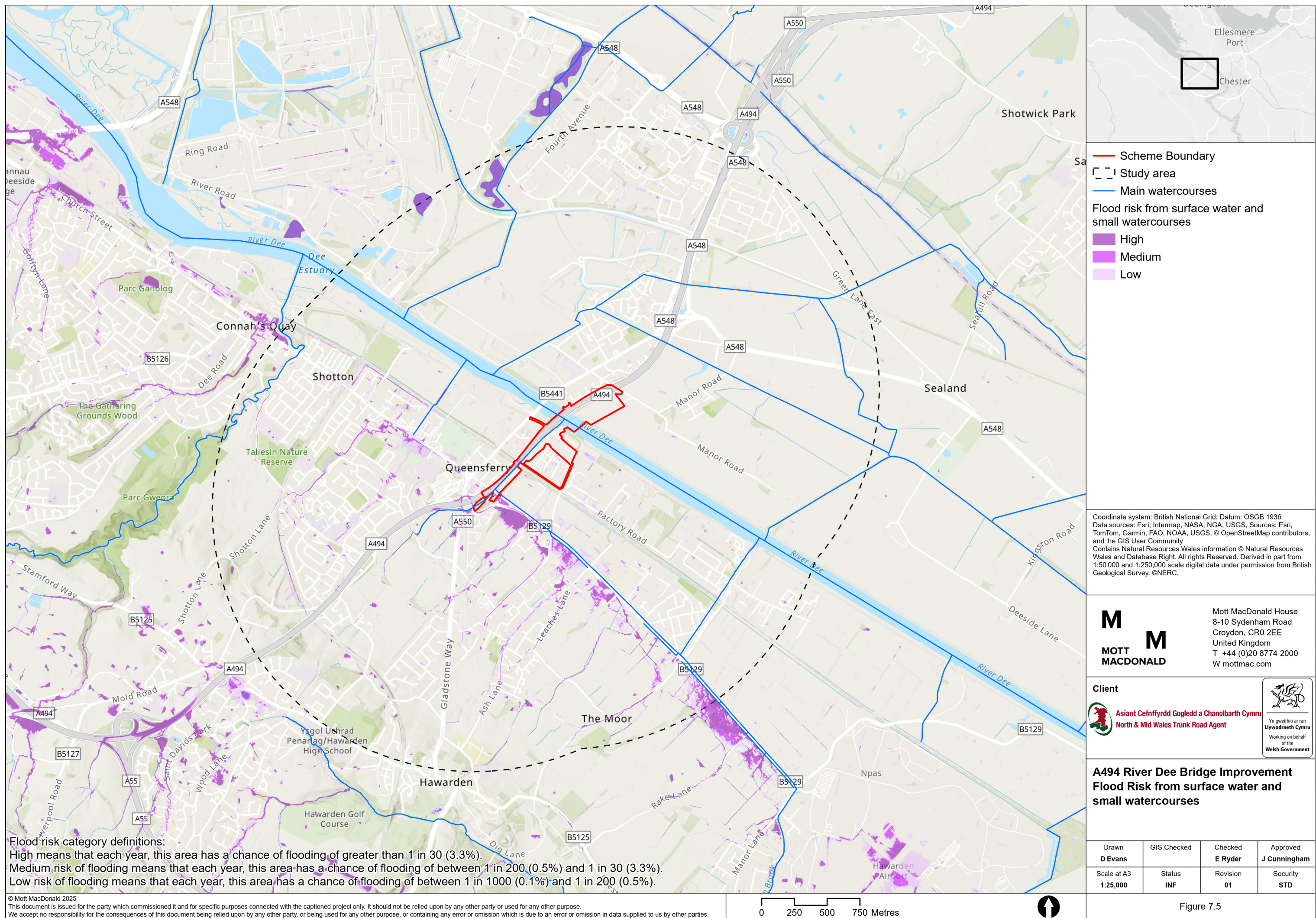
Welsh Government

A494 River Dee Bridge Improvement  
Flood Risk from rivers (fluvial)

|                         |               |                    |                          |
|-------------------------|---------------|--------------------|--------------------------|
| Drawn<br>D Evans        | GIS Checked   | Checked<br>E Ryder | Approved<br>J Cunningham |
| Scale at A3<br>1:25,000 | Status<br>INF | Revision<br>01     | Security<br>STD          |

Flood risk category definitions:  
High means that each year, this area has a chance of flooding of greater than 1 in 30 (3.3%).  
Medium risk of flooding means that each year, this area has a chance of flooding of between 1 in 200 (0.5%) and 1 in 30 (3.3%).  
Low risk of flooding means that each year, this area has a chance of flooding of between 1 in 1000 (0.1%) and 1 in 200 (0.5%).

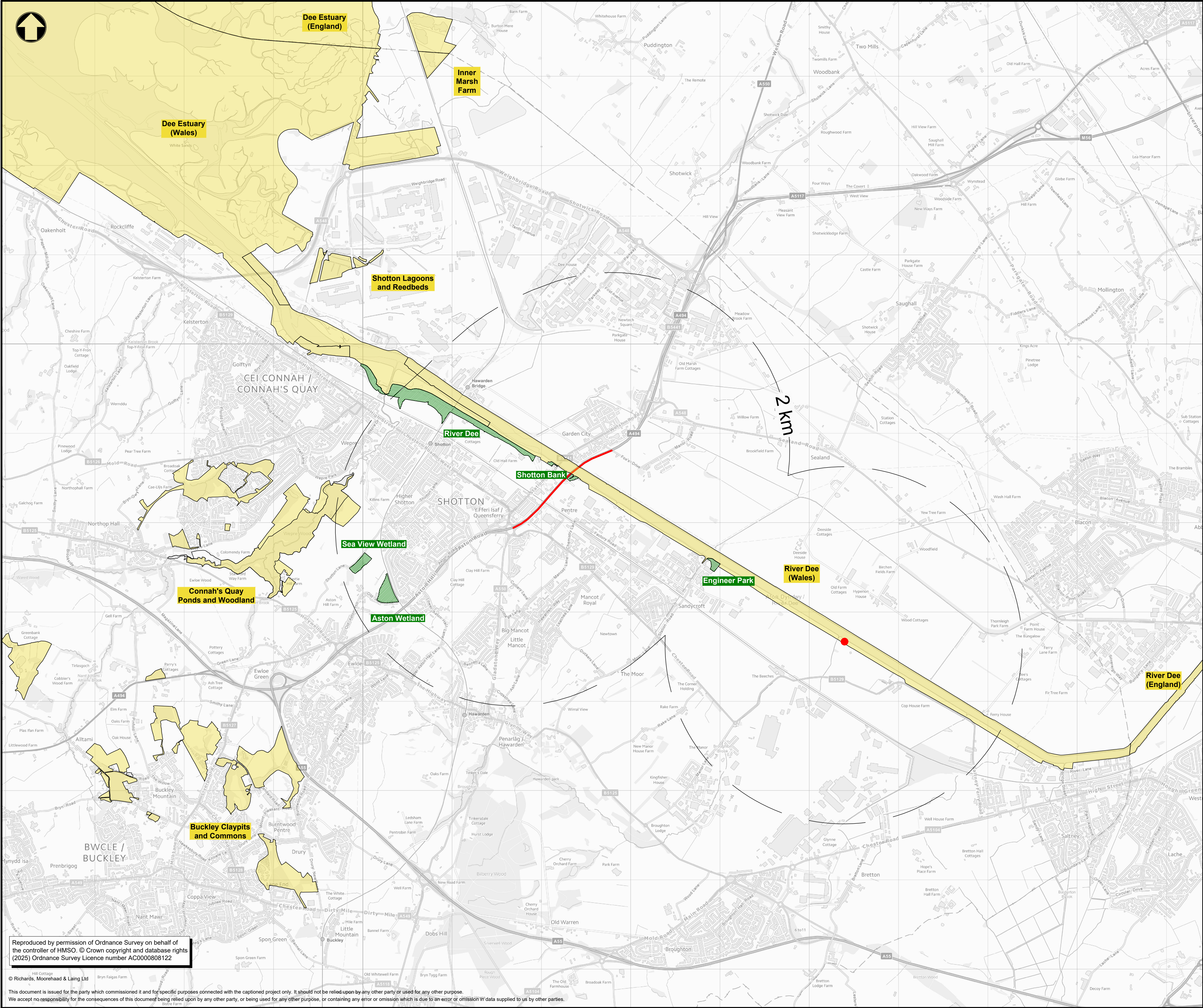












Notes

1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.

2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.

3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).

4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

A494 River Dee Bridge Replacement

ALOF Site

Study Area (2 km buffer)

Designated Sites

Site of Special Scientific Interest

Wildlife Sites

Reference drawings

NRW\_SSSIPolygon.shp

Sites\_of\_Special\_Scientific\_Interest\_England.shp

3094\_A494\_WildlifeSites.shp

|     |            |       |                                    |        |       |
|-----|------------|-------|------------------------------------|--------|-------|
| 01  | 21/03/2025 | RJ    | Draft issue for review and comment | JS     | RG    |
| Rev | Date       | Drawn | Description                        | Ch'k'd | App'd |

Status Stamp

NOT FOR CONSTRUCTION

M

MOTT MACDONALD

M

MOTT MACDONALD

RML

RML

Yn gweithio ar ran Llywodraeth Cymru Working on behalf of the Welsh Government

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru North & Mid Wales Trunk Road Agent

Mott MacDonald House  
5 Woodland Road West  
Colwyn Bay, LL29 7DH  
United Kingdom  
  
T +44 (0)1492 534601  
F -  
W www.mottmac.com

Title

A494 River Dee Bridge Replacement

Figure 8.2

Nationally Designated Nature Conservation and Wildlife Sites

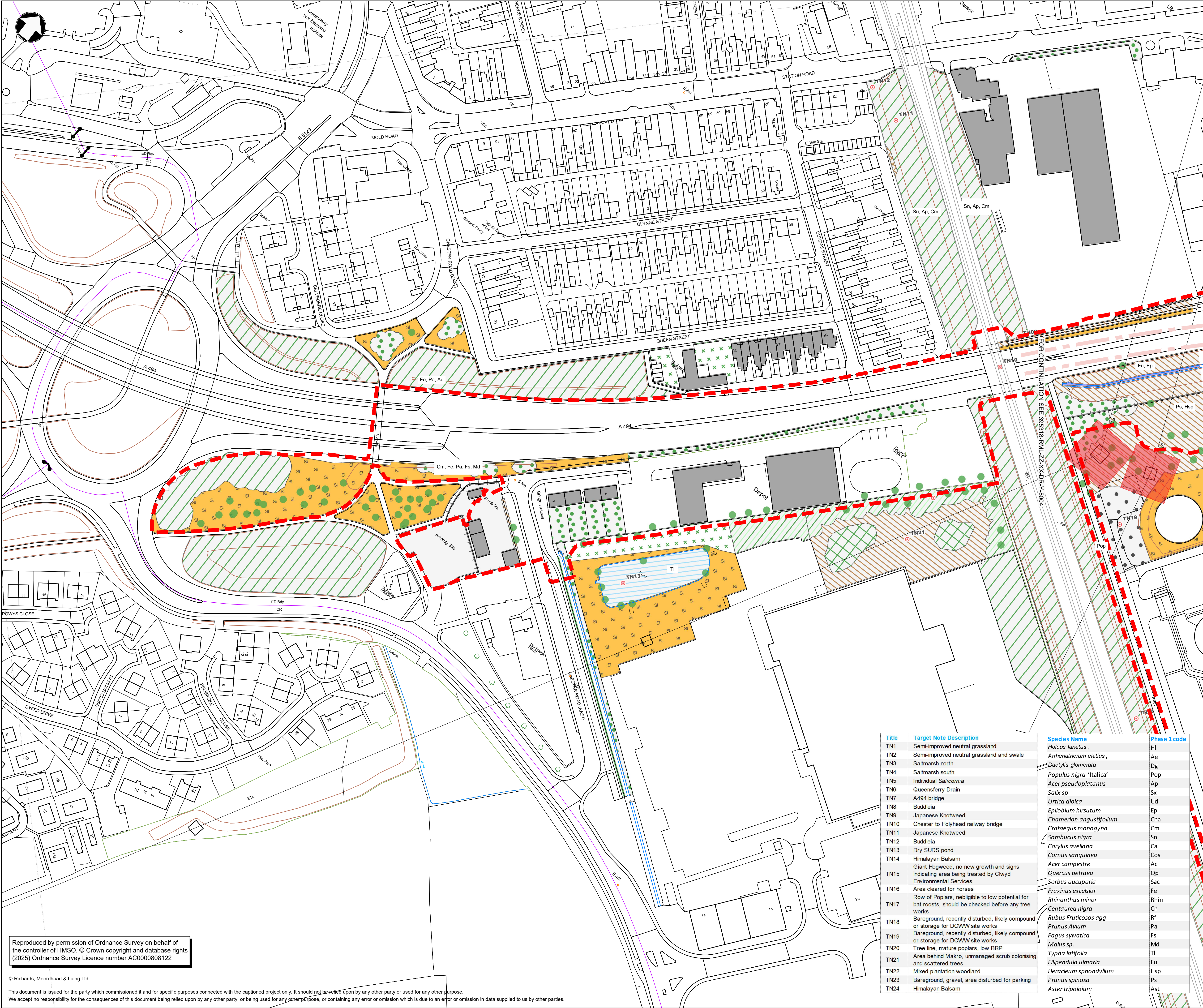
|                         |                            |             |              |             |     |
|-------------------------|----------------------------|-------------|--------------|-------------|-----|
| Designed                | Rh Edwards                 | RhE         | Eng check    | J.Stoddard  | JS  |
| Drawn                   | R.Jones                    | RJ          | Coordination | G.Morgan    | GM  |
| Dwg check               | D.Hall                     | DH          | Approved     | R.Griffiths | RG  |
| MMD Project Number      | 395318                     | Scale at A1 | 1:20000      | Security    | STD |
| Suitability Description | Suitable for Information   | Suit. Code  | S2           | Revision    | 01  |
| Drawing Number          | 395318-RML-ZZ-XX-DR-Y-8002 |             |              |             |     |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Laing Ltd  
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.  
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\15 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8002.dwg Mar 21, 2025 - 2:18PM  
r.jones





Notes

1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.

2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.

3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).

4. Information on this drawing is based on topographical data received from FM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

Phase 1 survey hierarchical alphanumeric reference and mapping colour codes

A1.1.2

Woodland - Broad-leaved - Plantation

A1.3.2

Woodland - Mixed - Plantation

A2.1

Scrub - Dense / Continuous

A2.2

Scrub - Scattered

A3.1

Parkland / Scattered Trees - Broad-leaved

B2.2

Neutral Grassland - Semi-improved

B4

Improved Grassland

C3.1

Tall herb and fern - Tall ruderal

F2.2

Marginal and inundation - Inundation vegetation

G1

Standing Water

G2

Running Water

H1.1

Intertidal - Mud / Sand

H2.4

Saltmarsh - Scattered Plants

H2.6

Saltmarsh - Dense / Continuous

I2.2

Spill

J1.1

Cultivated / Disturbed Land - Arable

J1.2

Cultivated / Disturbed Land - Amenity

J1.4

Cultivated / Disturbed Land - Introduced shrub

J2.1.2

Boundaries - Intact hedge - Species-poor

J2.2.2

Boundaries - Defunct hedge - Species-poor

J2.3.2

Boundaries - Hedge and trees - Species-poor

J2.4

Boundaries - Fence

J3.6

Build-up areas - Buildings

J4

Bare ground

n/a

Target note

01

21/03/2025

RJ

Draft issue for review and comment

JS

RG

Rev

Date

Drawn

Description

Ch'k'd

App'd

Status Stamp

NOT FOR CONSTRUCTION

M

M

MOTT

MACDONALD

Mott MacDonald House

5 Woodland Road West

Colwyn Bay, LL29 7DH

United Kingdom

T +44 (0)1492 534601

F -

W www.mottmac.com

RML

Client

Yn gweithio ar ran

Llywodraeth Cymru

Working on behalf of the

Welsh Government

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru

North & Mid Wales Trunk Road Agent

Title

A494 River Dee Bridge Replacement

Figure 8.3A

Phase 1 Survey

Habitat Classification

Sheet 1 of 6

Designed

R.Jones

RJ

Eng check

J.Stoddard

JS

Drawn

R.Jones

RJ

Coordination

G.Morgan

GM

Dwg check

D.Hall

DH

Approved

R.Griffiths

RG

MMD Project Number

395318

Scale at A1

1:1000

Security

STD

Suitability Description

Suitable for Information

Suit. Code

S2

Drawing Number

395318-RML-ZZ-XX-DR-Y-8003

Revision

01

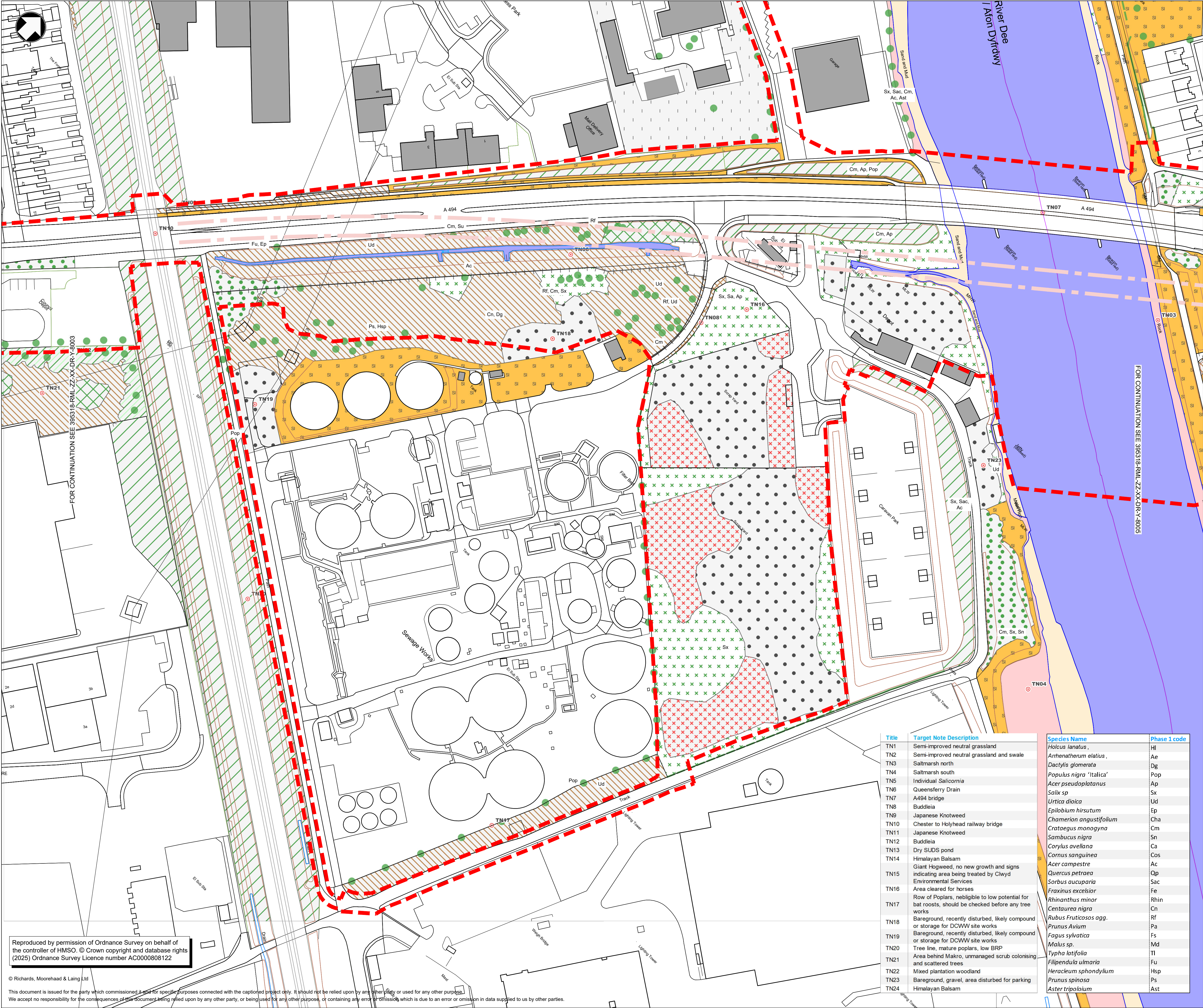
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\15 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8003-8008.dwg Mar 21, 2025 - 12:40PM r.jones





Notes

1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.

2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.

3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).

