Network Rail (Huddersfield to Westtown (Dewsbury) Improvements) Order

Condition 14: Ravensthorpe Static Frequency Converter Site – Stage 6 W3B

Document reference: 151667-TSA-00-TRU-REP-W-EN-001382

Network Rail

June 2023

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1. INTRODUCTION

1.1 Background

1.1.1 The Scheme is part of a wider programme of works under the Transpennine Route Upgrade (TRU) which will improve the Transpennine railway between Manchester, Huddersfield, Leeds and York and improve connections between key towns and cities across the north of England.

1.1.2 Planning Direction for the Huddersfield to Westtown (Dewsbury) section of the TRU was received from the Department for Transport, referenced TWA/21/APP/03, dated 13 October 2022.

1.1.3 This document sets out details in relation to Condition 14 of the Deemed Planning Permission for the Stage 6 works in work area W3B.

2. STAGED APPROACH TO DISCHARGE AND STAGE DESCRIPTION

2.1.1 As set out in document ref 151667-TSA-00-TRU-REP-W-EN-001189 version 3 (submitted in relation to Condition 3 of the Deemed Planning) a staged approach is proposed in relation to discharge of the deemed planning conditions.

2.1.2 Stage 6 comprises of the main construction phase for civils works for the Huddersfield to Westtown (Dewsbury) Scheme.

2.1.3 Stage 6 has been split into two submissions based on geographical areas:

- W3A – Huddersfield to Bradley Junction
- W3B – Bradley Junction to Westtown (Dewsbury)

2.1.4 This document provides details in relation to the Stage 6 W3B works between Bradley Junction and Westtown (Dewsbury), which were set out in Figure 2-1[1] in Volume 4 of the Environmental Statement (ES) and in Chapter 2: Scheme Description (Route Sections 4[2], 5[3] and 6[4]) in Volume 2ii of the ES.

2.1.5 The works required during Stage 6 W3B are summarised in Tables 2-1 to 2-5, and links to the relevant planning drawings are also provided. Figure 1 in Appendix A shows the geographical locations of the works.

2.1.6 Route drawings relevant to Stage 6 W3B are:

- Route Drawing 10 - NR13 Planning Drawing - Route Drawing 10.pdf (windows.net)
- Route Drawing 11 - NR13 Planning Drawing - Route Drawing 11.pdf (windows.net)
- Route Drawing 12 - NR13 Planning Drawing - Route Drawing 12.pdf (windows.net)
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- Route Drawing 24 - NR13 Planning Drawing - Route Drawing 24.pdf (windows.net)

2.1.7 The works included in Stage 6 W3B comprise:

- Earthworks
- Construction of retaining structures

[1] Ch02 Scheme Description - Fig 2-1 Scheme drawings.pdf (windows.net)
[2] W3 ES Volume 2ii: Ch02 Colne Bridge and Battyeford - Scheme Description
[3] W3 ES Volume 2ii: Ch02 Mirfield and Lower Hopton - Scheme Description
[4] W3 ES Volume 2ii: Ch02 Ravensthorpe and Westtown - Scheme Description

- Drainage including any new outfalls
- Erection of security/boundary fencing
- Demolition of buildings
- Over/Underbridge removal/demolition
- Over/Underbridge construction
- Provision of relocated Ravensthorpe Station
- Works to platforms etc. at existing stations
- Permanent track access and maintenance compounds
- Utilities works

2.1.8 All works associated with the construction compounds between Bradley Junction and Westtown (Dewsbury) are detailed in the Stage 1 and Stage 2 documentation (previously submitted planning applications ref: 2022/44/93858/W and 2022/44/93945/W).

Table 2-1 Proposed Stage 6 W3B works – Stations

Station name	Description of works	Planning drawing title and ref
Mirfield Station	• Reconstruction of the island platform (150m usable platform). • Island platform provided with two waiting shelter seating areas • Step free station access to be provided to the east of Station Road. Existing access on west side of Station Road to be infilled • Visual and audio announcements will be provided on platforms • CCTV and lighting will be provided on the platform, in the station entrance and car park • The station car park is to be retained in its current location	• Existing Site Plan (1) – 151667-TSA-34-MVN2-DRG-T-LP-162451 • Existing Site Plan (2) – 151667-TSA-34-MVN2-DRG-T-LP-162452 • Existing Site Plan (3) – 151667-TSA-34-MVN2-DRG-T-LP-162453 • Footbridge – Proposed Deck and Sections – 151667-TSA-34-MVN2-DRG-T-LP-162470 • Footbridge – Proposed Elevations and Lift – 151667-TSA-34-MVN2-DRG-T-LP-162469 • Footbridge – Proposed General Arrangement and Elevation - 151667-TSA-34-MVN2-DRG-T-LP-162468 • Existing Location Plan – 151667-TSA-34-MVN2-DRG-T-LP-162450 • Platform Elevation - 151667-TSA-34-MVN2-DRG-T-LP-162461 • Platform General Arrangement (1) – 151667-TSA-34-MVN2-DRG-T-LP-162457 • Platform General Arrangement (2) – 151667-TSA-34-MVN2-DRG-T-LP-162458 • Platform General Arrangement (3) – 151667-TSA-34-MVN2-DRG-T-LP-162459 • Platform Proposed Cross Sections – 151667-TSA-34-MVN2-DRG-T-LP-162462 • Proposed Highway Works General Arrangement - 151667-TSA-34-MVN2-DRG-T-LP-162463 • Proposed Site Plan (1) – 151667-TSA-34-MVN2-DRG-T-LP-162454 • Proposed Site Plan (2) – 151667-TSA-34-MVN2-DRG-T-LP-162455 • Proposed Site Plan (3) – 151667-TSA-34-MVN2-DRG-T-LP-162456 • Totem drawing – 151667-TSA-34-MVN2-DRG-T-LP-162465
Ravensthorpe Station	• The existing station will be closed, and its existing platforms demolished. The existing Ravensthorpe Station Footbridge (MVL1/4) will also be demolished. • A new station will be provided to the west of the realigned Calder Road • Provision of an island platform (150m) to serve the stopping services on the slow lines. Passive provision to extend to 200m. • The platform will be provided with two waiting shelters seating areas	• Existing Site Plan (1) – 151667-TSA-35-MVN2-DRG-T-LP-162552 • Existing Site Plan (2) – 151667-TSA-35-MVN2-DRG-T-LP-162553 • Existing Site Plan (3) – 151667-TSA-35-MVN2-DRG-T-LP-162554 • Existing Site Plan (4) – 151667-TSA-35-MVN2-DRG-T-LP-162555 • Existing Site Plan (5) – 151667-TSA-35-MVN2-DRG-T-LP-162565 • Forecourt General Arrangement - 151667-TSA-35-MVN2-DRG-T-LP-162556 • Location Plan – 151667-TSA-35-MVN2-DRG-T-LP-162550 • Platform Cross Sections - 151667-TSA-35-MVN2-DRG-T-LP-162567 • Proposed Platform Elevation - 151667-TSA-35-MVN2-DRG-T-LP-162566 • Proposed Footbridge Elevations - 151667-TSA-35-MVN2-DRG-T-LP-162576 • Proposed Footbridge General Arrangement - 151667-TSA-35-MVN2-DRG-T-LP-162575 • Proposed Footbridge Sections and Details - 151667-TSA-35-MVN2-DRG-T-LP-162577

Station name	Description of works	Planning drawing title and ref
	• Visual and audio announcements will be provided on platforms • CCTV and lighting will be provided on both platform, forecourt and station entrance • The station will be accessed from the south via a new forecourt from a roundabout on the realigned Calder Road, consisting of three number blue badge accessible parking spaces, a maintenance parking bay and a vehicle turning head. • The platform will be accessed via a footbridge (Ravensthorpe Station Footbridge (MVN2/201A)) with stairs and a lift. The footbridge will be level with the new forecourt.	• Proposed Platform General Arrangement (1) - 151667-TSA-35-MVN2-DRG-T-LP-162562 • Proposed Platform General Arrangement (2) - 151667-TSA-35-MVN2-DRG-T-LP-162563 • Proposed Platform General Arrangement (3) - 151667-TSA-35-MVN2-DRG-T-LP-162564 • Proposed Site Plan (1) - 151667-TSA-35-MVN2-DRG-T-LP-162557 • Proposed Site Plan (2) - 151667-TSA-35-MVN2-DRG-T-LP-162558 • Proposed Site Plan (3) - 151667-TSA-35-MVN2-DRG-T-LP-162559 • Proposed Site Plan (4) - 151667-TSA-35-MVN2-DRG-T-LP-162560 • Proposed Site Plan (5) - 151667-TSA-35-MVN2-DRG-T-LP-162561 • Proposed Cross Sections (1) - 151667-TSA-35-MVN2-DRG-T-LP-162568 • Proposed Cross Sections (2) - 151667-TSA-35-MVN2-DRG-T-LP-162569 • Totem drawing - 151667-TSA-35-MVN2-DRG-T-LP-162571

Table 2-2 Proposed Stage 6 W3B works – Structures

Name of structure	Description of works	Planning drawing title and ref
B6118 Colne Bridge Road Overbridge (MVL3/107)	• A new bridge will be constructed offline to the east of the existing structure to accommodate new fast lines	• Existing Highways General Arrangement - 151667-TSA-33-MVL3-DRG-T-LP-163404 • Proposed Highway Profile and Cross Sections - 151667-TSA-33-MVL3-DRG-T-LP-163406 • Proposed Highways General Arrangement - 151667-TSA-33-MVL3-DRG-T-LP-163405 • Existing Plan - 151667-TSA-33-MVL3-DRG-T-LP-168110
Huddersfield Broad Canal Underbridge (MVL3/108S)	• Reconstruction of bridge deck superstructure on the existing substructure	• Existing and Proposed Elevation and Cross Section - 151667-TSA-33-MVL3-DRG-T-LP-162301 • Existing and Proposed Plan - 151667-TSA-33-MVL3-DRG-T-LP-162300
Colne Viaduct Underbridge (MVL3/109)	• New fast lines will be constructed to the south side of the existing railway corridor and will use the existing redundant spans to cross the river. To support the two new fast lines, the existing metallic	• Existing and Proposed Elevation and Cross Section - 151667-TSA-33-MVL3-DRG-T-LP-162311 • Existing and Proposed Plan - 151667-TSA-33-MVL3-DRG-T-LP-162310

Name of structure	Description of works	Planning drawing title and ref
	deck to be to be modified and replaced with a new reinforced concrete deck. Two existing structures (masonry and steel) will both be modified to include a cantilever structure for a walkway and for the diverted sewer main to the south of line.	
Parks Overbridge (MVL3/110 and MVL4/1)	• Construction of a new 2 to 3 span bridge to accommodate new track alignment and OLE.	• Existing and Proposed Elevations and Cross Sections - 151667-TSA-33-MVL3-DRG-T-LP-162321 • Existing Highways General Arrangement - 151667-TSA-33-MVL3-DRG-T-LP-162323 • Existing and Proposed Plan - 151667-TSA-33-MVL3-DRG-T-LP-162320 • Proposed Highway Profile and Cross Section - 151667-TSA-33-MVL3-DRG-T-LP-162325 • Proposed Highways General Arrangement - 151667-TSA-33-MVL3-DRG-T-LP-162324
Cooper Bridge Intersection (MVL4/2)	• Replacement of existing masonry arch	• Existing and Proposed Elevation and Cross Section - 151667-TSA-33-MVL4-DRG-T-LP-162341 • Existing and Proposed Plan - 151667-TSA-33-MVL4-DRG-T-LP-162340
Heaton Lane Footbridge (MVL4/4)	• Construction of a new stepped footbridge to modern railway standards to accommodate OLE	• Existing and Proposed Plan - 151667-TSA-33-MVL4-DRG-T-LP-162372 • Elevations and Cross Sections (1) - 151667-TSA-33-MVL4-DRG-T-LP-162373 • Elevations and Cross Sections (2) - 151667-TSA-33-MVL4-DRG-T-LP-162374
Helm Lane Underbridge (MVN2/188)	• Existing underpass to be filled and replacement subway to be provided.	• Existing and Proposed Cross Sections - 151667-TSA-33-MVL4-DRG-T-LP-162371
Mirfield Viaduct (MVN2/192 and 192A)	• Additional track to be added to MVN2/192A • Strengthening works along viaduct	• Existing and Proposed Sections - 151667-TSA-34-MVN2-DRG-T-LP-168124 • Existing and Proposed Plan - 151667-TSA-34-MVN2-DRG-T-LP-168120 • North Elevation (1) - 151667-TSA-34-MVN2-DRG-T-LP-168121 • North Elevation (2) - 151667-TSA-34-MVN2-DRG-T-LP-168122 • North Elevation (3) - 151667-TSA-34-MVN2-DRG-T-LP-168123
Station Road Underbridge (MVN2/193)	• Bridge deck replacement and removal of eastern abutment due to inadequate horizontal clearance for four tracking and	• Existing and Proposed Plans - 151667-TSA-34-MVN2-DRG-T-LP-162473 • Existing and Proposed Sections - 151667-TSA-34-MVN2-DRG-T-LP-162474

Name of structure	Description of works	Planning drawing title and ref
	works within the station, including relocation of platforms.	
Calder Road Overbridge (MVN2/202)	• A new bridge will be constructed to the west of the existing bridge to allow for the change in vertical alignment of the tracks to facilitate construction of the Flyover Intersection (RBA/1)	• Existing and Proposed Elevations - 151667-TSA-35-MVN2-DRG-T-LP-162431 • Existing Highways General Arrangement (1) - 151667-TSA-35-MVN2-DRG-T-LP-162433 • Existing Highways General Arrangement (2) - 151667-TSA-35-MVN2-DRG-T-LP-162434 • Existing Highways General Arrangement (3) - 151667-TSA-35-MVN2-DRG-T-LP-162435 • Existing Highways General Arrangement (4) - 151667-TSA-35-MVN2-DRG-T-LP-162436 • Existing and Proposed Plan - 151667-TSA-35-MVN2-DRG-T-LP-162430 • Proposed Highway Profile - 151667-TSA-35-MVN2-DRG-T-LP-162441 • Proposed Highway Cross Sections - 151667-TSA-35-MVN2-DRG-T-LP-162442 • Proposed Highway General Arrangement (1) - 151667-TSA-35-MVN2-DRG-T-LP-162437 • Proposed Highway General Arrangement (2) - 151667-TSA-35-MVN2-DRG-T-LP-162438 • Proposed Highway General Arrangement (3) - 151667-TSA-35-MVN2-DRG-T-LP-162439 • Proposed Highway General Arrangement (4) - 151667-TSA-35-MVN2-DRG-T-LP-162440
Flyover Intersection (RBA/1)	• To achieve the grade separated junction to enable the fast lines to cross over the slow lines towards Wakefield a new intersection structure will be constructed	• Existing and Proposed Plan - 151667-TSA-35-MVN2-DRG-T-LP-162670 • Proposed Elevation and Cross Section - 151667-TSA-35-MVN2-DRG-T-LP-162671
Baker Viaduct (RBA/2)	• Construction of new 9 span viaduct to carry the fast and slow lines (new railway) (300-400m long) over the Calder and Hebble Navigation and River Calder.	• Detailed Elevation - 151667-TSA-35-MVN2-DRG-T-LP-162616 • Elevations and Sections - 151667-TSA-35-MVN2-DRG-T-LP-162615 • Existing and Proposed Plan - 151667-TSA-35-MVN2-DRG-T-LP-162601
Lees Hall Farm Underbridge (MVN2/204)	• Infilling of structure due to the realignment of railway lines to facilitate the Flyover Intersection (RBA/1)	• Existing and Proposed Elevation - 151667-TSA-35-MVN2-DRG-T-LP-162502 • Existing and Proposed Plan - 151667-TSA-35-MVN2-DRG-T-LP-162500 • Existing and Proposed Section - 151667-TSA-35-MVN2-DRG-T-LP-162501

