

Scheme title: **Whitehall Road West, Birkenshaw**  
 Structure title: **Birch Wood Road, Birkenshaw (Mine Shaft Cap)**

Structure Ref: **K66507**

**Certificate for the design and check of category 0 highway structures**

**Project details:**

Name of project: **Whitehall Road West, Birkenshaw**

Name of bridge or structure: **Birch Wood Road, Birkenshaw (Mine Shaft Cap)**

Structure reference no.: **K66507**

**Section 1**

We certify that reasonable professional skill and care has been used in the preparation of the design and check of Mine Shaft Cap on Birch Wood Road with a view to securing that:

1) It has been designed in accordance with:

a) the following standards;

| Eurocodes and associated UK National Annexes |                                 |   |   |  |
|--|---------------------------------|---|---|--|
| Used   | Eurocode part                   | Title   | Amendment/<br>Corrigenda  | Notes  |
|  | <b>Eurocode 0</b>               | <b>Basis of structural design</b>   |   |  |
| ✓  | BS EN 1990:2002<br>+A1:2005     | Eurocode 0: Basis of structural design  | +A1:2005<br>Incorporating corrigenda<br>December 2008<br>and April 2010 | See CD 350 section 7 for additional guidance.<br><br>This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1990:2023 |
| ✓  | NA to BS EN 1990:2002 + A1:2005 | UK National Annex to Eurocode 0 Basis of structural design  | National Amendment No.1   | See CD 350 section 7 for additional guidance.  |
|  | <b>Eurocode 1</b>               | <b>Actions on structures</b>  |   |  |
| ✓  | BS EN 1991-1-1:2002             | Eurocode 1: Actions on structures.<br>General Actions.<br>Densities, self-weight, imposed load for buildings                      | Corrigenda<br>December 2004<br>and March 2009                           |  |
| ✓  | NA to BS EN 1991-1-1:2002       | UK National Annex to Eurocode 1: Actions on structures.<br>General Actions.<br>Densities, self-weight, imposed load for buildings | Corrigenda July 2019  |  |

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| Eurocodes and associated UK National Annexes |                                      |   |  |  |
|--|--------------------------------------|---|--|--|
| Used   | Eurocode part                        | Title   | Amendment/<br>Corrigenda   | Notes  |
| a  | BS EN 1991-1-6:2005                  | Eurocode 1: Actions on structures. General Actions. Actions during execution                      | Corrigenda July 2008, November 2012 and February 2013                  |  |
| a  | NA to BS EN 1991-1-6:2005            | UK National Annex to Eurocode 1: Actions on structures. General Actions. Actions during execution | -  |  |
| a  | BS EN 1991-1-7:2006 +A1:2014         | Eurocode 1: Actions on structures. General Actions. Accidental actions                            | +A1: 2014 Corrigendum February 2010                                    |  |
| a  | NA+A1 to BS EN 1991-1-7:2006+A1:2014 | UK National Annex to Eurocode 1: Actions on structures. Part 1-7 : Accidental actions             | +A1:2014 Incorporating corrigenda August 2014 and November 2015        | See CD 350 for additional guidance.  |
| a  | BS EN 1991-2:2003                    | Eurocode 1: Actions on structures. Traffic loads on bridges                                       | Corrigenda December 2004 and February 2010                             | See CD 350 section 7 for additional guidance.<br><br>This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1991-2:2023 |
| a  | NA +A1:2020 to BS EN 1991-2:2003     | UK National Annex to Eurocode 1: Actions on structures. Traffic loads on bridges                  | Corrigendum No.1 Amendment June 2020                                   | See CD 350 section 7 for additional guidance.  |
|  | <b>Eurocode 2</b>                    | <b>Design of concrete structures</b>  |  |  |
| a  | BS EN 1992-1-1:2004 + A1:2014        | Eurocode 2: Design of concrete structures– Part 1-1: General rules and rules for buildings        | Incorporating corrigendum January 2008, November 2010 and January 2014 | This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1992-1-1:2023  |