4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

Phase 1 survey hierarchical alphanumeric reference and mapping colour codes

A11.2

Woodland - Broad-leaved - Plantation

A13.2

Woodland - Mixed - Plantation

A2.1

Scrub - Dense / Continuous

A2.2

Scrub - Scattered

A3.1

Parkland / Scattered Trees - Broad-leaved

B2.2

Neutral Grassland - Semi-improved

B4

Improved Grassland

C3.1

Tall herb and fern - Tall ruderal

F2.2

Marginal and inundation - Inundation vegetation

G1

Standing Water

G2

Running Water

H1.1

Intertidal - Mud / Sand

H2.4

Saltmarsh - Scattered Plants

H2.6

Saltmarsh - Dense / Continuous

I2.2

Spill

J1.1

Cultivated / Disturbed Land - Arable

J1.2

Cultivated / Disturbed Land - Amenity

J1.4

Cultivated / Disturbed Land - Introduced shrub

J2.1.2

Boundaries - Intact hedge - Species-poor

J2.2.2

Boundaries - Defunct hedge - Species-poor

J2.3.2

Boundaries - Hedge and trees - Species-poor

J2.4

Boundaries - Fence

J3.6

Built-up areas - Buildings

J4

Bare ground

n/a

Target note

02

08/04/2025

RJ

Draft issue for review and comment

JS

RG

Rev

Date

Drawn

Description

Ch'k'd

App'd

Status Stamp

NOT FOR CONSTRUCTION

M

MOTT MACDONALD

M

MOTT MACDONALD

RML

RML

Mott MacDonald House

5 Woodland Road West

Colwyn Bay, LL29 7DH

United Kingdom

T +44 (0)1492 534601

F -

W www.mottmac.com

Client

Yn gweithio ar ran

Llywodraeth Cymru

Working on behalf of the

Welsh Government

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru

North & Mid Wales Trunk Road Agent

Title

A494 River Dee Bridge Replacement

Figure 8.3B

Phase 1 Survey

Habitat Classification

Sheet 2 of 6

Designed

R.Jones

RJ

Eng check

J.Stoddard

JS

Drawn

R.Jones

RJ

Coordination

G.Morgan

GM

Dwg check

D.Hall

DH

Approved

R.Griffiths

RG

MMD Project Number

395318

Scale at A1

1:1000

Security

STD

Suitability Description

Suitable for Information

Suit. Code

S2

Drawing Number

395318-RML-ZZ-XX-DR-Y-8004

Revision

02

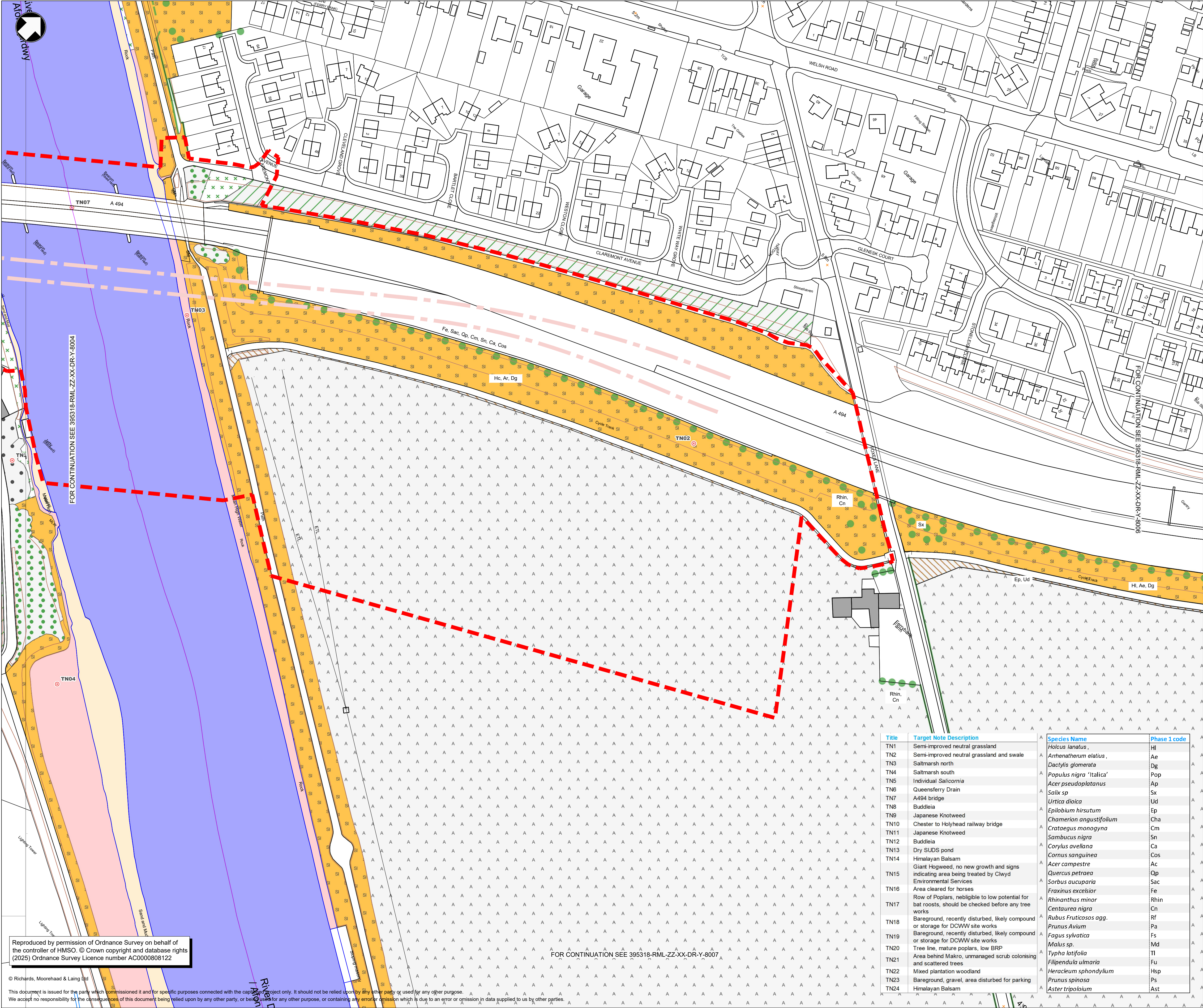
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission, which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\15 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8003-8008.dwg Apr 8, 2025 - 11:08AM r.jones





- Notes
- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
  - This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
  - Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
  - Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

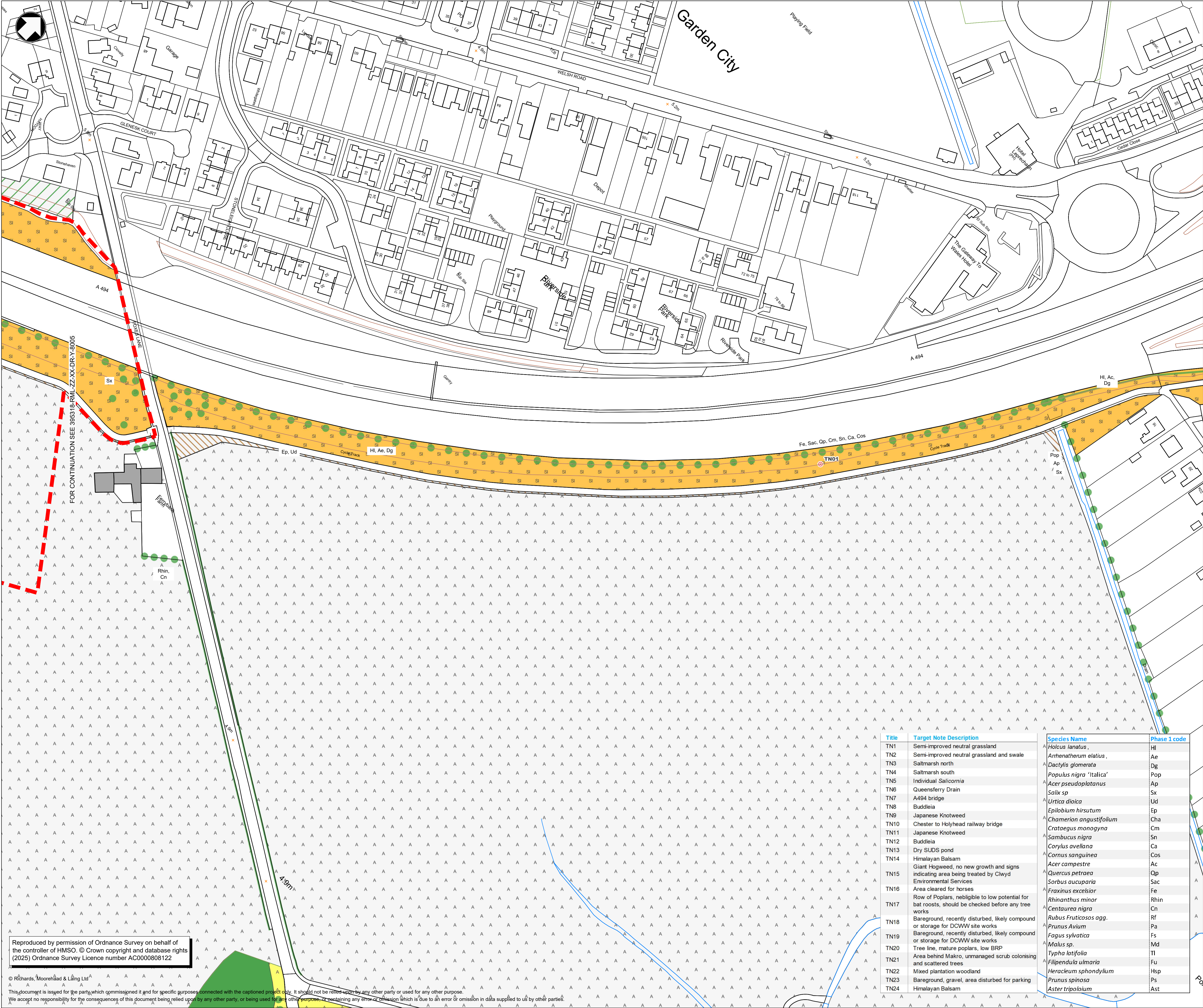
| Phase 1 survey hierarchical alphanumeric reference and mapping colour codes |                                                 |
|-----------------------------------------------------------------------------|-------------------------------------------------|
| A1.1.2                                                                      | Woodland - Broad-leaved - Plantation            |
| A1.3.2                                                                      | Woodland - Mixed - Plantation                   |
| A2.1                                                                        | Scrub - Dense / Continuous                      |
| A2.2                                                                        | Scrub - Scattered                               |
| A3.1                                                                        | Parkland / Scattered Trees - Broad-leaved       |
| B2.2                                                                        | Neutral Grassland - Semi-improved               |
| B4                                                                          | Improved Grassland                              |
| C3.1                                                                        | Tall herb and fern - Tall ruderal               |
| F2.2                                                                        | Marginal and inundation - Inundation vegetation |
| G1                                                                          | Standing Water                                  |
| G2                                                                          | Running Water                                   |
| H1.1                                                                        | Intertidal - Mud / Sand                         |
| H2.4                                                                        | Saltmarsh - Scattered Plants                    |
| H2.6                                                                        | Saltmarsh - Dense / Continuous                  |
| I2.2                                                                        | Spill                                           |
| J1.1                                                                        | Cultivated / Disturbed Land - Arable            |
| J1.2                                                                        | Cultivated / Disturbed Land - Amenity           |
| J1.4                                                                        | Cultivated / Disturbed Land - Introduced shrub  |
| J2.1.2                                                                      | Boundaries - Intact hedge - Species-poor        |
| J2.2.2                                                                      | Boundaries - Defunct hedge - Species-poor       |
| J2.3.2                                                                      | Boundaries - Hedge and trees - Species-poor     |
| J2.4                                                                        | Boundaries - Fence                              |
| J3.6                                                                        | Build-up areas - Buildings                      |
| J4                                                                          | Bare ground                                     |
| n/a                                                                         | Target note                                     |

|                                                                                                              |            |             |                                                                                                                                                |             |            |
|--------------------------------------------------------------------------------------------------------------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 01                                                                                                           | 21/03/2025 | RJ          | Draft issue for review and comment                                                                                                             | JS          | RG         |
| Rev                                                                                                          | Date       | Drawn       | Description                                                                                                                                    | Ch'k'd      | App'd      |
| Status Stamp                                                                                                 |            |             |                                                                                                                                                |             |            |
| NOT FOR CONSTRUCTION                                                                                         |            |             |                                                                                                                                                |             |            |
| <b>M</b><br><b>MOTT</b><br><b>MACDONALD</b>                                                                  |            |             | Mott MacDonald House<br>5 Woodland Road West<br>Colwyn Bay, LL29 7DH<br>United Kingdom<br><br>T +44 (0)1492 534601<br>F -<br>W www.mottmac.com |             |            |
| <b>RML</b>                                                                                                   |            |             | Client                                                                                                                                         |             |            |
| Title                                                                                                        |            |             |                                                                                                                                                |             |            |
| A494 River Dee Bridge Replacement<br>Figure 8.3C<br>Phase 1 Survey<br>Habitat Classification<br>Sheet 3 of 6 |            |             |                                                                                                                                                |             |            |
| Designed                                                                                                     | R.Jones    | RJ          | Eng check                                                                                                                                      | J.Stoddard  | JS         |
| Drawn                                                                                                        | R.Jones    | RJ          | Coordination                                                                                                                                   | G.Morgan    | GM         |
| Dwg check                                                                                                    | D.Hall     | DH          | Approved                                                                                                                                       | R.Griffiths | RG         |
| MMD Project Number                                                                                           |            | Scale at A1 |                                                                                                                                                | Security    |            |
| 395318                                                                                                       |            | 1:1000      |                                                                                                                                                | STD         |            |
| Suitability Description                                                                                      |            |             |                                                                                                                                                |             | Suit. Code |
| Suitable for Information                                                                                     |            |             |                                                                                                                                                |             | S2         |
| Drawing Number                                                                                               |            |             |                                                                                                                                                |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8005                                                                                   |            |             |                                                                                                                                                |             | 01         |

| Title | Target Note Description                                                                                  | Species Name                                                                           | Phase 1 code   |
|-------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------|
| TN1   | Semi-improved neutral grassland                                                                          | <i>Holcus lanatus</i> ,<br><i>Arrhenatherum elatius</i> ,<br><i>Dactylis glomerata</i> | Hl<br>Ae<br>Dg |
| TN2   | Semi-improved neutral grassland and swale                                                                | <i>Populus nigra</i> 'italica'                                                         | Pop            |
| TN3   | Saltmarsh north                                                                                          | <i>Acer pseudoplatanus</i>                                                             | Ap             |
| TN4   | Saltmarsh south                                                                                          | <i>Salix</i> sp                                                                        | Sx             |
| TN5   | Individual <i>Salicornia</i>                                                                             | <i>Urtica dioica</i>                                                                   | Ud             |
| TN6   | Queensferry Drain                                                                                        | <i>Epilobium hirsutum</i>                                                              | Ep             |
| TN7   | A494 bridge                                                                                              | <i>Chamerion angustifolium</i>                                                         | Cha            |
| TN8   | Buddleia                                                                                                 | <i>Crataegus monogyna</i>                                                              | Cm             |
| TN9   | Japanese Knotweed                                                                                        | <i>Sambucus nigra</i>                                                                  | Sn             |
| TN10  | Chester to Holyhead railway bridge                                                                       | <i>Corylus avellana</i>                                                                | Ca             |
| TN11  | Japanese Knotweed                                                                                        | <i>Cornus sanguinea</i>                                                                | Cos            |
| TN12  | Buddleia                                                                                                 | <i>Acer campestre</i>                                                                  | Ac             |
| TN13  | Dry SUDS pond                                                                                            | <i>Quercus petraea</i>                                                                 | Qp             |
| TN14  | Himalayan Balsam                                                                                         | <i>Sorbus aucuparia</i>                                                                | Sac            |
| TN15  | Queensferry Drain, no new growth and signs indicating area being treated by Clwyd Environmental Services | <i>Fraxinus excelsior</i>                                                              | Fe             |
| TN16  | Area cleared for horses                                                                                  | <i>Rhynanthus minor</i>                                                                | Rhin           |
| TN17  | Row of Poplars, negligible to low potential for bat roosts, should be checked before any tree works      | <i>Centaurea nigra</i>                                                                 | Cn             |
| TN18  | Bareground, recently disturbed, likely compound or storage for DCWW site works                           | <i>Rubus fruticosus</i> agg.                                                           | Rf             |
| TN19  | Bareground, recently disturbed, likely compound or storage for DCWW site works                           | <i>Prunus avium</i>                                                                    | Pa             |
| TN20  | Tree line, mature poplars, low BRP                                                                       | <i>Fagus sylvatica</i>                                                                 | Fs             |
| TN21  | Area behind Makro, unmanaged scrub colonising and scattered trees                                        | <i>Malus</i> sp.                                                                       | Md             |
| TN22  | Mixed plantation woodland                                                                                | <i>Typha latifolia</i>                                                                 | Tl             |
| TN23  | Bareground, gravel, area disturbed for parking                                                           | <i>Filipendula ulmaria</i>                                                             | Fu             |
| TN24  | Himalayan Balsam                                                                                         | <i>Heracleum sphondylium</i>                                                           | Hsp            |
|       |                                                                                                          | <i>Prunus spinosa</i>                                                                  | Ps             |
|       |                                                                                                          | <i>Aster tripolium</i>                                                                 | Ast            |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from FM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

Phase 1 survey hierarchical alphanumeric reference and mapping colour codes

|        |                                                 |
|--------|-------------------------------------------------|
| A1.1.2 | Woodland - Broad-leaved - Plantation            |
| A1.3.2 | Woodland - Mixed - Plantation                   |
| A2.1   | Scrub - Dense / Continuous                      |
| A2.2   | Scrub - Scattered                               |
| A3.1   | Parkland / Scattered Trees - Broad-leaved       |
| B2.2   | Neutral Grassland - Semi-improved               |
| B4     | Improved Grassland                              |
| C3.1   | Tall herb and fern - Tall ruderal               |
| F2.2   | Marginal and inundation - Inundation vegetation |
| G1     | Standing Water                                  |
| G2     | Running Water                                   |
| H1.1   | Intertidal - Mud / Sand                         |
| H2.4   | Saltmarsh - Scattered Plants                    |
| H2.6   | Saltmarsh - Dense / Continuous                  |
| I2.2   | Spill                                           |
| J1.1   | Cultivated / Disturbed Land - Arable            |
| J1.2   | Cultivated / Disturbed Land - Amenity           |
| J1.4   | Cultivated / Disturbed Land - Introduced shrub  |
| J2.1.2 | Boundaries - Intact hedge - Species-poor        |
| J2.2.2 | Boundaries - Defunct hedge - Species-poor       |
| J2.3.2 | Boundaries - Hedge and trees - Species-poor     |
| J2.4   | Boundaries - Fence                              |
| J3.6   | Build-up areas - Buildings                      |
| J4     | Bare ground                                     |
| n/a    | Target note                                     |

|                            |            |             |                                    |             |       |
|----------------------------|------------|-------------|------------------------------------|-------------|-------|
| 01                         | 21/03/2025 | RJ          | Draft issue for review and comment | JS          | RG    |
| Rev                        | Date       | Drawn       | Description                        | Ch'k'd      | App'd |
| Status Stamp               |            |             |                                    |             |       |
| NOT FOR CONSTRUCTION       |            |             |                                    |             |       |
|                            |            |             |                                    |             |       |
| MOTT MACDONALD             |            |             | RML                                |             |       |
| Client                     |            |             | Title                              |             |       |
|                            |            |             | A494 River Dee Bridge Replacement  |             |       |
|                            |            |             | Figure 8.3D                        |             |       |
|                            |            |             | Phase 1 Survey                     |             |       |
|                            |            |             | Habitat Classification             |             |       |
|                            |            |             | Sheet 4 of 6                       |             |       |
| Designed                   | R.Jones    | RJ          | Eng check                          | J.Stoddard  | JS    |
| Drawn                      | R.Jones    | RJ          | Coordination                       | G.Morgan    | GM    |
| Dwg check                  | D.Hall     | DH          | Approved                           | R.Griffiths | RG    |
| MMD Project Number         |            | Scale at A1 |                                    | Security    |       |
| 395318                     |            | 1:1000      |                                    | STD         |       |
| Suitability Description    |            |             |                                    | Suit. Code  |       |
| Suitable for Information   |            |             |                                    | S2          |       |
| Drawing Number             |            |             |                                    | Revision    |       |
| 395318-RML-ZZ-XX-DR-Y-8006 |            |             |                                    | 01          |       |

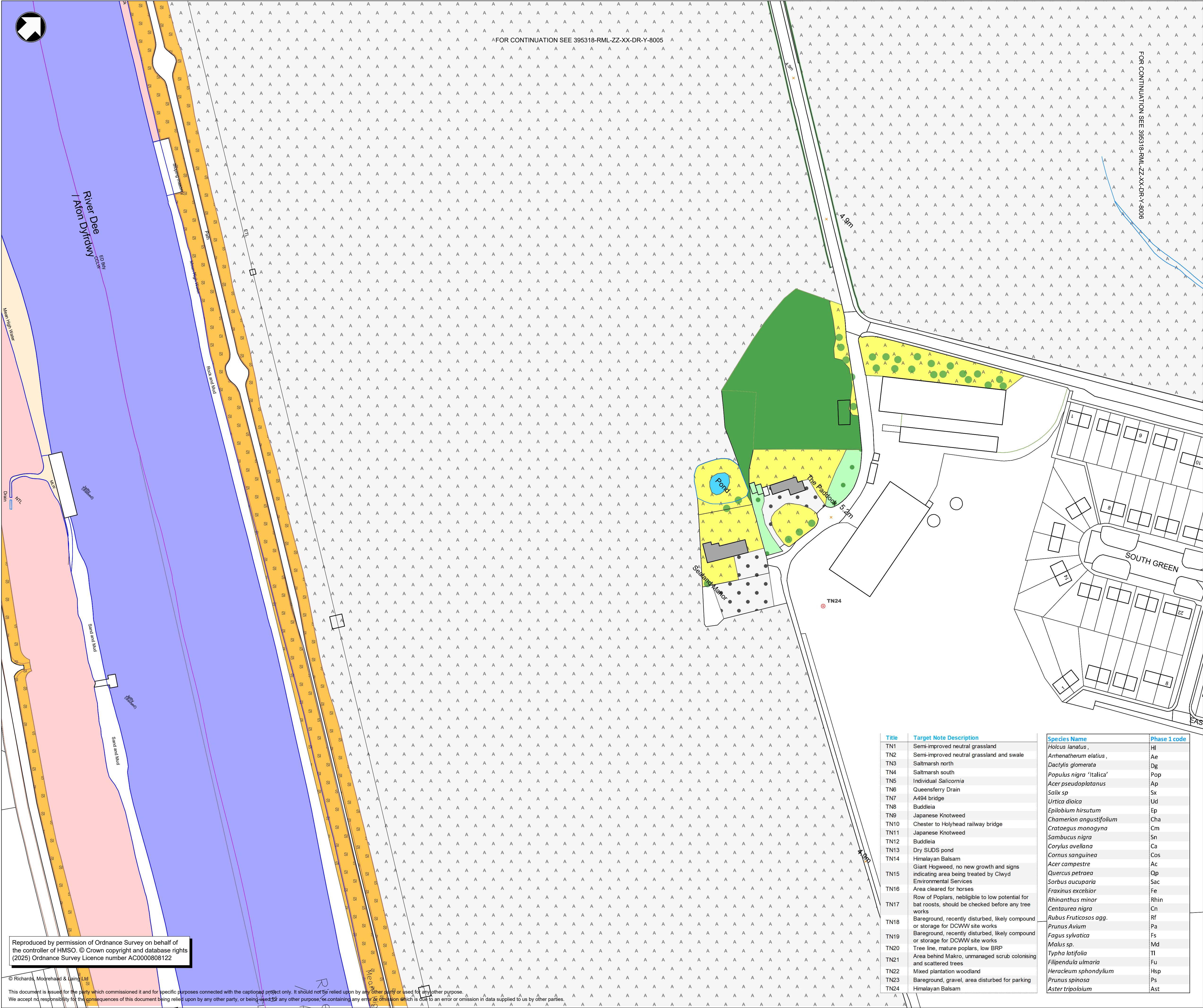
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Lings Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\15 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8003-8008.dwg Mar 21, 2025 - 1:01PM r.jones





