

Claydon I/C North

(/A14//181.10//) SMIS Structure Key: 9942

WARNING - Asbestos is present. Be familiar with SMIS Help Guide and the AAP, follow your own safe working procedures.



Principal Inspection

20 May 2015



HA Regional Office

East
Woodlands
Manton Lane
Bedford
MK41 7LW

Amey - Area 6

Amey
Amey Waterbeach office
Dickerson Industrial Estate
Ely Road
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Cambridge
CB25 9PG

Principal Inspection Report for Claydon I/C North (/A14//181.10//)
(Authorised)

Signatures

Inspected by _____ Signature _____ Date _____

Checked by _____ Signature _____ Date _____

Authorised by _____ Signature _____ Date _____

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Annex 1 - Structure Report

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Summary

| | | | |
|---|---|---------------------------------|-----------------|
| Structure Key | 9942 | Agent Name | Amey - Area 6 |
| Commissioned | 01/01/1975 | O.S. Grid Ref East/North | 612890 / 249610 |
| Bridge Type | Highway Underbridge | | |
| Length | 32.30 | Number of Spans | 3 |
| Date Inspected | 20/05/2015 | Overall Condition | Fair |
| Weather | Night: Dry and Mild | | |
| Weather on 21/05/2015 | Day: Dry and mild | | |
| Inspected by | ██████████ | | |
| Authorised by | ██████████ | | |
| Authorisation date | 05/01/2016 | | |
| Method of Inspection | On foot, visual | | |
| Equipment Used | MEWP, inspection tools and PPE | | |
| Parts of Structure Not Inspected | Foundations, buried/hidden surfaces and central reserve | | |

General Description

The structure is a simply supported three span underbridge and carries the A14, two lane, dual carriageway all purpose trunk road and two verges over the B1113 interchange through the centre span.

The bridge has two side spans of 9.0m and a main span of 14.25m and an overall width of 31.45m. The bridge is square to the A14.

The bridge comprises a cast in situ reinforced concrete top slab and 28no. type M1 precast prestressed beams with precast prestressed concrete type B2 box edge beams supported by cast in situ reinforced concrete bank seat abutments and two intermediate cast in situ reinforced concrete multiple leg portal piers. The bankseats and piers are founded on spread foundations. Flying wingwalls are cantilevered from the back of the bank seats. The deck has a longitudinal joint.

The dual 2 lane A14 on the bridge has carriageways 9.3m wide with 1m wide verges and a 9.9m wide central reserve. Asphaltic plug joints and a longitudinal joint are provided to accommodate movement of the bridge.

Articulation

The deck is supported on rubber pad type bearings. The simply supported structure is fixed at the south abutment and free at the north abutment with corresponding fixity over the intermediate supports.

Inspection Summary

The structure was found in fair condition. Most defects were fairly typical and minor although a significant amount of new early stage delaminated concrete was noted beneath deck joints.

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Inspection Photographs



01 - West elevation



02 - East elevation

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03 - North bankseat and revetment



04 - South bankseat and revetment

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05 - North pier



06 - South pier

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07 - Typical bankseat bearing, North



08 - Typical pier bearing, South

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09 - Main span deck soffit



10 - South side span deck soffit

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11 - View over Northbound carriageway



12 - View over Southbound carriageway

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13 - North joint, Northbound



14 - North joint, Southbound

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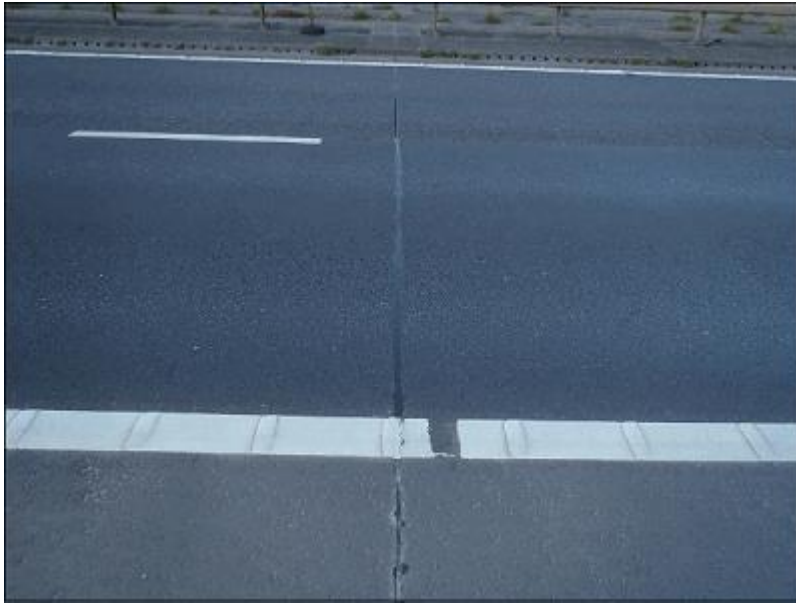


15 - North pier joint, Northbound



16 - North pier joint, Southbound

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17 - South pier joint, Northbound



18 - South pier joint, Southbound

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19 - South joint, Northbound



20 - South joint, Southbound

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Observations/Defects Confirmed at this Inspection

Not Applicable

| | | | |
|-------------------------|---|------------------|--------|
| Components | North Pier - bearing plinth (north piers) | | |
| Defect Type | Cr - Crack of uncertain origin or a combination of causes | | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D3 - Moderate: Defect is probably causing damage to element or structure, or is likely to do so in the near future | | |
| Priority | Medium | | |
| Comments | An obvious crack was noted in the Western most bearing plinth of the North pier. Monitor crack at future inspections. | | |
| Cause | Vandal Action | Certainty | Medium |
| Comment on Cause | | | |

Crack to bearing plinth on North pier




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Observations/Defects Confirmed at this Inspection

Substructure

| | | | |
|-------------------------|--|------------------|---|
| Components | North Pier - Cross head (north), South Pier - Cross head (south), North Abutment - Abutment Wall for North Abutment, South Abutment - Abutment Wall for South Abutment | | |
| Defect Type | AI - Algal growth | |  |
| Extent | SC - Defect present in 5% to not more than 20% of area or length of element | | |
| Severity | D4 - Severe: Defect is clearly causing damage to element or structure | | |
| Priority | Medium | | |
| Comments | The portal piers are heavily stained with algal deposit and scaling. Water seepage is evident on the pier cross beam. | | |
| Cause | Fixings Failure | Certainty | Medium |
| Comment on Cause | Joint failure above supports. | | |
| Cause | The central reserve drainage gully may also have failed. | | |

Water staining at historic site of algal staining, North pier



Algal staining to the South bankseat wall



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Observations/Defects Confirmed at this Inspection

| | |
|--------------------|--|
| Components | South Pier - Piers / Columns for South Pier, North Pier - Piers / Columns for North Pier |
| Defect Type | Graf - Graffiti |
| Extent | SB - Defect present in not more than 5% of area or length of element |
| Severity | A4 - Defect in offensive condition |
| Priority | High |
| Comments | There were two areas of graffiti to pier columns, one was offensive. |



Offensive graffiti to South pier column





Graffiti to North pier column



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Observations/Defects Confirmed at this Inspection

| | | | |
|-------------------------|--|------------------|------|
| Components | North Pier - tensioned corrugated beam safety fencing (B1113) | | |
| Defect Type | MissCo - Missing | | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D3S - Moderate: Defect may present a danger to the public in the near future | | |
| Priority | Medium | | |
| Comments | There are no connections between the safety fence and the parapets. Presence of full height anchor instead. | | |
| Cause | Construction Issue | Certainty | High |
| Comment on Cause | No connection between parapet and approaching safety barrier, Southwest | | |
| |  | | |
| Components | South Abutment - Abutment Wall for South Abutment, South Pier - Cross head (south), North Pier - Cross head (north), North Abutment - Abutment Wall for North Abutment | | |
| Defect Type | Holl - Hollow (delaminated) area  | | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D3 - Moderate: Defect is probably causing damage to element or structure, or is likely to do so in the near future | | |
| Priority | Medium | | |
| Comments | Areas of delaminated concrete were noted to the bankseat walls and pier crossheads. | | |
| Cause | Moisture Ingress | Certainty | High |
| Comment on Cause | Water is likely penetrating the deck joints resulting in corrosion to reinforcement of elements directly beneath. | | |

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Observations/Defects Confirmed at this Inspection

Delaminated concrete and rust staining to the East end of the North pier crosshead



Delaminated concrete to the North bankseat



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Delaminated concrete to the North bankseat



Delaminated concrete to the East end of the North bankseat



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Delaminated concrete to the South bankseat



Delaminated concrete to the East end of the South pier crosshead



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Delaminated concrete to the West end of the North bankseat



Delaminated concrete to soffit of South pier crosshead



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Delaminated concrete to the East end of the South bankseat



Components North Abutment - Abutment Wall for North Abutment, South Abutment - Abutment Wall for South Abutment

Defect Type Cr - Crack of uncertain origin or a combination of causes

Extent SB - Defect present in not more than 5% of area or length of element

Severity D2 - Minor: Defect is unlikely to be causing damage to the element or structure now or unlikely to do so in the near future

Priority Low

Comments The South abutment, a number of cracks were noted which are showing damp and rust staining. Delaminated concrete is common adjacent to these cracks. Cracking also noted in the North bankseat wall.

