National Asset Delivery

Technical Surveys and Testing

Site Information for

570135 - M5, J23-24, 194.10, Huntworth Viaduct,

Topographical Survey

1 SITE INFORMATION

1.1 Site boundary, extents and access arrangements

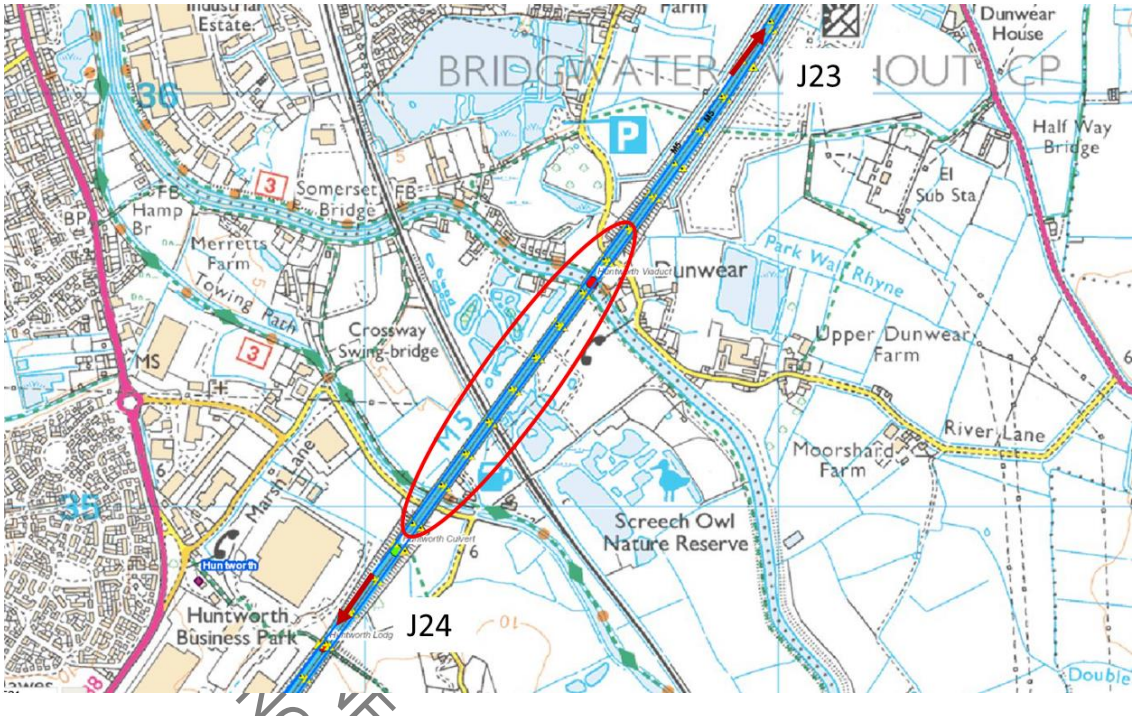
Huntworth Viaduct carries the M5 over a Somerset County road, the River Parrett, the Bristol to Exeter mainline railway, the Bridgwater to Taunton canal and another Somerset County road at MP 194.10.

It was constructed in 1973 and has a zero skew. The viaduct comprises twin steel box girders linked by transverse steel plate girders at 3m centres. Steel plate girders, also at 3m centres, cantilever from the outer faces of the box girders. A 230mm thick reinforced concrete slab acts compositely with the box girders and plate girders. The result is a continuous 17 span structure. Each box girder is supported on common reinforced concrete abutments and 16 No. individual intermediate reinforced concrete piers.

Each pier is founded on an individual pile cap and pile cluster. Each box girder can be entered via access hatches in the outer web, at the midspan of each span. Once inside, the entire length of the box is accessible. The box girders have internal lighting and an electrical power supply.

The private land between the river and the canal can be accessed from the south via the swing bridge over the canal. This road/track crosses the railway at a level crossing, leading to the area of land between the railway and the river. This area can also be accessed via the railway bridge and marsh lane, however this is currently closed due to Colley Lane Southern Access Road works. There is also limited headroom of 5'6".

Only the south compound and the footprints of the pier bases and abutments are currently in HE ownership. An "Avon Key" will be required to access these compounds. They Key will need to be collected from the HE depot on the day access is required, and returned the same day. The remainder of the land under and adjacent to the viaduct is in disparate private ownership, with easements existing to allow maintenance access.



1.2 Pavement

Surfacing

Northbound Carriageway:

2016 50 mm HRA Plane and Inlay

1992 50mm Regulating course

Waterproofing: Servicised (W G Grace Ltd) Servidek/Servipak – Board (Bitumen)

Southbound Carriageway

Waterproofing: Pitchmastic PmB Two-Part Polyurethane Elastomer

2015: 50mm HRA Surfacing

2015: 50mm Regulating course

1.3 Drainage

There is a kerb drainage system ontop of the bridge deck. This drainage system flows into each of the abutments.

1.4 Geotechnical

Piles were used for the majority of foundations. The piles pass through a variety of soil types. The upper layers which are likely to be encountered in this survey works are clay based.

1.5 Soft Estate and Environment

As per section 1 the structure passes over a variety of land including rivers, canals, farmland, general storage areas and the railway line.

Notable Environmental Features listed below

- Environmental/Heritage: UK BAP Priority Habitat at the south end up to the railway.
- Protected Species W&CA – Otters recorded in the vicinity of the bridge
- Local nature reserve approx. 200-300m from northeast corner of the bridge.

1.6 Traffic Signs, Road Markings

Huntworth Viaduct carries the M4 carriageways are marked in the usual way for a section of motorway.

Dunwear Lane/River Lane is a minor country road with limited signage.

1.7 Lighting

There is no street lighting on this part of the network.

1.8 Structures and Buildings

The main structure within the survey area is the Huntworth Viaduct

There are small animal shelters underneath the Huntworth Viaduct

There are a variety of nearby residential buildings.

1.9 Tunnels

N/A

1.10 Technology

There is technology on the M5, however the majority of works is below the M5.

There is a weather station at the north east corner of the structure.

1.11 Statutory Undertakers

There are a variety services within the vicinity of the structure, see C2 searches within PCI.

1.12 Traffic

M5 N/B AADT 38206

M5 S/B AADT 38258