- Notes
- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
  - This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
  - Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
  - Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

| Phase 1 survey hierarchical alphanumeric reference and mapping colour codes |                                                 |
|-----------------------------------------------------------------------------|-------------------------------------------------|
| A1.1.2                                                                      | Woodland - Broad-leaved - Plantation            |
| A1.3.2                                                                      | Woodland - Mixed - Plantation                   |
| A2.1                                                                        | Scrub - Dense / Continuous                      |
| A2.2                                                                        | Scrub - Scattered                               |
| A3.1                                                                        | Parkland / Scattered Trees - Broad-leaved       |
| B2.2                                                                        | Neutral Grassland - Semi-improved               |
| B4                                                                          | Improved Grassland                              |
| C3.1                                                                        | Tall herb and fern - Tall ruderal               |
| F2.2                                                                        | Marginal and inundation - Inundation vegetation |
| G1                                                                          | Standing Water                                  |
| G2                                                                          | Running Water                                   |
| H1.1                                                                        | Intertidal - Mud / Sand                         |
| H2.4                                                                        | Saltmarsh - Scattered Plants                    |
| H2.6                                                                        | Saltmarsh - Dense / Continuous                  |
| I2.2                                                                        | Spill                                           |
| J1.1                                                                        | Cultivated / Disturbed Land - Arable            |
| J1.2                                                                        | Cultivated / Disturbed Land - Amenity           |
| J1.4                                                                        | Cultivated / Disturbed Land - Introduced shrub  |
| J2.1.2                                                                      | Boundaries - Intact hedge - Species-poor        |
| J2.2.2                                                                      | Boundaries - Defunct hedge - Species-poor       |
| J2.3.2                                                                      | Boundaries - Hedge and trees - Species-poor     |
| J2.4                                                                        | Boundaries - Fence                              |
| J3.6                                                                        | Build-up areas - Buildings                      |
| J4                                                                          | Bare ground                                     |
| n/a                                                                         | Target note                                     |

|     |            |       |                                    |        |       |
|-----|------------|-------|------------------------------------|--------|-------|
| 01  | 21/03/2025 | RJ    | Draft issue for review and comment | JS     | RG    |
| Rev | Date       | Drawn | Description                        | Ch'k'd | App'd |

Status Stamp

NOT FOR CONSTRUCTION

M

MOTT MACDONALD

M

MOTT MACDONALD

Yn gweithio ar ran Llywodraeth Cymru Working on behalf of the Welsh Government

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru

North & Mid Wales Trunk Road Agent

Mott MacDonald House  
5 Woodland Road West  
Colwyn Bay, LL29 7DH  
United Kingdom

T +44 (0)1492 534601  
F -  
W www.mottmac.com

Client

|  |  |
|--|--|
|  |  |
|--|--|

Title

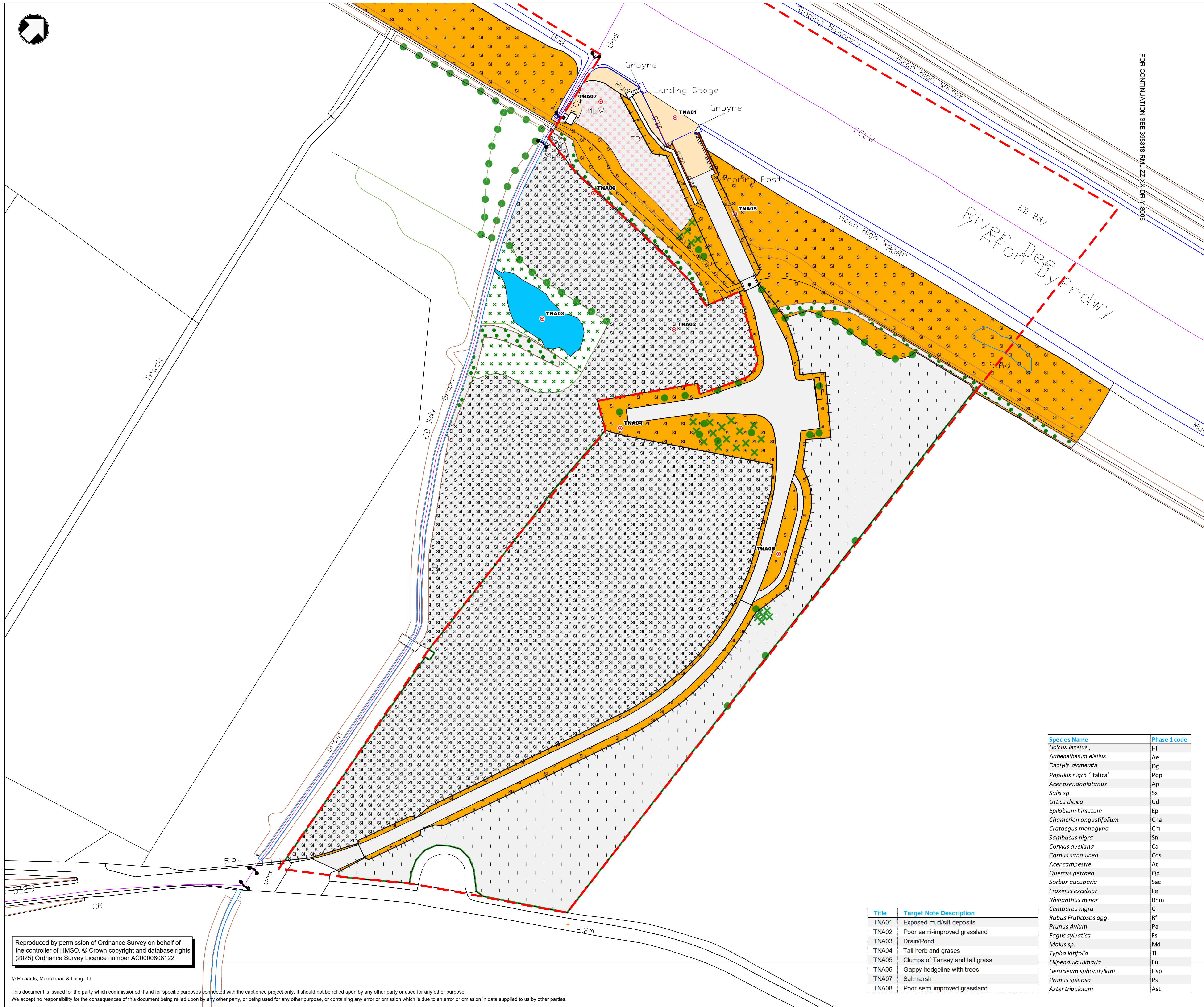
A494 River Dee Bridge Replacement  
Figure 8.3E  
Phase 1 Survey  
Habitat Classification  
Sheet 5 of 6

|                         |                            |             |              |             |     |
|-------------------------|----------------------------|-------------|--------------|-------------|-----|
| Designed                | R.Jones                    | RJ          | Eng check    | J.Stoddard  | JS  |
| Drawn                   | R.Jones                    | RJ          | Coordination | G.Morgan    | GM  |
| Dwg check               | D.Hall                     | DH          | Approved     | R.Griffiths | RG  |
| MMD Project Number      | 395318                     | Scale at A1 | 1:1000       | Security    | STD |
| Suitability Description | Suitable for Information   | Suit. Code  | S2           | Revision    | 01  |
| Drawing Number          | 395318-RML-ZZ-XX-DR-Y-8007 |             |              |             |     |

| Title | Target Note Description                                                                              | Species Name                   | Phase 1 code |
|-------|------------------------------------------------------------------------------------------------------|--------------------------------|--------------|
| TN1   | Semi-improved neutral grassland                                                                      | <i>Holcus lanatus</i>          | Hl           |
| TN2   | Semi-improved neutral grassland and swale                                                            | <i>Arrhenatherum elatius</i>   | Ae           |
| TN3   | Saltmarsh north                                                                                      | <i>Dactylis glomerata</i>      | Dg           |
| TN4   | Saltmarsh south                                                                                      | <i>Populus nigra</i> 'italica' | Pop          |
| TN5   | Individual <i>Salicornia</i>                                                                         | <i>Acer pseudoplatanus</i>     | Ap           |
| TN6   | Queensferry Drain                                                                                    | <i>Salix sp</i>                | Sx           |
| TN7   | A494 bridge                                                                                          | <i>Urtica dioica</i>           | Ud           |
| TN8   | Buddleia                                                                                             | <i>Epilobium hirsutum</i>      | Ep           |
| TN9   | Japanese Knotweed                                                                                    | <i>Chamerion angustifolium</i> | Cha          |
| TN10  | Chester to Holyhead railway bridge                                                                   | <i>Crataegus monogyna</i>      | Cm           |
| TN11  | Japanese Knotweed                                                                                    | <i>Sambucus nigra</i>          | Sn           |
| TN12  | Buddleia                                                                                             | <i>Corylus avellana</i>        | Ca           |
| TN13  | Dry SUDS pond                                                                                        | <i>Cornus sanguinea</i>        | Cos          |
| TN14  | Himalayan Balsam                                                                                     | <i>Acer campestre</i>          | Ac           |
| TN15  | Giant Hogweed, no new growth and signs indicating area being treated by Clwyd Environmental Services | <i>Quercus petraea</i>         | Qp           |
| TN16  | Area cleared for horses                                                                              | <i>Sorbus aucuparia</i>        | Sac          |
| TN17  | Row of Poplars, negligible to low potential for bat roosts, should be checked before any tree works  | <i>Fraxinus excelsior</i>      | Fr           |
| TN18  | Bareground, recently disturbed, likely compound or storage for DCWW site works                       | <i>Rhinanthus minor</i>        | Rhin         |
| TN19  | Bareground, recently disturbed, likely compound or storage for DCWW site works                       | <i>Centaurea nigra</i>         | Cn           |
| TN20  | Tree line, mature poplars, low BRP                                                                   | <i>Rubus fruticosus agg.</i>   | Rf           |
| TN21  | Area behind Makro, unmanaged scrub colonising and scattered trees                                    | <i>Prunus avium</i>            | Pa           |
| TN22  | Mixed plantation woodland                                                                            | <i>Fagus sylvatica</i>         | Fs           |
| TN23  | Bareground, gravel, area disturbed for parking                                                       | <i>Malus sp.</i>               | Md           |
| TN24  | Himalayan Balsam                                                                                     | <i>Typha latifolia</i>         | Tl           |
|       |                                                                                                      | <i>Filipendula ulmaria</i>     | Fu           |
|       |                                                                                                      | <i>Heracleum sphondylium</i>   | Hsp          |
|       |                                                                                                      | <i>Prunus spinosa</i>          | Ps           |
|       |                                                                                                      | <i>Aster tripolium</i>         | Ast          |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122





1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

## Phase 1 survey hierarchical alphanumeric reference and mapping colour code

|                                                                                     |        |                                                 |
|-------------------------------------------------------------------------------------|--------|-------------------------------------------------|
|  | A1.1.2 | Woodland - Broad-leaved - Plantation            |
|  | A1.3.2 | Woodland - Mixed - Plantation                   |
|  | A2.1   | Scrub - Dense / Continuous                      |
|  | A2.2   | Scrub - Scattered                               |
|  | B3.1   | Parkland / Scattered Trees - Broad-leaved       |
|  | B3.2   | Neutral Grassland - Semi-improved               |
|  | B4     | Improved Grassland                              |
|  | C3.1   | Tall herb and fern - Tall ruderal               |
|  | F2.2   | Marginal and inundation - Inundation vegetation |
|  | G1     | Standing Water                                  |
|  | G2     | Running Water                                   |
|  | H1.1   | Intertidal - Mud / Sand                         |
|  | H2.4   | Saltmarsh - Scattered Plants                    |
|  | H2.6   | Saltmarsh - Dense / Continuous                  |
|  | I2.2   | Spill                                           |
|  | J1.1   | Cultivated / Disturbed Land - Arable            |
|  | J1.2   | Cultivated / Disturbed Land - Amenity           |
|  | J1.4   | Cultivated / Disturbed Land - Introduced shrub  |
|  | J2.1.2 | Boundaries - Intact hedge - Species-poor        |
|  | J2.2.2 | Boundaries - Defunct hedge - Species-poor       |
|  | J2.3.2 | Boundaries - Hedges and trees - Species-poor    |
|  | J3.2   | Boundaries - Fence                              |
|  | J3.6   | Buildup areas - Buildings                       |
|  | K4     | Bare ground                                     |
|  | N/A    | Target note                                     |

|     |            |       |                                    |        |       |
|-----|------------|-------|------------------------------------|--------|-------|
| 1   | 21/03/2025 | RJ    | Draft issue for review and comment | JS     | RG    |
| Rev | Date       | Drawn | Description                        | Ch'k'd | App'd |

NOT FOR CONSTRUCTION



Mott MacDonald House  
5 Woodland Road West  
Colwyn Bay, LL29 7DH  
United Kingdom

T +44 (0)1492 53460  
F -  
W [www.mottmac.com](http://www.mottmac.com)



 **Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru**  
**North & Mid Wales Trunk Road Agent**

A494 River Dee Bridge Replacement  
Figure 8.3F  
Phase 1 Survey  
Habitat Classification  
Sheet 6 of 6

|           |         |    |              |             |    |
|-----------|---------|----|--------------|-------------|----|
| Designed  | R.Jones | RJ | Eng check    | J.Stoddard  | JS |
| Drawn     | R.Jones | RJ | Coordination | G.Morgan    | GM |
| Dwg check | D.Hall  | DH | Approved     | R.Griffiths | RG |

|                    |             |          |
|--------------------|-------------|----------|
| MMD Project Number | Scale at A1 | Security |
| 395318             | 1:1000      | STD      |

|                          |            |
|--------------------------|------------|
| Suitability Description  | Suit. Code |
| Suitable for Information | S2         |

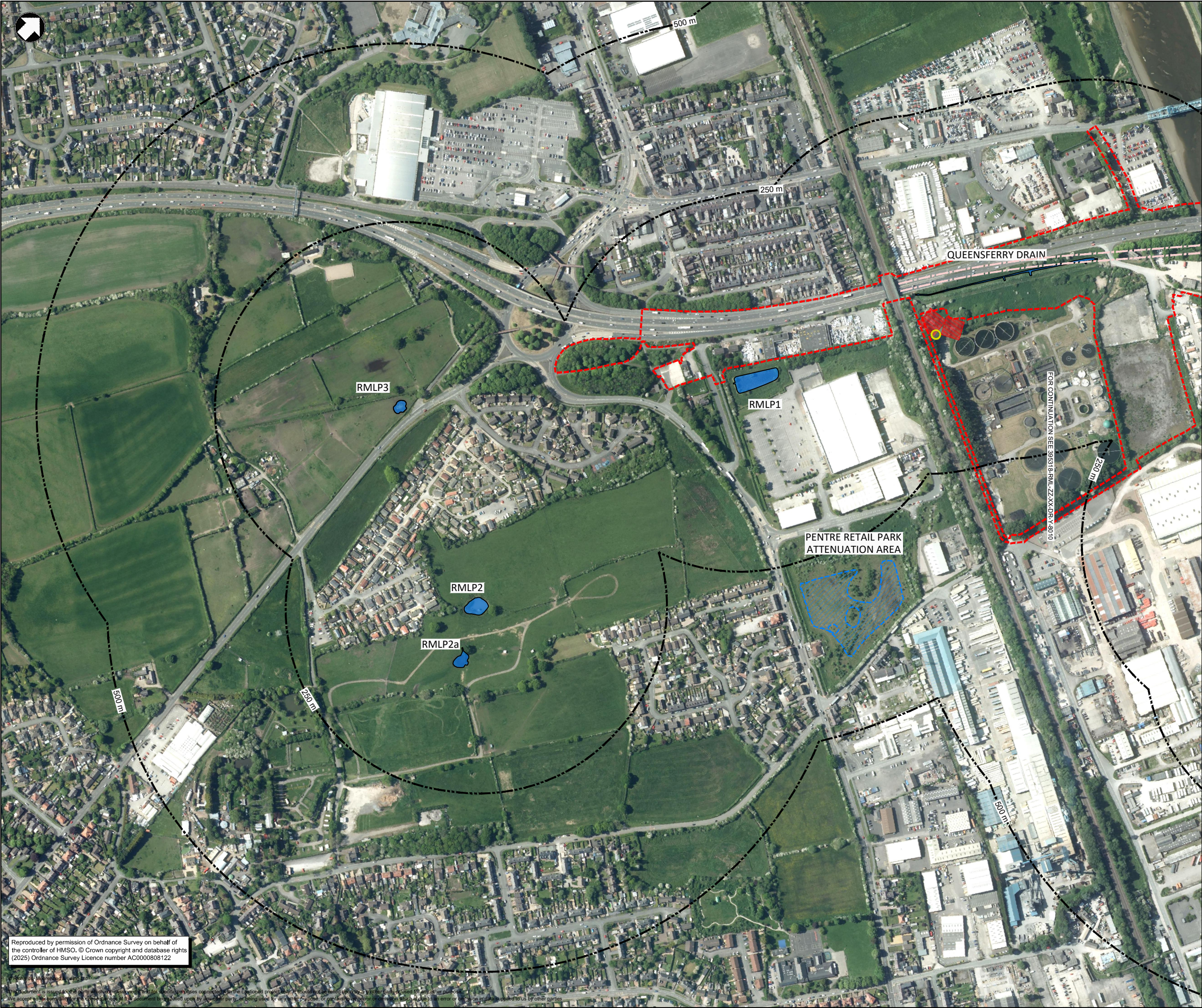
Reproduced by permission of Ordnance Survey on behalf of  
the controller of HMSO. © Crown copyright and database rights  
(2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\15 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8003-8008.dwg Mar 21, 2025 2:12PM r.jones

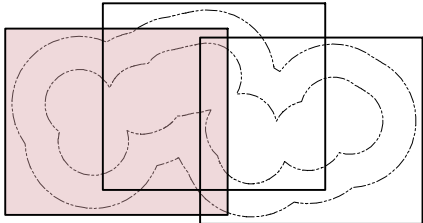




- Notes
1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
  2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
  3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
  4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Fixed Distance Buffers (250 m and 500 m)
- Ponds Surveyed
- GCN found during 2020 reptile surveys
- Surface water attenuation area created since GCN pond surveys



|                                                                                                  |            |                                                                                                                                                |                                    |             |            |       |
|--------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|------------|-------|
| 01                                                                                               | 21/03/2025 | RJ                                                                                                                                             | Draft issue for review and comment |             | JS         | RG    |
| Rev                                                                                              | Date       | Drawn                                                                                                                                          | Description                        |             | Ch'k'd     | App'd |
| Status Stamp                                                                                     |            |                                                                                                                                                |                                    |             |            |       |
| NOT FOR CONSTRUCTION                                                                             |            |                                                                                                                                                |                                    |             |            |       |
| <b>M</b><br><b>MOTT</b><br><b>MACDONALD</b>                                                      |            | Mott MacDonald House<br>5 Woodland Road West<br>Colwyn Bay, LL29 7DH<br>United Kingdom<br><br>T +44 (0)1492 534601<br>F -<br>W www.mottmac.com |                                    |             |            |       |
| <b>RML</b>                                                                                       |            | Client                                                                                                                                         |                                    |             |            |       |
|                                                                                                  |            |                                                                                                                                                |                                    |             |            |       |
| Title                                                                                            |            |                                                                                                                                                |                                    |             |            |       |
| A494 River Dee Bridge Replacement<br>Figure 8.4A<br>GCN Survey<br>Pond Locations<br>Sheet 1 of 3 |            |                                                                                                                                                |                                    |             |            |       |
| Designed                                                                                         | R.Jones    | RJ                                                                                                                                             | Eng check                          | J.Stoddard  | JS         |       |
| Drawn                                                                                            | R.Jones    | RJ                                                                                                                                             | Coordination                       | G.Morgan    | GM         |       |
| Dwg check                                                                                        | D.Hall     | DH                                                                                                                                             | Approved                           | R.Griffiths | RG         |       |
| MMD Project Number                                                                               |            | Scale at A1                                                                                                                                    |                                    |             | Security   |       |
| 395318                                                                                           |            | 1:5000                                                                                                                                         |                                    |             | STD        |       |
| Suitability Description                                                                          |            |                                                                                                                                                |                                    |             | Suit. Code |       |
| Suitable for Information                                                                         |            |                                                                                                                                                |                                    |             | S2         |       |
| Drawing Number                                                                                   |            |                                                                                                                                                |                                    |             | Revision   |       |
| 395318-RML-ZZ-XX-DR-Y-8009                                                                       |            |                                                                                                                                                |                                    |             | 01         |       |

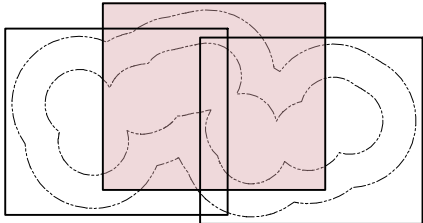
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122





- Notes
1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
  2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
  3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
  4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

- Key to symbols
- A494 River Dee Bridge Replacement
  - Scheme extents
  - Fixed Distance Buffers (250 m and 500 m)
  - Ponds Surveyed
  - GCN found during 2020 reptile surveys
  - Surface water attenuation area created since GCN pond surveys



|                                                                                                                                                                                     |            |       |                                                                                                                                                                              |             |                  |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------|
| 02                                                                                                                                                                                  | 08/04/2025 | RJ    | Draft issue for review and comment                                                                                                                                           |             | JS               | RG    |
| Rev                                                                                                                                                                                 | Date       | Drawn | Description                                                                                                                                                                  |             | Ch'k'd           | App'd |
| Status Stamp                                                                                                                                                                        |            |       |                                                                                                                                                                              |             |                  |       |
| NOT FOR CONSTRUCTION                                                                                                                                                                |            |       |                                                                                                                                                                              |             |                  |       |
| <b>M</b><br><b>MOTT</b><br><b>MACDONALD</b>                                                                                                                                         |            |       | Mott MacDonald House<br>5 Woodland Road West<br>Colwyn Bay, LL29 7DH<br>United Kingdom<br><br>T +44 (0)1492 534601<br>F -<br>W www.mottmac.com                               |             |                  |       |
| <b>RML</b>                                                                                                                                                                          |            |       |                                                                                                                                                                              |             |                  |       |
| Client                                                                                                                                                                              |            |       |                                                                                                                                                                              |             |                  |       |
| <br>Yn gweithio ar ran<br>Llywodraeth Cymru<br>Working on behalf<br>of the<br>Welsh Government |            |       | <br>Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru<br>North & Mid Wales Trunk Road Agent |             |                  |       |
| Title                                                                                                                                                                               |            |       |                                                                                                                                                                              |             |                  |       |
| A494 River Dee Bridge Replacement<br>Figure 8.4B<br>Pond Locations                                                                                                                  |            |       |                                                                                                                                                                              |             |                  |       |
| Sheet 2 of 3                                                                                                                                                                        |            |       |                                                                                                                                                                              |             |                  |       |
| Designed                                                                                                                                                                            | R.Jones    | RJ    | Eng check                                                                                                                                                                    | J.Stoddard  | JS               |       |
| Drawn                                                                                                                                                                               | R.Jones    | RJ    | Coordination                                                                                                                                                                 | G.Morgan    | GM               |       |
| Dwg check                                                                                                                                                                           | D.Hall     | DH    | Approved                                                                                                                                                                     | R.Griffiths | RG               |       |
| MMD Project Number<br>395318                                                                                                                                                        |            |       | Scale at A1<br>1:5000                                                                                                                                                        |             | Security<br>STD  |       |
| Suitability Description<br>Suitable for Information                                                                                                                                 |            |       |                                                                                                                                                                              |             | Suit. Code<br>S2 |       |
| Drawing Number<br>395318-RML-ZZ-XX-DR-Y-8010                                                                                                                                        |            |       |                                                                                                                                                                              |             | Revision<br>02   |       |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC000808122