Cracking to West end of South bankseat wall surrounded by delaminated concrete



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Cracking to South bankseat wall
with rust staining present



Vertical crack towards East end of
the South bankseat wall



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Observations/Defects Confirmed at this Inspection

Cracking and rust staining to the North bankseat



Components South Pier - Piers / Columns for South Pier

Defect Type Debo - Debonding

Extent SB - Defect present in not more than 5% of area or length of element

Severity D2 - Minor: Defect is unlikely to be causing damage to the element or structure now or unlikely to do so in the near future

Priority Low

Comments The polysulphide joints sealant have degraded and are debonding.

Damage to seal at West end of the North pier



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Observations/Defects Confirmed at this Inspection

Cracking to sealant above the South pier, West end



Failed seal at East end of South pier



| | |
|--------------------|---|
| Components | North Pier - Piers / Columns for North Pier |
| Defect Type | Sp - Spalled area |
| Extent | SB - Defect present in not more than 5% of area or length of element |
| Severity | D2 - Minor: Defect is unlikely to be causing damage to the element or structure now or unlikely to do so in the near future |
| Priority | Low |
| Comments | North piers, at the base of the fifth column from the west, two areas of spalling (approx 300mm long x 100mm wide and 20mm deep) and a crack 400mm long and 0.55mm wide. There is corrosive staining in the vicinity of the spall. Delamination now extends to 600x500mm. Other areas of delaminated concrete were noted to pier bases. |

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Observations/Defects Confirmed at this Inspection

Delaminating and spalling concrete to base of North pier columns



Delaminated concrete to East column of North pier



| | |
|--------------------|---|
| Components | South Pier - Cross head (south), North Pier - Cross head (north) |
| Defect Type | FRep - Failed repair |
| Extent | SB - Defect present in not more than 5% of area or length of element |
| Severity | D2 - Minor: Defect is unlikely to be causing damage to the element or structure now or unlikely to do so in the near future |
| Priority | Low |
| Comments | A number of repairs at core hole testing locations to pier crossheads have failed, sounding hollow when hit with inspection hammer. |


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Observations/Defects Confirmed at this Inspection

Typical failed repair, North pier



| | | |
|--------------------|---|--|
| Components | South Abutment - Abutment Wall for South Abutment | |
| Defect Type | Cr - Crack of uncertain origin or a combination of causes |  |
| Extent | SC - Defect present in 5% to not more than 20% of area or length of element | |
| Severity | D1 - Defect is definitely not causing damage to element or structure | |
| Priority | Medium | |
| Comments | Longitudinal crack (approx 6m) at the West end of the South abutment. There is a rusty leak at the East end of that crack. To be monitored. DEFECT REPEATED | |

| | | |
|--------------------|--|---|
| Components | South Pier - Piers / Columns for South Pier | |
| Defect Type | MissCo - Missing |  |
| Extent | SB - Defect present in not more than 5% of area or length of element | |
| Severity | D1 - Defect is definitely not causing damage to element or structure | |
| Priority | High | |
| Comments | There is no safety fence protection to the south pier portal. | |

No safety barrier protection to South pier





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Observations/Defects Confirmed at this Inspection

Restraint System

| | | | |
|-------------------------|--|---|------|
| Components | East Deck (north side span - east) - East Parapet, East Deck(south side span - east) - East Parapet | | |
| Defect Type | MissCo - Missing | | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D3S - Moderate: Defect may present a danger to the public in the near future | | |
| Priority | Medium | | |
| Comments | There are no connections between the safety fence and the parapets. Presence of full height anchor instead. | | |
| Cause | Construction Issue | Certainty | High |
| Comment on Cause | | | |
| | No connection between parapet and approaching safety barrier, Southwest |  | |
| Components | West Deck (north side span - west) - West Parapet, East Deck (north side span - east) - East Parapet, West Deck (south side span - west) - West Parapet, West Deck(main span - west) - West Parapet, East Deck (main span - east) - East Parapet, East Deck(south side span - east) - East Parapet | | |
| Defect Type | PDeg - Other degradation or breakdown  | | |
| Extent | SC - Defect present in 5% to not more than 20% of area or length of element | | |
| Severity | P2 - Minor loss of protection likely in the near future | | |
| Priority | Low | | |
| Comments | The parapet rails and posts are subject to loss and general deterioration of the paint system. The infill mesh fixings are suffering from corrosion. | | |
| Cause | Corrosion | Certainty | High |
| Comment on Cause | | | |

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Observations/Defects Confirmed at this Inspection

Corrosion to rear of West parapet rails



Typical deterioration of parapet protective paint system



| | | |
|-------------------------|---|-----------------------|
| Components | East Deck(south side span - east) - East Parapet | |
| Defect Type | AD - Impact (accident) damage other | |
| Extent | SC - Defect present in 5% to not more than 20% of area or length of element | |
| Severity | D2 - Minor: Defect is unlikely to be causing damage to the element or structure now or unlikely to do so in the near future | |
| Priority | Medium | |
| Comments | The mesh infill to the east parapet has minor impact damage approximately 15m long. | |
| Cause | Accident Damage | Certainty High |
| Comment on Cause | - | |

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Damage to East parapet infill mesh





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Observations/Defects Confirmed at this Inspection

Carriageway

| | | | |
|-------------------------|---|---|--------|
| Components | West Deck(main span - west) - A14 westbound surfacing (replaced Sept 09), West Deck (north side span - west) - A14 westbound surfacing (replaced Sept 09) | | |
| Defect Type | PH - Pothole |  | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D3S - Moderate: Defect may present a danger to the public in the near future | | |
| Priority | High | | |
| Comments | Potholing and surfacing deterioration is present to the southbound carriageway at North pier | | |
| Cause | Age Expired | Certainty | High |
| Comment on Cause | Lack of binding agent to the aggregate leading to movement of material and breakup of the surfacing. | | |
| | Potholing at the North pier joint in the Southbound carriageway surfacing |  | |
| Components | East Deck (main span - east) - Joint 2 east (north verge piers), East Deck (main span - east) - Joint 3 east (south verge piers), West Deck(main span - west) - Joint 3 west (south verge piers), East Deck(south side span - east) - Joint 4 east (south abutment), West Deck (south side span - west) - Joint 4 west (south abutment), West Deck (north side span - west) - Joint 1 (north abutment - west bound), East Deck (north side span - east) - Joint 1 (north abutment - east bound), West Deck(main span - west) - Joint 2 west (north verge piers) | | |
| Defect Type | CrCo - Cracked | | |
| Extent | SC - Defect present in 5% to not more than 20% of area or length of element | | |
| Severity | D3 - Moderate: Defect is probably causing damage to element or structure, or is likely to do so in the near future | | |
| Priority | High | | |
| Comments | There is no sealant across portions of the saw cuts in the carriageway surfacing above deck joints which may be a point of entrance for water damaging elements below. | | |
| Cause | Maintenance Issue | Certainty | Medium |
| Comment on Cause | | | |

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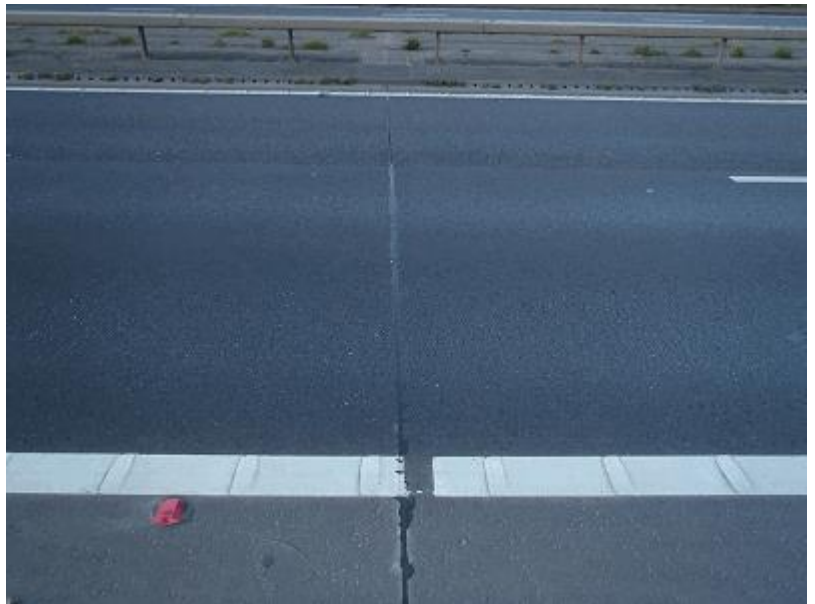
(Authorised)

Observations/Defects Confirmed at this Inspection

Areas of no sealant in saw cut to surfacing above South pier, Eastbound



No sealant across saw cut to carriageway surface above North pier, Westbound



| | | |
|-------------------------|--|-------------------------|
| Components | East Deck (north side span - east) - A14 east bound surfacing (replaced Nov 07) | |
| Defect Type | CrCo - Cracked | |
| Extent | SB - Defect present in not more than 5% of area or length of element | |
| Severity | D3 - Moderate: Defect is probably causing damage to element or structure, or is likely to do so in the near future | |
| Priority | Medium | |
| Comments | There was cracking in the carriageway on the approach to the North joint (Eastbound). | |
| Cause | Unable to Determine | Certainty Medium |
| Comment on Cause | | |