Name of structure	Description of works	Planning drawing title and ref
B6117 Fall Lane, Thornhill Road Underbridge (MDL1/9)	• New structure is required to accommodate the railway realignment	• Existing and Proposed Section - 151667-TSA-35-MVN2-DRG-T-LP-162516 • Existing and Proposed Elevation - 151667-TSA-35-MVN2-DRG-T-LP-162511 • Existing Highway General Arrangement - 151667-TSA-35-MVN2-DRG-T-LP-162512 • Highway Profile Cross Section - 151667-TSA-35-MVN2-DRG-T-LP-162514 • Existing and Proposed Plan - 151667-TSA-35-MVN2-DRG-T-LP-162510 • Proposed Highway General Arrangement - 151667-TSA-35-MVN2-DRG-T-LP-162513
Occupation Underbridge (MDL1/10)	• Infilling of structure severing private access to a residential property. A new access will be provided to the south of the residential property from Calder Bank Road.	• Existing and Proposed Sections - 151667-TSA-35-MVN2-DRG-T-LP-168143 • Existing and Proposed Plan - 151667-TSA-35-MVN2-DRG-T-LP-168140 • North Elevation - 151667-TSA-35-MVN2-DRG-T-LP-168141 • South Elevation - 151667-TSA-35-MVN2-DRG-T-LP-168142
Toad Holes Underbridge (MDL1/12)	• Infilling of structure due to poor condition	• Existing and Proposed Elevation - 151667-TSA-35-MVN2-DRG-T-LP-168151 • Existing and Proposed Plan - 151667-TSA-35-MVN2-DRG-T-LP-168152
Ming Hill Underbridge (MDL1/14)	• Infilling of structure (southern side) due to potential future maintenance liability of retaining the structure	• Existing and Proposed Elevation - 151667-TSA-35-MVN2-DRG-T-LP-168161 • Existing and Proposed Plan - 151667-TSA-35-MVN2-DRG-T-LP-168160 • Existing and Proposed Section - 151667-TSA-35-MVN2-DRG-T-LP-168162

2.1.9 Locations are shown in Figure 1 in Appendix A.

Table 2-3 Proposed Stage 6 W3B works – Drainage

Culvert name	Description of works
Colnebridge Culvert (MVL3/110A)	• Culvert extended by 15m to the south to take existing watercourse under new fast lines. • Existing headwall to be removed and replaced with new headwall
Heaton Lodge Junction Culvert (MVN2/190)	• Culvert to be repaired and modified
Mirfield Culvert (MVN2/190B)	• Culvert to be repaired and modified
Mirfield Culvert (MVN2/190C)	• Culvert to be repaired and modified
Chadwick Close Culvert (MVN2/191A)	• Repairs and modifications which may include culvert extensions upstream and downstream with replacement of chambers
Mirfield Station (MVN2/none)	• A new storm water drainage system is required for the re-modelled platforms and additional track drainage
Sands Lane Culvert (MVN2/198B)	• Culvert to be repaired and modified
Ladywood Culvert (MVN2/200C)	• Culvert to be extended by 5m
Ladywood Road Culvert (MVN2/200)	• Culvert to be extended with a new headwall
Ravensthorpe Station	• Re-grading of existing drainage within the adjacent property will be required
Ravensthorpe Triangle	• Drainage will replicate existing and use of storm water attenuation structures and infiltration basins

2.1.10 There are existing earthworks throughout the Scheme area associated with the existing operational railway. Earthworks allow the track to stay relatively level through a varied topography and allows trains to operate more efficiently by reducing the need for additional acceleration and deceleration to climb and descend climbs.

2.1.11 Earthworks (new and where they have been reworked) will generally be covered in topsoil and landscaped as appropriate. Any exceptions to this will be detailed within the Landscape and Ecological Management Plan (LEMP) Stage 8.

2.1.12 Locations are shown in Figure 1 in Appendix A.

Table 2-4 Proposed Stage 6 W3B works – Earthworks

Earthworks ID	Description of works
E9	• Widening of cutting to facilitate four tracking and track realignment • 150m length and 2.2m height
W11	• Reprofiling to a 1 in 2 slope • Wall needed due to track realignment affecting existing embankment • 80m length and 3m height
E10	• Reprofiling and widening of earthworks embankment • 100m length and 3-5m in height
E11	• New cutting for construction of fast lines • 1050m in length and 10m in height
W13	• Reinforced soil wall at Ravensthorpe Junction – Flyover Intersection (RBA/1) • Required to support works to fast line

Earthworks ID	Description of works
	• 75m length and 6m height
W15	• Reinforced soil wall at Ravensthorpe Junction – Flyover Intersection (RBA/1) • 80m length and 7m height
E13	• Earthwork cutting to west of Calder Road Overbridge (MVN2/202) as part of new station site. • 465m length up to 16.9m in height
E15	• Embankment • Widening of cutting for track works • 120m length and up to 6m height
E16	• Earthwork at Ravensthorpe Junction as part of new flyover and viaduct structures. • Lies within the Thornhill Quarry Landfill site. • 390m length and up to 10m height
W17	• Reinforced soil retaining wall adjacent to Kirklees Household Waste Recycling Centre (HWRC) • Required due to construction of Baker Viaduct Underbridge (RBA/2) • 265m length and 9m height
E18	• Widening of existing soil embankment west of Thornhill Road • 100m length and 4.5m height
W19	• Existing soil embankment to be replaced by a ballast retention wall. • Works required due to vertical track realignment at Thornhill Road • 150m length and 1.5m height
E19	• Widening of existing soil embankment east of Thornhill Road • 125m length and 5m height
W20/W21	• Reinforced soil wall • Required due to road realignment of Thornhill Road • Combined 80m length and up to 6m in height
E20	• Soil embankment at the Wakefield line due to works to realign the line. • 480m length and 5m height
W22	• Sheet piled wall • 65m in length and 3m height

Table 2-5 Proposed Stage 6 W3B works – Demolitions

Building requiring demolition	Description of works
Portal Frame building at MVL3/108S	• Demolition of industrial building adjacent to the existing line close to Colne Viaduct Underbridge (MVL3/109) and falls under the footprint of the earthworks (embankment)
Thornhill House, Thornhill Road, Dewsbury	• Demolition of commercial unit adjacent to existing line close to Occupation Underbridge (MDL1/10) and falls under the footprint of the earthworks (embankment) in this location.

2.1.13 The Scheme impacts on various existing transmission and distribution utility networks. Conflicts with utility services may occur where the Scheme crosses highways and over/underbridge structures, or on private land.

2.1.14 Works within the highway will be carried out in compliance with the Highways Agreement and any impacts on the highways network will be discussed through the Highway Network Management Group.

2.1.15 Other specific utilities works within the Stage 6 W3B area include:

- Tensioning of overhead power lines at Huddersfield Broad Canal Underbridge (MVL3/108S);
- Temporary and permanent diversion of Yorkshire Water sludge main onto bridge abutment at Colne Viaduct Underbridge (MVL3/109);
- Works to overhead power lines in Ravensthorpe area including undergrounding of part of the system (Ouzelwell Lane); and
- Gas main diversion works at Heaton Lodge.

2.1.16 It is anticipated that works within Stage 6 W3B will commence in September 2023.

3. RELEVANT PLANNING CONDITION

3.1.1 The wording of Condition 14 is reproduced as follows:

14. Ravensthorpe Static Frequency Converter Site

a) Details of the design of the Static Frequency Converter Site and wider Ravensthorpe Triangle (including Thornhill Quarry and Coal Wharf) as identified on planning direction drawings 151667-TSA-35-MDL1-DRG-T-LP162949 Rev P02, 151667-TSA-W3-000-DRG-T-LP-162951 Rev P03 and 151667-TSA-35-MDL1-DRG-T-LP-162891 Rev P02 must be submitted to and approved in writing by the local planning authority before work on the structure commences.

The details must include the following:

i) Details of restoration/mitigation of any ecological impacts within the site;

ii) A plan of ecological mitigation details including areas of new plantings and details of any habitats created or enhanced;

iii) Implementation timetable and a programme for initial aftercare, long-term management and maintenance responsibilities for a period of five years post-completion;

iv) Details of any proposed hard/soft landscaping scheme including measures for visual screening; and

v) Full design details associated with the compensatory floodplain storage area.

b) The development must be constructed in accordance with the approved details and all hard and soft landscaping and visual screening measures shall be retained thereafter unless otherwise agreed in writing with the local planning authority.

***Reason**: In the interests of visual amenity and biodiversity in accordance with Local Plan policies LP24, LP30, LP31, LP32 and LP33 of Kirklees Local Plan.*

3.1.2 Partial discharge of Condition 14a) and 14av) is sought.

3.1.3 As set out in document ref 151667-TSA-00-TRU-REP-W-EN-001189 version 3 (submitted in relation to Condition 3 of the Deemed Planning) a staged approach is proposed in relation to discharge of the deemed planning conditions and the details of the ecological and landscaping scheme including details of mitigation to satisfy sub-sections 14ai), 14aii), 14aiii), and 14aiv) will be submitted as part of the Stage 8 LEMP.

3.1.4 Details of the design of the Ravensthorpe Static Frequency Converter (SFC) site (Condition 14a) are provided in this document together with information on the compensatory floodplain storage area.

4. RAVENSTHORPE SFC - DESIGN INFORMATION

4.1.1 The Ravensthorpe SFC site will comprise the following components:

- Transformer equipment;
- Transformer blind and firewall;
- TPD compound;
- Branch reactor compound;
- Converter room comprising:
  - insulated composite cladding roof panel, coloured green to match transformer equipment
  - fire resistant steel doorset – polyester powder coated (PPC) in Anthracite grey colour
- Control room;
- Pump room;
- Heating, Ventilation and Air Conditioning (HVAC) unit;
- PPC metal gutters;
- Mansafe fall arrest system for access and maintenance fixed to ductwork; and
- 1.8m palisade fencing.

4.1.2 The following design drawings, provided in Appendix B, set out details of the proposed works to be undertaken at the SFC site:

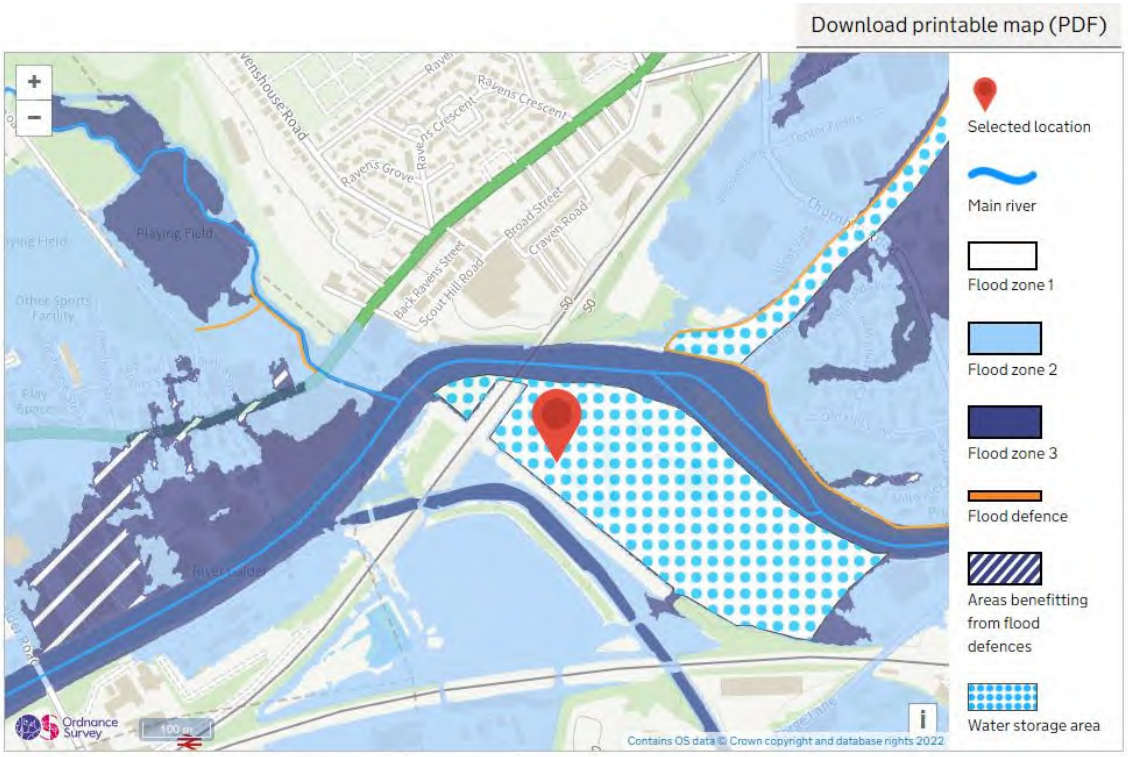
- Ground Level Plan - 151667-TSA-35-MVN2-DRG-T-LP-150001 Rev P01
- Roof Level Plan - 151667-TSA-35-MVN2-DRG-T-LP-150002 Rev P01
- Proposed Elevations - 151667-TSA-35-MVN2-DRG-T-LP-150003 Rev P01
- Proposed Sections - 151667-TSA-35-MVN2-DRG-T-LP-150004 Rev P01
- Proposed Cladding Interface - 151667-TSA-35-MVN2-DRG-T-LP-150005 Rev P01