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| Eurocodes and associated UK National Annexes |   |  |   |   |
|--|---|--|---|---|
| Used   | Eurocode part                                 | Title  | Amendment/<br>Corrigenda  | Notes   |
| a  | NA + A2:2014 to BS EN 1992-1-1:2004 + A1:2014 | UK National Annex to Eurocode 2: Design of concrete structures – Part 1-1: General rules and rules for buildings |   |   |
|  | <b>Eurocode 7</b>                             | <b>Geotechnical design</b>   |   |   |
| a  | BS EN 1997-1:2004+A1:2013                     | Eurocode 7: Geotechnical design – Part 1 General rules   | +A1:2013 Corrigendum February 2009  | This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1990:2023 |
| a  | NA+A2:2022 to BS EN 1997-1:2004+A1:2013       | UK National Annex to Eurocode 7: Geotechnical design – Part 1 General rules                                      | +A1:2013 Incorporating Corrigendum No.1, Amendment 1 – July 2014 and Amendment 2 - 2022 | Supersedes NA+A1:2014 to BS EN 1997-1:2004+A1:2013  |

| The Design Manual for Roads and Bridges (DMRB) |                          |  |   |
|--|--------------------------|--|---|
| Used   | DMRB reference           | Title                                    | Notes   |
| ✓  | CG 300<br>Revision 0.1.0 | Technical approval of highway structures | Supersedes BD 2/12                                      |
| ✓  | CD 350<br>Revision 0     | The design of highway structures         | Supersedes BD 100/16, BA 57/01, BD 57/01 and IAN 124/11 |

| Miscellaneous |                    |                                |       |
|---------------|--------------------|--------------------------------|-------|
| Used          | Standard reference | Title                          | Notes |
| a             | CIRIA 758D         | Abandoned Mine Workings Manual |       |

**Design Sulphate Class DS1 has been recommended in the ground investigation report (Ian Farmer Associates, March 2021), based on chemical test results, and hence DC-1 applies.**

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2) It has been checked for compliance with:

a) the relevant standards in 1)

(3) It has been accurately translated into construction drawings and bar bending schedules (all of which have been checked). The unique numbers of these drawings and schedules are:

**09.21011-ACE-ZZ-ZZ-DR-S-9102 rev P3 -**

**09.21011-ACE-ZZ-ZZ-SH-S-9102-01 rev P1 – Bar Schedule**

**09.21011-ACE-00-ZZ-DR-C-1200 rev P28 - S104 Drainage Layout - Sh.1**

**FGL above capping is 156.245m AOD.**

**This is the cover level of MH chamber SW21** (as shown on drg no 09.21011-ACE-00-ZZ-DR-C-1200 rev P28 - S104 Drainage Layout - Sh1)

**REDACTED**

Signed: \_\_\_\_\_

Name: \_\_\_\_\_ Matthew Ramsden \_\_\_\_\_ Design Team Leader

Engineering Qualifications: Beng, CEng, MStructE

**REDACTED**

Signed: \_\_\_\_\_

Name: Matthew Ramsden

Position held: Director

Name of Organisation: Adept Consulting Engineers Ltd

Date: 25.11.24

**REDACTED**

Signed \_\_\_\_\_

Name \_\_\_\_\_ Erol Erturan \_\_\_\_\_ Check Team Leader

Engineering Qualifications: BSc, MSc, Beng, MICE, MStructE

**REDACTED**

Signed: \_\_\_\_\_

Name: Erol Erturan

Position held: Managing Director

Name of Organisation: Adept Consulting Engineers Ltd

Date: 25.11.24

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**Section 2**

~~The departures and additional criteria given in paragraph 1 are agreed.~~

The certificate is accepted by the TAA.

Signed: **REDACTED** \_\_\_\_\_

Name: \_\_\_\_\_ Claire Richardson \_\_\_\_\_

Position held: \_\_Principal Engineer (Highway Structures)\_\_\_\_\_

Engineering Qualifications: \_\_BEng CEng MICE\_\_\_\_\_

TAA: \_\_\_\_\_ Kirklees Council \_\_\_\_\_

Date: 29-11-2024 \_\_\_\_\_