Notes

1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Fixed Distance Buffers (250 m and 500 m)
- Ponds Surveyed
- GCN found during 2020 reptile surveys
- Surface water attenuation area created since GCN pond surveys

|                                                                    |            |             |                                                                                                                                                            |             |            |
|--------------------------------------------------------------------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 01                                                                 | 21/03/2025 | RJ          | Draft issue for review and comment                                                                                                                         | JS          | RG         |
| Rev                                                                | Date       | Drawn       | Description                                                                                                                                                | Ch'k'd      | App'd      |
| Status Stamp                                                       |            |             |                                                                                                                                                            |             |            |
| NOT FOR CONSTRUCTION                                               |            |             |                                                                                                                                                            |             |            |
|                                                                    |            |             | <p>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom</p> <p>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</p> |             |            |
| Client                                                             |            |             |                                                                                                                                                            |             |            |
|                                                                    |            |             |                                                                                                                                                            |             |            |
| Title                                                              |            |             |                                                                                                                                                            |             |            |
| A494 River Dee Bridge Replacement<br>Figure 8.4C<br>Pond Locations |            |             |                                                                                                                                                            |             |            |
| Sheet 3 of 3                                                       |            |             |                                                                                                                                                            |             |            |
| Designed                                                           | R.Jones    | RJ          | Eng check                                                                                                                                                  | J.Stoddard  | JS         |
| Drawn                                                              | R.Jones    | RJ          | Coordination                                                                                                                                               | G.Morgan    | GM         |
| Dwg check                                                          | D.Hall     | DH          | Approved                                                                                                                                                   | R.Griffiths | RG         |
| MMD Project Number                                                 |            | Scale at A1 |                                                                                                                                                            | Security    |            |
| 395318                                                             |            | 1:5000      |                                                                                                                                                            | STD         |            |
| Suitability Description                                            |            |             |                                                                                                                                                            |             | Suit. Code |
| Suitable for Information                                           |            |             |                                                                                                                                                            |             | S2         |
| Drawing Number                                                     |            |             |                                                                                                                                                            |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8011                                         |            |             |                                                                                                                                                            |             | 01         |

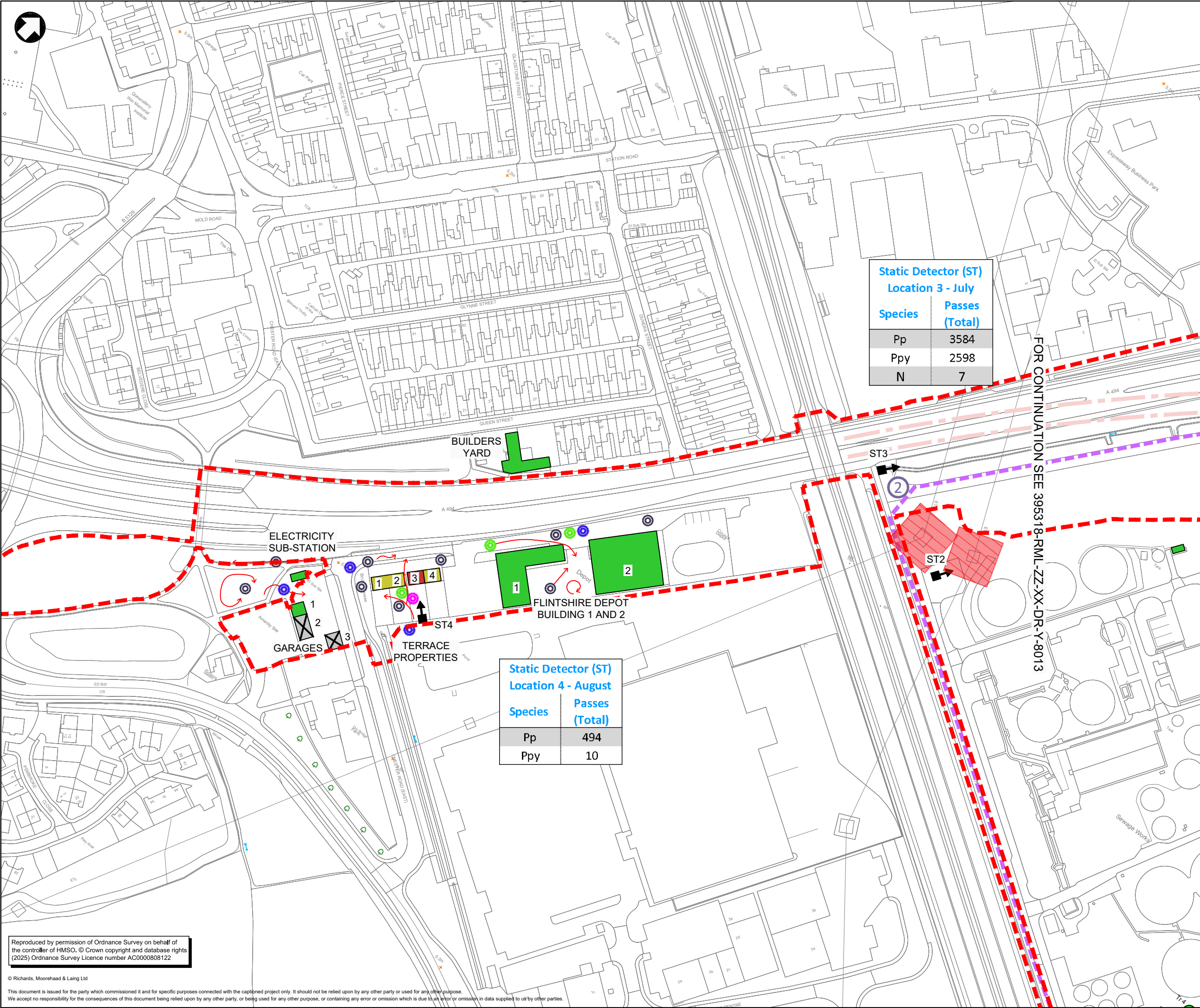
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Lamb Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party or being used for any other purpose, or for any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8009-11.dwg Mar 21, 2025 - 2:54PM  
r.jones





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

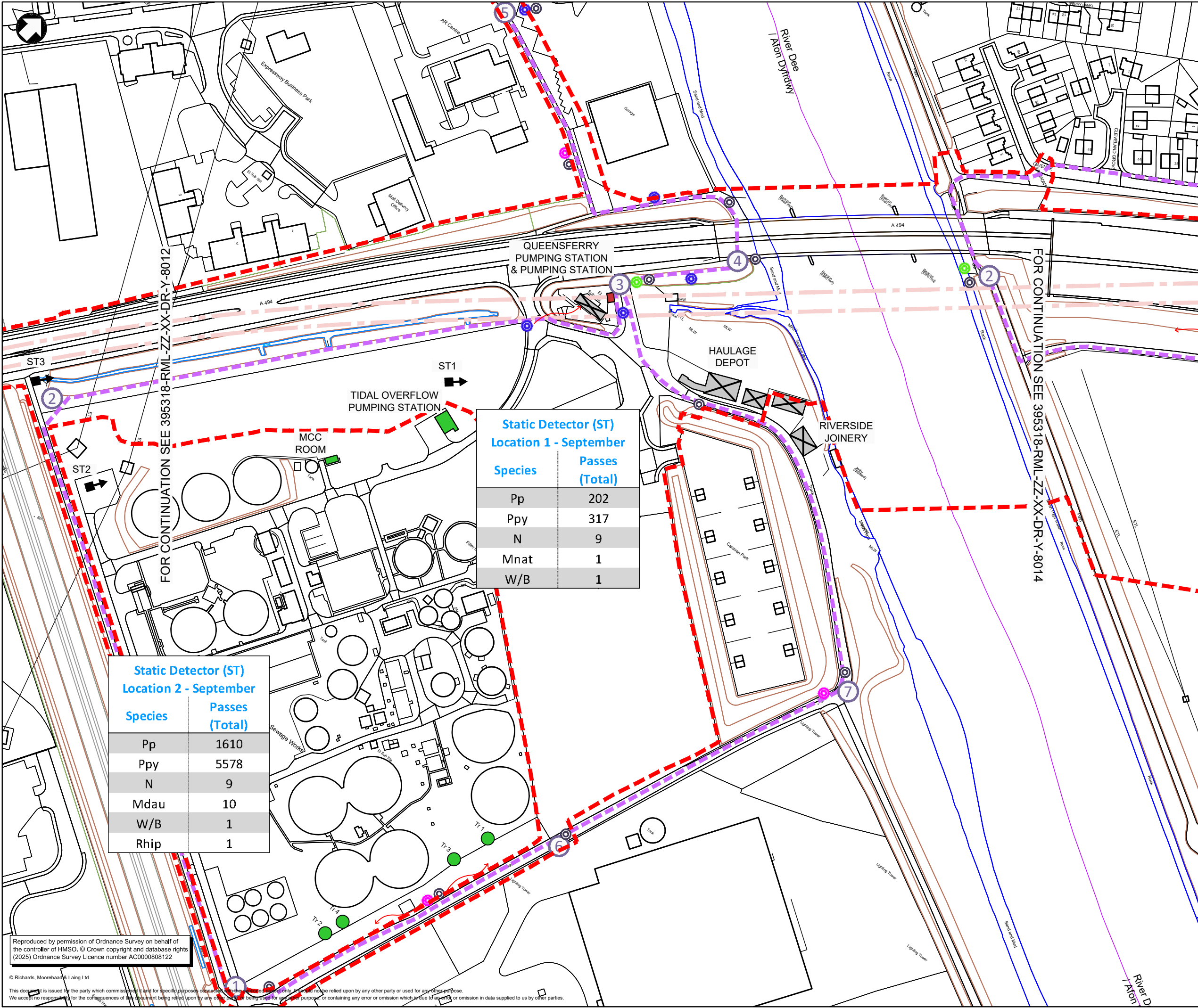
- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Pp)
- Soprano Pipistrelle (Ppy)
- Noctule (N)
- Whiskered/Brandts (WB)
- Direction of travel, if seen
- Bat roost potential in structures & trees
  - Negligible
  - Low
  - Moderate
  - High
  - Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                    |            |             |                                                                                                                                                            |             |            |
|------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 01                                                                                                                                 | 21/03/2025 | RJ          | Draft issue for review and comment                                                                                                                         | JS          | RG         |
| Rev                                                                                                                                | Date       | Drawn       | Description                                                                                                                                                | Ch'k'd      | App'd      |
| Status Stamp                                                                                                                       |            |             |                                                                                                                                                            |             |            |
| NOT FOR CONSTRUCTION                                                                                                               |            |             |                                                                                                                                                            |             |            |
|                                                                                                                                    |            |             | <p>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom</p> <p>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</p> |             |            |
| Client                                                                                                                             |            |             |                                                                                                                                                            |             |            |
|                                                                                                                                    |            |             |                                                                                                                                                            |             |            |
| A494 River Dee Bridge Replacement<br>Figure 8.5A<br>Bat Survey Results - 2018<br>Structures & Tree Roost Potential<br>Sheet 1 of 3 |            |             |                                                                                                                                                            |             |            |
| Designed                                                                                                                           | R.Jones    | RJ          | Eng check                                                                                                                                                  | J.Stoddard  | JS         |
| Drawn                                                                                                                              | R.Jones    | RJ          | Coordination                                                                                                                                               | G.Morgan    | GM         |
| Dwg check                                                                                                                          | D.Hall     | DH          | Approved                                                                                                                                                   | R.Griffiths | RG         |
| MMD Project Number                                                                                                                 |            | Scale at A1 |                                                                                                                                                            | Security    |            |
| 395318                                                                                                                             |            | 1:1000      |                                                                                                                                                            | STD         |            |
| Suitability Description                                                                                                            |            |             |                                                                                                                                                            |             | Suit. Code |
| Suitable for Information                                                                                                           |            |             |                                                                                                                                                            |             | S2         |
| Drawing Number                                                                                                                     |            |             |                                                                                                                                                            |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8012                                                                                                         |            |             |                                                                                                                                                            |             | 01         |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

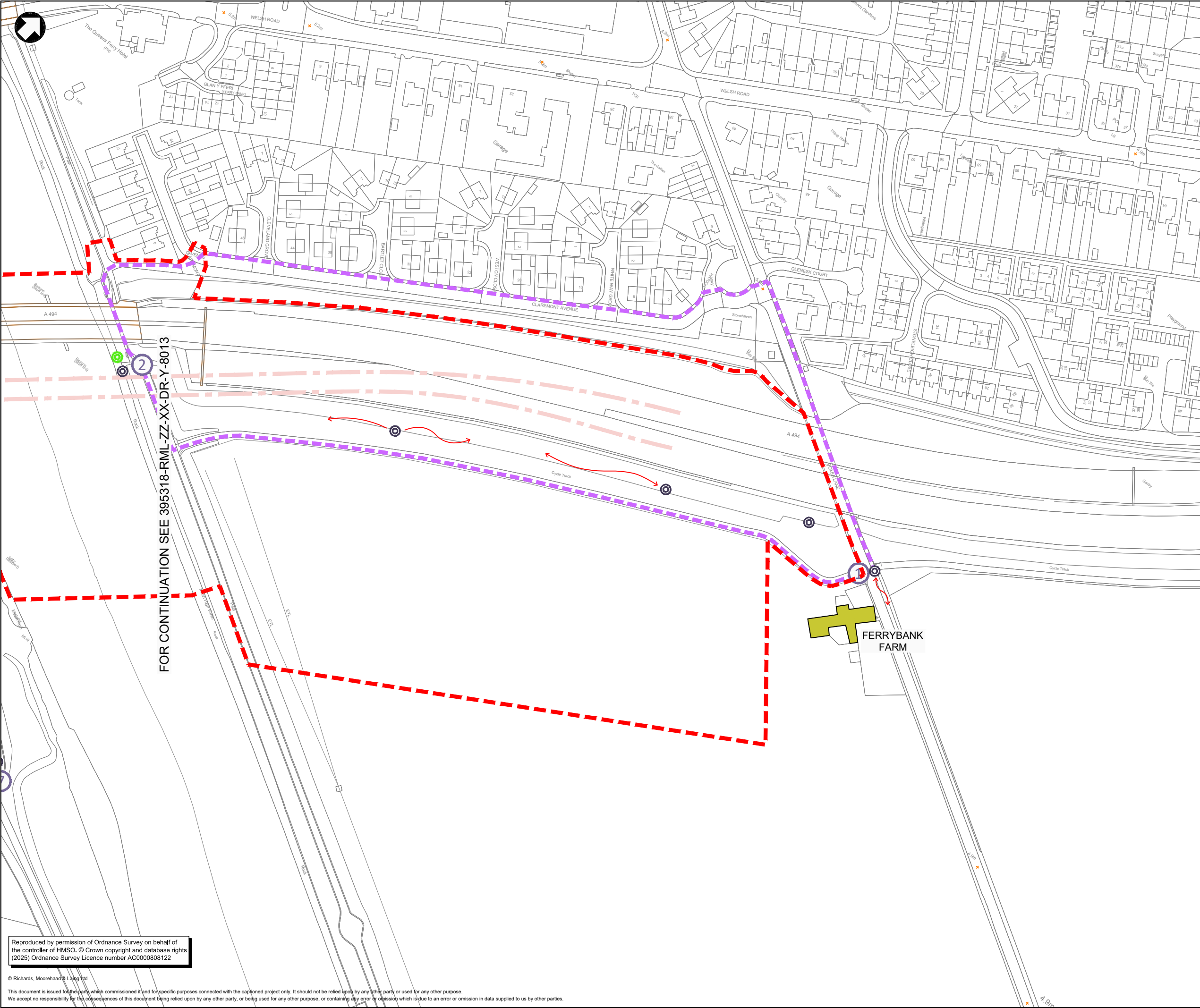
Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Pp)
- Soprano Pipistrelle (Ppy)
- Noctule (N)
- Whiskered/Brands (W/B)
- Direction of travel, if seen
- Bat roost potential in structures & trees
  - Negligible
  - Low
  - Moderate
  - High
  - Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.  
Daubentons bat (Mdau)  
Lesser Horseshoe bat (Rhip)  
Natterers bat (Mnat)

|                                                                                                                                    |            |                       |                                                                                                                                                         |                  |       |
|------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------|
| 02                                                                                                                                 | 08/04/2025 | RJ                    | Draft issue for review and comment                                                                                                                      | JS               | RG    |
| Rev                                                                                                                                | Date       | Drawn                 | Description                                                                                                                                             | Ch'kd            | App'd |
| Status Stamp                                                                                                                       |            |                       |                                                                                                                                                         |                  |       |
| NOT FOR CONSTRUCTION                                                                                                               |            |                       |                                                                                                                                                         |                  |       |
|                                                                                                                                    |            |                       | <p>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom<br/>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</p> |                  |       |
|                                                                                                                                    |            |                       | Client                                                                                                                                                  |                  |       |
|                                                                                                                                    |            |                       |                                                                                                                                                         |                  |       |
| A494 River Dee Bridge Replacement<br>Figure 8.5B<br>Bat Survey Results - 2018<br>Structures & Tree Roost Potential<br>Sheet 2 of 3 |            |                       |                                                                                                                                                         |                  |       |
| Designed                                                                                                                           | R.Jones    | RJ                    | Eng check                                                                                                                                               | J.Stoddard       | JS    |
| Drawn                                                                                                                              | R.Jones    | RJ                    | Coordination                                                                                                                                            | G.Morgan         | GM    |
| Dwg check                                                                                                                          | D.Hall     | DH                    | Approved                                                                                                                                                | R.Griffiths      | RG    |
| MMD Project Number<br>395318                                                                                                       |            | Scale at A1<br>1:1000 |                                                                                                                                                         | Security<br>STD  |       |
| Suitability Description<br>Suitable for Information                                                                                |            |                       |                                                                                                                                                         | Suit. Code<br>S2 |       |
| Drawing Number<br>395318-RML-ZZ-XX-DR-Y-8013                                                                                       |            |                       |                                                                                                                                                         | Revision<br>02   |       |





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

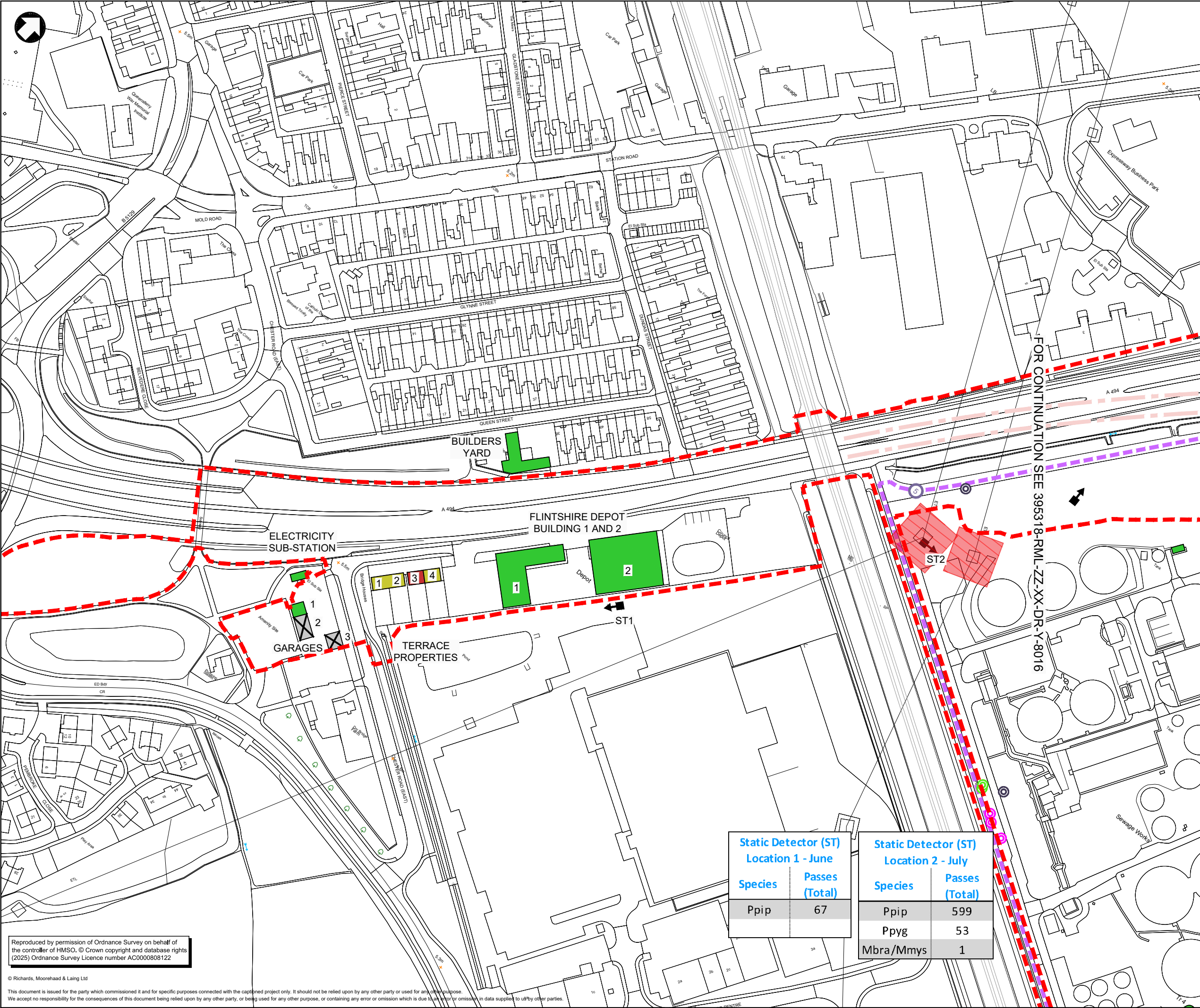
Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Pp)
- Soprano Pipistrelle (Ppy)
- Noctule (N)
- Whiskered/Brandts (W/B)
- Direction of travel, if seen
- Bat roost potential in structures & trees
  - Negligible
  - Low
  - Moderate
  - High
  - Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                                   |            |                                                                                                                                                            |                                    |             |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|------------|
| 01                                                                                                                                                | 21/03/2025 | RJ                                                                                                                                                         | Draft issue for review and comment | JS          | RG         |
| Rev                                                                                                                                               | Date       | Drawn                                                                                                                                                      | Description                        | Ch'kd       | App'd      |
| Status Stamp                                                                                                                                      |            |                                                                                                                                                            |                                    |             |            |
| NOT FOR CONSTRUCTION                                                                                                                              |            |                                                                                                                                                            |                                    |             |            |
|                                                                                                                                                   |            | <p>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom</p> <p>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</p> |                                    |             |            |
| Client                                                                                                                                            |            |                                                                                                                                                            |                                    |             |            |
|                                                                                                                                                   |            |                                                                                                                                                            |                                    |             |            |
| <p>A494 River Dee Bridge Replacement<br/>Figure 8.5C<br/>Bat Survey Results - 2018<br/>Structures &amp; Tree Roost Potential<br/>Sheet 3 of 3</p> |            |                                                                                                                                                            |                                    |             |            |
| Designed                                                                                                                                          | R.Jones    | RJ                                                                                                                                                         | Eng check                          | J.Stoddard  | JS         |
| Drawn                                                                                                                                             | R.Jones    | RJ                                                                                                                                                         | Coordination                       | G.Morgan    | GM         |
| Dwg check                                                                                                                                         | D.Hall     | DH                                                                                                                                                         | Approved                           | R.Griffiths | RG         |
| MMD Project Number                                                                                                                                | 395318     | Scale at A1                                                                                                                                                | 1:1000                             | Security    | STD        |
| Suitability Description                                                                                                                           |            |                                                                                                                                                            |                                    |             | Suit. Code |
| Suitable for Information                                                                                                                          |            |                                                                                                                                                            |                                    |             | S2         |
| Drawing Number                                                                                                                                    |            |                                                                                                                                                            |                                    |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8014                                                                                                                        |            |                                                                                                                                                            |                                    |             | 01         |