5. RAVENSTHORPE SFC – COMPENSATORY FLOODPLAIN STORAGE

5.1 Introduction

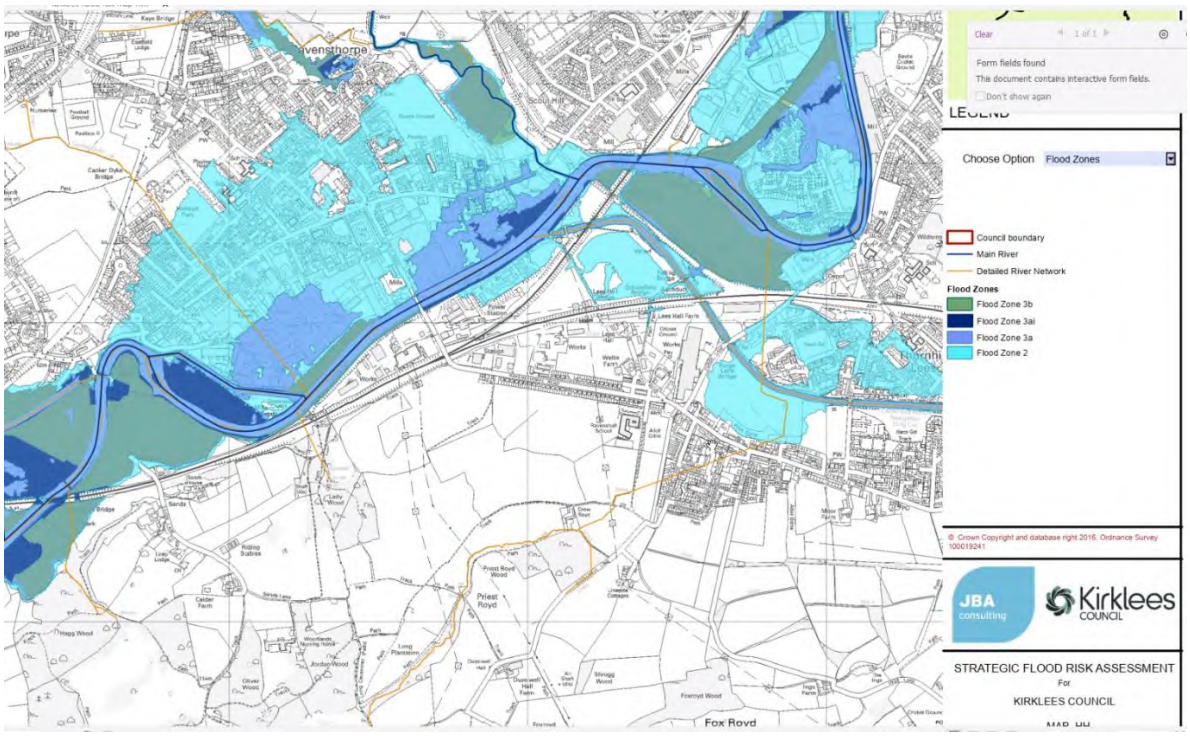
5.1.1 The Flood Risk Assessment, submitted as in Appendix 11-1 Flood Risk Assessment in Volume 3 of the ES[5], assessed the risk to and from the Scheme based on the proposed Baker Viaduct in the area referred to as the Ravensthorpe Triangle. In this area, the Scheme crosses the Calder and Hebble Navigation Canal, the River Calder Floodplain and the River Calder. The new Baker Viaduct is proposed in this location to accommodate the proposed alignment of the railway. A currently active sand/gravel quarry, which is due to be fully restored in line with the quarry's restoration plans prior to construction of the Scheme commencing, also forms part of the river's floodplain between the Calder and Hebble Navigation and River Calder.

5.1.2 The proposed viaduct crosses an area designated as 'Water Storage Area' and is located in Functional Floodplain Flood Zone 3b and is defined as land where water has to flow or be stored in times of flood for fluvial or tidal flood incidents with an annual probability of 5% or greater.



Insert 5-1 Environment Agency Flood Map

[5] W3 Environmental Statement Volume 3: Appendix 11-1 Flood Risk Assessment



Insert 5-2 Flood Zone 3b – Functional Floodplain

5.2 Modelling

5.2.1 The existing River Calder hydraulic river model was provided by the Environment Agency (EA) for this study. The model was last updated in 2016. The model is a 1D/2D Flood Modeller-TUFLOW model. The model covers a significant length of the Calder from its confluence with the River Holme to its downstream boundary at the crossing of the M1, Calder Grove.

5.2.2 As part of this modelling, the baseline model has been updated to include additional cross sections (CALD08_2569u and CALD08_2569d, cross sections shown in Inserts 5-3 and 5-4) at the proposed crossing of the River Calder to be in line with the cross-section schematisation in the with scheme model.

5.2.3 The 1D/2D boundary was also amended to match the 1D section extents and ensure channel volume was represented correctly (2d_bc_HXI_MIR_DEW_006-1000_L_ATK.MIF).

5.2.4 The changes made to the model meant that modelling of the proposed scheme with and without mitigation could be undertaken (e.g., compensatory flood storage area) without changing conveyance in areas which remain unchanged between models. This ensures a direct comparison of results can be made between all modelled scenarios.

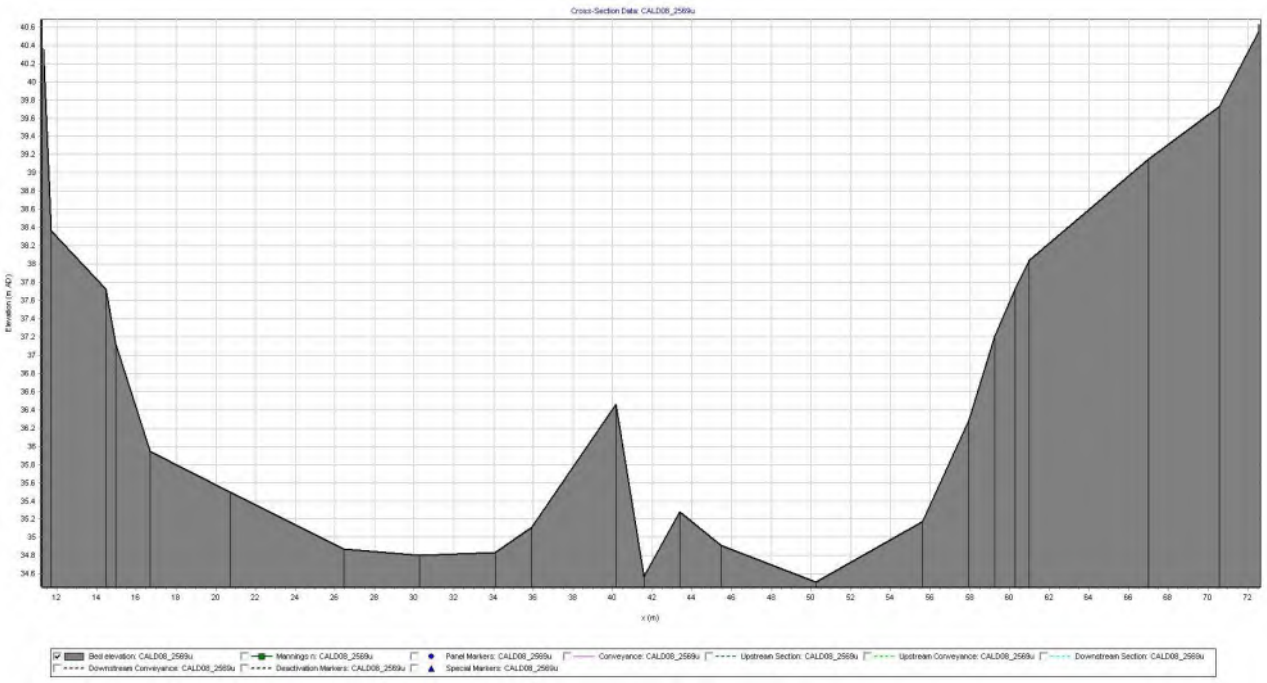
5.2.5 The Scheme modelling has been undertaking using data contained within the design drawings. Earthworks associated with the Scheme have resulted in a change in schematisation of the river network; this includes representation of (Locations shown in Insert 5-3).

- In-channel training walls (Constriction of channel shown in Inserts 5-3 and 5-4). The training walls have been represented in within the 1D flood modeller model to enable any impact of the channel constriction to be quantified;
- Piers placed in the floodplain. The piers have been represented within the Tuflow 2D domain as a FCSH line (2d_fcsh_L_Cald_Raven_Piers_L.tab) which models a constriction

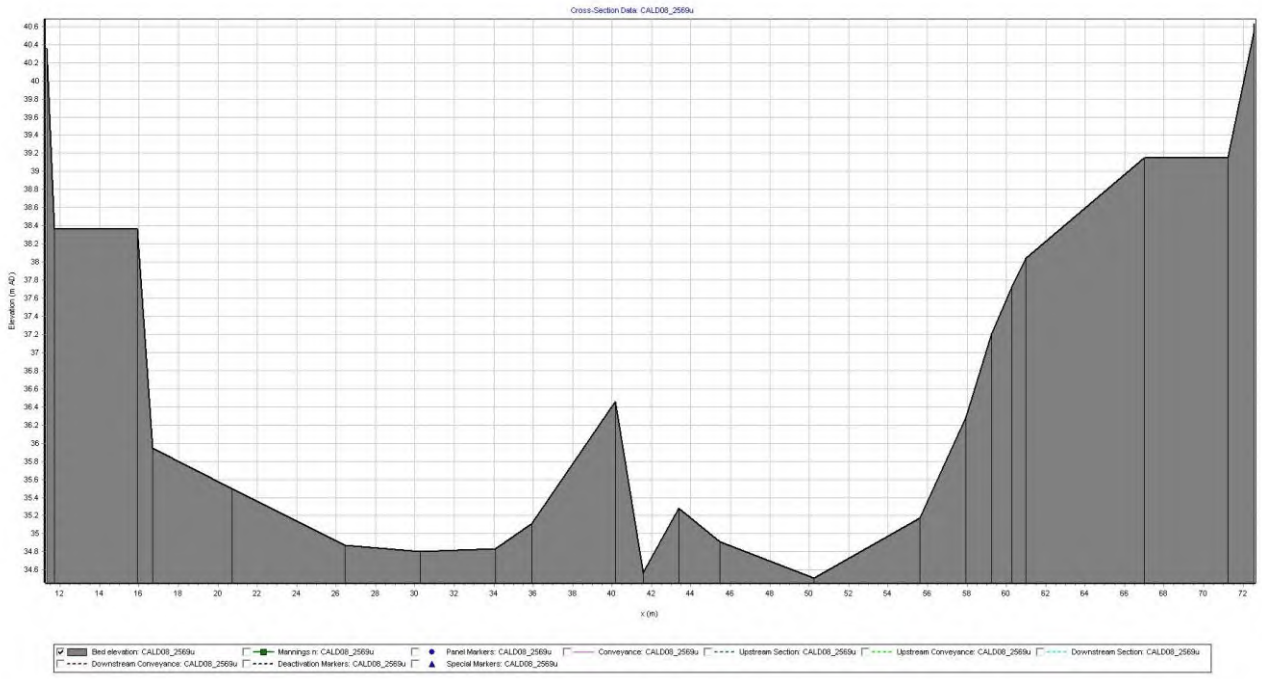
with an associated constriction percentage, this constriction is calculated based on an area relationship between the dimensions of the piers and the resolution of the ground model;

- A new embankment (2d_zln_RavensTri_L.MIF), the footprint (including traction feeder station) of which has been modelled as features included on the footprint are critical and require lifting out of the flood plain (Insert 5-5).

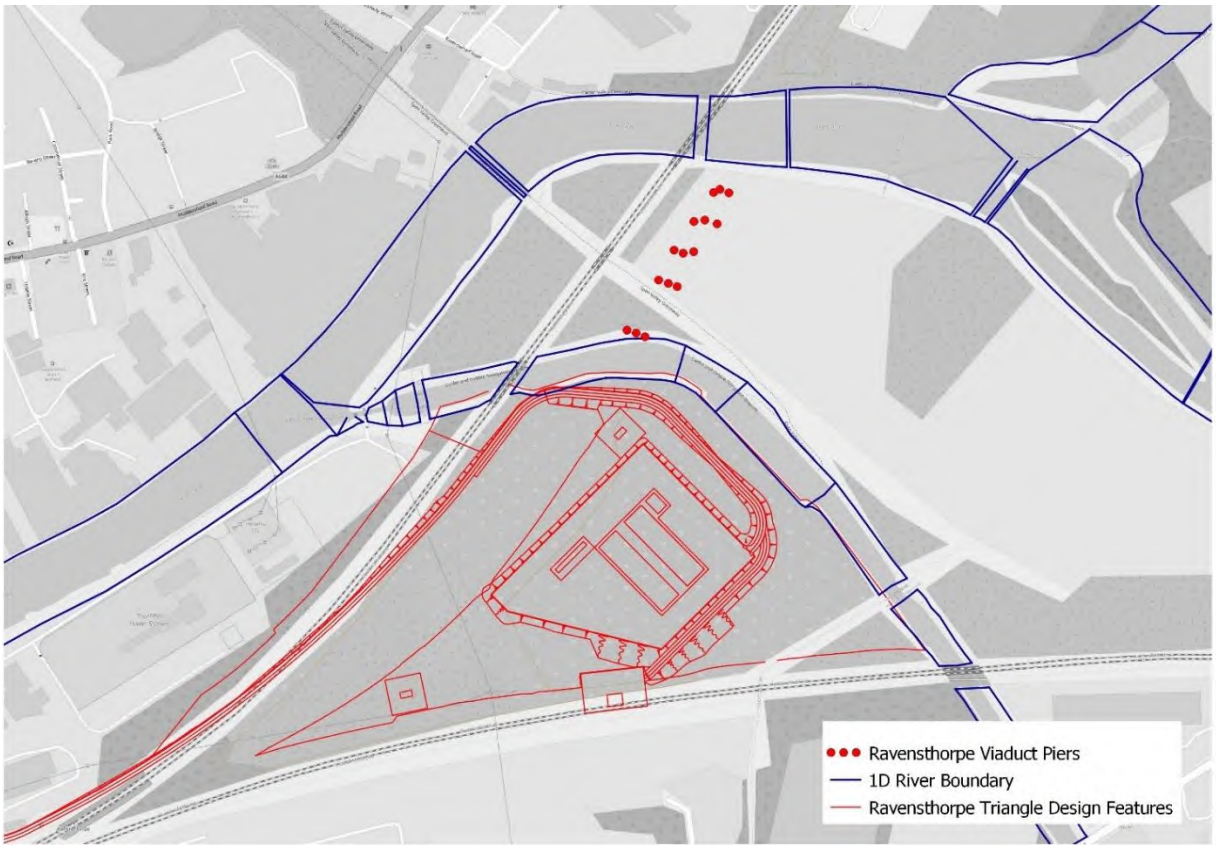
5.2.6 The Scheme elements have been examined to assess the possible interruption to the development of the flood flow routes and any resultant change in flood prevalence.