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Observations/Defects Confirmed at this Inspection

Cracking to carriageway surface as a result of settlement




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Observations/Defects Confirmed at this Inspection

Superstructure

| | | |
|--------------------|---|---|
| Components | West Deck (south side span - west) - parapet cantilever, North Abutment - north abutment bearings | |
| Defect Type | FO - Foreign object |  |
| Extent | SB - Defect present in not more than 5% of area or length of element | |
| Severity | D2 - Minor: Defect is unlikely to be causing damage to the element or structure now or unlikely to do so in the near future | |
| Priority | Low | |
| Comments | In the west cantilever at the south end there is an area of corroding ferrous material with a spall, approx 60mm diameter. Similar defect in the same area approximately 1m south of the south pier. Also, a small area of exposed corroding steel on the north abutment east end. | |

Corroding ferrous debris to West edge beam in South side span



Corroding ferrous debris to West edge beam in South side span adjacent to South abutment



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Reviewed Maintenance Actions confirmed through this and outstanding from other Inspections

N.B. The Origin of Work for each of these Maintenance Actions is Routine Inspection (currently Principal, General, Special and Monitoring).

| | | | |
|---------------------------|---|----------------------------|------------|
| Maintenance Object | Safety Fence | Maintenance Action | Install |
| Estimated Cost | £20,000 | Recomm. Action Date | 30/09/2014 |
| Priority Category | 2 | Risk Score | 92 |
| Comments | Provide safety fence protection to the south pier portal | | |
| Maintenance Object | Surfacing | Maintenance Action | Replace |
| Estimated Cost | £80,000 | Recomm. Action Date | 30/09/2014 |
| Priority Category | 3 | Risk Score | 70 |
| Comments | Resurfacing of westbound lane 1 over the entire structure. Repairs/replacement of burried joint and waterproofing will also be required. | | |
| Maintenance Object | Expansion Joint | Maintenance Action | Replace |
| Estimated Cost | £25,000 | Recomm. Action Date | 30/09/2014 |
| Priority Category | 3 | Risk Score | 65 |
| Comments | Investigate cause of water seepage. If joints are found to leak repair joints. Note the defect is likely to occur at the interface of the phased joint replacement works near the central reserve. In addition, the longitudinal joint between the two bridge decks may be the cause of water seepage. In addition to the above joint repairs will be required as a consequence of resurfacing works. | | |
| Maintenance Object | Concrete | Maintenance Action | Repair |
| Estimated Cost | £2,000 | Recomm. Action Date | 01/04/2016 |
| Priority Category | 3 | Risk Score | 61 |
| Comments | Investigate cause of longitudinal crack to South abutment. If crack is stable, resin inject to prevent corrosion to reinforcement | | |
| Maintenance Object | Pier/Column | Maintenance Action | Repair |
| Estimated Cost | £1,000 | Recomm. Action Date | 01/04/2016 |
| Priority Category | 3 | Risk Score | 41 |
| Comments | Undertake minor concrete repair to areas of spalling. | | |
| Maintenance Object | Concrete Deck | Maintenance Action | Repair |
| Estimated Cost | £1,000 | Recomm. Action Date | 01/04/2016 |
| Priority Category | 3 | Risk Score | 25 |
| Comments | Remove corroding objects and repair spalling on the west deck cantilerver soffit. | | |
| Maintenance Object | Parapet | Maintenance Action | Paint |
| Estimated Cost | £6,000 | Recomm. Action Date | 01/04/2016 |
| Priority Category | 3 | Risk Score | 25 |
| Comments | Localised paint repairs to parapet | | |
| Maintenance Object | Parapet | Maintenance Action | Replace |
| Estimated Cost | £2,000 | Recomm. Action Date | 01/04/2016 |
| Priority Category | 3 | Risk Score | 25 |
| Comments | Replace deformed mesh infill east parapet. | | |
| Maintenance Object | Revetment | Maintenance Action | Repair |
| Estimated Cost | £500 | Recomm. Action Date | 01/04/2016 |
| Priority Category | 3 | Risk Score | 25 |
| Comments | Replace missing slab on the north revetment. | | |

Unreviewed Maint' Actions confirmed through this and outstanding from other Inspections

N.B. The Origin of Work for each of these Maintenance Actions is Routine Inspection (currently Principal, General, Special and Monitoring).

| | | | |
|---------------------------|---|----------------------------|------------|
| Maintenance Object | Concrete | Maintenance Action | Repair |
| Estimated Cost | £30,000 | Recomm. Action Date | 01/08/2017 |
| Comments | Repair areas of delaminated concrete caused by reinforcement corrosion. | | |

Additions to the next Routine Maintenance

| | |
|-----------------|--|
| Comments | Remove graffiti and minor vegetation as part of routine maintenance. |
|-----------------|--|

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Outstanding Observations/Defects NOT Confirmed at this Inspection

Restraint System

| | | | |
|----------------------|--|----------------------------|------------|
| Components | West Deck (south side span - west) - West Parapet, East Deck (main span - east) - East Parapet, East Deck(south side span - east) - East Parapet, West Deck (north side span - west) - West Parapet, West Deck(main span - west) - West Parapet | | |
| Defect Type | MissCo - Missing | | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D2 - Minor: Defect is unlikely to be causing damage to the element or structure now or unlikely to do so in the near future | | |
| Priority | Medium | Emergency? | No |
| No. of images | 0 | Date last confirmed | 15/06/2010 |
| Comments | Parapet Defects identified during SMIS Capture exercise but not viewed during 2004 GI due to H & S including Bolt fixings - inspect all fixings and tighten loose bolts Parapet Fixings near north end Clean Parapet General Paint Loss Joint Sealant to Parapet edge beams | | |
| Components | West Deck (south side span - west) - West Parapet, East Deck(south side span - east) - East Parapet, West Deck(main span - west) - West Parapet, East Deck (north side span - east) - East Parapet, East Deck (main span - east) - East Parapet, West Deck (north side span - west) - West Parapet | | |
| Defect Type | Deg - Degraded | | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D2 - Minor: Defect is unlikely to be causing damage to the element or structure now or unlikely to do so in the near future | | |
| Priority | Low | Emergency? | No |
| No. of images | 0 | Date last confirmed | 15/06/2010 |
| Comments | IAN 97/07 Assessment - Monitor parapet condition in future PI/GI inspections. | | |

Carriageway

| | | | |
|----------------------|---|----------------------------|------------|
| Components | West Deck (north side span - west) - Waterproofing (West deck) | | |
| Defect Type | Debo - Debonding  | | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D3 - Moderate: Defect is probably causing damage to element or structure, or is likely to do so in the near future | | |
| Priority | Medium | Emergency? | No |
| No. of images | 0 | Date last confirmed | 20/06/2012 |
| Comments | The waterproofing membrane to the areas exposed during pothole patch repairs was found to be debonded from the substrate and was subsequently removed to allow bonding of the surfacing. This has left the concrete deck exposed to the ingress of chlorides through water ingress. | | |

Watercourses and Earthworks

| | | | |
|----------------------|--|----------------------------|------------|
| Components | North Abutment - north revetment | | |
| Defect Type | MissCo - Missing | | |
| Extent | SB - Defect present in not more than 5% of area or length of element | | |
| Severity | D1 - Defect is definitely not causing damage to element or structure | | |
| Priority | Low | Emergency? | No |
| No. of images | 0 | Date last confirmed | 28/04/2009 |
| Comments | The north revetment has a slab missing at the base of the north east pier. | | |

Principal Inspection Report for Claydon I/C North (/A14//181.10//)

(Authorised)

Reviewed Maintenance Actions from sources other than Inspections

N.B. Currently these would be maintenance actions with an Origin of Work not set to Routine Inspection, e.g. BACO Parapets or ASR.

| | | | |
|---------------------------|--|----------------------------|------------|
| Maintenance Object | Waterproofing | Maintenance Action | Replace |
| Origin of Work | Incident | | |
| Estimated Cost | £40,000 | Recomm. Action Date | 30/09/2014 |
| Priority Category | 3 | Risk Score | 65 |
| Comments | Repair areas of debonded/delaminated waterproofing whilst carrying out resurfacing operations. | | |

Unreviewed Maintenance Actions from sources other than Inspections

N.B. Currently these would be maintenance actions with an Origin of Work not set to Routine Inspection, e.g. BACO Parapets or ASR.

No other maintenance actions outstanding

Other Planned Inspections

N.B. These are the planned inspections in SMIS at the time of report production (Tuesday, 5 January, 2016), NOT at the time of the inspection.

| Type | Target Date | Reason |
|-----------|-------------|---|
| Special | 31/03/2006 | Expansion joints have failed resulting in long term contamination of underlying structure. Waterproofing membrane probable failure. |
| Special | 01/07/2013 | Mesh damage only to the westbound parapet. |
| General | 23/07/2016 | |
| General | 23/07/2018 | |
| Principal | 23/07/2020 | |

Annex 1

Structure Report

Structure Report for Claydon I/C North (/A14//181.10//)

WARNING - Asbestos is present. Be familiar with SMIS Help Guide and the AAP, follow your own safe working procedures.