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

A494 River Dee Bridge Replacement

Scheme extents

Transect route

Transect stopping point

Location of static detector

Common Pipistrelle (Pp)

Soprano Pipistrelle (Ppy)

Noctule (N)

Whiskered/Brandts (WB)

Bat roost potential in structures & trees

Negligible

Low

Moderate

High

Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                                                                 |            |                                                                                                                                                                              |                                    |                       |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------------------|------------------|
| 01                                                                                                                                                                              | 21/03/2025 | RJ                                                                                                                                                                           | Draft issue for review and comment | JS                    | RG               |
| Rev                                                                                                                                                                             | Date       | Drawn                                                                                                                                                                        | Description                        | Ch'k'd                | App'd            |
| Status Stamp                                                                                                                                                                    |            |                                                                                                                                                                              |                                    |                       |                  |
| NOT FOR CONSTRUCTION                                                                                                                                                            |            |                                                                                                                                                                              |                                    |                       |                  |
| <div><div>M</div><div>MOTT MACDONALD</div></div>                                                                                                                                |            | <div><div>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom</div><div>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</div></div> |                                    |                       |                  |
| Client                                                                                                                                                                          |            |                                                                                                                                                                              |                                    |                       |                  |
| <div><div><br/>Yn gweithio ar ran<br/>Llywodraeth Cymru<br/>Working on behalf<br/>of the<br/>Welsh Government</div><div><br/>North &amp; Mid Wales Trunk Road Agent</div></div> |            |                                                                                                                                                                              |                                    |                       |                  |
| A494 River Dee Bridge Replacement<br>Figure 8.5D<br>Bat Survey Results - 2020<br>Structures & Tree Roost Potential<br>Sheet 1 of 3                                              |            |                                                                                                                                                                              |                                    |                       |                  |
| Designed                                                                                                                                                                        | R.Jones    | RJ                                                                                                                                                                           | Eng check                          | J.Stoddard            | JS               |
| Drawn                                                                                                                                                                           | R.Jones    | RJ                                                                                                                                                                           | Coordination                       | G.Morgan              | GM               |
| Dwg check                                                                                                                                                                       | D.Hall     | DH                                                                                                                                                                           | Approved                           | R.Griffiths           | RG               |
| MMD Project Number                                                                                                                                                              | 395318     |                                                                                                                                                                              |                                    | Scale at A1<br>1:1000 | Security<br>STD  |
| Suitability Description<br>Suitable for Information                                                                                                                             |            |                                                                                                                                                                              |                                    |                       | Suit. Code<br>S2 |
| Drawing Number<br>395318-RML-ZZ-XX-DR-Y-8015                                                                                                                                    |            |                                                                                                                                                                              |                                    |                       | Revision<br>01   |

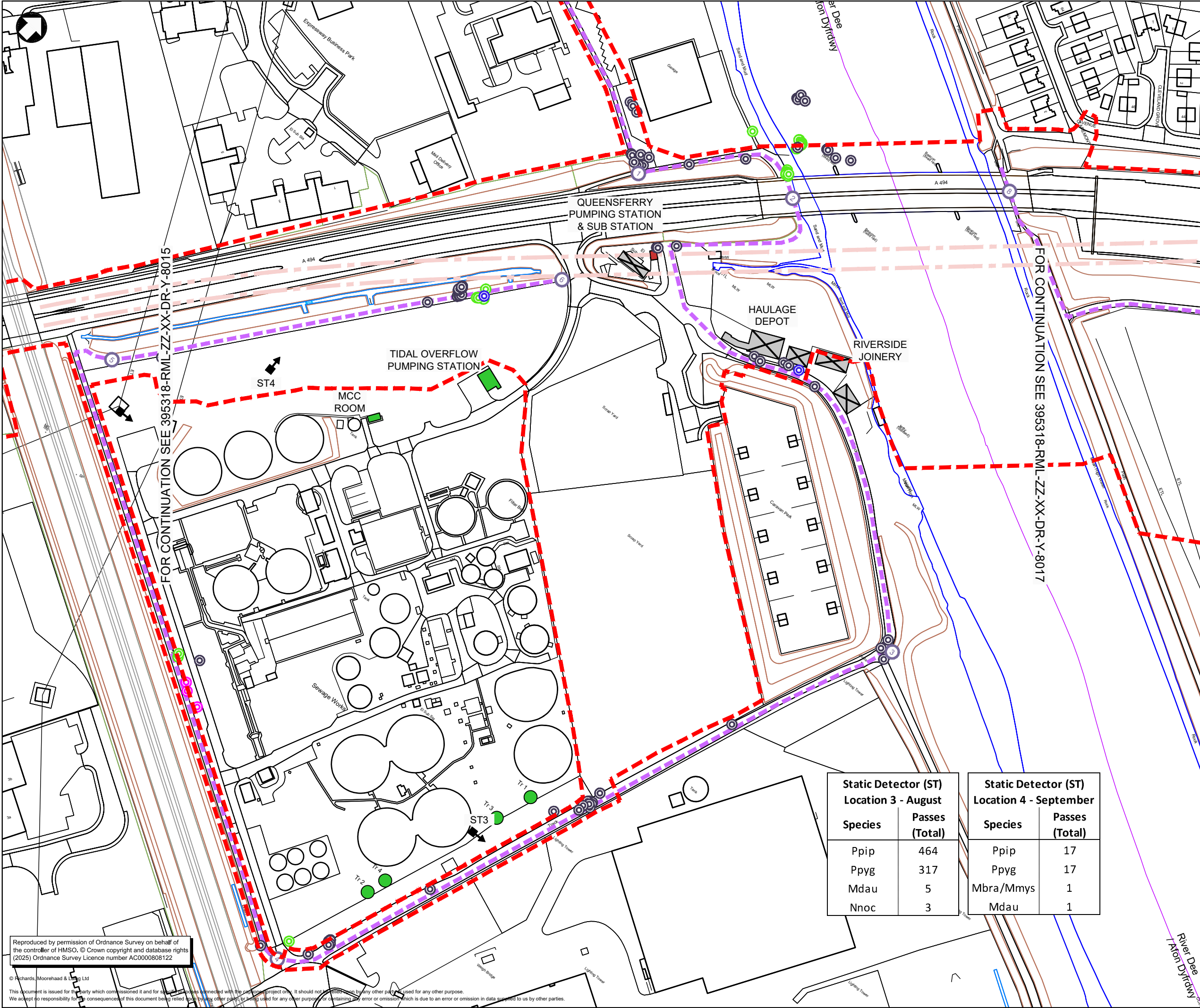
| Static Detector (ST)<br>Location 1 - June |                   | Static Detector (ST)<br>Location 2 - July |                   |
|-------------------------------------------|-------------------|-------------------------------------------|-------------------|
| Species                                   | Passes<br>(Total) | Species                                   | Passes<br>(Total) |
| Ppip                                      | 67                | Ppip                                      | 599               |
|                                           |                   | Ppyg                                      | 53                |
|                                           |                   | Mbra/Mmys                                 | 1                 |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Laing Ltd  
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8015.dwg Mar 24, 2025 - 11:38AM  
r.jones





- Notes
1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
  2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
  3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
  4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Pp)
- Soprano Pipistrelle (Ppy)
- Noctule (N)
- Whiskered/Brands (WB)

Bat roost potential in structures & trees

- Negligible
- Low
- Moderate
- High
- Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.  
Daubentons bat (Mdau)  
Lesser Horseshoe bat (Rhip)  
Natterers bat (Mnat)

|     |            |       |                              |        |       |
|-----|------------|-------|------------------------------|--------|-------|
| 02  | 08/04/2025 | RJ    | Issue for review and comment | JS     | RG    |
| Rev | Date       | Drawn | Description                  | Ch'k'd | App'd |

Status Stamp

NOT FOR CONSTRUCTION

MOTT MACDONALD

RML

Client

Yn gweithio ar ran Llywodraeth Cymru Working on behalf of the Welsh Government

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru North & Mid Wales Trunk Road Agent

A494 River Dee Bridge Replacement  
Figure 8.5E  
Bat Survey Results - 2020  
Structures & Tree Roost Potential  
Sheet 2 of 3

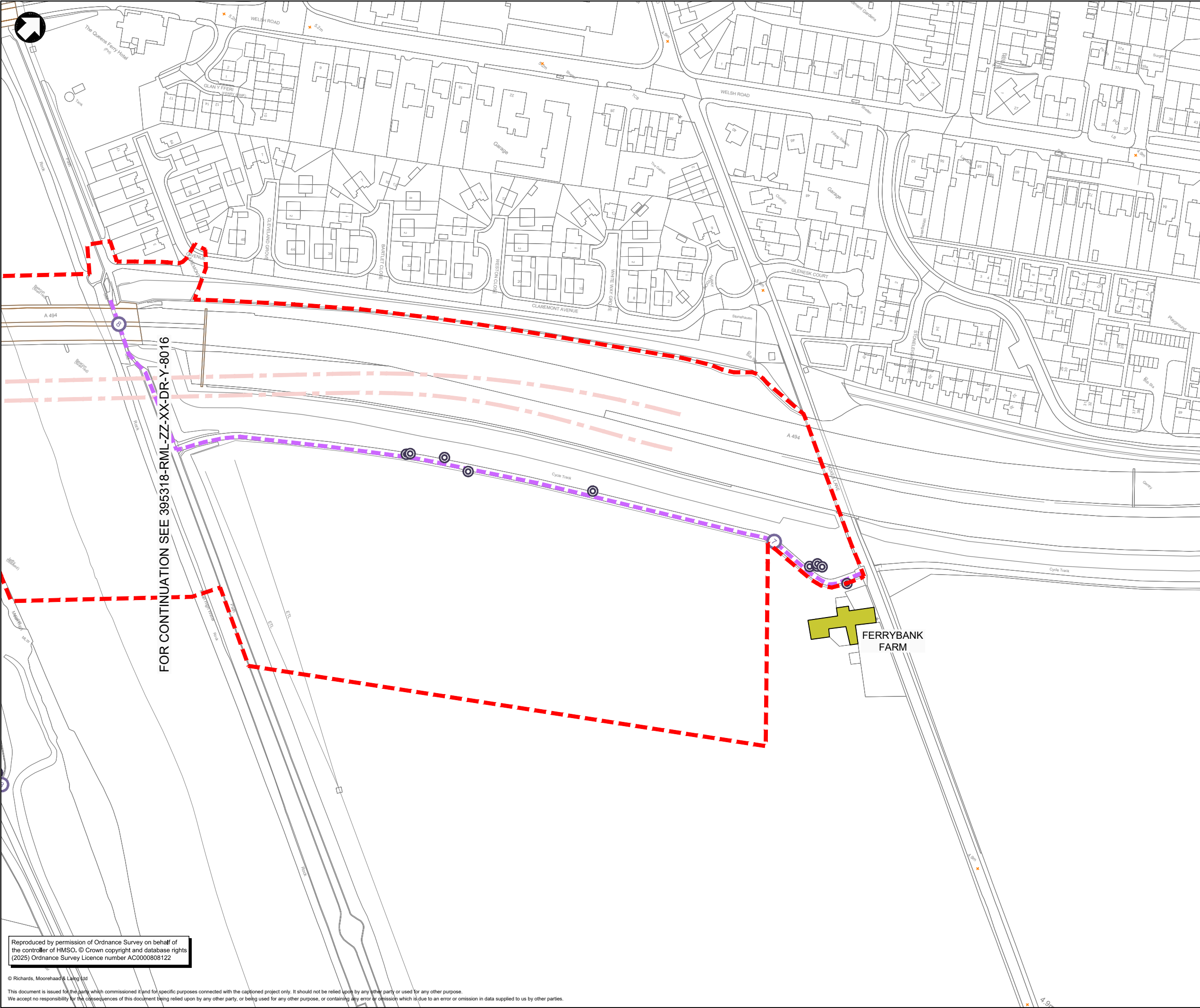
|                         |                            |             |              |             |     |
|-------------------------|----------------------------|-------------|--------------|-------------|-----|
| Designed                | R.Jones                    | RJ          | Eng check    | J.Stoddard  | JS  |
| Drawn                   | R.Jones                    | RJ          | Coordination | G.Morgan    | GM  |
| Dwg check               | D.Hall                     | DH          | Approved     | R.Griffiths | RG  |
| MMD Project Number      | 395318                     | Scale at A1 | 1:1000       | Security    | STD |
| Suitability Description | Suitable for Information   | Suit. Code  | S2           | Revision    | 02  |
| Drawing Number          | 395318-RML-ZZ-XX-DR-Y-8016 |             |              |             |     |

| Static Detector (ST)<br>Location 3 - August |                | Static Detector (ST)<br>Location 4 - September |                |
|---------------------------------------------|----------------|------------------------------------------------|----------------|
| Species                                     | Passes (Total) | Species                                        | Passes (Total) |
| Ppip                                        | 464            | Ppip                                           | 17             |
| Ppyg                                        | 317            | Ppyg                                           | 17             |
| Mdau                                        | 5              | Mbra/Mmys                                      | 1              |
| Nnoc                                        | 3              | Mdau                                           | 1              |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Lingo Ltd  
This document is issued for the party which commissioned it and for specific purposes connected with the capital project only. It should not be relied upon by any other party for any other purpose.  
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Pp)
- Soprano Pipistrelle (Ppy)
- Noctule (N)
- Whiskered/Brandts (WB)

Bat roost potential in structures & trees

- Negligible
- Low
- Moderate
- High
- Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                                   |            |                                                                                                                                                            |                              |             |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------|------------|
| 01                                                                                                                                                | 21/03/2025 | RJ                                                                                                                                                         | Issue for review and comment | JS          | RG         |
| Rev                                                                                                                                               | Date       | Drawn                                                                                                                                                      | Description                  | Ch'kd       | App'd      |
| Status Stamp                                                                                                                                      |            |                                                                                                                                                            |                              |             |            |
| NOT FOR CONSTRUCTION                                                                                                                              |            |                                                                                                                                                            |                              |             |            |
|                                                                                                                                                   |            | <p>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom</p> <p>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</p> |                              |             |            |
| Client                                                                                                                                            |            |                                                                                                                                                            |                              |             |            |
|                                                                                                                                                   |            |                                                                                                                                                            |                              |             |            |
| <p>A494 River Dee Bridge Replacement<br/>Figure 8.5F<br/>Bat Survey Results - 2020<br/>Structures &amp; Tree Roost Potential<br/>Sheet 3 of 3</p> |            |                                                                                                                                                            |                              |             |            |
| Designed                                                                                                                                          | R.Jones    | RJ                                                                                                                                                         | Eng check                    | J.Stoddard  | JS         |
| Drawn                                                                                                                                             | R.Jones    | RJ                                                                                                                                                         | Coordination                 | G.Morgan    | GM         |
| Dwg check                                                                                                                                         | D.Hall     | DH                                                                                                                                                         | Approved                     | R.Griffiths | RG         |
| MMD Project Number                                                                                                                                |            | Scale at A1                                                                                                                                                |                              | Security    |            |
| 395318                                                                                                                                            |            | 1:1000                                                                                                                                                     |                              | STD         |            |
| Suitability Description                                                                                                                           |            |                                                                                                                                                            |                              |             | Suit. Code |
| Suitable for Information                                                                                                                          |            |                                                                                                                                                            |                              |             | S2         |
| Drawing Number                                                                                                                                    |            |                                                                                                                                                            |                              |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8017                                                                                                                        |            |                                                                                                                                                            |                              |             | 01         |

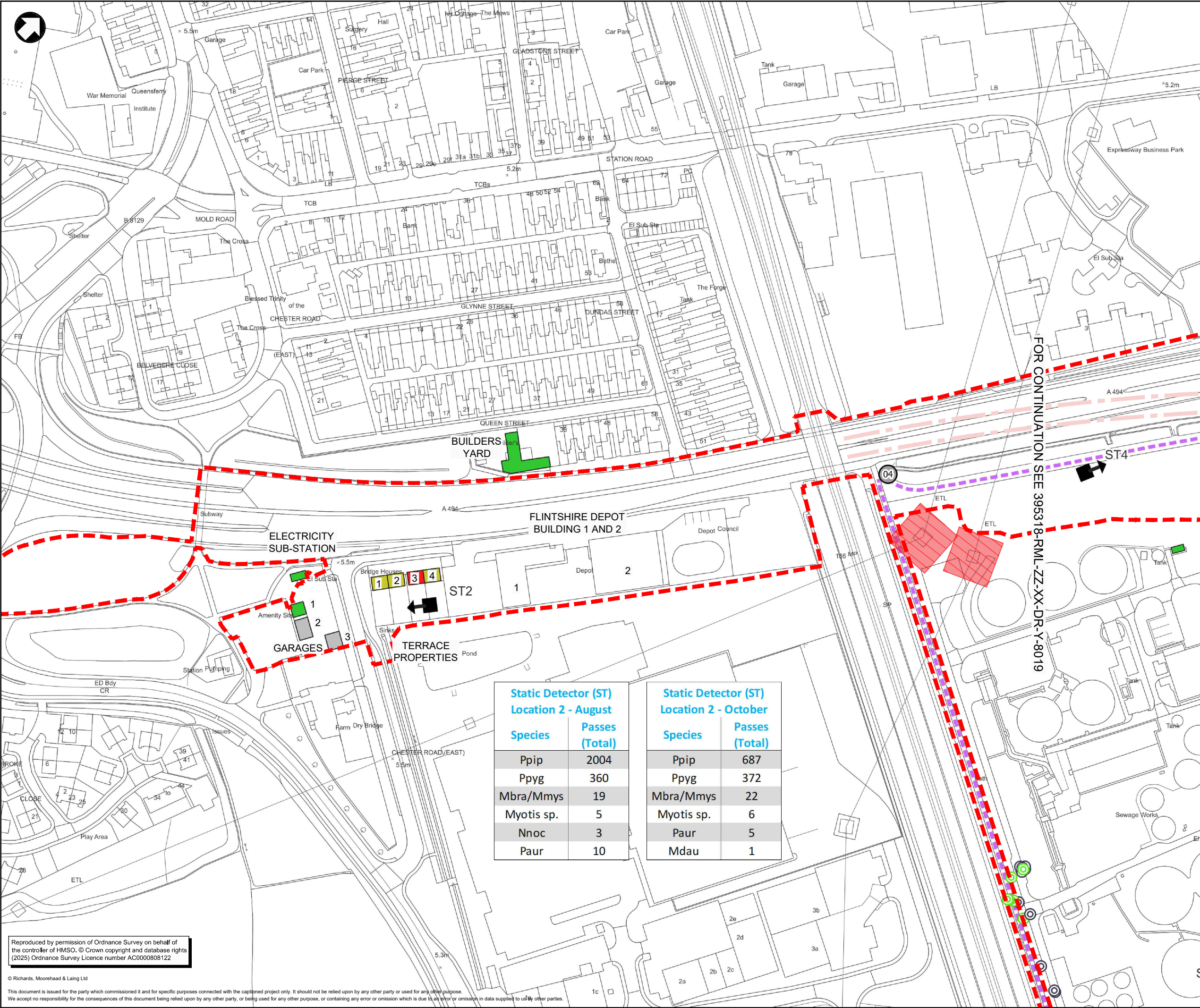
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Leding Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\15 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8017.dwg Mar 24, 2025 - 11:51AM r.jones





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Ppip)
- Soprano Pipistrelle (Ppyg)
- Noctule (Nnoc)
- Whiskered/Brandts (Mbra/Mmys)

Bat roost potential in structures & trees

- Negligible
- Low
- Moderate
- High
- Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                                                                     |                            |       |                                                                                                                                                |             |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 01                                                                                                                                                                                  | 21/03/2025                 | RJ    | Draft issue for review and comment                                                                                                             | JS          | RG         |
| Rev                                                                                                                                                                                 | Date                       | Drawn | Description                                                                                                                                    | Ch'k'd      | App'd      |
| Status Stamp                                                                                                                                                                        |                            |       |                                                                                                                                                |             |            |
| NOT FOR CONSTRUCTION                                                                                                                                                                |                            |       |                                                                                                                                                |             |            |
| <b>MOTT MACDONALD</b>                                                                                                                                                               |                            |       | Mott MacDonald House<br>5 Woodland Road West<br>Colwyn Bay, LL29 7DH<br>United Kingdom<br><br>T +44 (0)1492 534601<br>F -<br>W www.mottmac.com |             |            |
| <b>RML</b>                                                                                                                                                                          |                            |       | Client                                                                                                                                         |             |            |
| <br>Yn gweithio ar ran<br>Llywodraeth Cymru<br>Working on behalf<br>of the<br>Welsh Government |                            |       | <br>North & Mid Wales Trunk Road Agent                    |             |            |
| A494 River Dee Bridge Replacement<br>Figure 8.5G<br>Bat Survey Results - 2022<br>Structures & Tree Roost Potential<br>Sheet 1 of 3                                                  |                            |       |                                                                                                                                                |             |            |
| Designed                                                                                                                                                                            | R.Jones                    | RJ    | Eng check                                                                                                                                      | J.Stoddard  | JS         |
| Drawn                                                                                                                                                                               | R.Jones                    | RJ    | Coordination                                                                                                                                   | G.Morgan    | GM         |
| Dwg check                                                                                                                                                                           | D.Hall                     | DH    | Approved                                                                                                                                       | R.Griffiths | RG         |
| MMD Project Number                                                                                                                                                                  | 395318                     |       | Scale at A1                                                                                                                                    | 1:1000      | Security   |
| Suitability Description                                                                                                                                                             | Suitable for Information   |       |                                                                                                                                                |             | Suit. Code |
| Drawing Number                                                                                                                                                                      | 395318-RML-ZZ-XX-DR-Y-8018 |       |                                                                                                                                                |             | Revision   |
|                                                                                                                                                                                     |                            |       |                                                                                                                                                |             | STD        |
|                                                                                                                                                                                     |                            |       |                                                                                                                                                |             | S2         |
|                                                                                                                                                                                     |                            |       |                                                                                                                                                |             | 01         |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122



| Static Detector (ST)<br>Location 4 - August |                   |
|---------------------------------------------|-------------------|
| Species                                     | Passes<br>(Total) |
| Ppip                                        | 1406              |
| Ppyg                                        | 305               |
| Nnoc                                        | 3                 |
| Mbra/Mmys                                   | 2                 |

| Static Detector (ST)<br>Location 4 - September |                   |
|------------------------------------------------|-------------------|
| Species                                        | Passes<br>(Total) |
| Ppip                                           | 85                |
| Ppyg                                           | 59                |
| Myotis sp                                      | 1                 |
| Mbra/Mmys                                      | 1                 |

| Static Detector (ST)<br>Location 3 - August |                   |
|---------------------------------------------|-------------------|
| Species                                     | Passes<br>(Total) |
| Ppip                                        | 8832              |
| Ppyg                                        | 4078              |
| Myotis sp                                   | 10                |
| Mbra/Mmys                                   | 3                 |
| Mdau                                        | 1                 |

| Static Detector (ST)<br>Location 3 - September |                   |
|------------------------------------------------|-------------------|
| Species                                        | Passes<br>(Total) |
| Ppip                                           | 5419              |
| Ppyg                                           | 531               |
| Mbra/Mmys                                      | 10                |
| Myotis sp                                      | 8                 |
| Rhip                                           | 2                 |
| Paur                                           | 1                 |
| Mdau                                           | 1                 |