Insert 5-3 Baseline 1D cross section (CALD08_2569u)



Insert 5-4 With Scheme 1D cross section (CALD08_2569u)

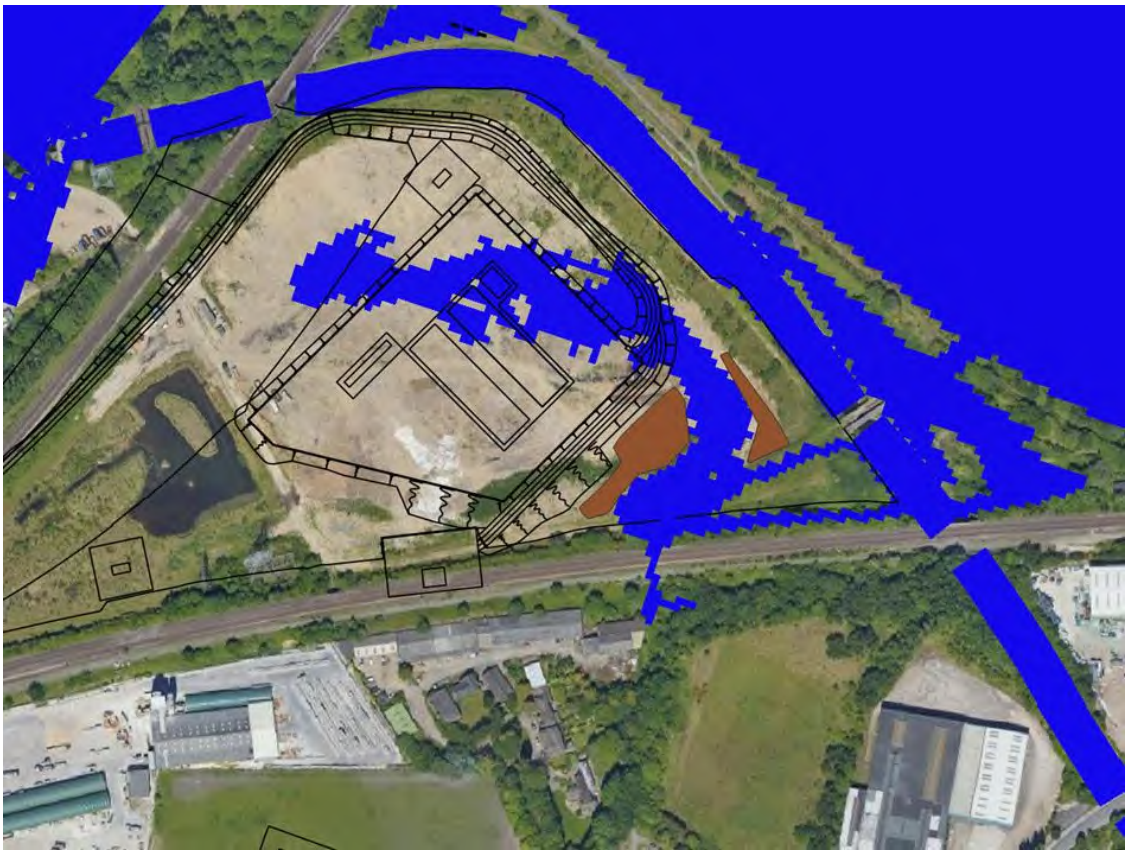


Insert 5-5 Ravensthorpe Scheme elements

5.3 Results

5.3.1 The model indicates an average depth of lost floodplain is estimated to be 80mm across an area of around 8,130m^2 shown in Insert 5-6. This would require a compensatory flood storage replacement of approximately 700m^3. Modelling suggested this can be incorporated into the Ravensthorpe Triangle ground works in the form of 'reduced ground levels' in the vicinity of the proposed works in an area that sits outside of the 1% annual chance event plus climate change allowance (50%) maximum extent.

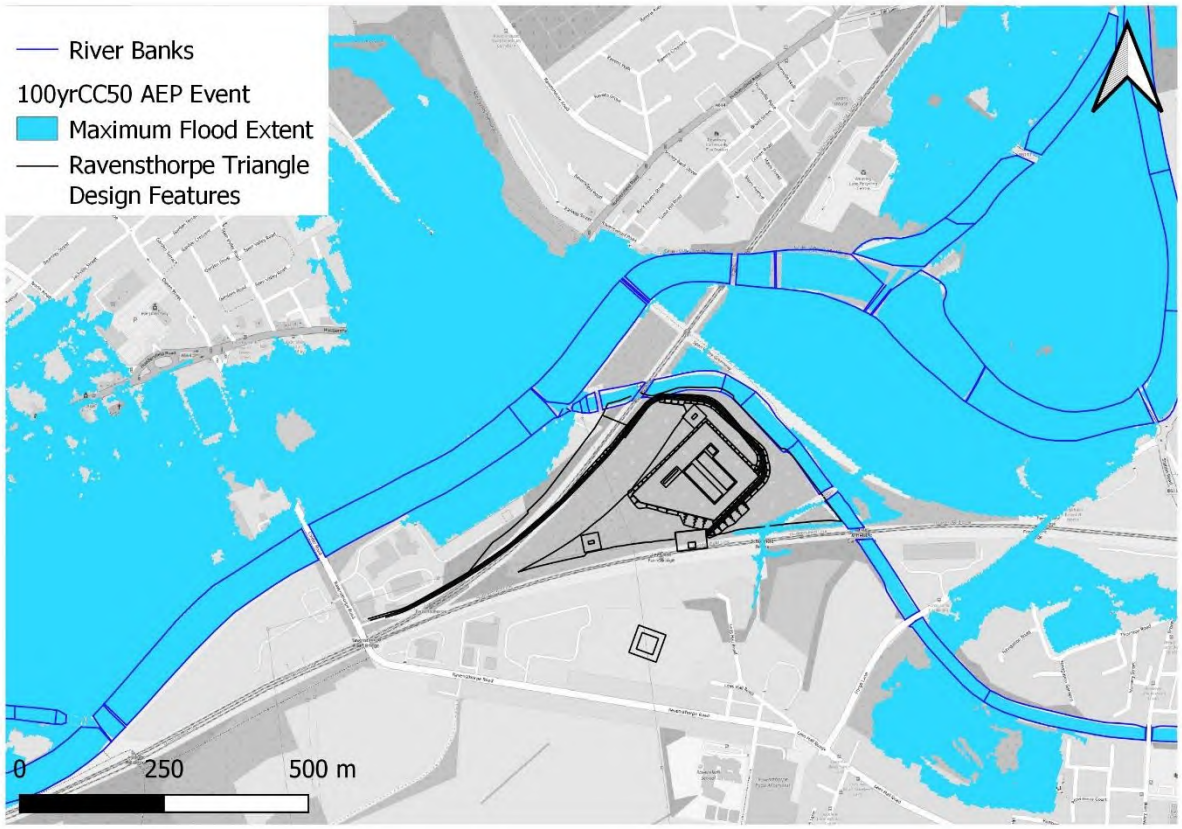
5.3.2 To calculate the required ground cut for the required flood storage area the ground elevations in the area show on have been lowered. To achieve the required compensatory flood storage area the ground elevations were lowered in the model and with the simulation flooding approximately 2,200m^2 in area and involve 2,500m^3 of cut activity. The ground invert of this would be approximately 36.2m Above Ordnance Datum (AOD) and would provide sufficient storage as to reduce post Scheme peak flood level to that of baseline conditions.



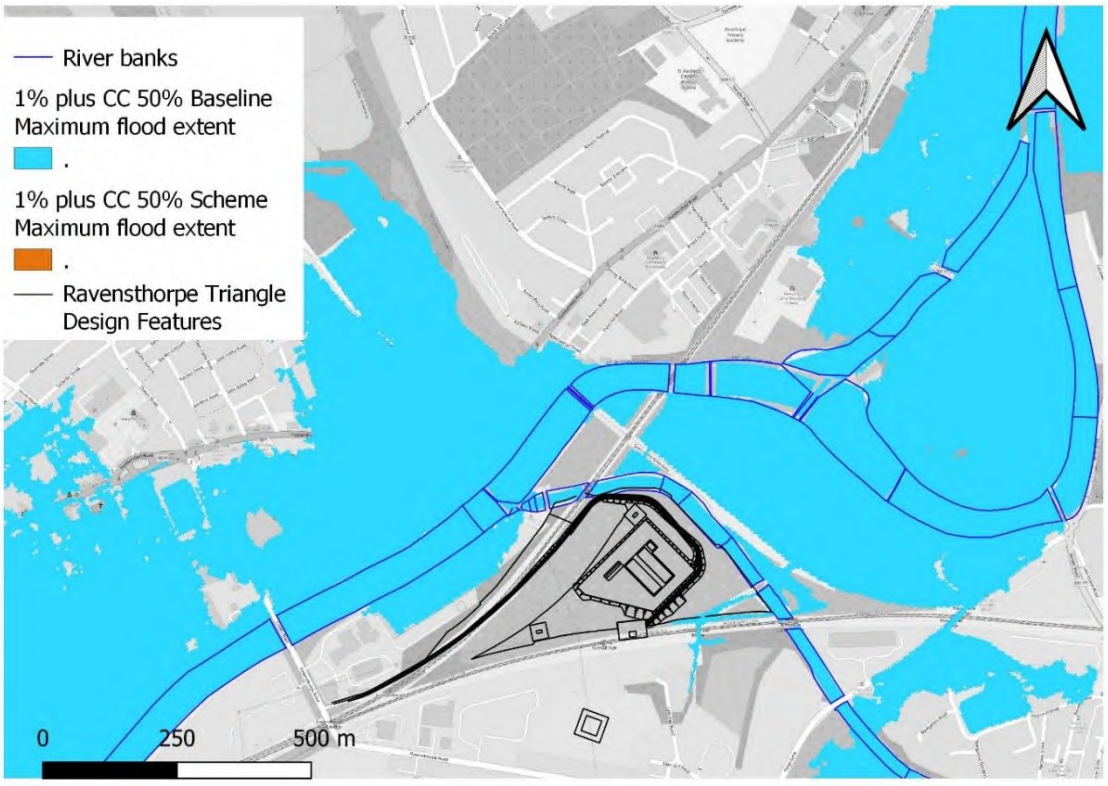
Insert 5-6 Proposed Scheme elements overlaying pre-Scheme 100 year plus climate change model results (Blue) with required area for Compensatory Flood Storage delineated (Brown)

5.3.3 Since the iteration of the modelling results discussed above, updated topographical information has been provided for the Thornhill Quarry Landfill Site within the Ravensthorpe Triangle area. The nature of works in the landfill and quarry have varied considerably since the model was developed. The Lidar used within the model was last updated in 2016. Therefore, updated topographic information has been used to represent the landfill in its current state including that of the clay cap over the landfill and its elevation.

5.3.4 Inserts 5-7 and 5-8 show the baseline 1% AEP plus 50% allowance for climate change modelled flood extent which considers the updated ground model in the Ravensthorpe Triangle and the overlaid modelled extent for baseline and with Scheme.



Insert 5-7 Baseline Model extent in the Ravensthorpe area for the 1% AEP plus 50% allowance event



Insert 5-8 With Viaduct Model extent overlaid with the Baseline model extent in the Ravensthorpe area for the 1% AEP plus 50% allowance event

5.3.5 The Environment Agency policy dictates that any loss of flood volume requires replacing on a level for level and volume for volume basis. The model indicates there is no lost floodplain as a result of the Ravensthorpe Triangle design features when considering the 1% annual chance event plus climate change allowance (50%) maximum extent. Therefore, no compensatory flood storage replacement is required as a result of the proposed development given the most up to date topographical data of the Ravensthorpe area.

5.3.6 The modelling results show that the piers do not impact peak water level during the 1% annual chance event including climate change allowance (50%), with localised nominal change in depth around the piers estimated to be approximately +-5mm, within a typical modelling tolerance.

Appendices

APPENDIX A – LOCATIONS OF STAGE 6 W3B WORKS

N

BBW Line

Station Road

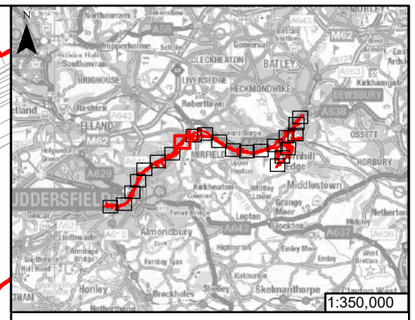
Earthworks - E9 - widening of existing cutting

Bradley Junction

Bradley Culvert (MVL3/102A) - works to extend existing culvert (5m)

Continued on Page 9

Continued on Page 7



Scheme Boundary

Adjacent Map Sheet

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SCALE 1:2,500

Rev	Date	Description of Revisions	Drwn	Chkd	Appr
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Status: SHARED

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NetworkRail

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Drawing Title

Figure 1
Stage 6 W3B works

Designed	R.Bowes	Signed Electronically	Date 12/02/2021
Drawn	R.Bowes	Signed Electronically	Date 12/02/2021
Checked	N.Booth	Signed Electronically	Date 26/06/2023
Approved	P.Butler	Signed Electronically	Date 27/06/2023

Scale(s): 1:2,500

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Alternative Reference: ---

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N

Parks Overbridge (MVL3/110 & MVL4/1)
- construction of new 2 to 3 span bridge.
- Offline construction to allow continue access to water treatment works
- existing structure will be demolished following construction of new bridge

Heaton Lodge Water Treatement Works

Huddersfield Broad Canal

Earthworks - W11 - embankment

Earthworks - E10 - widening of soil embankment

Huddersfield Broad Canal (MVL3/108S)
- reconstruction of bridge deck on existing sub-structures
- diversion of Yorkshire Water sludge main

Mamas & Papas

Continued on Page 8

Demolition of portal frame building

Colne Viaduct Underbridge (MVL3/109)
- metallic deck to be modified and replaced with concrete deck
- diversion of Yorkshire Water sludge main

Tensioning of overhead power lines

Continued on Page 10

Earthworks - E11 New Heaton Lodge Cutting (10m deep) for construction of fast lines