Structure Summary key 9942

| | | | |
|----------------------------------|----------------------|---------------------------------|-----------------|
| Road | A14 | O.S. Grid Ref East/North | 612890 / 249610 |
| Commissioned | 1975 | Constructed | 1975 |
| Maintaining Agent-Area | Amey - Area 6-Area 6 | | |
| Geographical Area | Suffolk | Custodian-Region | HA-East |
| Designer | Eastern Rcu | | |
| Last Principal Inspection | 20/05/2015 | Last General Inspection | 20/06/2012 |
| PI Frequency (years) | 6 | | |

Structure Type **Bridge And Large Culvert**

| | | | |
|--------------------------------|---------------------|-----------------------------|----------|
| Bridge Type | Highway Underbridge | | |
| High Load Route | No | Heavy Load Route | No |
| Scour Susceptible | No | DBFO | No |
| Original Design Loading | HA + 45 HB | | |
| Number of Spans | 3 | Length | 32.30 |
| Tensioning | Not Tensioned | Overall Construction | Concrete |

Description of Structure

The structure is a simply supported three span underbridge and carries the A14, two lane, dual carriageway all purpose trunk road and two verges over the B1113 interchange through the centre span.

The bridge has two side spans of 9.0m and a main span of 14.25m and an overall width of 31.45m. The bridge is square to the A14.

The bridge comprises a cast in situ reinforced concrete top slab and 28no. type M1 precast prestressed beams with precast prestressed concrete type B2 box edge beams supported by cast in situ reinforced concrete bank seat abutments and two intermediate cast in situ reinforced concrete multiple leg portal piers. The bankseats and piers are founded on spread foundations. Flying wingwalls are cantilevered from the back of the bank seats. The deck has a longitudinal joint.

The dual 2 lane A14 on the bridge has carriageways 9.3m wide with 1m wide verges and a 9.9m wide central reserve. Asphaltic plug joints and a longitudinal joint are provided to accommodate movement of the bridge.

Articulation

The deck is supported on rubber pad type bearings. The simply supported structure is fixed at the south abutment and free at the north abutment with corresponding fixity over the intermediate supports.

Load Management for C&U and STGO Live Loading

| | | | |
|-------------------|---------------------------|----------------------|------|
| Location | All Traffic Lanes | Direction | Both |
| ALL | 40/44 tonnes (Assessment) | | |
| HB with LL | 45 (Assessment) | HB without LL | |
| SV with LL | | SV without LL | |

Structure Report for Claydon I/C North (/A14/181.10/)

Assessments, Inspection and Maintenance History Completed Inspections

| Inspection Type | Inspection Date | Inspection Reason |
|--|-----------------|---|
| Principal Inspection | 20/05/2015 | |
| General Inspection | 20/06/2012 | |
| Special Inspection (Special Inspection following incident) | 17/01/2011 | Potholes appearing to the surfacing |
| General Inspection | 15/06/2010 | |
| Special Inspection (IAN 97/07 Assessment) | 28/07/2009 | Special Inspection to record IAN 97/07 results. |
| Principal Inspection | 28/04/2009 | |
| Special Inspection (Resilience assessment) | 06/01/2009 | Special inspection for initial resilience assessment. |
| General Inspection | 31/05/2006 | |
| General Inspection | 13/06/2004 | |
| Principal Inspection | 23/07/2002 | |
| General Inspection | 17/09/1998 | |
| Principal Inspection | 14/08/1996 | |
| General Inspection | 08/09/1994 | |
| General Inspection | 18/03/1993 | |
| Principal Inspection | 03/12/1990 | |
| General Inspection | 01/10/1986 | |
| Principal Inspection | 01/02/1982 | |
| General Inspection | 01/09/1980 | |

Completed Assessments

| Assessment Type | Assessment Date |
|---------------------|-----------------|
| Parapet Assessment | 03/02/2006 |
| 40 Tonne Assessment | 19/08/1996 |

Maintenance Actions Completed Through Projects Created In SMIS

| Maintenance Object | Maintenance Action | Date Completed | Comments | Project Name |
|--------------------|--------------------|----------------|--|--------------------------------|
| Expansion Joint | Repair | 23/09/2009 | Replace longitudinal joint to prevent further contamination. | A14 Claydon Waterproofing W/B. |
| Surfacing | Repair | 23/09/2009 | Repair damaged surfacing if waterproofing work is likely to be delayed. | A14 Claydon Waterproofing W/B. |
| Expansion Joint | Replace | 23/09/2009 | Replace joints in westbound carriageway to prevent further damage to the crossheads. | A14 Claydon Waterproofing W/B. |
| Waterproofing | Replace | 23/09/2009 | Westbound carriageway - replace age expired waterproofing that has shown evidence of failure | A14 Claydon Waterproofing W/B. |
| Expansion Joint | Replace | 01/12/2007 | Replace failed expansion joints to eastbound carriageway | A14 CLAYDON WATERPROOFING |
| Waterproofing | Replace | 01/12/2007 | Eastbound carriageway - replace age expired waterproofing | A14 CLAYDON WATERPROOFING |

Structure Report for Claydon I/C North (/A14/181.10/)

Additional Maintenance History

May 2010 - Birse provided saw cut and seal to previous location of surfacing/expansion joint repair..September 2009 - Waterproofing Part 2 Westbound - under the Area 6 MAC Contract Atkins sub-contracted this scheme to Jacksons Civil Engineering. The scope of the scheme was to replace the waterproofing membrane, expansion joints, surfacing, install a combined kerb drain system and a sub-surface drainage system; all to the westbound carriageway only. In this scheme the waterproofing was replaced with a Pitchmastic PMB membrane, the expansion joints were replaced with Pitchmastic BP1 Buried joints, and shallow Envirokerb and Dri-deck sub-surface drainage systems were installed. November 2008 - Birse carried out a surfacing repair over the eastbound north pier expansion joint following pothole at expansion joint location. Bridging plate had been displaced, possibly from surfacing operations, plate replaced and fixed in position. November 2007 - Waterproofing Part 1 Eastbound - Birse Civils Limited replaced the waterproofing membrane, expansion joints, polysulphide joints, surfacing and installed Hydrodeck kerb drainage units to the eastbound carriageway only. As part of the works the centre reserve was partially hardened to allow maintenance of two narrow lanes during peak time working. The expansion joints were replaced with Sentinel buried joints and the waterproofing membrane with Stirling Lloyd Eliminator. October 2010 - Ducting added to external face of westbound parapet beam for comms cables for A14 VMS contract.

Features

| |
|--|
| North Side Span has Natural Ground (Eg Valley) running under it maintained by Highways Agency |
| Main Span has Lane 2 of the Main Carriageway of an unspecified road running under it with a headroom of 5.68 metres which was last checked on 20/05/2015 maintained by Suffolk County Council reference B1113 |
| Main Span has Lane 1 of the Main Carriageway of an unspecified road running under it with a critical headroom of 5.63 metres which was last checked on 20/05/2015 maintained by Suffolk County Council reference B1113 |
| South Side Span has Natural Ground (Eg Valley) running under it maintained by Highways Agency |
| West Parapet has some unknown services fixed to it maintained by Highways Agency |
| West Parapet has some unknown services fixed to it maintained by Highways Agency |
| West Parapet has some unknown services fixed to it maintained by Highways Agency |
| Bridge and Large Culvert has Lane 2 of the Main Carriageway of the road A14 (Downlink) running over it maintained by Highways Agency reference Northbound. |
| Bridge and Large Culvert has an Electricity service |
| Bridge and Large Culvert has Lane 1 of the Main Carriageway of the road A14 (Uplink) running over it maintained by Highways Agency reference Southbound. |
| Bridge and Large Culvert has Lane 2 of the Main Carriageway of the road A14 (Uplink) running over it maintained by Highways Agency reference Southbound. |
| Bridge and Large Culvert has Lane 1 of the Main Carriageway of the road A14 (Downlink) running over it maintained by Highways Agency reference Northbound. |

Interim Measures

No interim measures present

Constraints

| Component | Type | Name | Description |
|-------------------|------------------------|--------------------------------|------------------------------------|
| Claydon I/C North | Environmental/Heritage | Protected Species W&CA - Flora | Interchange roundabout |
| Claydon I/C North | Materials | Crocidolite | Asbestos cement permanent shutting |

Departures

| Departure No. | Standard Departed From | Status |
|---------------|--|------------------------|
| 73612 | 1700 - Aspects not covered : Specification, Structures SHW, MCHW VOL 1 Series 1700 Structural Concrete | Approved with comments |

Coating System for Steelwork

No Coating Systems for Steelworks present

Structure Report for Claydon I/C North (/A14//181.10//)

Coating System for Concrete

No Concrete Coating Systems Present

Structure Report for Claydon I/C North (/A14//181.10//)
Inventory

N.B. Inspection Elements are added for Inspection purposes only. They are shown here for information only, and it should be noted that the list of Inspection elements is not comprehensive.