- Notes
1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
  2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
  3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
  4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Ppip)
- Soprano Pipistrelle (Ppyg)
- Noctule (Nnoc)
- Whiskered/Brandts (Mbra/Mmys)

- Bat roost potential in structures & trees
- Negligible
  - Low
  - Moderate
  - High
  - Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.  
Daubentons bat (Mdau)  
Lesser Horseshoe bat (Rhip)  
Natterers bat (Mnat)

|     |            |       |                                    |       |       |
|-----|------------|-------|------------------------------------|-------|-------|
| 02  | 08/04/2025 | RJ    | Draft issue for review and comment | JS    | RG    |
| Rev | Date       | Drawn | Description                        | Ch'kd | App'd |

Status Stamp

NOT FOR CONSTRUCTION

M

MOTT  
MACDONALD

M

RML

Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent

T +44 (0)1492 534601  
F -  
W www.mottmac.com

Client

A494 River Dee Bridge Replacement  
Figure 8.5H  
Bat Survey Results - 2022  
Structures & Tree Roost Potential  
Sheet 2 of 3

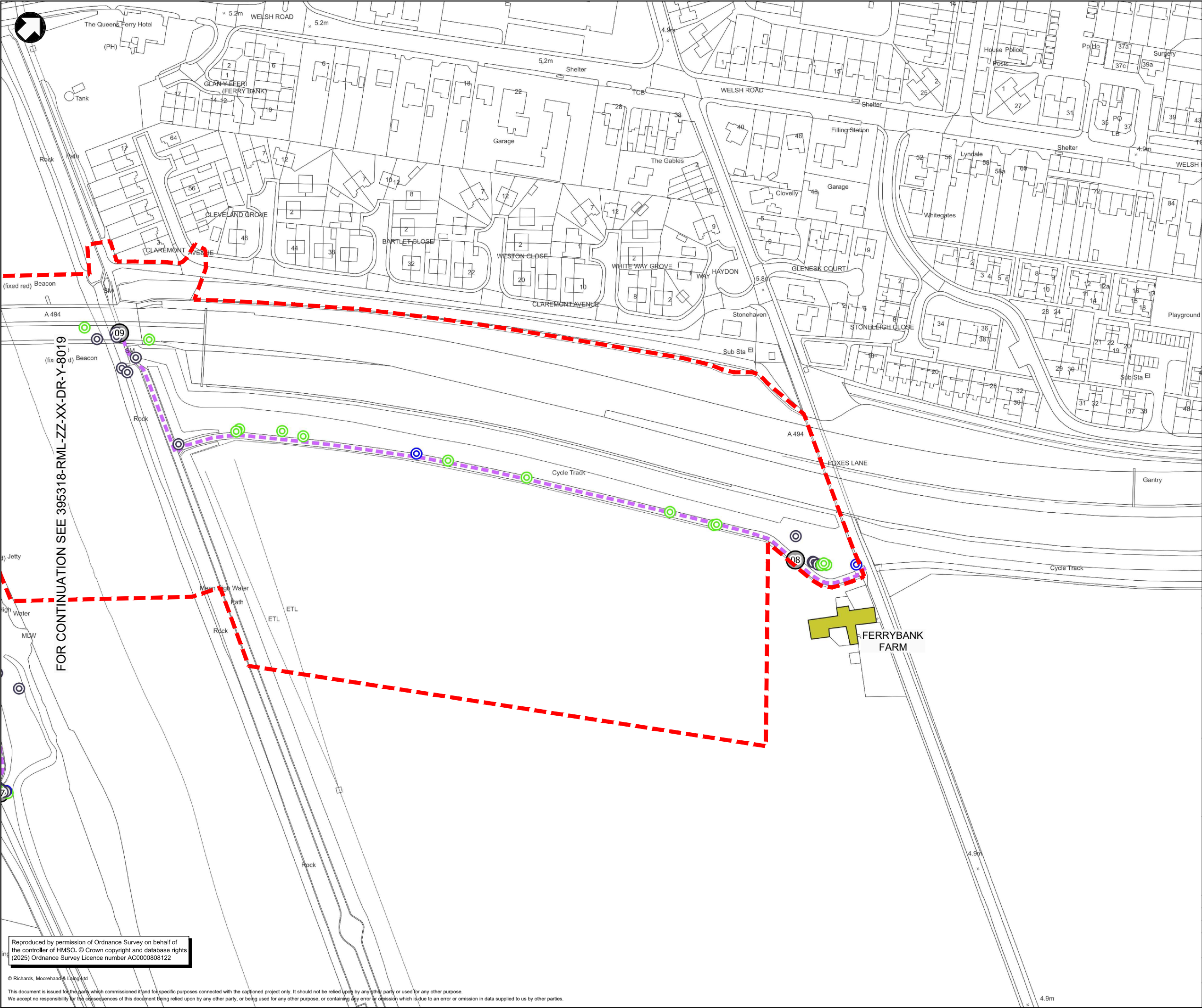
|                         |                            |             |              |             |     |
|-------------------------|----------------------------|-------------|--------------|-------------|-----|
| Designed                | R.Jones                    | RJ          | Eng check    | J.Stoddard  | JS  |
| Drawn                   | R.Jones                    | RJ          | Coordination | G.Morgan    | GM  |
| Dwg check               | D.Hall                     | DH          | Approved     | R.Griffiths | RG  |
| MMD Project Number      | 395318                     | Scale at A1 | 1:1000       | Security    | STD |
| Suitability Description | Suitable for Information   | Suit. Code  | S2           | Revision    | 02  |
| Drawing Number          | 395318-RML-ZZ-XX-DR-Y-8019 |             |              |             |     |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC000808122

© Richard, Moorehead & Laing Ltd  
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.  
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8019.dwg Apr 8, 2025 - 11:21AM  
r.jones





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

**A494 River Dee Bridge Replacement**

Scheme extents

Transect route

Transect stopping point

Location of static detector

Common Pipistrelle (Ppip)

Soprano Pipistrelle (Ppyg)

Noctule (Nnoc)

Whiskered/Brandts (Mbra/Mmys)

Bat roost potential in structures & trees

Negligible

Low

Moderate

High

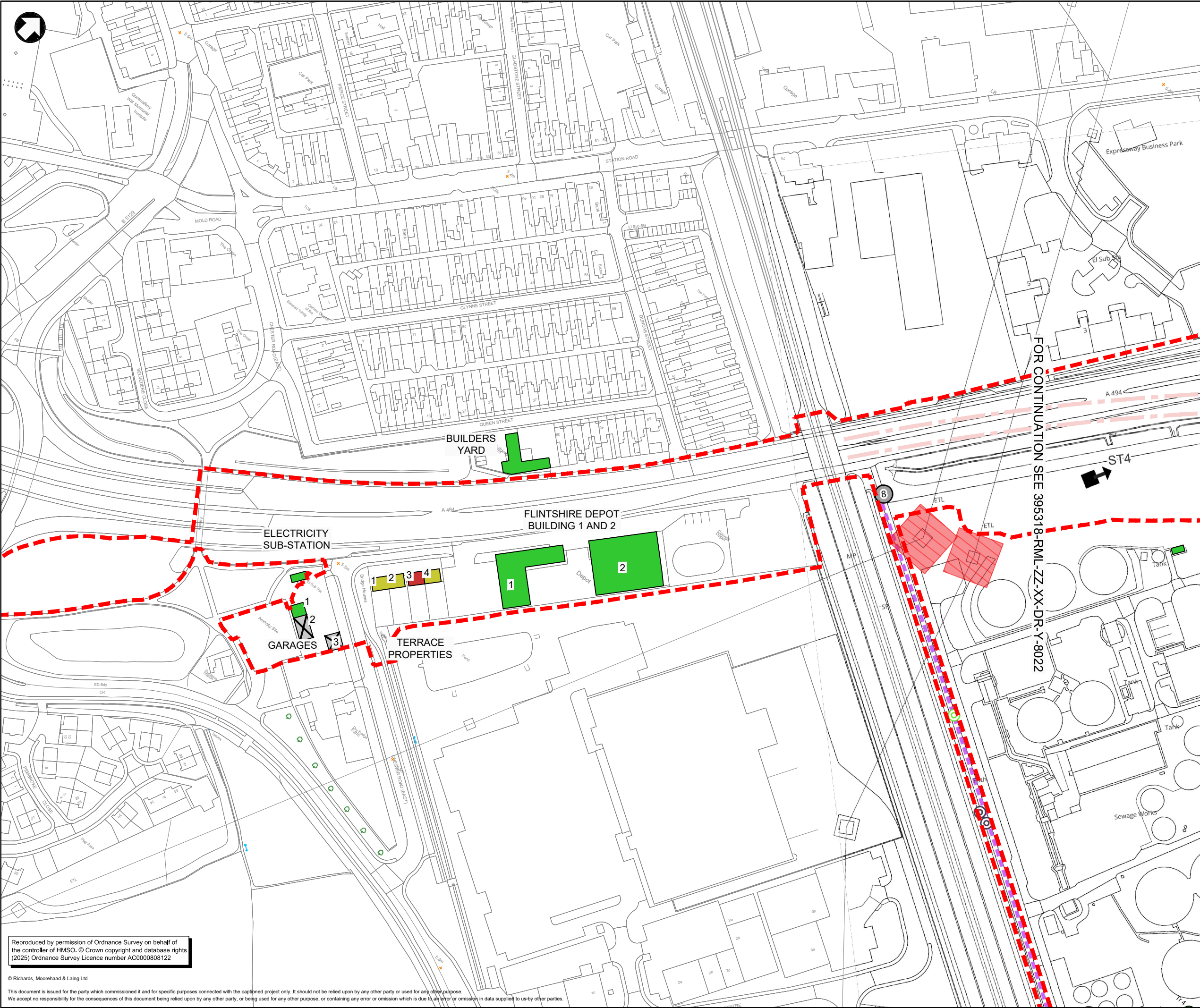
Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                                                                 |            |                                                                                                                                                                              |                                    |                 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------------|------------------|
| 01                                                                                                                                                                              | 21/03/2025 | RJ                                                                                                                                                                           | Draft issue for review and comment | JS              | RG               |
| Rev                                                                                                                                                                             | Date       | Drawn                                                                                                                                                                        | Description                        | Ch'k'd          | App'd            |
| Status Stamp                                                                                                                                                                    |            |                                                                                                                                                                              |                                    |                 |                  |
| NOT FOR CONSTRUCTION                                                                                                                                                            |            |                                                                                                                                                                              |                                    |                 |                  |
| <div><div>MOTT MACDONALD</div><div>RML</div></div>                                                                                                                              |            | <div><div>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom</div><div>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</div></div> |                                    |                 |                  |
| Client                                                                                                                                                                          |            |                                                                                                                                                                              |                                    |                 |                  |
| <div><div><br/>Yn gweithio ar ran<br/>Llywodraeth Cymru<br/>Working on behalf<br/>of the<br/>Welsh Government</div><div><br/>North &amp; Mid Wales Trunk Road Agent</div></div> |            |                                                                                                                                                                              |                                    |                 |                  |
| A494 River Dee Bridge Replacement<br>Figure 8.51<br>Bat Survey Results - 2022<br>Structures & Tree Roost Potential<br>Sheet 3 of 3                                              |            |                                                                                                                                                                              |                                    |                 |                  |
| Designed                                                                                                                                                                        | R.Jones    | RJ                                                                                                                                                                           | Eng check                          | J.Stoddard      | JS               |
| Drawn                                                                                                                                                                           | R.Jones    | RJ                                                                                                                                                                           | Coordination                       | G.Morgan        | GM               |
| Dwg check                                                                                                                                                                       | D.Hall     | DH                                                                                                                                                                           | Approved                           | R.Griffiths     | RG               |
| MMD Project Number<br>395318                                                                                                                                                    |            | Scale at A1<br>1:1000                                                                                                                                                        |                                    | Security<br>STD |                  |
| Suitability Description<br>Suitable for Information                                                                                                                             |            |                                                                                                                                                                              |                                    |                 | Suit. Code<br>S2 |
| Drawing Number<br>395318-RML-ZZ-XX-DR-Y-8020                                                                                                                                    |            |                                                                                                                                                                              |                                    |                 | Revision<br>01   |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Ppip)
- Soprano Pipistrelle (Ppyg)
- Noctule (Nnoc)
- Whiskered/Brandts (Mbra/Mmys)

Bat roost potential in structures & trees

- Negligible
- Low
- Moderate
- High
- Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                                   |            |             |                                                                                                                                                            |             |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 01                                                                                                                                                | 24/03/2025 | RJ          | Draft issue for review and comment                                                                                                                         | JS          | RG         |
| Rev                                                                                                                                               | Date       | Drawn       | Description                                                                                                                                                | Ch'k'd      | App'd      |
| Status Stamp                                                                                                                                      |            |             |                                                                                                                                                            |             |            |
| NOT FOR CONSTRUCTION                                                                                                                              |            |             |                                                                                                                                                            |             |            |
|                                                                                                                                                   |            |             | <p>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom</p> <p>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</p> |             |            |
| Client                                                                                                                                            |            |             |                                                                                                                                                            |             |            |
|                                                                                                                                                   |            |             |                                                                                                                                                            |             |            |
| <p>A494 River Dee Bridge Replacement<br/>Figure 8.5J<br/>Bat Survey Results - 2023<br/>Structures &amp; Tree Roost Potential<br/>Sheet 1 of 3</p> |            |             |                                                                                                                                                            |             |            |
| Designed                                                                                                                                          | R.Jones    | RJ          | Eng check                                                                                                                                                  | J.Stoddard  | JS         |
| Drawn                                                                                                                                             | R.Jones    | RJ          | Coordination                                                                                                                                               | G.Morgan    | GM         |
| Dwg check                                                                                                                                         | D.Hall     | DH          | Approved                                                                                                                                                   | R.Griffiths | RG         |
| MMD Project Number                                                                                                                                |            | Scale at A1 |                                                                                                                                                            | Security    |            |
| 395318                                                                                                                                            |            | 1:1000      |                                                                                                                                                            | STD         |            |
| Suitability Description                                                                                                                           |            |             |                                                                                                                                                            |             | Suit. Code |
| Suitable for Information                                                                                                                          |            |             |                                                                                                                                                            |             | S2         |
| Drawing Number                                                                                                                                    |            |             |                                                                                                                                                            |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8021                                                                                                                        |            |             |                                                                                                                                                            |             | 01         |

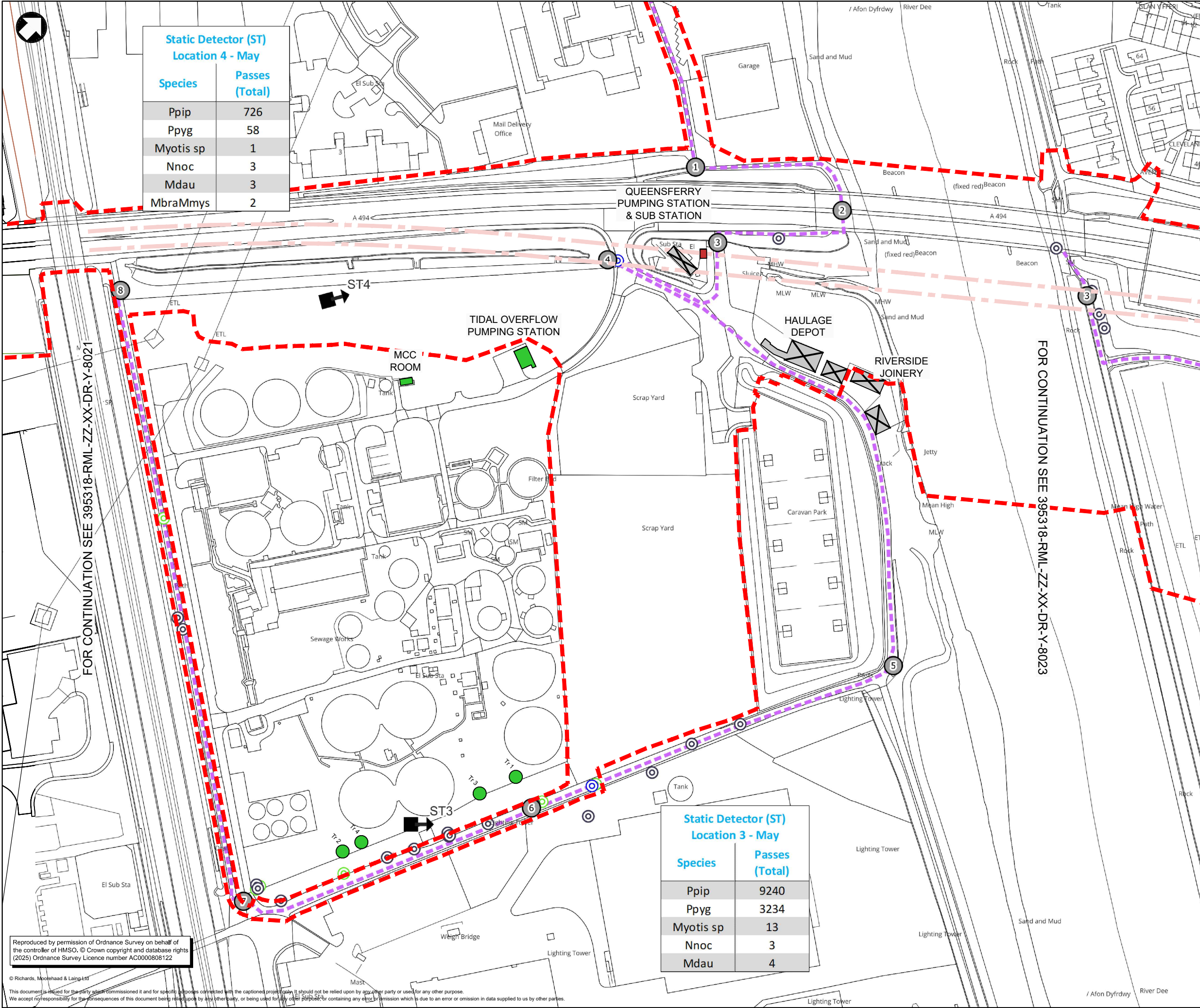
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8021.dwg Mar 24, 2025 - 4:16PM r.jones





| Static Detector (ST)<br>Location 4 - May |                   |
|------------------------------------------|-------------------|
| Species                                  | Passes<br>(Total) |
| Ppip                                     | 726               |
| Ppyg                                     | 58                |
| Myotis sp                                | 1                 |
| Nnoc                                     | 3                 |
| Mdau                                     | 3                 |
| MbraMmys                                 | 2                 |

| Static Detector (ST)<br>Location 3 - May |                   |
|------------------------------------------|-------------------|
| Species                                  | Passes<br>(Total) |
| Ppip                                     | 9240              |
| Ppyg                                     | 3234              |
| Myotis sp                                | 13                |
| Nnoc                                     | 3                 |
| Mdau                                     | 4                 |

Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

A494 River Dee Bridge Replacement

Scheme extents

Transect route

Transect stopping point

Location of static detector

Common Pipistrelle (Ppip)

Soprano Pipistrelle (Ppyg)

Noctule (Nnoc)

Whiskered/Brandts (Mbra/Mmys)

Bat roost potential in structures & trees

Negligible

Low

Moderate

High

Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

Daubenton's bat (Mdau)

Lesser Horseshoe bat (Rhip)

Natterers bat (Mnat)

|     |            |       |                                    |        |       |
|-----|------------|-------|------------------------------------|--------|-------|
| 02  | 08/04/2025 | RJ    | Draft issue for review and comment | JS     | RG    |
| Rev | Date       | Drawn | Description                        | Ch'k'd | App'd |

Status Stamp

NOT FOR CONSTRUCTION

M

M

MOTT  
MACDONALD

RML

Client

Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru  
North & Mid Wales Trunk Road Agent

A494 River Dee Bridge Replacement

Figure 8.5K

Bat Survey Results - 2023

Structures & Tree Roost Potential

Sheet 2 of 3

|           |         |    |              |             |    |
|-----------|---------|----|--------------|-------------|----|
| Designed  | R.Jones | RJ | Eng check    | J.Stoddard  | JS |
| Drawn     | R.Jones | RJ | Coordination | G.Morgan    | GM |
| Dwg check | D.Hall  | DH | Approved     | R.Griffiths | RG |