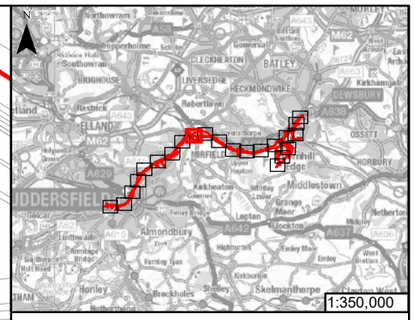
B6118 Colne Bridge Road (MVL3/107)
- existing 4 span masonry arch – to be demolished
- new bridge to be constructed offline to the east of the existing structure. Clear span of circa 20m.
- external finishes to be confirmed and will be agreed with relevant stakeholders
- two central arches of the existing structure will require demolition. The two other spans are to be infilled and will abut the new structure
- existing abutments retained as part of permanent works
- highway width to be increased to 7.3m in line with modern standards. One 2.0m footway will be provided (to the east) to tie into the existing provision.
- Structure is Grade II listed

Bradley PSP and maintainers access (RRAP)

River Colne

Works to overhead power lines

Construction Access



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Cooper Bridge Intersection (MVL4/2)
- replacement of masonry arch
- disused south bore to be retained for maintenance access

Heaton Lodge Footbridge (MVL4/4)
- to be replaced

Helm Lane Underbridge (MVN2/188)
- to be replaced

Colnebridge Culvert (MVL3/110A) - works to extend existing culvert (15m)

Earthworks - E11 - New Heaton Lodge Cutting (10m deep) for construction of fast lines

High pressure gas main diversions

Continued on Page 9

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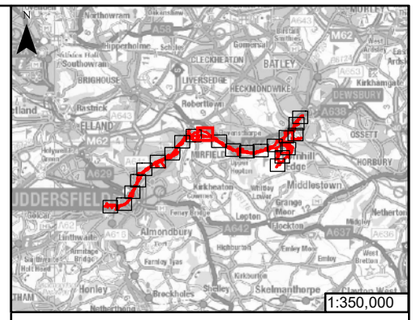

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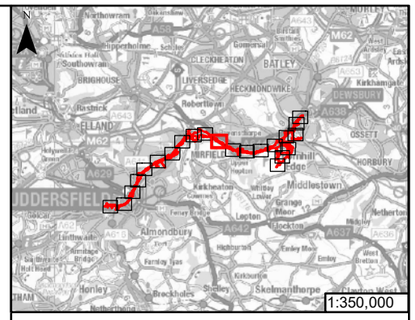
Continued on Page 10

Mirfield Culverts (MVN2/190B & MVN2/190C) - to be repaired and modified

Heaton Lodge Junction Culvert (MVN2/190A) - to be repaired and modified

Chadwick Close Culvert (MVN2/191A) - repairs and modifications, which may include culvert extension upstream

Continued on Page 12



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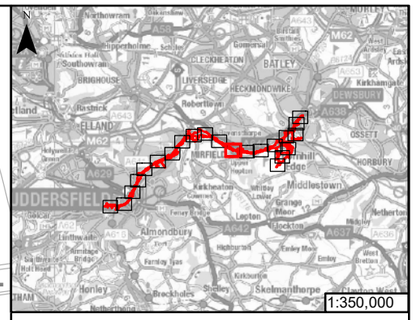
Continued on Page 11

Mirfield Viaduct (MVN2/192 & MVN2/192A)
- Strengthening works
- Grit blasting of structure

Mirfield Station - infill of existing access provision of step free access (lifts and footbridge works to platforms

Station Road Underbridge (MVN2/193)
- bridge deck replacement
- removal of eastern abutment

Continued on Page 13



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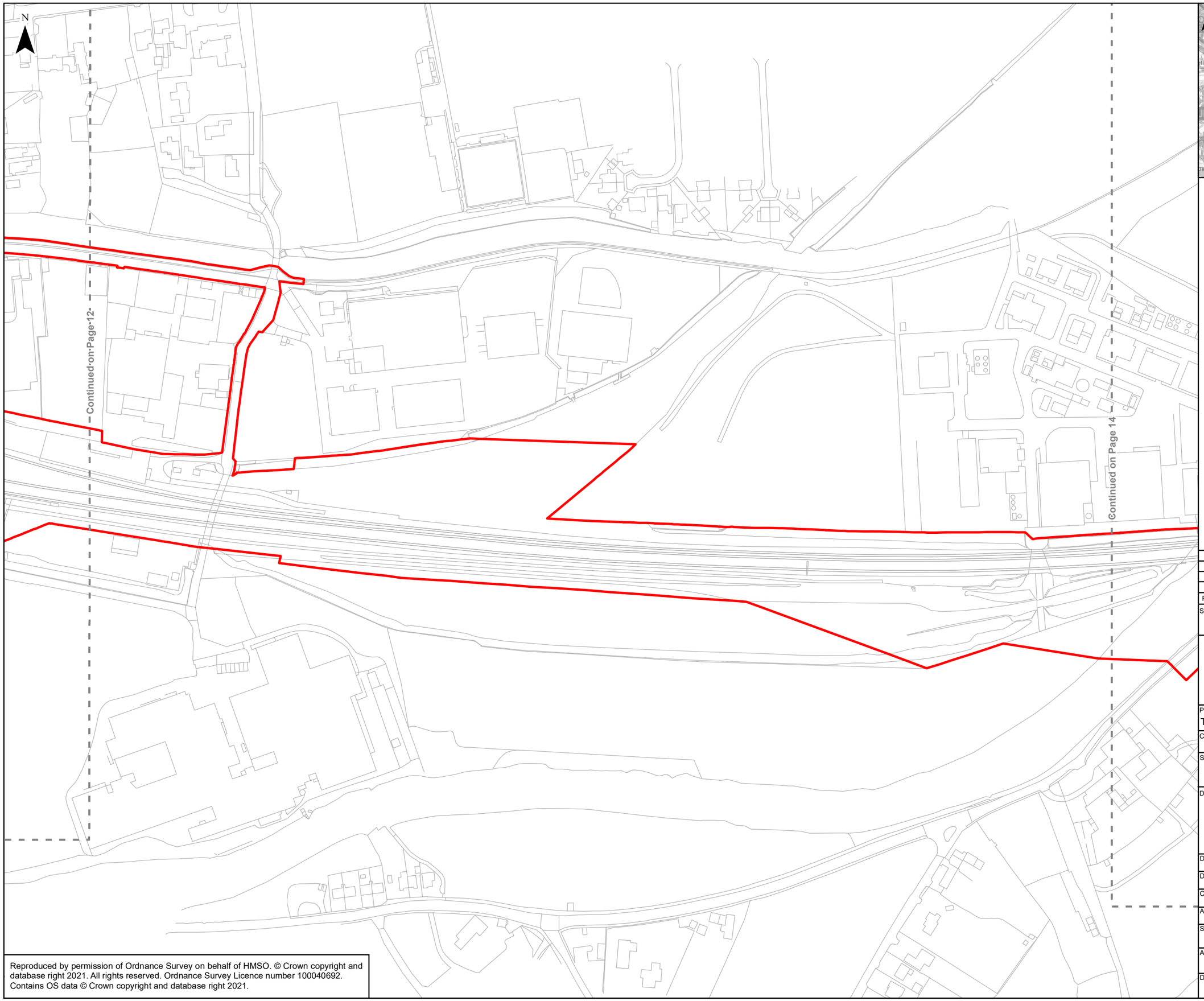

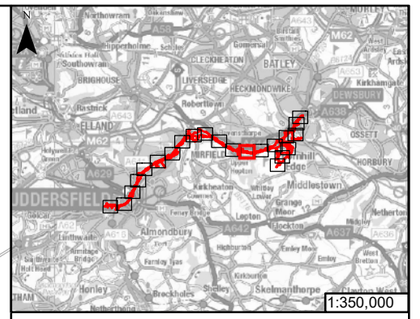

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Sands Lane Culvert (MVN2/198B) - to be repaired and modified.

Wheatley's Underbridge (MVN2/196) - installation of handrail.

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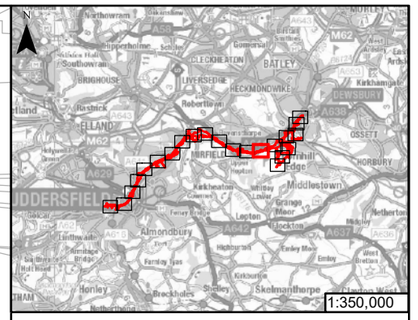

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N

Calder Road Overbridge (MVN2/202) - new bridge to be reconstructed to west of the existing bridge

Demolition of existing Ravensthorpe Station/ removal of footbridge MDL1/4

Flyover Intersection (RBA/1)

Realignment of Calder Road/ Ravensthorpe Road

Continued on Page 19

Overhead power line works

Ladywood Culvert (MVN2/200C) - works to extend existing culvert (15m)

Earthworks - W13 - reinforced soil wall

Earthworks - E15 - widening of cutting

Continued on Page 14

Continued on Page 18

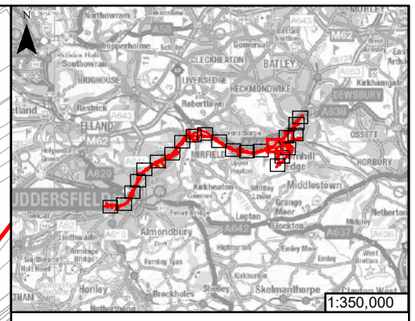
Overhead power line works

Realignment of Calder Road/Ravensthorpe Road including 3 arm roundabout

Ravensthorpe Station - includes footbridge with step free acess (lift)

Earthworks - E13 - new cutting as part of new Station site - up to 16.9m in height (from track level)

Continued on Page 16



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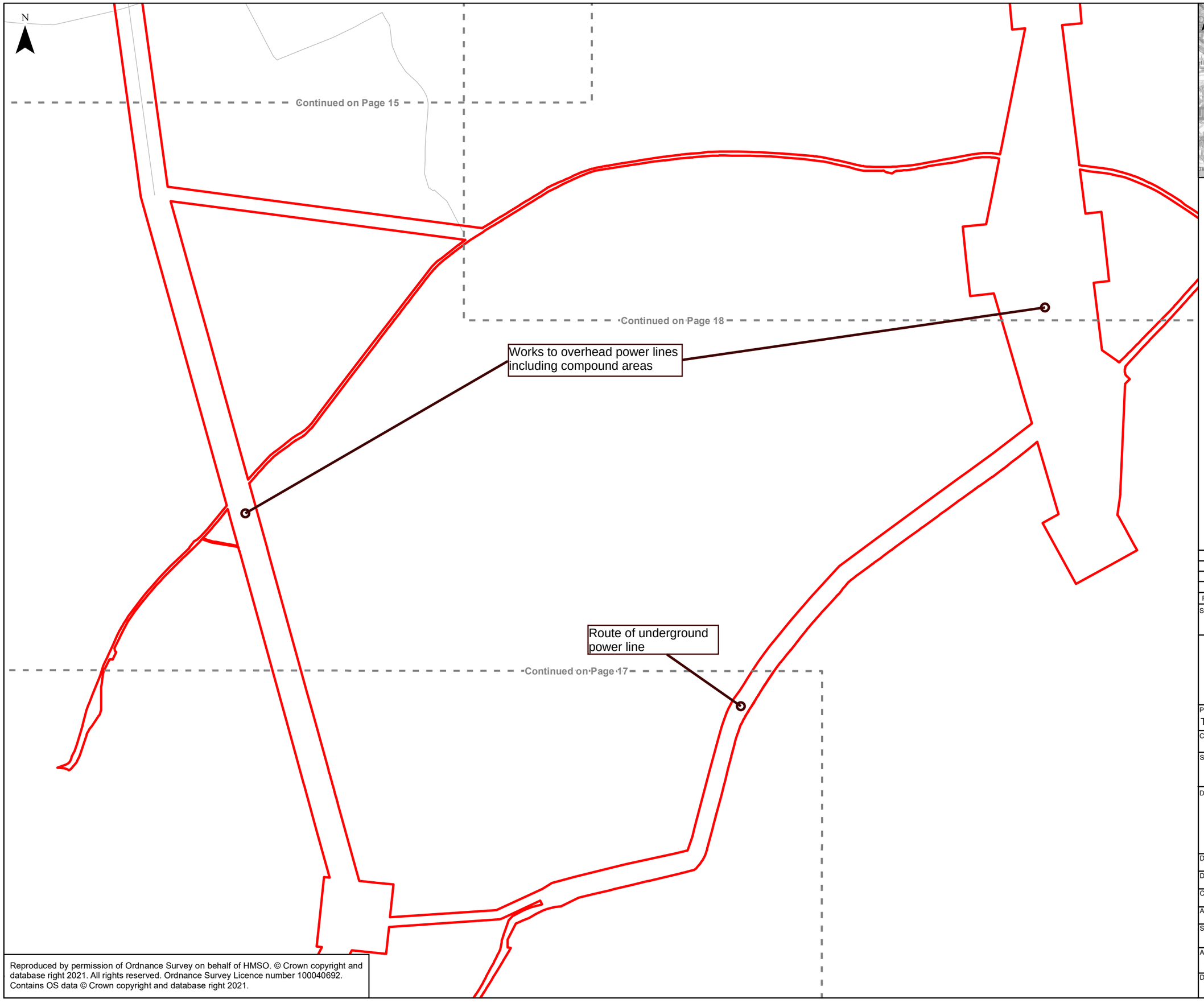