North Abutment

| | | | |
|------------------------|----------------------------------|------------------------|----------------------------|
| Support Type | Bank Seat | Material Type | Insitu Reinforced Concrete |
| Connection Type | Proprietary Elastomeric Bearings | Facing Material | None |

Foundation 1

| | |
|-------------|-----------------|
| Type | Spread Footings |
|-------------|-----------------|

north revetment

| | |
|-------------|---------|
| Type | Surface |
|-------------|---------|

north east wingwall

| | | | |
|-------------------------|-------------|---------------|--|
| Anchoring System | Sub Surface | Length | |
| | | Height | |

north west wingwall

| | | | |
|-------------------------|-------------|---------------|--|
| Anchoring System | Sub Surface | Length | |
| | | Height | |

bearing shelf (north)

| | |
|----------------------|----------------------|
| Material Type | Insitu Mass Concrete |
|----------------------|----------------------|

ballast wall (north) - (Inspection Element)

| | |
|-------------|--------------------|
| Type | BAL - Ballast wall |
|-------------|--------------------|

north abutment bearings

| | | | |
|----------------|-------------|--------------------------|------------|
| Type | Elastomeric | Installation Date | 01/01/1975 |
| Product | | No. of Bearings | 30 |

north embankment - (Inspection Element)

| | |
|-------------|---|
| Type | EMB - Embankment or adjacent earthworks |
|-------------|---|

Abutment Wall for North Abutment

| | | | |
|------------------------|-------------------------|------------------------|-------------------|
| Support Type | Bank Seat | Material Type | Insitu Reinforced |
| Connection Type | Proprietary Elastomeric | Facing Material | None |

North Side Span

| | | | |
|-----------------------------------|-------------------------------------|---------------------------------------|------|
| Structural Form Type | Beam/Girder - At/Below Deck Surface | Skew | 0.00 |
| Min Width Between Supports | 7.00 | Date Min Width Last Checked | |
| Features Data | | | |
| Critical Headroom | | Critical Headroom Last Checked | |

East Deck (north side span - east)

| | | | |
|----------------------------|------------------------------|--------------------------|------------|
| Structure Form Type | Simply Supported | Length | 9.00 |
| Construction Type | Beam And Slab | Width | 15.72 |
| Enclosure Type | Void Inaccessible | Construction Date | 01/01/1975 |
| Material Type | Precast Prestressed Concrete | Material Name | PRIMARY |
| Material Type | Insitu Reinforced Concrete | Material Name | SECONDARY |

Joint 1 (north abutment - east bound)

| | | | |
|----------------|------------------------------------|--------------------------|------------|
| Type | Buried Joint(Continuous Surfacing) | Installation Date | 26/11/2007 |
| Product | Stirling Lloyd Sentinel B10 | No. of Joints | 1 |

Structure Report for Claydon I/C North (/A14//181.10//)
East Parapet

| | | | |
|------------------------------|-----------------|---|----------------|
| Location | Deck Edge | Installation Date | 01/01/1975 |
| Form | Vehicle Parapet | Modified | Not Modified |
| Designer | B S C (Steel) | Modification Date | |
| M'facturer/Fabricator | B S C (Steel) | Nominal Height | 1 |
| Baco Parapet Type | Not Applicable | Modification Date (Baco post only) | |
| Barrier Type | Other | Primary Material | Steel |
| Material Infill | Mesh Infill | Parapet Group | P2(113) |
| Cont Perf Class | Not Applicable | Working Width | Not Applicable |
| Safety Fence Approach | N | Safety Fence Departure | N |
| Protection System | N | Protection System | N |
| Protection Reason | Not Applicable | | |
| BA 37/92 Ranking Data | | | |
| Assessed | Y | Assessed Date | 31/03/2002 |
| Contain Capacity Req | Normal | Containment Ranking | 1.00 |
| Containment Basis | Not Applicable | | |
| Risk Features Below | 1.00 | Risk Highway Carried Out | 3.00 |
| Risk Layout | 0.00 | Risk Containment Features | 0.00 |
| Risk Ranking | 4.00 | Priority Ranking | 4.00 |

A14 east bound surfacing (replaced Nov 07) - (Inspection Element)

| | |
|-------------|-----------------------------|
| Type | SUR - Carriageway surfacing |
|-------------|-----------------------------|

Box beam concrete east

| | | | |
|-----------------|------------------------------|---------------------------|-----------|
| Shape | Box | Strengthening Type | Not Known |
| Type | Precast Hollow | Edge Beam? | Y |
| Material | Precast Prestressed Concrete | | |

Longitudinal joint (replaced Nov 07) - (Inspection Element)

| | |
|-------------|--------------------------|
| Type | LNJ - Longitudinal joint |
|-------------|--------------------------|

parapet cantilever east - (Inspection Element)

| | |
|-------------|------------------------------------|
| Type | EDG - Edge beam or edge cantilever |
|-------------|------------------------------------|

Slab

| | | | |
|-----------------|----------------------------|---------------------------|-----------|
| Form | Slab Flat | Type | Solid |
| Material | Insitu Reinforced Concrete | Strengthening Type | Not Known |

West Deck (north side span - west)

| | | | |
|----------------------------|------------------------------|--------------------------|------------|
| Structure Form Type | Simply Supported | Length | 9.00 |
| Construction Type | Beam And Slab | Width | 15.72 |
| Enclosure Type | Void Inaccessible | Construction Date | 01/01/1975 |
| Material Type | Precast Prestressed Concrete | Material Name | PRIMARY |
| Material Type | Insitu Reinforced Concrete | Material Name | SECONDARY |

Joint 1 (north abutment - west bound)

| | | | |
|----------------|------------------------------------|--------------------------|------------|
| Type | Buried Joint(Continuous Surfacing) | Installation Date | 23/09/2009 |
| | | No. of Joints | 1 |
| Product | Bayer (Uk) Ltd Bp1 Buried Joint | | |

Structure Report for Claydon I/C North (/A14//181.10//)
West Parapet

| | | | |
|------------------------------|-----------------|---|----------------|
| Location | Deck Edge | Installation Date | 01/01/1975 |
| Form | Vehicle Parapet | Modified | Not Modified |
| Designer | B S C (Steel) | Modification Date | |
| M'facturer/Fabricator | B S C (Steel) | Nominal Height | 1 |
| Baco Parapet Type | Not Applicable | Modification Date (Baco post only) | |
| Barrier Type | Other | Primary Material | Steel |
| Material Infill | Mesh Infill | Parapet Group | P2(113) |
| Cont Perf Class | Not Applicable | Working Width | Not Applicable |
| Safety Fence Approach | N | Safety Fence Departure | N |
| Protection System | N | Protection System | N |
| Protection Reason | Not Applicable | | |
| BA 37/92 Ranking Data | | | |
| Assessed | Y | Assessed Date | 31/03/2002 |
| Contain Capacity Req | Normal | Containment Ranking | 1.00 |
| Containment Basis | Not Applicable | | |
| Risk Features Below | 1.00 | Risk Highway Carried Out | 3.00 |
| Risk Layout | 0.00 | Risk Containment Features | 0.00 |
| Risk Ranking | 4.00 | Priority Ranking | 4.00 |

central reserve - integral sub-surface drainage system, installed '09 - (Inspection Element)

| | |
|-------------|-----------------------|
| Type | CRV - Central reserve |
|-------------|-----------------------|

longitudinal joint - (Inspection Element)

| | |
|-------------|--------------------------|
| Type | LNJ - Longitudinal joint |
|-------------|--------------------------|

double sided open box beam

| | | | |
|------------------------------|----------------|---|---------------------|
| Location | Verge | Installation Date | |
| Form | Safety Barrier | Modified | Modification Status |
| Designer | Not Known | Modification Date | |
| M'facturer/Fabricator | Not Known | Nominal Height | Not Specified |
| Baco Parapet Type | Not Applicable | Modification Date (Baco post only) | |
| Barrier Type | DROBB | Primary Material | Not Known |
| Material Infill | No Infill | Parapet Group | Not Applicable |
| Cont Perf Class | Not Applicable | Working Width | Not Applicable |
| Safety Fence Approach | N | Safety Fence Departure | N |
| Protection System | N | Protection System | N |
| Protection Reason | Not Applicable | | |
| BA 37/92 Ranking Data | | | |
| Assessed | | Assessed Date | |
| Contain Capacity Req | Not Specified | Containment Ranking | |
| Containment Basis | Not Known | | |
| Risk Features Below | | Risk Highway Carried Out | |
| Risk Layout | | Risk Containment Features | |
| Risk Ranking | 0.00 | Priority Ranking | 0.00 |

A14 westbound surfacing (replaced Sept 09) - (Inspection Element)

| | |
|-------------|-----------------------------|
| Type | SUR - Carriageway surfacing |
|-------------|-----------------------------|

Box beam concrete west

| | | | |
|-----------------|------------------------------|---------------------------|-----------|
| Shape | Box | Strengthening Type | Not Known |
| Type | Precast Hollow | Edge Beam? | Y |
| Material | Precast Prestressed Concrete | | |

parapet cantilever west - (Inspection Element)

| | |
|-------------|------------------------------------|
| Type | EDG - Edge beam or edge cantilever |
|-------------|------------------------------------|