MMD Project Number

395318

Scale at A1

1:1000

Security

STD

Suitability Description

Suitable for Information

Suit. Code

S2

Drawing Number

395318-RML-ZZ-XX-DR-Y-8022

Revision

02

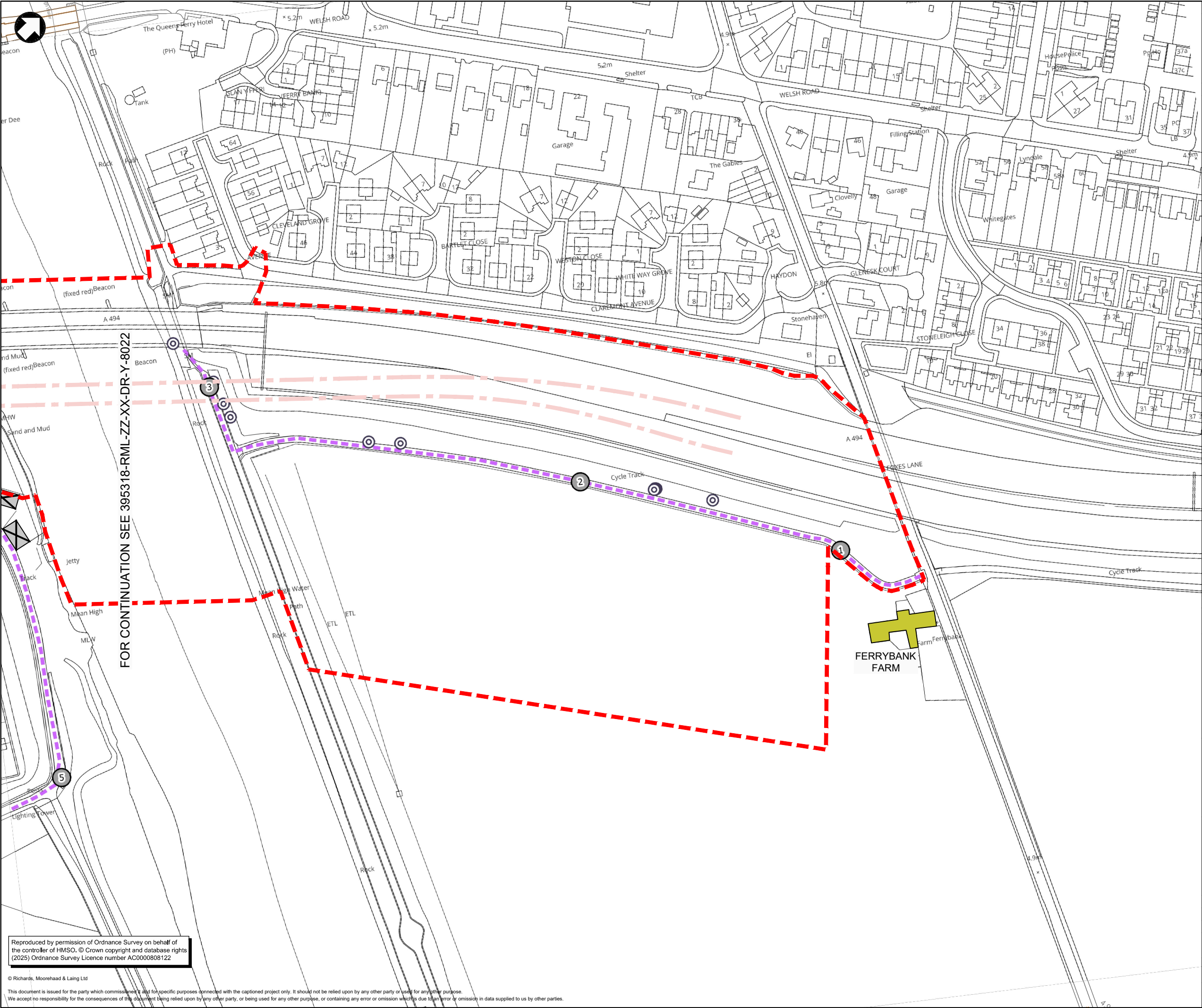
Reproduced by permission of Ordnance Survey on behalf of  
the controller of HMSO. © Crown copyright and database rights  
(2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Laing Ltd

This document is issued for the party who commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.  
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8022.dwg Apr 8, 2025 - 11:23AM  
r.jones





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

A494 River Dee Bridge Replacement

Scheme extents

Transect route

Transect stopping point

Location of static detector

Common Pipistrelle (Ppip)

Soprano Pipistrelle (Ppyg)

Noctule (Nnoc)

Whiskered/Brandts (Mbra/Mmys)

Bat roost potential in structures & trees

Negligible

Low

Moderate

High

Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                                                                                                                                            |            |                                                                                                                                                                                                            |                                    |             |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|------------|
| 01                                                                                                                                                                                                                                                         | 24/03/2025 | RJ                                                                                                                                                                                                         | Draft issue for review and comment | JS          | RG         |
| Rev                                                                                                                                                                                                                                                        | Date       | Drawn                                                                                                                                                                                                      | Description                        | Ch'k'd      | App'd      |
| Status Stamp                                                                                                                                                                                                                                               |            |                                                                                                                                                                                                            |                                    |             |            |
| NOT FOR CONSTRUCTION                                                                                                                                                                                                                                       |            |                                                                                                                                                                                                            |                                    |             |            |
| <div><div>M</div><div>MOTT MACDONALD</div></div>                                                                                                                                                                                                           |            | <div><div>Mott MacDonald House</div><div>5 Woodland Road West</div><div>Colwyn Bay, LL29 7DH</div><div>United Kingdom</div><div>T +44 (0)1492 534601</div><div>F -</div><div>W www.mottmac.com</div></div> |                                    |             |            |
| Client                                                                                                                                                                                                                                                     |            |                                                                                                                                                                                                            |                                    |             |            |
| <div><div><div><div></div><div>Yn gweithio ar ran Llywodraeth Cymru Working on behalf of the Welsh Government</div></div><div><div></div><div>Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru North &amp; Mid Wales Trunk Road Agent</div></div></div></div> |            |                                                                                                                                                                                                            |                                    |             |            |
| <div><div>A494 River Dee Bridge Replacement</div><div>Figure 8.5L</div><div>Bat Survey Results - 2023</div><div>Structures &amp; Tree Roost Potential</div><div>Sheet 3 of 3</div></div>                                                                   |            |                                                                                                                                                                                                            |                                    |             |            |
| Designed                                                                                                                                                                                                                                                   | R.Jones    | RJ                                                                                                                                                                                                         | Eng check                          | J.Stoddard  | JS         |
| Drawn                                                                                                                                                                                                                                                      | R.Jones    | RJ                                                                                                                                                                                                         | Coordination                       | G.Morgan    | GM         |
| Dwg check                                                                                                                                                                                                                                                  | D.Hall     | DH                                                                                                                                                                                                         | Approved                           | R.Griffiths | RG         |
| MMD Project Number                                                                                                                                                                                                                                         |            | Scale at A1                                                                                                                                                                                                |                                    | Security    |            |
| 395318                                                                                                                                                                                                                                                     |            | 1:1000                                                                                                                                                                                                     |                                    | STD         |            |
| Suitability Description                                                                                                                                                                                                                                    |            |                                                                                                                                                                                                            |                                    |             | Suit. Code |
| Suitable for Information                                                                                                                                                                                                                                   |            |                                                                                                                                                                                                            |                                    |             | S2         |
| Drawing Number                                                                                                                                                                                                                                             |            |                                                                                                                                                                                                            |                                    |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8023                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                            |                                    |             | 01         |

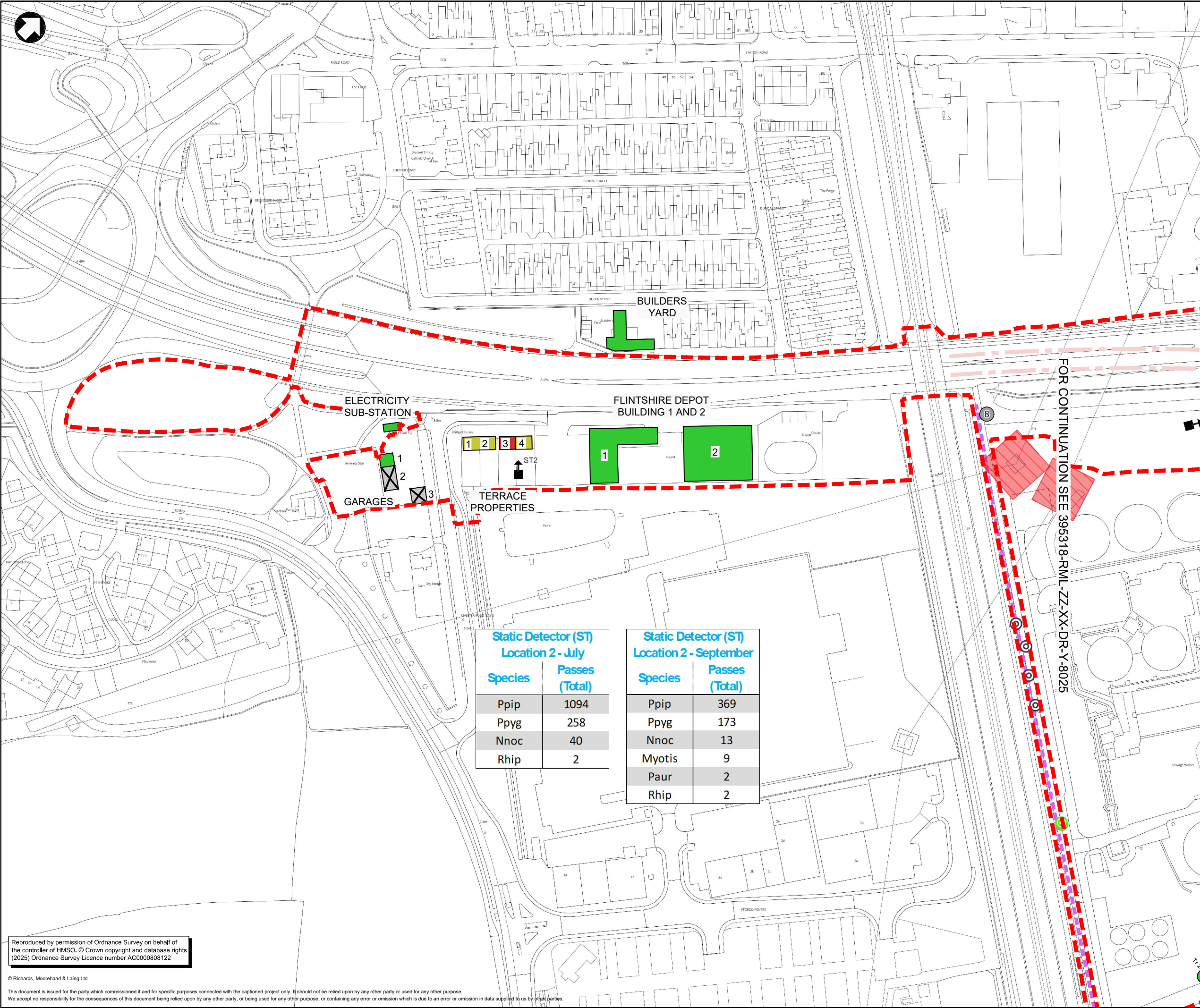
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehaad & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8023.dwg Mar 24, 2025 - 4:35PM rjones





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Ppip)
- Soprano Pipistrelle (Ppyg)
- Noctule (Nnoc)
- Whiskered/Brandts (Mbra/Mmys)

Bat roost potential in structures & trees

- Negligible
- Low
- Moderate
- High
- Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|     |            |       |                                    |        |       |
|-----|------------|-------|------------------------------------|--------|-------|
| 01  | 25/03/2025 | RJ    | Draft issue for review and comment | JS     | RG    |
| Rev | Date       | Drawn | Description                        | Ch'k'd | App'd |

Status Stamp

**NOT FOR CONSTRUCTION**

**M**

**MOTT**

**MACDONALD**

Mott MacDonald House  
5 Woodland Road West  
Colwyn Bay, LL29 7DH  
United Kingdom

T +44 (0)1492 534601  
F -  
W www.mottmac.com

Client

Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

North & Mid Wales Trunk Road Agent

**A494 River Dee Bridge Replacement**  
**Figure 8.5M**  
**Bat Survey Results - 2024**  
**Structures & Tree Roost Potential**  
**Sheet 1 of 3**

|                         |                            |             |              |             |     |
|-------------------------|----------------------------|-------------|--------------|-------------|-----|
| Designed                | R.Jones                    | RJ          | Eng check    | J.Stoddard  | JS  |
| Drawn                   | R.Jones                    | RJ          | Coordination | G.Morgan    | GM  |
| Dwg check               | D.Hall                     | DH          | Approved     | R.Griffiths | RG  |
| MMD Project Number      | 395318                     | Scale at A1 | 1:1000       | Security    | STD |
| Suitability Description | Suitable for Information   | Suit. Code  | S2           | Revision    | 01  |
| Drawing Number          | 395318-RML-ZZ-XX-DR-Y-8024 |             |              |             |     |

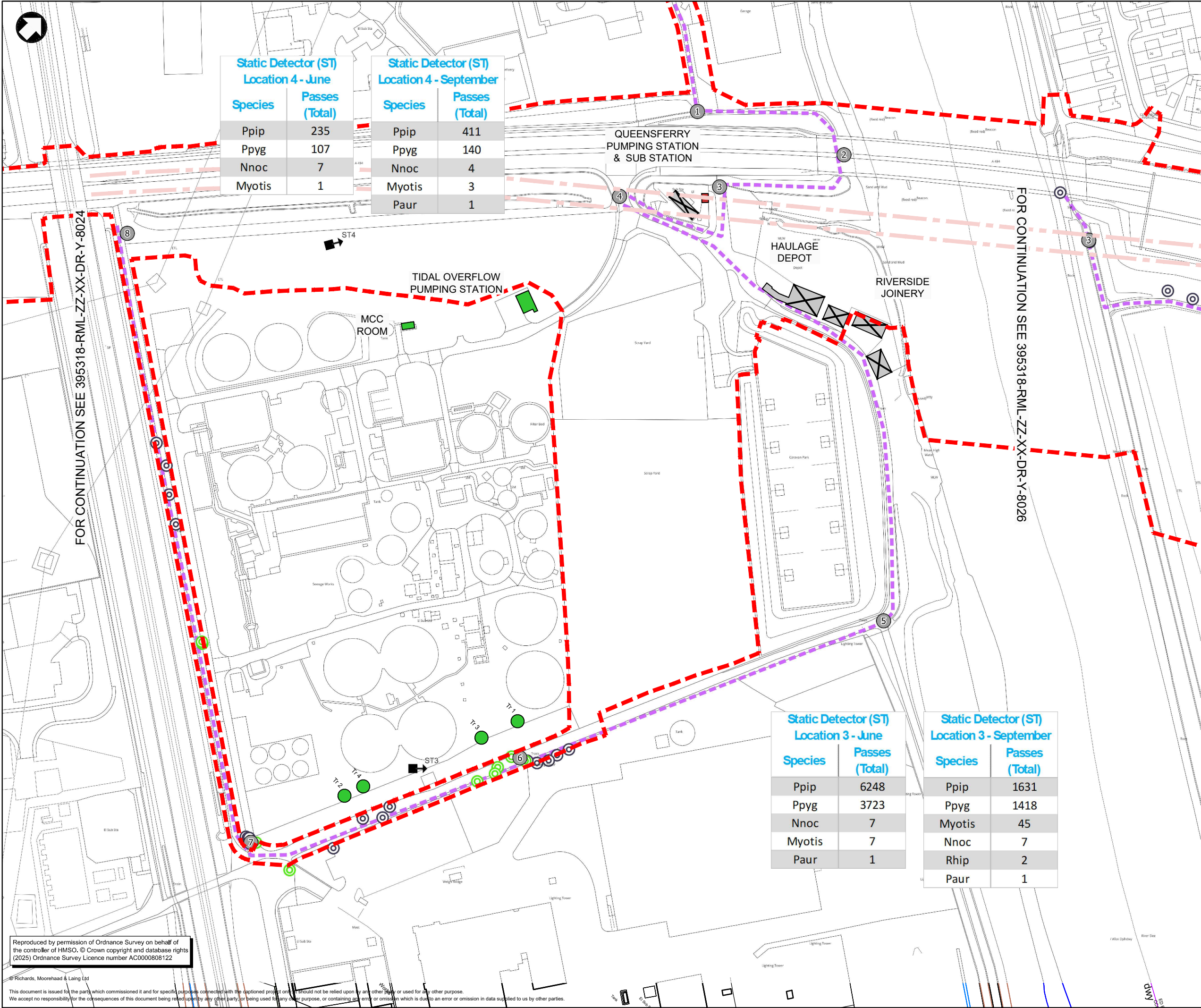
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8024.dwg Mar 26, 2025 - 12:47PM r.jones





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Ppip)
- Soprano Pipistrelle (Ppyg)
- Noctule (Nnoc)
- Whiskered/Brandts (Mbra/Mmys)

Bat roost potential in structures & trees

- Negligible
- Low
- Moderate
- High
- Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.  
Daubentons bat (Mda)  
Lesser Horseshoe bat (Rhip)  
Natterers bat (Mnat)

|     |            |       |                                    |        |       |
|-----|------------|-------|------------------------------------|--------|-------|
| 02  | 08/04/2025 | RJ    | Draft issue for review and comment | JS     | RG    |
| Rev | Date       | Drawn | Description                        | Ch'k'd | App'd |

Status Stamp

NOT FOR CONSTRUCTION

**M**

**MOTT**

**MACDONALD**

Mott MacDonald House  
5 Woodland Road West  
Colwyn Bay, LL29 7DH  
United Kingdom

T +44 (0)1492 534601  
F -  
W www.mottmac.com

Client

  
Yn gweithio ar ran  
Llywodraeth Cymru  
Working on behalf  
of the  
Welsh Government

  
North & Mid Wales Trunk Road Agent

A494 River Dee Bridge Replacement  
Figure 8.5N  
Bat Survey Results - 2024  
Structures & Tree Roost Potential  
Sheet 2 of 3

|                         |                            |             |              |             |     |
|-------------------------|----------------------------|-------------|--------------|-------------|-----|
| Designed                | R.Jones                    | RJ          | Eng check    | J.Stoddard  | JS  |
| Drawn                   | R.Jones                    | RJ          | Coordination | G.Morgan    | GM  |
| Dwg check               | D.Hall                     | DH          | Approved     | R.Griffiths | RG  |
| MMD Project Number      | 395318                     | Scale at A1 | 1:1000       | Security    | STD |
| Suitability Description | Suitable for Introduction  | Suit. Code  | S2           | Revision    | 02  |
| Drawing Number          | 395318-RML-ZZ-XX-DR-Y-8025 |             |              |             |     |

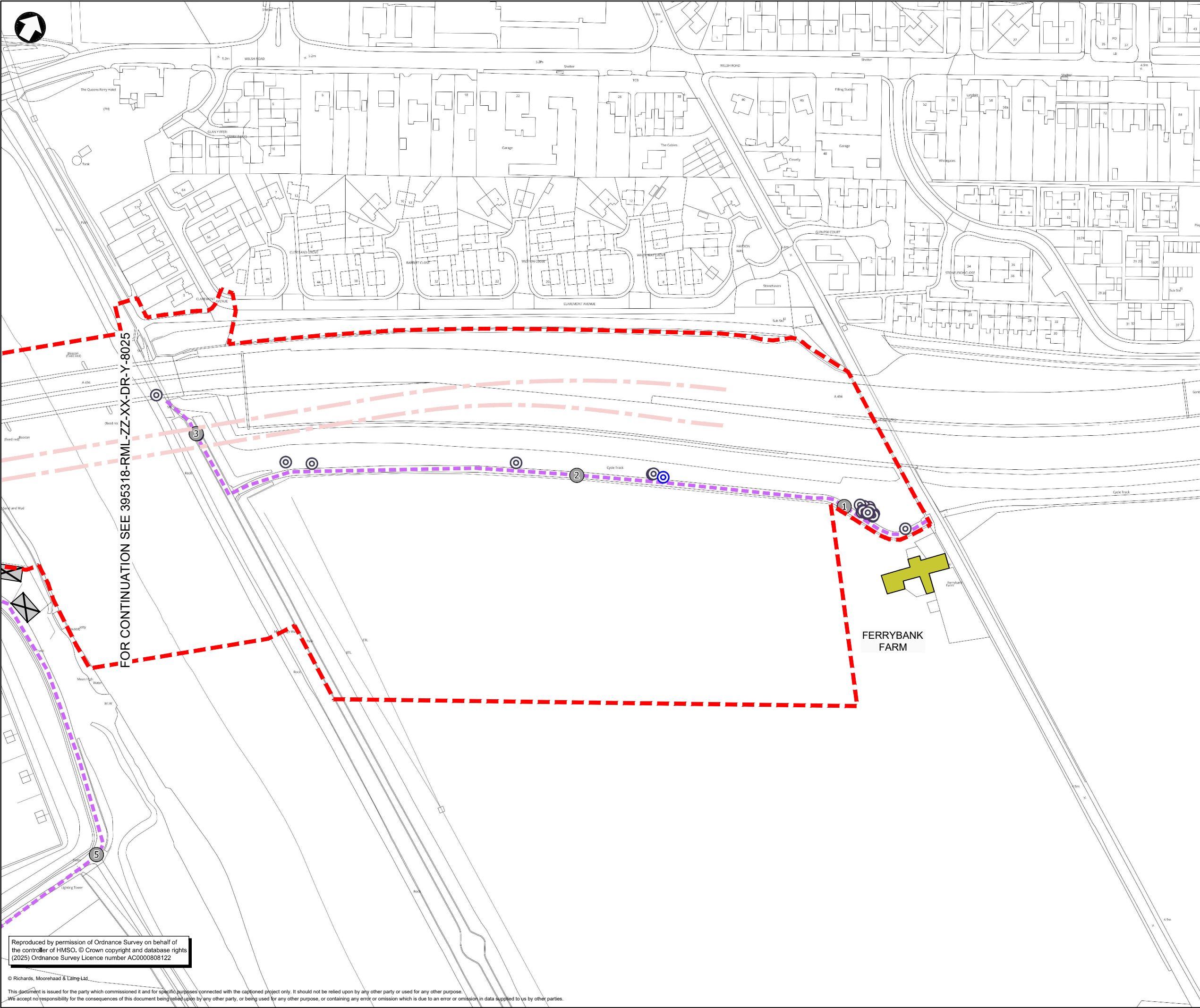
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehaad & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing an error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8025.dwg Apr 8, 2025 - 11:28AM  
r.jones





Notes

- This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
- This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
- Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
- Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Transect route
- Transect stopping point
- Location of static detector
- Common Pipistrelle (Ppip)
- Soprano Pipistrelle (Ppyg)
- Noctule (Nnoc)
- Whiskered/Brandts (Mbra/Mmys)

Bat roost potential in structures & trees

- Negligible
- Low
- Moderate
- High
- Confirmed

Transects walked over 3 occasions, with routes reversed on 1 occasion.