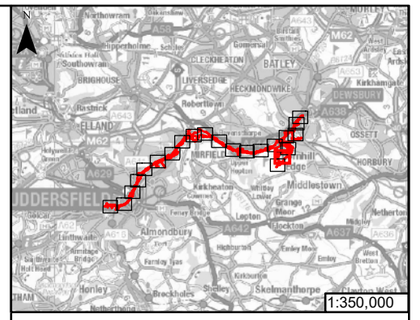

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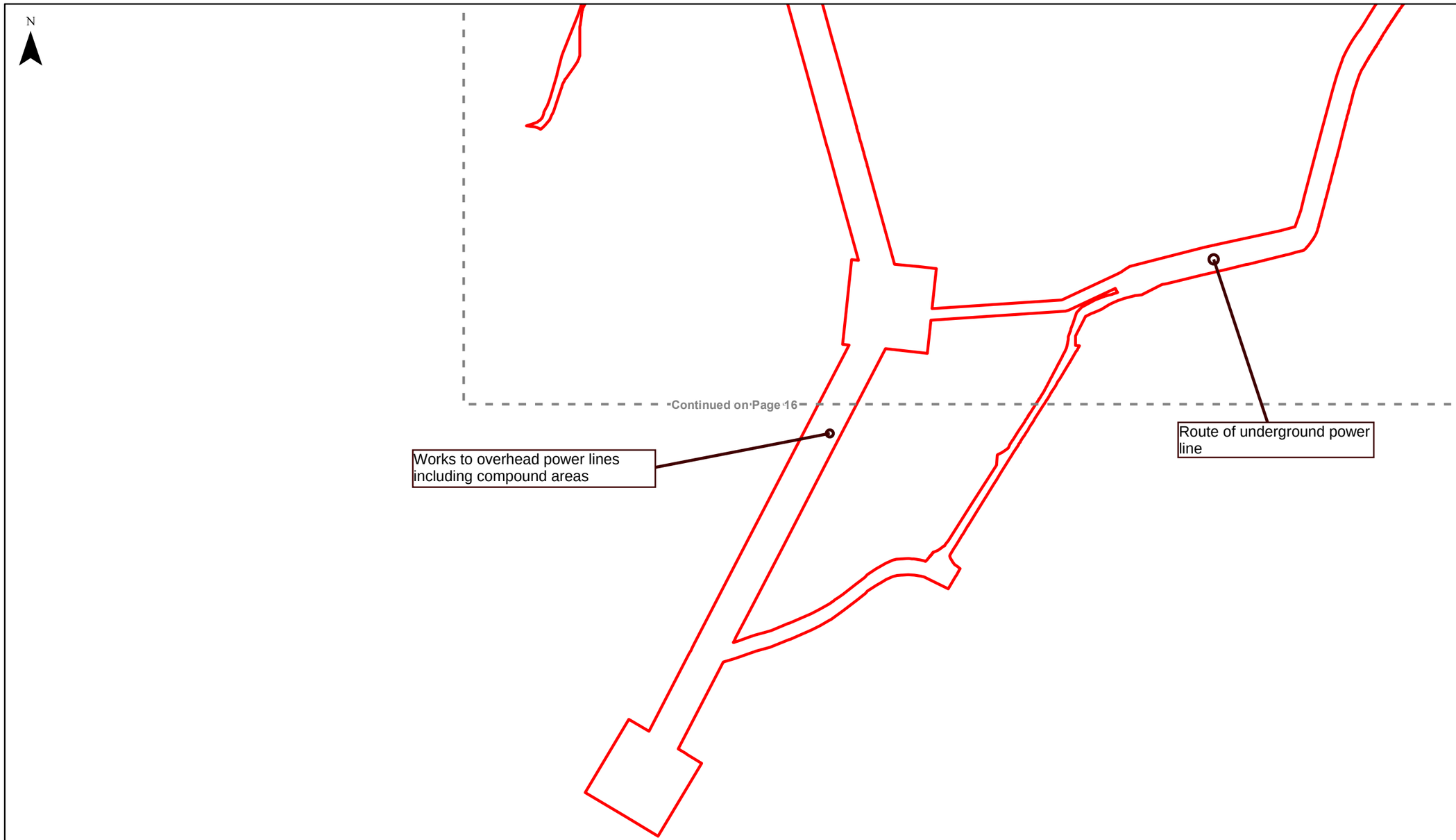
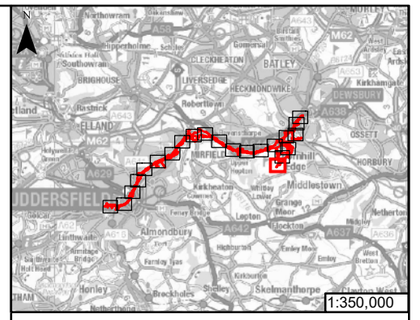
Revision: P01

Sheet Size A3 297 x 420





Scheme Boundary

Adjacent Map Sheet

0 10 20 40 60 80 100 Metres

SCALE 1:2,500

Rev	Date	Description of Revisions	Drwn	Chkd	Appr
P01	28/06/23	FIRST ISSUE	RB	NB	PB

Status: SHARED

Suitability:

NetworkRail

Project: TRANSPENNINE ROUTE UPGRADE

Contract No.: 151667

SchemeTitle: THE NETWORK RAIL (HUDDERSFIELD TO WESTTOWN (DEWSBURY) IMPROVEMENTS) ORDER

Drawing Title

Figure 1
Stage 6 W3B Works Plan

Designed	R.Bowes	Signed Electronically	Date 12/02/2021
Drawn	R.Bowes	Signed Electronically	Date 12/02/2021
Checked	N.Booth	Signed Electronically	Date 28/06/2023
Approved	P.Butler	Signed Electronically	Date 28/06/2023

Scale(s): 1:2,500

ELR & Project Chainage: ---

Alternative Reference: ---

Sheet: 10 of 15

Drawing Number: 151667-TSA-00-TRU-REP-W-EN-001388

Revision: P01

Sheet Size A3 297 x 420

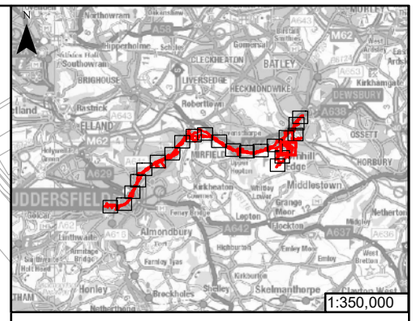
N

Continued on Page 19

Continued on Page 15

Works to overhead power lines

Continued on Page 16



Scheme Boundary

Adjacent Map Sheet

0 10 20 40 60 80 100 Metres

SCALE 1:2,500

Rev	Date	Description of Revisions	Drwn	Chkd	Appr
P01	28/06/23	FIRST ISSUE	RB	NB	PB

Status: SHARED

Suitability:

NetworkRail

Project: TRANSPENNINE ROUTE UPGRADE

Contract No.: 151667

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Drawing Title

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Checked	N.Booth	Signed Electronically	Date 28/06/2023
Approved	P.Butler	Signed Electronically	Date 28/06/2023

Scale(s): 1:2,500

ELR & Project Chainage: ---

Alternative Reference: ---

Sheet: 11 of 15

Drawing Number: 151667-TSA-00-TRU-REP-W-EN-001388

Revision: P01

Sheet Size A3 297 x 420

N

Earthworks - E18 - widening of existing soil embankment

Works to Yorkshire Water sewer

Earthworks - W17 - reinforced soil retaining wall

Works to overhead power lines including compound areas

Earthworks - E16 - embankment

Earthworks - W15 - reinforced soil wall

Works to overhead power lines including compound areas

Continued on Page 15

Continued on Page 20

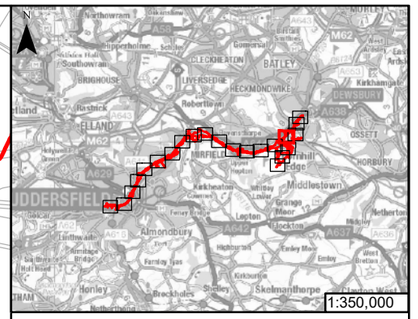
Construction of new 9 span **Baker Viaduct Underbridge (RBA/2)**

Earthworks - E20 - soil embankment

Lees Hall Underbridge (MVN2/204) - to be infilled

Ravensthorpe Power Supply Unit (PSU) site

Wakefield Lines



Scheme Boundary

Adjacent Map Sheet

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SCALE 1:2,500

Rev	Date	Description of Revisions	Drwn	Chkd	Appr
P01	28/06/23	FIRST ISSUE	RB	NB	PB

Status: SHARED

Suitability:

NetworkRail

Project: TRANSPENNINE ROUTE UPGRADE

Contract No.: 151667

SchemeTitle: THE NETWORK RAIL (HUDDERSFIELD TO WESTTOWN (DEWSBURY) IMPROVEMENTS) ORDER

Drawing Title

Figure 1
Stage 6 W3B Works Plan

Designed	R.Bowes	Signed Electronically	Date 12/02/2021
Drawn	R.Bowes	Signed Electronically	Date 12/02/2021
Checked	NBooth	Signed Electronically	Date 28/06/2023
Approved	P.Butler	Signed Electronically	Date 28/06/20231

Scale(s): 1:2,500

ELR & Project Chainage: ---

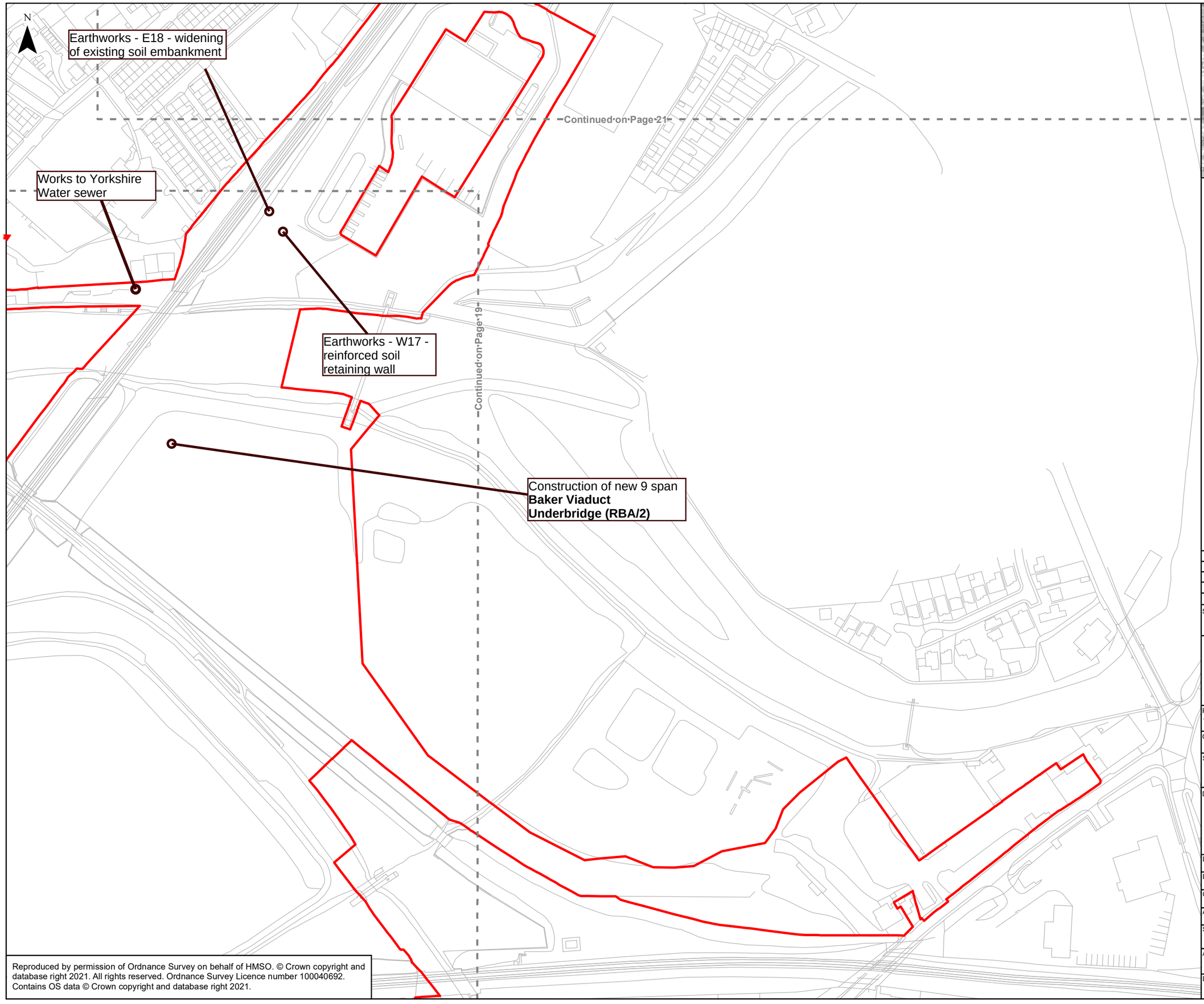
Alternative Reference: ---

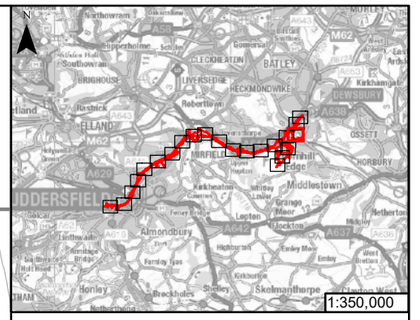
Sheet: 12 of 15

Drawing Number: 151667-TSA-00-TRU-REP-W-EN-001388

Revision: P01

Sheet Size A3 297 x 420





Scheme Boundary

Adjacent Map Sheet

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SCALE 1:2,500

Rev	Date	Description of Revisions	Drwn	Chkd	Appr
P01	28/06/23	FIRST ISSUE	RB	NB	PB

Status: SHARED

Suitability:

NetworkRail

Project: TRANSPENNINE ROUTE UPGRADE

Contract No.: 151667

SchemeTitle: THE NETWORK RAIL (HUDDERSFIELD TO WESTTOWN (DEWSBURY) IMPROVEMENTS) ORDER

Drawing Title

Figure 1
Stage 6 W3B Works Plan

Designed	R.Bowes	Signed Electronically	Date 12/02/2021
Drawn	R.Bowes	Signed Electronically	Date 12/02/2021
Checked	NBooth	Signed Electronically	Date 28/06/2023
Approved	P.Butler	Signed Electronically	Date 28/06/2023

Scale(s): 1:2,500

ELR & Project Chainage: ---

Alternative Reference: ---

Sheet: 13 of 15

Drawing Number: 151667-TSA-00-TRU-REP-W-EN-001388

Revision: P01

Sheet Size A3 297 x 420

N

Earthworks - E19 - widening of existing soil embankment

Earthworks - W22 - sheet piled wall

Occupation Underbridge (MDL1/10) - infill of existing structure

Toad Holes Underbridge (MDL1/12) - infill of existing structure

Earthworks - E19 - widening of existing soil embankment

Earthworks - W19 - King post retaining wall

Earthworks - W21 - reinforced soil wall

Continued on Page 22

B6117 Fall Lane, Thornhill Road Underbridge (MDL1/9) - construction of new single span bridge deck

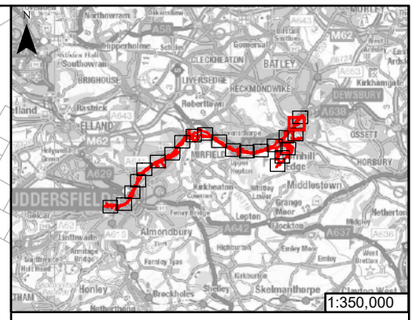
New access to private residence

Demolition of Thornhill House, Thornhill Road, Dewsbury

Earthworks - E18 - widening of existing soil embankment

Earthworks - W17 - reinforced soil retaining wall

Continued on Page 20



Scheme Boundary

Adjacent Map Sheet

0 10 20 40 60 80 100 Metres

SCALE 1:2,500

Rev	Date	Description of Revisions	Drwn	Chkd	Appr
P01	28/06/23	FIRST ISSUE	RB	NB	PB