Structure Report for Claydon I/C North (/A14//181.10//)

| | | | |
|--|-------------------------------------|---------------------------------------|-------------------------|
| Slab | | | |
| Form | Slab Flat | Type | Solid |
| Material | Insitu Reinforced Concrete | StrengtheningType | Not Known |
| North Pier | | | |
| Support Type | Concrete Frame | Connection Type | Proprietary Elastomeric |
| Assessment Data | | | |
| Strengthening Completed | N | Permanent Protection | N |
| Construction Date | | | |
| Foundation | | | |
| Type | Spread Footings | | |
| tensioned corrugated beam safety fencing - (Inspection Element) | | | |
| Type | FEN - Fender | | |
| Cross head (north) | | | |
| Material | Insitu Reinforced Concrete | Height | |
| | | Length | |
| | | Width | |
| bearing plinth (north piers) | | | |
| Material Type | Insitu Mass Concrete | | |
| tensioned corrugated beam safety fencing (B1113) - (Inspection Element) | | | |
| Type | FEN - Fender | | |
| Bearing 2 (north verge piers side span) | | | |
| Type | Elastomeric | Installation Date | 01/01/1981 |
| Product | | No. of Bearings | 30 |
| Bearing 3 (north verge piers main span) | | | |
| Type | Elastomeric | Installation Date | 01/01/1981 |
| Product | | No. of Bearings | 30 |
| Piers / Columns for North Pier | | | |
| Support Type | Concrete Frame | Connection Type | Proprietary |
| Main Span | | | |
| Structural Form Type | Beam/Girder - At/Below Deck Surface | Skew | 0.00 |
| Min Width Between Supports | 14.25 | Date Min Width Last Checked | |
| Features Data | | | |
| Critical Headroom | | Critical Headroom Last Checked | |
| East Deck (main span - east) | | | |
| Structure Form Type | Simply Supported | Length | 14.30 |
| Construction Type | Beam And Slab | Width | 14.25 |
| Enclosure Type | Void Inaccessible | Construction Date | 01/01/1975 |
| Material Type | Precast Prestressed Concrete | Material Name | PRIMARY |
| Material Type | Insitu Reinforced Concrete | Material Name | SECONDARY |
| Joint 2 east (north verge piers) | | | |
| Type | Buried Joint(Continuous Surfacing) | Installation Date | 26/11/2007 |
| Product | Stirling Lloyd Sentinel B20 | No. of Joints | 1 |

Structure Report for Claydon I/C North (/A14//181.10//)
Joint 3 east (south verge piers)

| | | | |
|----------------|------------------------------------|--------------------------|------------|
| Type | Buried Joint(Continuous Surfacing) | Installation Date | 26/11/2007 |
| Product | Stirling Lloyd Sentinel B15 | No. of Joints | 1 |

East Parapet

| | | | |
|------------------------------|-----------------|-------------------------------|----------------|
| Location | Deck Edge | Installation Date | 01/01/1975 |
| Form | Vehicle Parapet | Modified | Not Modified |
| Designer | B S C (Steel) | Modification Date | |
| M'facturer/Fabricator | B S C (Steel) | Nominal Height | 1 |
| Baco Parapet Type | Not Applicable | Modification Date | |
| Barrier Type | Other | (Baco post only) | |
| Material Infill | Mesh Infill | Primary Material | Steel |
| Cont Perf Class | Not Applicable | Parapet Group | P2(113) |
| Safety Fence Approach | N | Working Width | Not Applicable |
| Protection System | N | Safety Fence Departure | N |
| Protection Reason | Not Applicable | Protection System | N |

BA 37/92 Ranking Data

| | | | |
|-----------------------------|----------------|----------------------------------|------------|
| Assessed | Y | Assessed Date | 31/03/2002 |
| Contain Capacity Req | Normal | Containment Ranking | 1.00 |
| Containment Basis | Not Applicable | | |
| Risk Features Below | 1.00 | Risk Highway Carried Out | 3.00 |
| Risk Layout | 0.00 | Risk Containment Features | 0.00 |
| Risk Ranking | 4.00 | Priority Ranking | 4.00 |

A14 eastbound surfacing (replaced Nov 07) - (Inspection Element)

| | |
|-------------|-----------------------------|
| Type | SUR - Carriageway surfacing |
|-------------|-----------------------------|

Box beam concrete east

| | | | |
|-----------------|------------------------------|---------------------------|---------------|
| Shape | Box | Strengthening Type | Overspan Slab |
| Type | Precast Hollow | Edge Beam? | Y |
| Material | Precast Prestressed Concrete | | |

longditudinal joint (replaced Nov 07) - (Inspection Element)

| | |
|-------------|--------------------------|
| Type | LNJ - Longitudinal joint |
|-------------|--------------------------|

parapet cantilever - (Inspection Element)

| | |
|-------------|------------------------------------|
| Type | EDG - Edge beam or edge cantilever |
|-------------|------------------------------------|

Slab

| | | | |
|-----------------|-----------------------------|--------------------------|-----------|
| Form | Slab Flat | Type | Solid |
| Material | Precast Reinforced Concrete | StrengtheningType | Not Known |

West Deck(main span - west)

| | | | |
|----------------------------|-------------------|--------------------------|------------|
| Structure Form Type | Simply Supported | Length | 14.30 |
| Construction Type | Beam And Slab | Width | 14.25 |
| Enclosure Type | Void Inaccessible | Construction Date | 01/01/1975 |

Joint 2 west (north verge piers)

| | | | |
|----------------|------------------------------------|--------------------------|------------|
| Type | Buried Joint(Continuous Surfacing) | Installation Date | 23/09/2009 |
| Product | Bayer (UK) Ltd Bp1 Buried Joint | No. of Joints | 1 |

Joint 3 west (south verge piers)

| | | | |
|----------------|------------------------------------|--------------------------|------------|
| Type | Buried Joint(Continuous Surfacing) | Installation Date | 23/09/2009 |
| Product | Bayer (UK) Ltd Bp1 Buried Joint | No. of Joints | 1 |

Structure Report for Claydon I/C North (/A14//181.10//)
West Parapet

| | | | |
|------------------------------|-----------------|---|----------------|
| Location | Deck Edge | Installation Date | 01/01/1975 |
| Form | Vehicle Parapet | Modified | Not Modified |
| Designer | B S C (Steel) | Modification Date | |
| M'facturer/Fabricator | B S C (Steel) | Nominal Height | 1 |
| Baco Parapet Type | Not Applicable | Modification Date (Baco post only) | |
| Barrier Type | Other | Primary Material | Steel |
| Material Infill | Mesh Infill | Parapet Group | P2(113) |
| Cont Perf Class | Not Applicable | Working Width | Not Applicable |
| Safety Fence Approach | N | Safety Fence Departure | N |
| Protection System | N | Protection System | N |
| Protection Reason | Not Applicable | | |
| BA 37/92 Ranking Data | | | |
| Assessed | Y | Assessed Date | 31/03/2002 |
| Contain Capacity Req | Normal | Containment Ranking | 1.00 |
| Containment Basis | Not Applicable | | |
| Risk Features Below | 1.00 | Risk Highway Carried Out | 3.00 |
| Risk Layout | 0.00 | Risk Containment Features | 0.00 |
| Risk Ranking | 4.00 | Priority Ranking | 4.00 |

double sided open box beam

| | | | |
|------------------------------|----------------|---|---------------------|
| Location | Deck Edge | Installation Date | |
| Form | Safety Barrier | Modified | Modification Status |
| Designer | Not Known | Modification Date | |
| M'facturer/Fabricator | Not Known | Nominal Height | Not Specified |
| Baco Parapet Type | Not Applicable | Modification Date (Baco post only) | |
| Barrier Type | DROBB | Primary Material | Not Known |
| Material Infill | No Infill | Parapet Group | Not Applicable |
| Cont Perf Class | Not Applicable | Working Width | Not Applicable |
| Safety Fence Approach | N | Safety Fence Departure | N |
| Protection System | N | Protection System | N |
| Protection Reason | Not Applicable | | |
| BA 37/92 Ranking Data | | | |
| Assessed | | Assessed Date | |
| Contain Capacity Req | Not Specified | Containment Ranking | |
| Containment Basis | Not Known | | |
| Risk Features Below | | Risk Highway Carried Out | |
| Risk Layout | | Risk Containment Features | |
| Risk Ranking | 0.00 | Priority Ranking | 0.00 |

longitudinal joint - (Inspection Element)

| | |
|-------------|--------------------------|
| Type | LNJ - Longitudinal joint |
|-------------|--------------------------|

A14 westbound surfacing (replaced Sept 09) - (Inspection Element)

| | |
|-------------|-----------------------------|
| Type | SUR - Carriageway surfacing |
|-------------|-----------------------------|

Box beam concrete west

| | | | |
|-----------------|------------------------------|---------------------------|-----------|
| Shape | Box | Strengthening Type | Not Known |
| Type | Precast Hollow | Edge Beam? | Y |
| Material | Precast Prestressed Concrete | | |

central reserve - integral sub-surface drainage system, installaed '09 - (Inspection Element)

| | |
|-------------|-----------------------|
| Type | CRV - Central reserve |
|-------------|-----------------------|

parapet cantilever west - (Inspection Element)

| | |
|-------------|------------------------------------|
| Type | EDG - Edge beam or edge cantilever |
|-------------|------------------------------------|