|                                                                                                                                                   |            |             |                                                                                                                                                         |             |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 01                                                                                                                                                | 25/03/2025 | RJ          | Draft issue for review and comment                                                                                                                      | JS          | RG         |
| Rev                                                                                                                                               | Date       | Drawn       | Description                                                                                                                                             | Ch'k'd      | App'd      |
| Status Stamp                                                                                                                                      |            |             |                                                                                                                                                         |             |            |
| NOT FOR CONSTRUCTION                                                                                                                              |            |             |                                                                                                                                                         |             |            |
|                                                                                                                                                   |            |             | <p>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom<br/>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</p> |             |            |
| Client                                                                                                                                            |            |             |                                                                                                                                                         |             |            |
|                                                                                                                                                   |            |             |                                                                                                                                                         |             |            |
| <p>A494 River Dee Bridge Replacement<br/>Figure 8.50<br/>Bat Survey Results - 2024<br/>Structures &amp; Tree Roost Potential<br/>Sheet 3 of 3</p> |            |             |                                                                                                                                                         |             |            |
| Designed                                                                                                                                          | R.Jones    | RJ          | Eng check                                                                                                                                               | J.Stoddard  | JS         |
| Drawn                                                                                                                                             | R.Jones    | RJ          | Coordination                                                                                                                                            | G.Morgan    | GM         |
| Dwg check                                                                                                                                         | D.Hall     | DH          | Approved                                                                                                                                                | R.Griffiths | RG         |
| MMD Project Number                                                                                                                                |            | Scale at A1 |                                                                                                                                                         | Security    |            |
| 395318                                                                                                                                            |            | 1:1000      |                                                                                                                                                         | STD         |            |
| Suitability Description                                                                                                                           |            |             |                                                                                                                                                         |             | Suit. Code |
| Suitable for Information                                                                                                                          |            |             |                                                                                                                                                         |             | S2         |
| Drawing Number                                                                                                                                    |            |             |                                                                                                                                                         |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8026                                                                                                                        |            |             |                                                                                                                                                         |             | 01         |

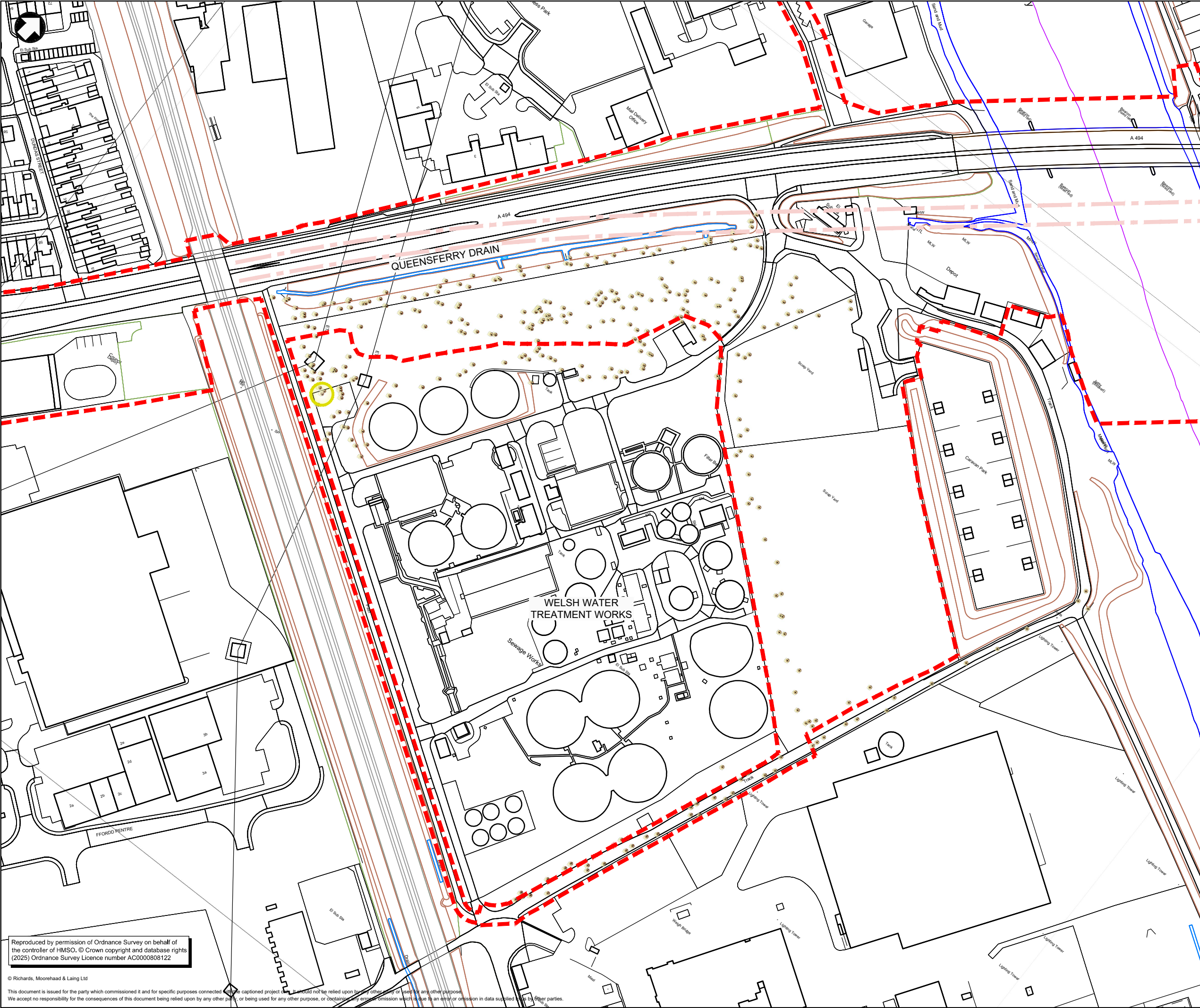
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehead & Lilling Ltd.

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8026.dwg Mar 25, 2025 - 4:36PM r.jones





Notes

1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.

2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.

3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).

4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

A494 River Dee Bridge Replacement alignment

Scheme extents

Reptile refugia location

GCN located under refugia in 2020

|                                                                                                              |            |             |                                                                                                                                                                                                                                                            |             |            |
|--------------------------------------------------------------------------------------------------------------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 02                                                                                                           | 08/04/2025 | RJ          | Draft issue for review and comment                                                                                                                                                                                                                         | JS          | RG         |
| Rev                                                                                                          | Date       | Drawn       | Description                                                                                                                                                                                                                                                | Ch'k'd      | App'd      |
| Status Stamp                                                                                                 |            |             |                                                                                                                                                                                                                                                            |             |            |
| NOT FOR CONSTRUCTION                                                                                         |            |             |                                                                                                                                                                                                                                                            |             |            |
| <div><div>M</div><div>MOTT MACDONALD</div></div>                                                             |            |             | <div><div>Mott MacDonald House</div><div>5 Woodland Road West</div><div>Colwyn Bay, LL29 7DH</div><div>United Kingdom</div><div>T +44 (0)1492 534601</div><div>F -</div><div>W www.mottmac.com</div></div>                                                 |             |            |
| Client                                                                                                       |            |             | <div><div><div><div></div><div>Yn gweithio ar ran Llywodraeth Cymru Working on behalf of the Welsh Government</div></div><div><div></div><div>Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru North &amp; Mid Wales Trunk Road Agent</div></div></div></div> |             |            |
| Title                                                                                                        |            |             |                                                                                                                                                                                                                                                            |             |            |
| A494 River Dee Bridge Replacement<br>Figure 8.6<br>Reptile Surveys<br>Artificial Refugia Locations 2018-2023 |            |             |                                                                                                                                                                                                                                                            |             |            |
| Designed                                                                                                     | R.Jones    | RJ          | Eng check                                                                                                                                                                                                                                                  | J.Stoddard  | JS         |
| Drawn                                                                                                        | R.Jones    | RJ          | Coordination                                                                                                                                                                                                                                               | G.Morgan    | GM         |
| Dwg check                                                                                                    | D.Hall     | DH          | Approved                                                                                                                                                                                                                                                   | R.Griffiths | RG         |
| MMD Project Number                                                                                           |            | Scale at A1 |                                                                                                                                                                                                                                                            | Security    |            |
| 395318                                                                                                       |            | 1:1000      |                                                                                                                                                                                                                                                            | STD         |            |
| Suitability Description                                                                                      |            |             |                                                                                                                                                                                                                                                            |             | Suit. Code |
| Suitable for Information                                                                                     |            |             |                                                                                                                                                                                                                                                            |             | S2         |
| Drawing Number                                                                                               |            |             |                                                                                                                                                                                                                                                            |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8027                                                                                   |            |             |                                                                                                                                                                                                                                                            |             | 02         |

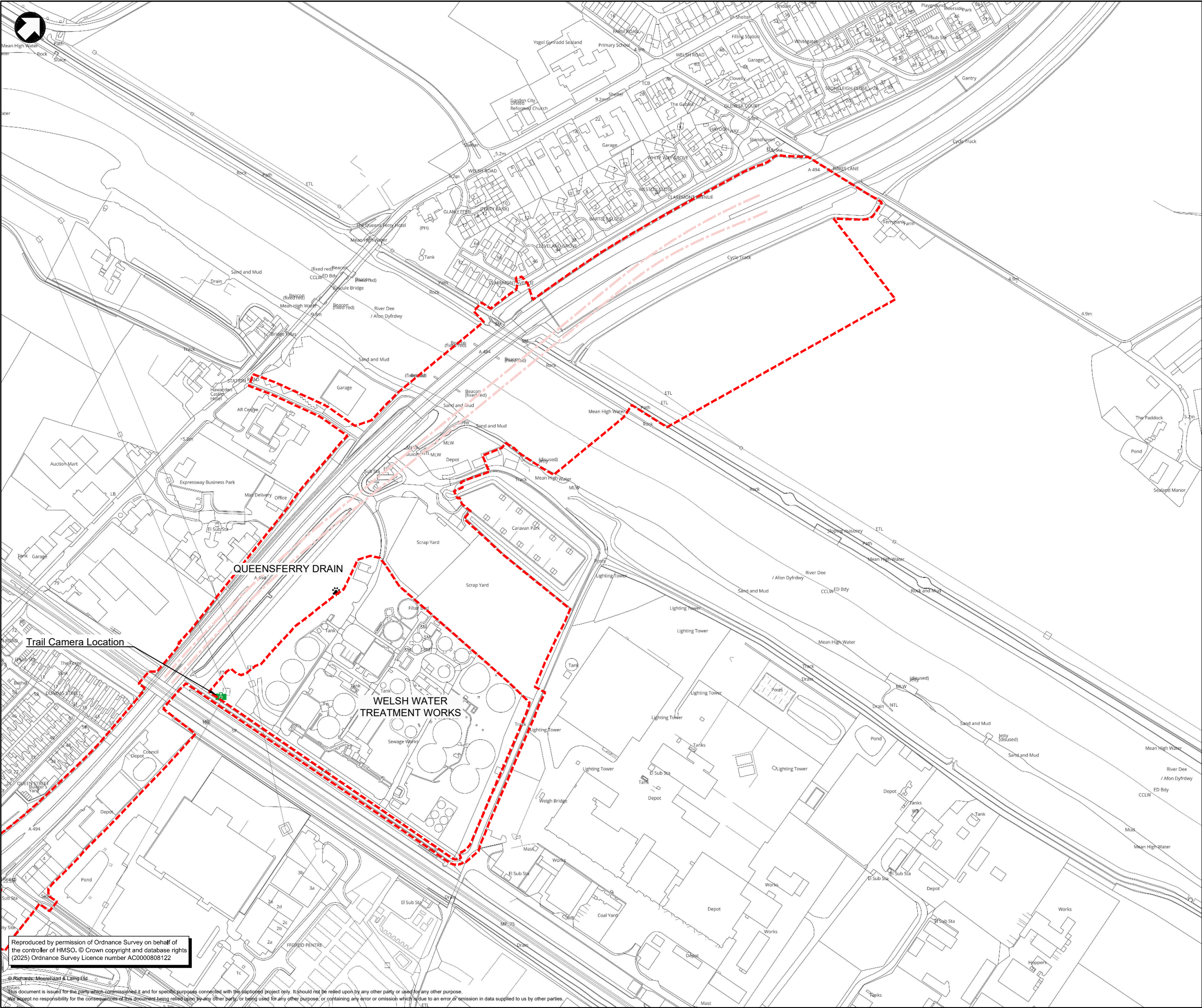
Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Moorehaad & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8027.dwg Apr 8, 2025 - 11:32AM r.jones





Notes

1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.

2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.

3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).

4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

A494 River Dee Bridge Replacement

Scheme extents

Sett location (REMOVED FOR PUBLICATION & ANIMAL WELFARE)

30m exclusion zone (REMOVED FOR PUBLICATION & ANIMAL WELFARE)

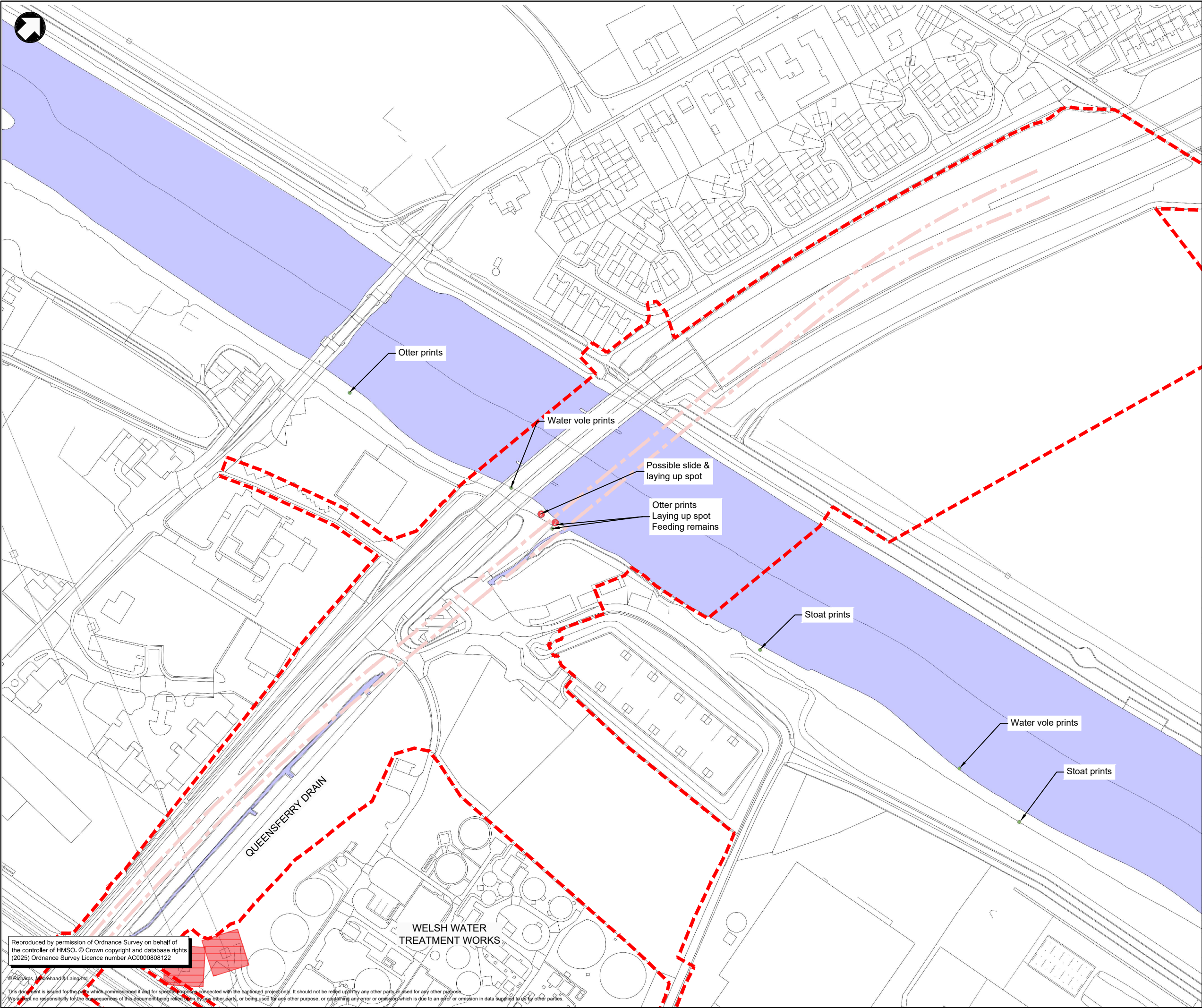
Mammal run - (REMOVED FOR PUBLICATION & ANIMAL WELFARE)

Mammal print

|                                                                                                                                                                                                                                                            |            |             |                                                                                                                                                                                                            |             |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 03                                                                                                                                                                                                                                                         | 10/09/2025 | RJ          | Draft issue for review and comment                                                                                                                                                                         | JS          | RG         |
| Rev                                                                                                                                                                                                                                                        | Date       | Drawn       | Description                                                                                                                                                                                                | Ch'k'd      | App'd      |
| Status Stamp                                                                                                                                                                                                                                               |            |             |                                                                                                                                                                                                            |             |            |
| PUBLIC VERSION                                                                                                                                                                                                                                             |            |             |                                                                                                                                                                                                            |             |            |
| <div><div>M</div><div>MOTT MACDONALD</div></div>                                                                                                                                                                                                           |            |             | <div><div>Mott MacDonald House</div><div>5 Woodland Road West</div><div>Colwyn Bay, LL29 7DH</div><div>United Kingdom</div><div>T +44 (0)1492 534601</div><div>F -</div><div>W www.mottmac.com</div></div> |             |            |
| Client                                                                                                                                                                                                                                                     |            |             |                                                                                                                                                                                                            |             |            |
| <div><div><div><div></div><div>Yn gweithio ar ran Llywodraeth Cymru Working on behalf of the Welsh Government</div></div><div><div></div><div>Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru North &amp; Mid Wales Trunk Road Agent</div></div></div></div> |            |             |                                                                                                                                                                                                            |             |            |
| Title                                                                                                                                                                                                                                                      |            |             |                                                                                                                                                                                                            |             |            |
| A494 River Dee Bridge Replacement<br>Figure 8.7<br>Badger Activity Survey 2018-2025                                                                                                                                                                        |            |             |                                                                                                                                                                                                            |             |            |
| Designed                                                                                                                                                                                                                                                   | R.Jones    | RJ          | Eng check                                                                                                                                                                                                  | J.Stoddard  | JS         |
| Drawn                                                                                                                                                                                                                                                      | R.Jones    | RJ          | Coordination                                                                                                                                                                                               | G.Morgan    | GM         |
| Dwg check                                                                                                                                                                                                                                                  | A. Lynch   | AL          | Approved                                                                                                                                                                                                   | R.Griffiths | RG         |
| MMD Project Number                                                                                                                                                                                                                                         |            | Scale at A1 |                                                                                                                                                                                                            | Security    |            |
| 395318                                                                                                                                                                                                                                                     |            | 1:4000      |                                                                                                                                                                                                            | Rstd        |            |
| Suitability Description                                                                                                                                                                                                                                    |            |             |                                                                                                                                                                                                            |             | Suit. Code |
| Suitable for Information                                                                                                                                                                                                                                   |            |             |                                                                                                                                                                                                            |             | S3         |
| Drawing Number                                                                                                                                                                                                                                             |            |             |                                                                                                                                                                                                            |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8028                                                                                                                                                                                                                                 |            |             |                                                                                                                                                                                                            |             | 03         |

G:\3300-3399\3305 A494 Dee Bridge 2024\115 Drawings\Working\2025 Ecology\395318-RML-ZZ-XX-DR-Y-8028.dwg Sep 10, 2025 - 11:28AM r.jones





Notes

1. This drawing details the current Preliminary Design at Key Stage 3 of Welsh Government's Linear Key Stage Approval Process and is subject to further detail design development in the subsequent key stages.
2. This drawing is to be read in conjunction with all other related Mott MacDonald and RML drawings and specifications.
3. Unless otherwise stated all dimensions are in metres and all levels are in metres Above Ordnance Datum (AOD).
4. Information on this drawing is based on topographical data received from PM Surveys in 2018 for the site area and OS mapping data for all other areas.

Key to symbols

- A494 River Dee Bridge Replacement
- Scheme extents
- Features identified (number of features)

|                                                                                                                                                                                                                                   |            |             |                                                                                                                                                                  |             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| 01                                                                                                                                                                                                                                | 26/03/2025 | RJ          | Draft issue for review and comment                                                                                                                               | JS          | RG         |
| Rev                                                                                                                                                                                                                               | Date       | Drawn       | Description                                                                                                                                                      | Ch'k'd      | App'd      |
| Status Stamp                                                                                                                                                                                                                      |            |             |                                                                                                                                                                  |             |            |
| NOT FOR CONSTRUCTION                                                                                                                                                                                                              |            |             |                                                                                                                                                                  |             |            |
| <div><div>MOTT MACDONALD</div><div>RML</div></div>                                                                                                                                                                                |            |             | <div>Mott MacDonald House<br/>5 Woodland Road West<br/>Colwyn Bay, LL29 7DH<br/>United Kingdom<br/><br/>T +44 (0)1492 534601<br/>F -<br/>W www.mottmac.com</div> |             |            |
| Client                                                                                                                                                                                                                            |            |             |                                                                                                                                                                  |             |            |
| <div><div><br/>Yn gweithio ar ran<br/>Llywodraeth Cymru<br/>Working on behalf<br/>of the<br/>Welsh Government</div><div><br/>Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru<br/>North &amp; Mid Wales Trunk Road Agent</div></div> |            |             |                                                                                                                                                                  |             |            |
| Title                                                                                                                                                                                                                             |            |             |                                                                                                                                                                  |             |            |
| A494 River Dee Bridge Replacement<br>Figure 8.8<br>Otter & Water Vole Survey 2018-2024                                                                                                                                            |            |             |                                                                                                                                                                  |             |            |
| Designed                                                                                                                                                                                                                          | R.Jones    | RJ          | Eng check                                                                                                                                                        | J.Stoddard  | JS         |
| Drawn                                                                                                                                                                                                                             | R.Jones    | RJ          | Coordination                                                                                                                                                     | G.Morgan    | GM         |
| Dwg check                                                                                                                                                                                                                         | D.Hall     | DH          | Approved                                                                                                                                                         | R.Griffiths | RG         |
| MMD Project Number                                                                                                                                                                                                                |            | Scale at A1 |                                                                                                                                                                  | Security    |            |
| 395318                                                                                                                                                                                                                            |            | 1:1250      |                                                                                                                                                                  | STD         |            |
| Suitability Description                                                                                                                                                                                                           |            |             |                                                                                                                                                                  |             | Suit. Code |
| Suitable for Information                                                                                                                                                                                                          |            |             |                                                                                                                                                                  |             | S2         |
| Drawing Number                                                                                                                                                                                                                    |            |             |                                                                                                                                                                  |             | Revision   |
| 395318-RML-ZZ-XX-DR-Y-8029                                                                                                                                                                                                        |            |             |                                                                                                                                                                  |             | 01         |

Reproduced by permission of Ordnance Survey on behalf of the controller of HMSO. © Crown copyright and database rights (2025) Ordnance Survey Licence number AC0000808122

© Richards, Morehead & Laing Ltd

This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

G:\3300-3399\3305 A494 Dee Bridge 2024\15 Drawings\Working\2024 Ecology\ACAD\395318-RML-ZZ-XX-DR-Y-8029.dwg Mar 26, 2025 - 12:35PM  
r.jones