Status: SHARED

Suitability:

NetworkRail

Project: TRANSPENNINE ROUTE UPGRADE

Contract No.: 151667

SchemeTitle: THE NETWORK RAIL (HUDDERSFIELD TO WESTTOWN (DEWSBURY) IMPROVEMENTS) ORDER

Drawing Title

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Stage 6 W3B Works Plan

Designed	R.Bowes	Signed Electronically	Date 12/02/2021
Drawn	R.Bowes	Signed Electronically	Date 12/02/2021
Checked	NBooth	Signed Electronically	Date 28/06/2023
Approved	P.Butler	Signed Electronically	Date 28/06/2023

Scale(s): 1:2,500

ELR & Project Chainage: ---

Alternative Reference: ---

Sheet: 14 of 15

Drawing Number: 151667-TSA-00-TRU-REP-W-EN-001388

Revision: P01

Sheet Size A3 297 x 420

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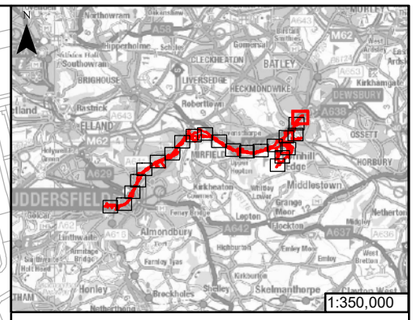

Scheme Boundary

Adjacent Map Sheet

Continued on Page 21

Ming Hill Underbridge (MDL1/14) - infill of existing structure

Earthworks - E19 - Widening of existing soil embankment

Toad Holes Underbridge (MDL1/12) - infill of existing structure

Earthworks - W19 - King post retaining wall

Occupation Underbridge (MDL1/10) - infill of existing structure

0 10 20 40 60 80 100 Metres

SCALE 1:2,500

Rev	Date	Description of Revisions	Drwn	Chkd	Appr
P01	28/06/23	FIRST ISSUE	RB	NB	PB

Status: SHARED

Suitability:

NetworkRail

Project: TRANSPENNINE ROUTE UPGRADE

Contract No.: 151667

SchemeTitle: THE NETWORK RAIL (HUDDERSFIELD TO WESTTOWN (DEWSBURY) IMPROVEMENTS) ORDER

Drawing Title

Figure 1
Stage 6 W3B Works Plan

Designed	R.Bowes	Signed Electronically	Date 12/02/2021
Drawn	R.Bowes	Signed Electronically	Date 12/02/2021
Checked	NBooth	Signed Electronically	Date 28/06/2023
Approved	P.Butler	Signed Electronically	Date 28/06/2023

Scale(s): 1:2,500

ELR & Project Chainage: ---

Alternative Reference: ---

Sheet: 15 of 15

Drawing Number: 151667-TSA-00-TRU-REP-W-EN-001388

Revision: P01

Sheet Size A3 297 x 420

APPENDIX B – DESIGN DRAWINGS

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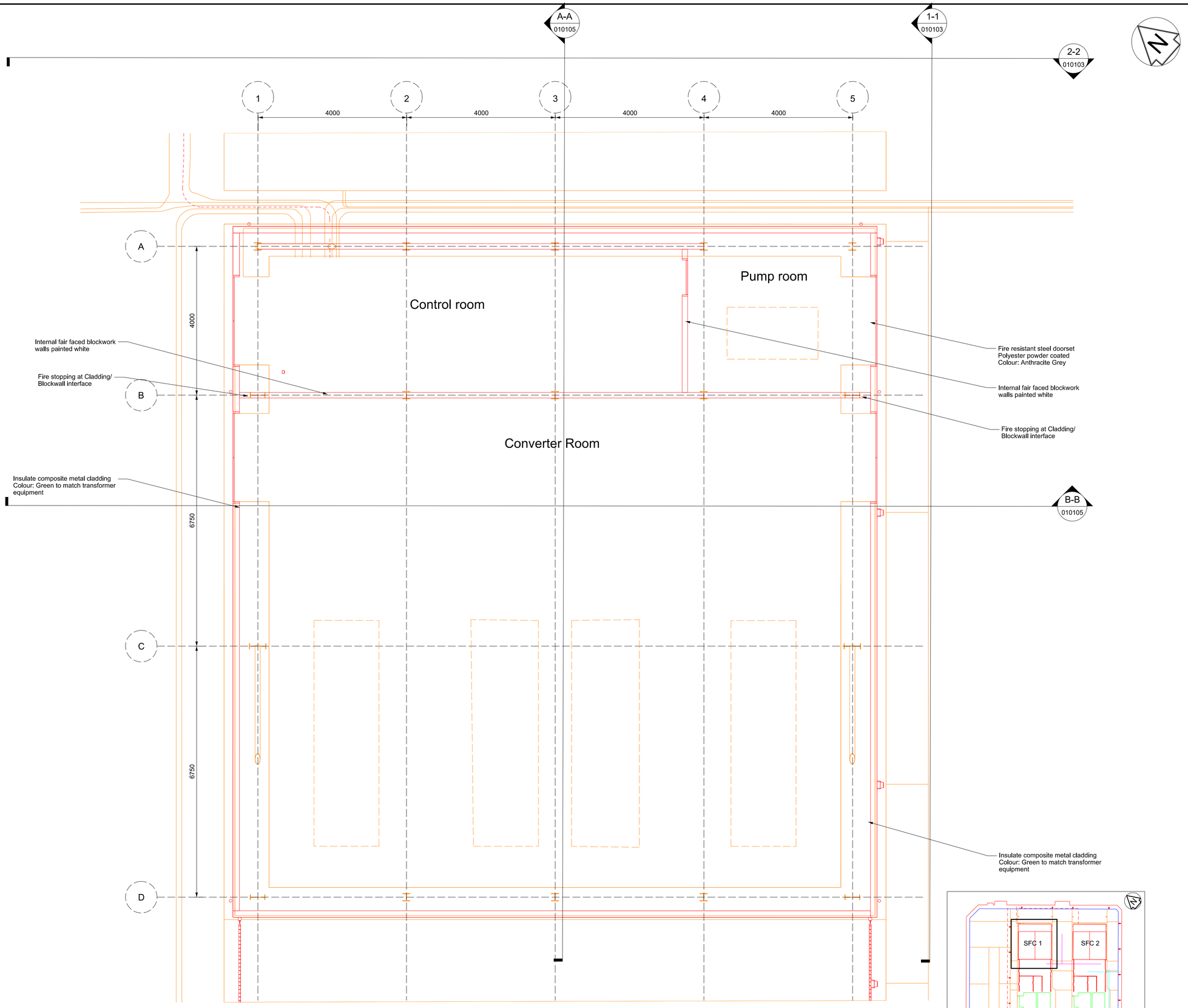
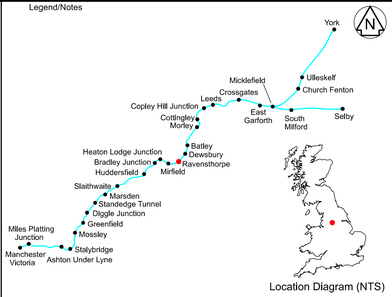
151667-TSA-35-MVN2-DRG-T-LP-150001 P01



Ravensthorpe SFC 1 - Proposed GA Plan
Scale: 1: 50

Key Plan
Scale: 1: 1000

Legend/Notes



Location Diagram (NTS)

Notes

1. All dimensions are in millimetres unless stated otherwise.
2. Do not scale from this drawing.
3. This drawing is based on available topographical survey information, examination reports and archive information.
4. For surrounding context, refer to drawing 151667-TSA-35-MVN2-DRG-T-LP-150000
5. Both SFC Buildings are identical. Only SFC 1 is shown for clarity.

Legend

- Proposed
- To be removed
- To be modified
- Existing
- Ordnance survey data
- Aerial survey data (LIDAR)
- Indicative Network Rail land boundary
- Intervention proposed to create position(s) of safety
- Proposed future works
- Temporary works
- Mechanical & Electrical Equipment

0 1 2 3 4 5m
SCALE 1:50

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
P01	23/06/23	First Issue	DB	JC	

Status: Fit for Information
Suitability: S2

NetworkRail

Authorised		Signed	Date

Contractor(s): TRU West Alliance

Location

Type: CAD Drawing	Sub-type: General Arrangement
Role: Town and Country Planner	Sub-Role: General
Zone: Ravensthorpe and Westown (Dewsbury)	
Phasing	Grip Stage: GRIP 4

Project: Transpennine Route Upgrade

Contract No.: 151667

Contract Title: TRU - West of Leeds

Drawing Title: Ravensthorpe Triangle SFC DPP Condition 14 SFC 1 Proposed Ground Level Plan

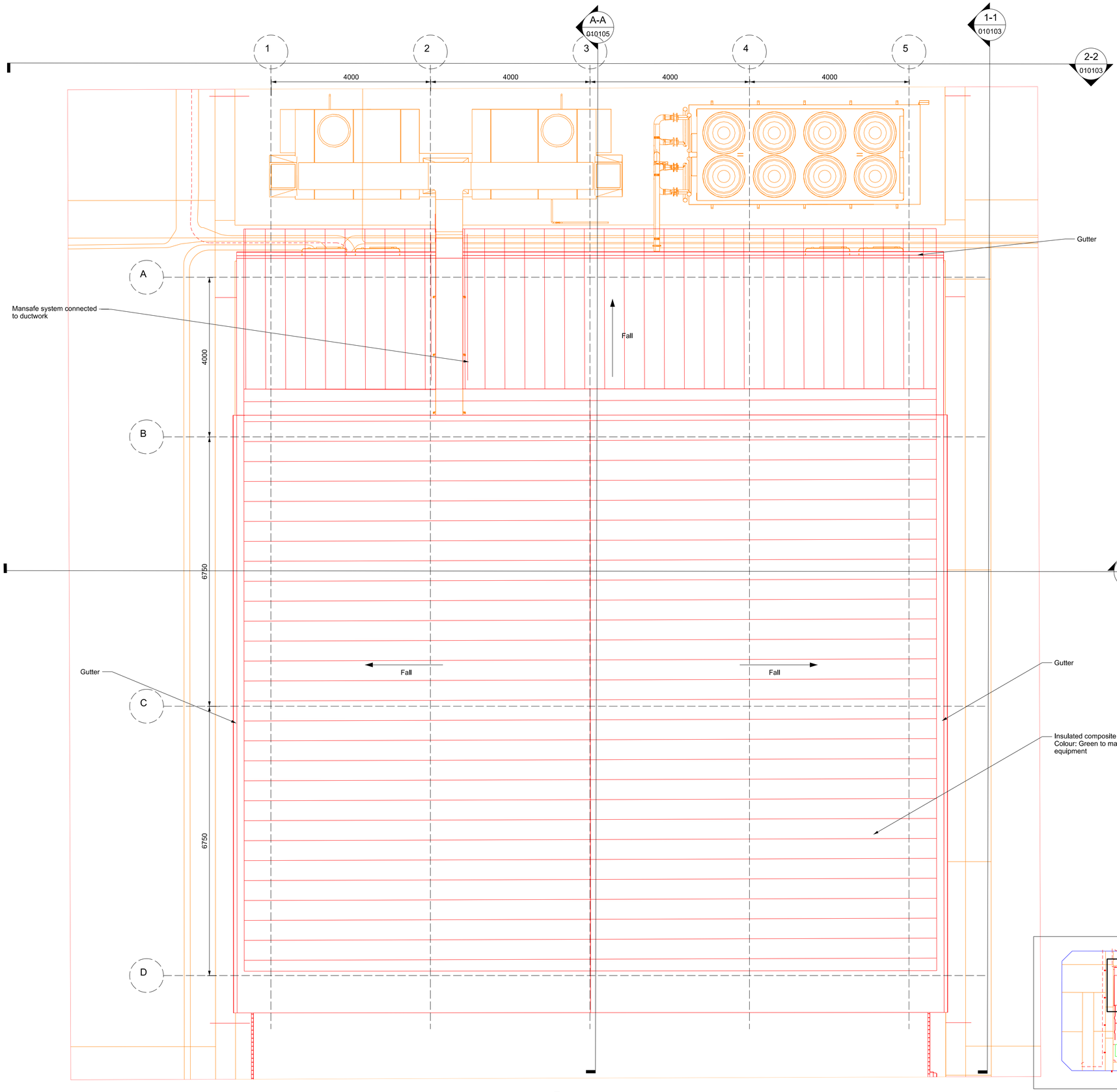
Designed	J Clayton	Signed	Date: 22/06/23
Drawn	D.Banbery	Signed: Electronically Signed	Date: 22/06/23
Checked	J.Clayton	Signed: Electronically Signed	Date: 22/06/23
Approved	J.Portlock	Signed: Electronically Signed	Date: 23/06/23
Scale(s): 1:50		ELR & Mileage: 002.0248 to 050.0691	

Alternative Reference | Sheet of

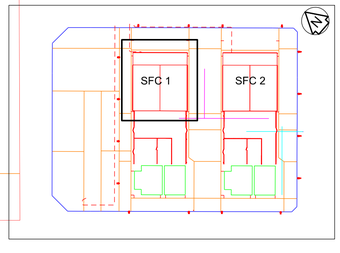
Drawing Number: 151667-TSA-35-MVN2-DRG-T-LP-150001 | Revision: P01

Sheet Size A1 594 x 841

Drawing Number
151667-TSA-35-MVN2-DRG-T-LP-150002 P01

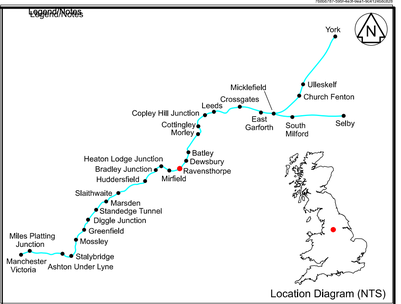


Ravensthorpe SFC 1- Proposed Roof Plan
Scale: 1: 50



Key Plan
Scale: 1: 1000

Legend/Notes



Location Diagram (NTS)

Notes

1. All dimensions are in millimetres unless stated otherwise.
2. Do not scale from this drawing.
3. This drawing is based on available topographical survey information, examination reports and archive information.
4. For surrounding context, refer to drawing 151667-TSA-35-MVN2-DRG-T-LP-150000
5. Both SFC Buildings are identical. Only SFC 1 is shown for clarity.