Structure Report for Claydon I/C North (/A14//181.10//)

| Slab | | | |
|-----------------|----------------------------|--------------------------|-----------|
| Form | Slab Flat | Type | Solid |
| Material | Insitu Reinforced Concrete | StrengtheningType | Not Known |

| South Pier | | | |
|--------------------------------|----------------|-----------------------------|-------------------------|
| Support Type | Concrete Frame | Connection Type | Proprietary Elastomeric |
| Assessment Data | | | |
| Strengthening Completed | N | Permanent Protection | N |
| Construction Date | | | |

| Foundation 3 | |
|---------------------|-----------------|
| Type | Spread Footings |

| Cross head (south) | | | |
|---------------------------|----------------------------|---------------|--|
| Material | Insitu Reinforced Concrete | Height | |
| | | Length | |
| | | Width | |

| bearing plinth (South piers) | |
|-------------------------------------|----------------------|
| Material Type | Insitu Mass Concrete |

| Bearing 4 (south verge piers main span) | | | |
|--|-------------|--------------------------|------------|
| Type | Elastomeric | Installation Date | 01/01/1981 |
| Product | | No. of Bearings | 30 |

| Bearing 5 (south verge piers side span) | | | |
|--|-------------|--------------------------|------------|
| Type | Elastomeric | Installation Date | 01/01/1981 |
| Product | | No. of Bearings | 30 |

| Piers / Columns for South Pier | | | |
|---------------------------------------|----------------|------------------------|-------------|
| Support Type | Concrete Frame | Connection Type | Proprietary |

| South Side Span | | | |
|-----------------------------------|-------------------------------------|---------------------------------------|------|
| Structural Form Type | Beam/Girder - At/Below Deck Surface | Skew | 0.00 |
| Min Width Between Supports | 0.00 | Date Min Width Last Checked | |
| Features Data | | | |
| Critical Headroom | | Critical Headroom Last Checked | |

| East Deck(south side span - east) | | | |
|--|-------------------|--------------------------|------------|
| Structure Form Type | Simply Supported | Length | 9.00 |
| Construction Type | Beam And Slab | Width | 14.25 |
| Enclosure Type | Void Inaccessible | Construction Date | 01/01/1975 |

| Joint 4 east (south abutment) | | | |
|--------------------------------------|------------------------------------|--------------------------|------------|
| Type | Buried Joint(Continuous Surfacing) | Installation Date | 26/11/2007 |
| Product | Stirling Lloyd Sentinel B5 | No. of Joints | 1 |

Structure Report for Claydon I/C North (/A14//181.10//)
East Parapet

| | | | |
|------------------------------|-----------------|---|----------------|
| Location | Deck Edge | Installation Date | 01/01/1975 |
| Form | Vehicle Parapet | Modified | Not Modified |
| Designer | B S C (Steel) | Modification Date | |
| M'facturer/Fabricator | B S C (Steel) | Nominal Height | 1 |
| Baco Parapet Type | Not Applicable | Modification Date (Baco post only) | |
| Barrier Type | Other | Primary Material | Steel |
| Material Infill | Mesh Infill | Parapet Group | P2(113) |
| Cont Perf Class | Not Applicable | Working Width | Not Applicable |
| Safety Fence Approach | N | Safety Fence Departure | N |
| Protection System | N | Protection System | N |
| Protection Reason | Not Applicable | | |
| BA 37/92 Ranking Data | | | |
| Assessed | Y | Assessed Date | 31/03/2002 |
| Contain Capacity Req | Normal | Containment Ranking | 1.00 |
| Containment Basis | Not Applicable | | |
| Risk Features Below | 1.00 | Risk Highway Carried Out | 3.00 |
| Risk Layout | 0.00 | Risk Containment Features | 0.00 |
| Risk Ranking | 4.00 | Priority Ranking | 4.00 |

A14 surfacing east bound (replaced Nov 2007) - (Inspection Element)

| | |
|-------------|-----------------------------|
| Type | SUR - Carriageway surfacing |
|-------------|-----------------------------|

Box beam concrete east

| | | | |
|-----------------|------------------------------|---------------------------|-----------|
| Shape | Box | Strengthening Type | Not Known |
| Type | Precast Hollow | Edge Beam? | Y |
| Material | Precast Prestressed Concrete | | |

longitudinal joint (replaced Nov 2007) - (Inspection Element)

| | |
|-------------|--------------------------|
| Type | LNJ - Longitudinal joint |
|-------------|--------------------------|

parapet cantilever - (Inspection Element)

| | |
|-------------|------------------------------------|
| Type | EDG - Edge beam or edge cantilever |
|-------------|------------------------------------|

Slab

| | | | |
|-----------------|-----------------------------|--------------------------|-----------|
| Form | Slab Flat | Type | Solid |
| Material | Precast Reinforced Concrete | StrengtheningType | Not Known |

West Deck (south side span - west)

| | | | |
|----------------------------|------------------------------|--------------------------|------------|
| Structure Form Type | Simply Supported | Length | 9.00 |
| Construction Type | Beam And Slab | Width | 14.25 |
| Enclosure Type | Void Inaccessible | Construction Date | 01/01/1975 |
| Material Type | Precast Prestressed Concrete | Material Name | PRIMARY |
| Material Type | Insitu Reinforced Concrete | Material Name | SECONDARY |

Joint 4 west (south abutment)

| | | | |
|----------------|------------------------------------|--------------------------|------------|
| Type | Buried Joint(Continuous Surfacing) | Installation Date | 23/09/2009 |
| | | No. of Joints | 1 |
| Product | Bayer (Uk) Ltd Bp1 Buried Joint | | |

Structure Report for Claydon I/C North (/A14//181.10//)
West Parapet

| | | | |
|------------------------------|-----------------|---|----------------|
| Location | Deck Edge | Installation Date | 01/01/1975 |
| Form | Vehicle Parapet | Modified | Not Modified |
| Designer | B S C (Steel) | Modification Date | |
| M'facturer/Fabricator | B S C (Steel) | Nominal Height | 1 |
| Baco Parapet Type | Not Applicable | Modification Date (Baco post only) | |
| Barrier Type | Other | Primary Material | Steel |
| Material Infill | Mesh Infill | Parapet Group | P2(113) |
| Cont Perf Class | Not Applicable | Working Width | Not Applicable |
| Safety Fence Approach | N | Safety Fence Departure | N |
| Protection System | N | Protection System | N |
| Protection Reason | Not Applicable | | |
| BA 37/92 Ranking Data | | | |
| Assessed | Y | Assessed Date | 31/03/2002 |
| Contain Capacity Req | Normal | Containment Ranking | 1.00 |
| Containment Basis | Not Applicable | | |
| Risk Features Below | 1.00 | Risk Highway Carried Out | 3.00 |
| Risk Layout | 0.00 | Risk Containment Features | 0.00 |
| Risk Ranking | 4.00 | Priority Ranking | 4.00 |

A14 surfacing west bound (replaced Sept 09) - (Inspection Element)

| | |
|-------------|-----------------------------|
| Type | SUR - Carriageway surfacing |
|-------------|-----------------------------|

longitudinal joint - (Inspection Element)

| | |
|-------------|--------------------------|
| Type | LNJ - Longitudinal joint |
|-------------|--------------------------|

Box beam concrete west

| | | | |
|-----------------|------------------------------|---------------------------|-----------|
| Shape | Box | Strengthening Type | Not Known |
| Type | Precast Hollow | Edge Beam? | Y |
| Material | Precast Prestressed Concrete | | |

central reserve - integral sub-surface drainage system, installed '09 - (Inspection Element)

| | |
|-------------|-----------------------|
| Type | CRV - Central reserve |
|-------------|-----------------------|

Double sided open box beam safety fence

| | | | |
|------------------------------|----------------|---|---------------------|
| Location | Verge | Installation Date | |
| Form | Safety Barrier | Modified | Modification Status |
| Designer | Not Known | Modification Date | |
| M'facturer/Fabricator | Not Known | Nominal Height | Not Specified |
| Baco Parapet Type | Not Applicable | Modification Date (Baco post only) | |
| Barrier Type | DROBB | Primary Material | Not Known |
| Material Infill | No Infill | Parapet Group | Not Applicable |
| Cont Perf Class | Not Applicable | Working Width | Not Applicable |
| Safety Fence Approach | N | Safety Fence Departure | N |
| Protection System | N | Protection System | N |
| Protection Reason | Not Applicable | | |
| BA 37/92 Ranking Data | | | |
| Assessed | | Assessed Date | |
| Contain Capacity Req | Not Specified | Containment Ranking | |
| Containment Basis | Not Known | | |
| Risk Features Below | | Risk Highway Carried Out | |
| Risk Layout | | Risk Containment Features | |
| Risk Ranking | 0.00 | Priority Ranking | 0.00 |

parapet cantilever - (Inspection Element)

| | |
|-------------|------------------------------------|
| Type | EDG - Edge beam or edge cantilever |
|-------------|------------------------------------|

Structure Report for Claydon I/C North (/A14//181.10//)

| | | | |
|---|---|--------------------------|----------------------------|
| Slab | | | |
| Form | Slab Flat | Type | Solid |
| Material | Insitu Reinforced Concrete | StrengtheningType | Not Known |
| South Abutment | | | |
| Support Type | Bank Seat | Material Type | Insitu Reinforced Concrete |
| Connection Type | Proprietary Elastomeric Bearings | Facing Material | None |
| Foundation 4 | | | |
| Type | Spread Footings | | |
| Bearing shelf south | | | |
| Material Type | Insitu Mass Concrete | | |
| Wingwall south west | | | |
| Anchoring System | Sub Surface | Length | |
| | | Height | |
| Wingwall south east | | | |
| Anchoring System | Sub Surface | Length | |
| | | Height | |
| ballast wall (south) - (Inspection Element) | | | |
| Type | BAL - Ballast wall | | |
| south embankment (nature reserve) - (Inspection Element) | | | |
| Type | EMB - Embankment or adjacent earthworks | | |
| south abutment bearings | | | |
| Type | Elastomeric | Installation Date | 01/01/1975 |
| Product | | No. of Bearings | 30 |
| South Revetment | | | |
| Type | Surface | | |
| Abutment Wall for South Abutment | | | |
| Support Type | Bank Seat | Material Type | Insitu Reinforced |
| Connection Type | Proprietary Elastomeric | Facing Material | None |

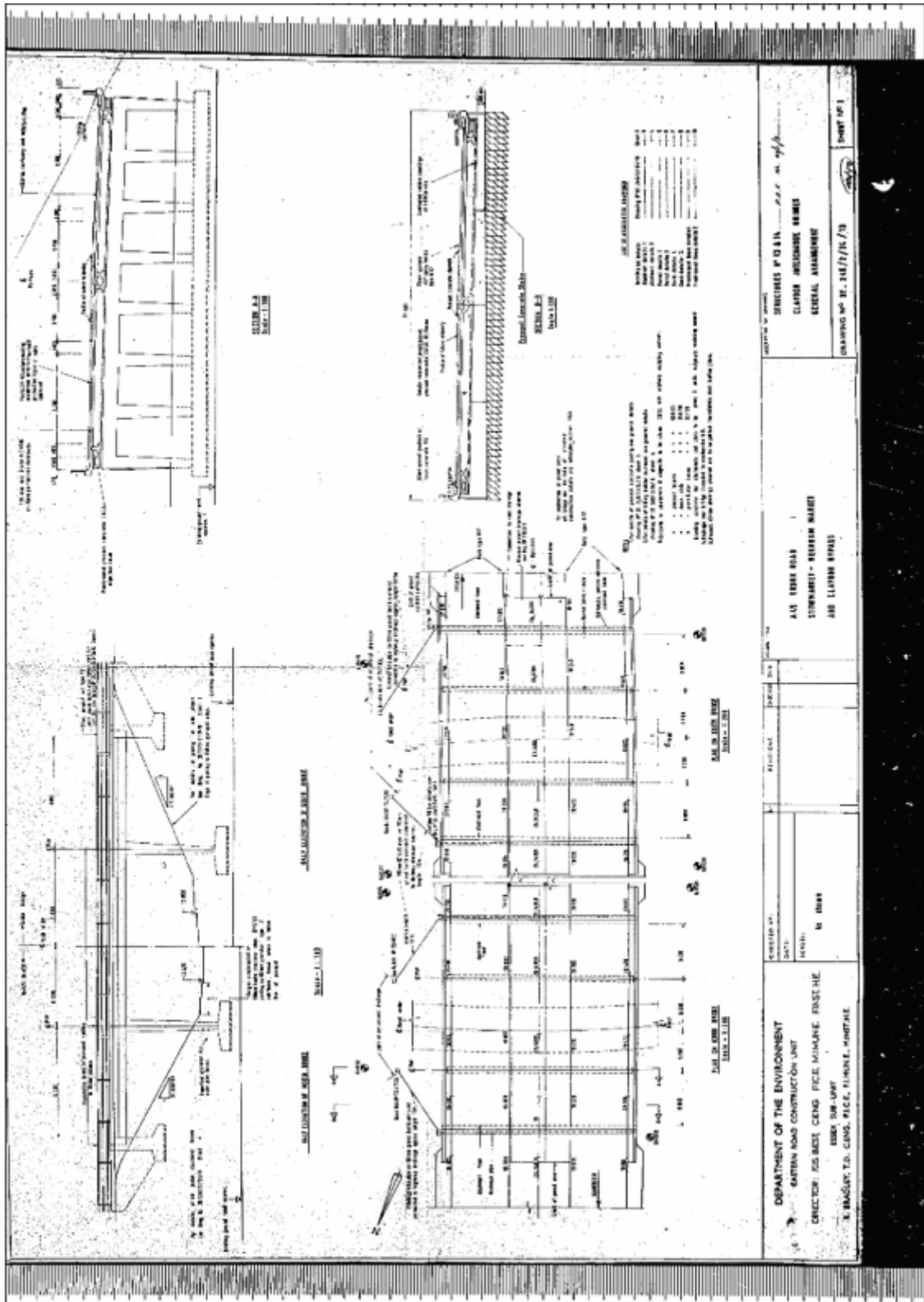
Structure Report for Claydon I/C North (/A14//181.10//)

General Photograph



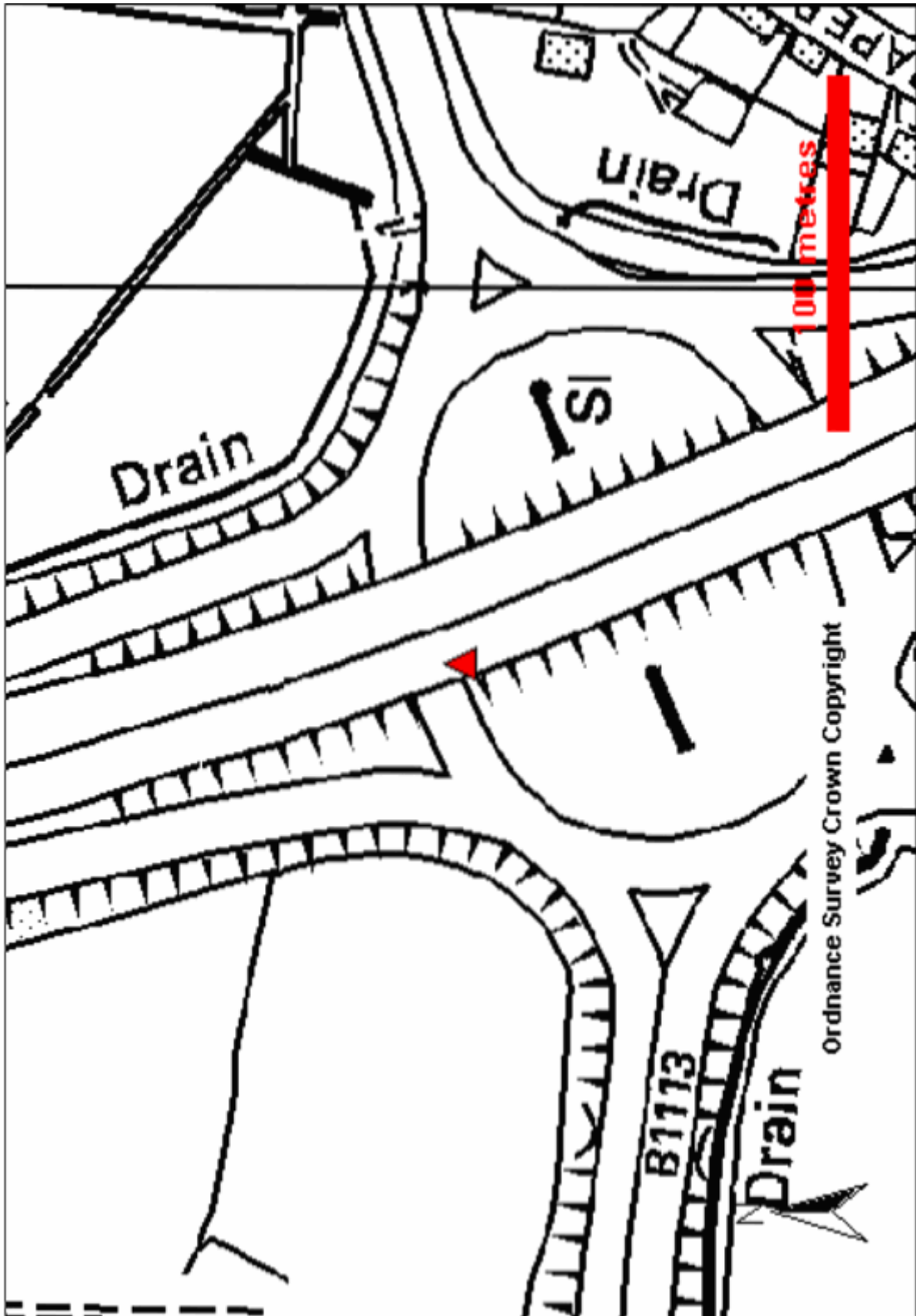
Structure Report for Claydon I/C North (/A14//181.10//)

Elevation Drawing



Structure Report for Claydon I/C North (/A14//181.10//)

Map



Structure Report for Claydon I/C North (/A14/181.10/)

1:50,000 Map