Legend

- Proposed
- To be removed
- To be modified
- Existing
- Ordnance survey data
- Aerial survey data (LIDAR)
- Indicative Network Rail land boundary
- Intervention proposed to create position(s) of safety
- Proposed future works
- Temporary works
- Mechanical & Electrical Equipment

0 1 2 3 4 5m
SCALE 1:50

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
P01	23/06/23	First Issue	DB	JC	JP

Status: Fit for Information
Suitability: S2

NetworkRail

Authorised		Signed	Date

Contractor(s): TRU West Alliance

Location:

Type	Sub-type
CAD Drawing	General Arrangement
Role: Town and Country Planner	Sub-Role: General
Zone: Ravensthorpe and Westown (Dewsbury)	
Phasing	Project Stage: GRIP 4

Project: Transpennine Route Upgrade

Contract No.: 151667

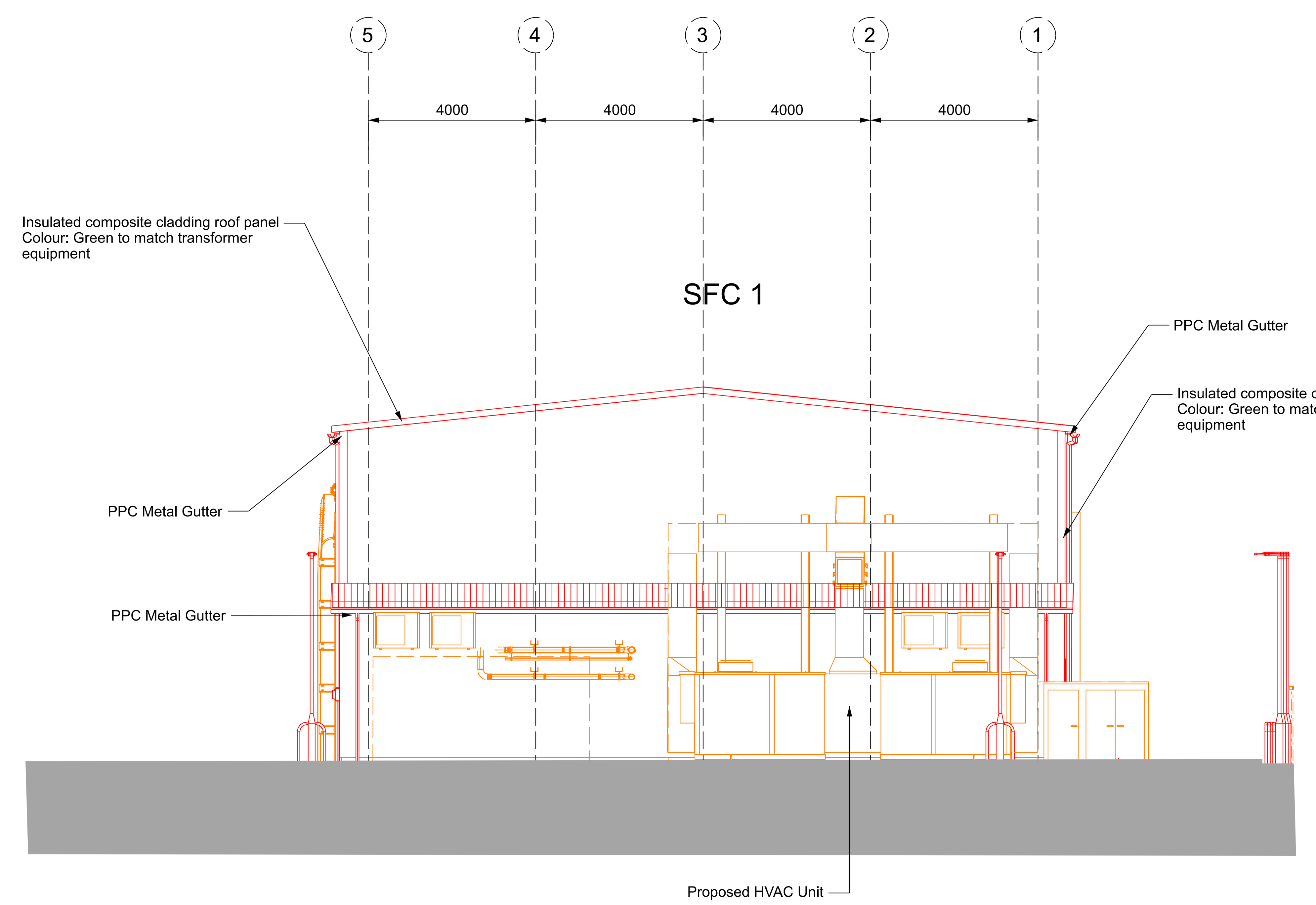
Contract Title: TRU - West of Leeds

Drawing Title:
Ravensthorpe Triangle SFC
DPP Condition 14
SFC 1 Proposed Roof
Level Plan

Designed	J Clayton	Signed	Date 22/06/23
Drawn	D.Banbery	Signed Electronically Signed	Date 22/06/23
Checked	J.Clayton	Signed Electronically Signed	Date 22/06/23
Approved	J.Portlock	Signed Electronically Signed	Date 23/06/23
Scale(s) 1:50		ELR & Mileage 002.0248 to 050.0691	
Alternative Reference		Sheet / of	
Drawing Number 151667-TSA-35-MVN2-DRG-T-LP-150002			Revision P01

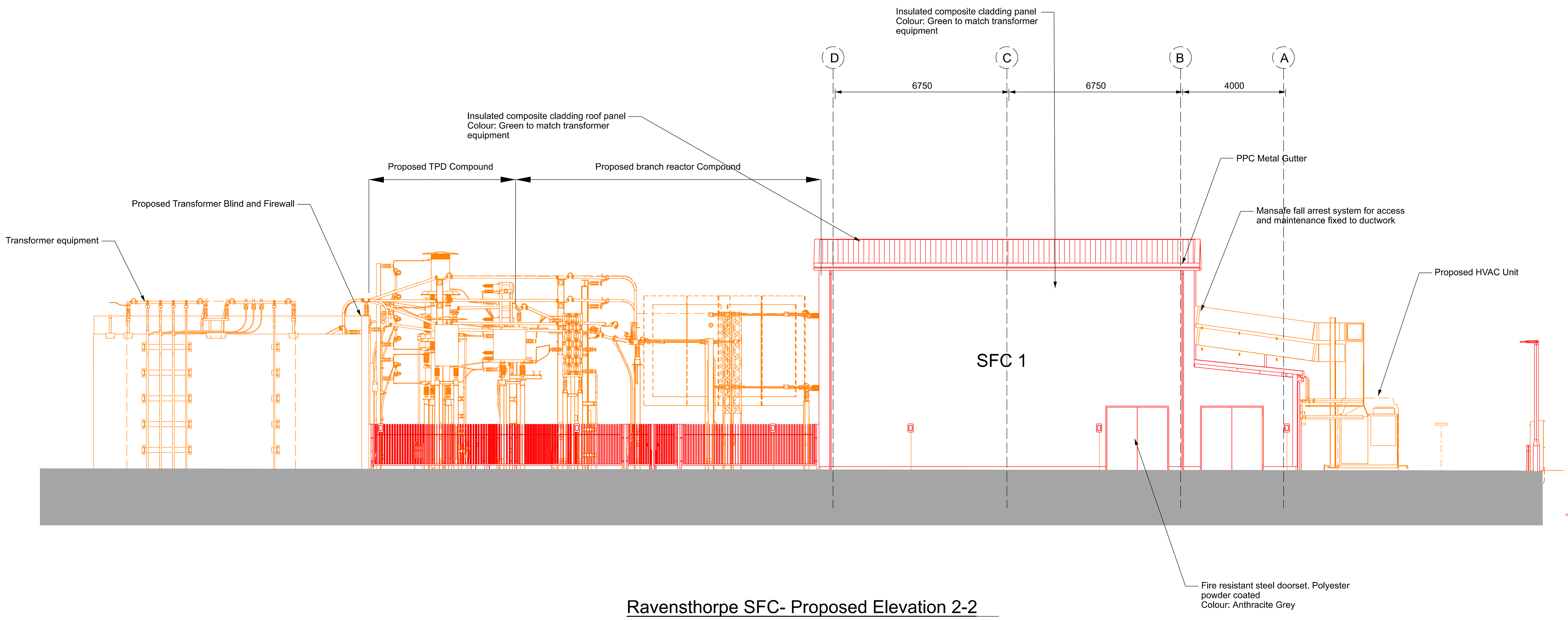
Sheet Size A1 594 x 841

Drawing Number 151667-TSA-35-MVN2-DRG-T-LP-150003 P01



Ravensthorpe SFC- Proposed Elevation 1-1

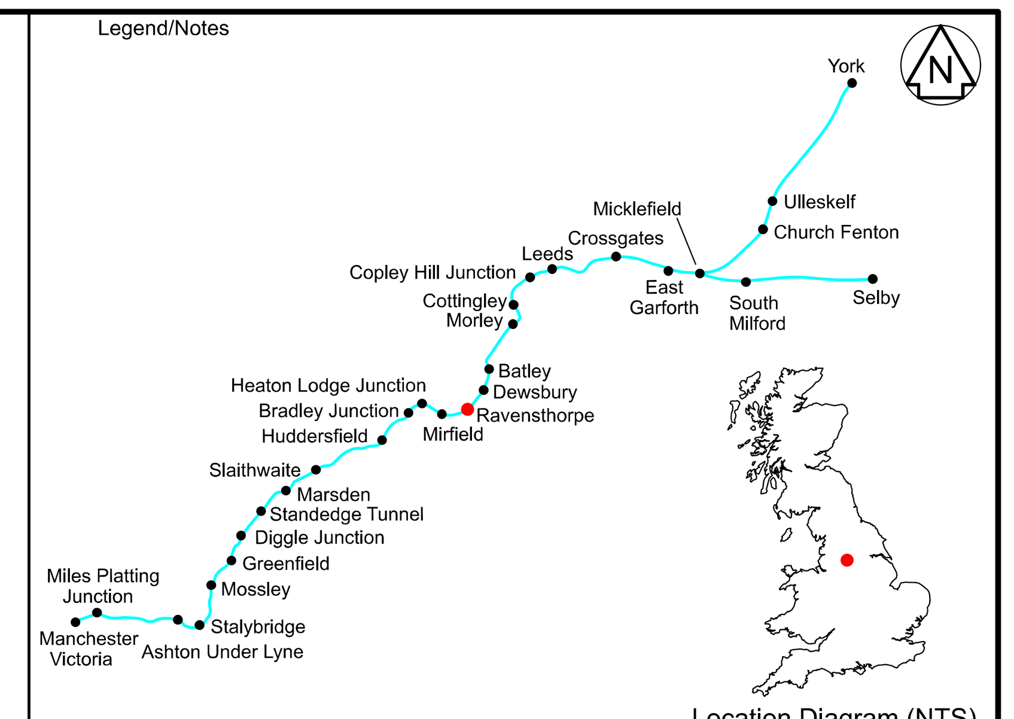
Scale: 1: 100



Ravensthorpe SFC- Proposed Elevation 2-2

Scale: 1: 100

Legend/Notes



Location Diagram (NTS)

Notes

1. All dimensions are in millimetres unless stated otherwise.
2. Do not scale from this drawing.
3. This drawing is based on available topographical survey information, examination reports and archive information.
4. For surrounding context, refer to drawing 151667-TSA-35-MVN2-DRG-T-LP-150000
5. Both SFC Buildings are identical. Only SFC 1 is shown for clarity.

Legend

- Proposed
- To be removed
- To be modified
- Existing
- Ordnance survey data
- Aerial survey data (LIDAR)
- Indicative Network Rail land boundary
- Intervention proposed to create position(s) of safety
- Proposed future works
- Temporary works
- Mechanical & Electrical Equipment

0 2 4 6 8 10m

SCALE 1:100

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
P01	23/06/23	First Issue	DB	JC	

Status: Fit for Information — Suitability: S2

NetworkRail

Authorised | Signed | Date

Contractor(s): TRU West Alliance

Location

Type: CAD Drawing — Sub-type: Elevation

Role: Town and Country Planner — Sub-Role: General

Zone: Ravensthorpe and Westown (Dewsbury)

Phasing — Grip Stage: GRIP 4

Project: Transpennine Route Upgrade

Contract No.: 151667

Contract Title: TRU - West of Leeds

Drawing Title: Ravensthorpe Triangle SFC DPP Condition 14 Proposed Elevations

	Name	Signed	Date
Designed	J Clayton		22/06/23
Drawn	D.Banbery	Electronically Signed	22/06/23
Checked	J.Clayton	Electronically Signed	22/06/23
Approved	J.Portlock	Electronically Signed	23/06/23

Scale(s): 1:100 — ELR & Mileage: 002.0248 to 050.0691

Alternative Reference — Sheet of

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Sheet Size A1 594 x 841

DrawingNumber
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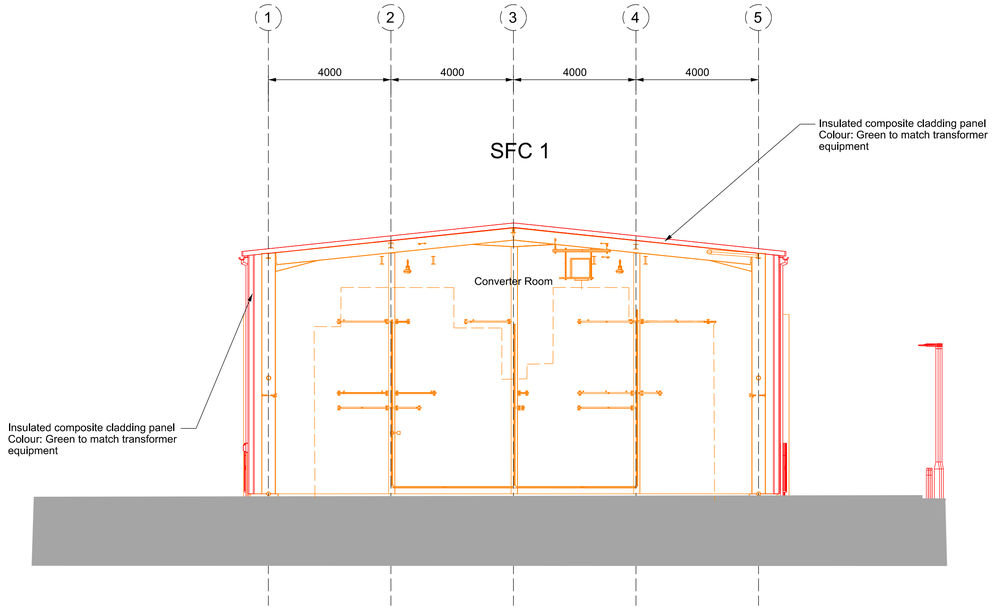
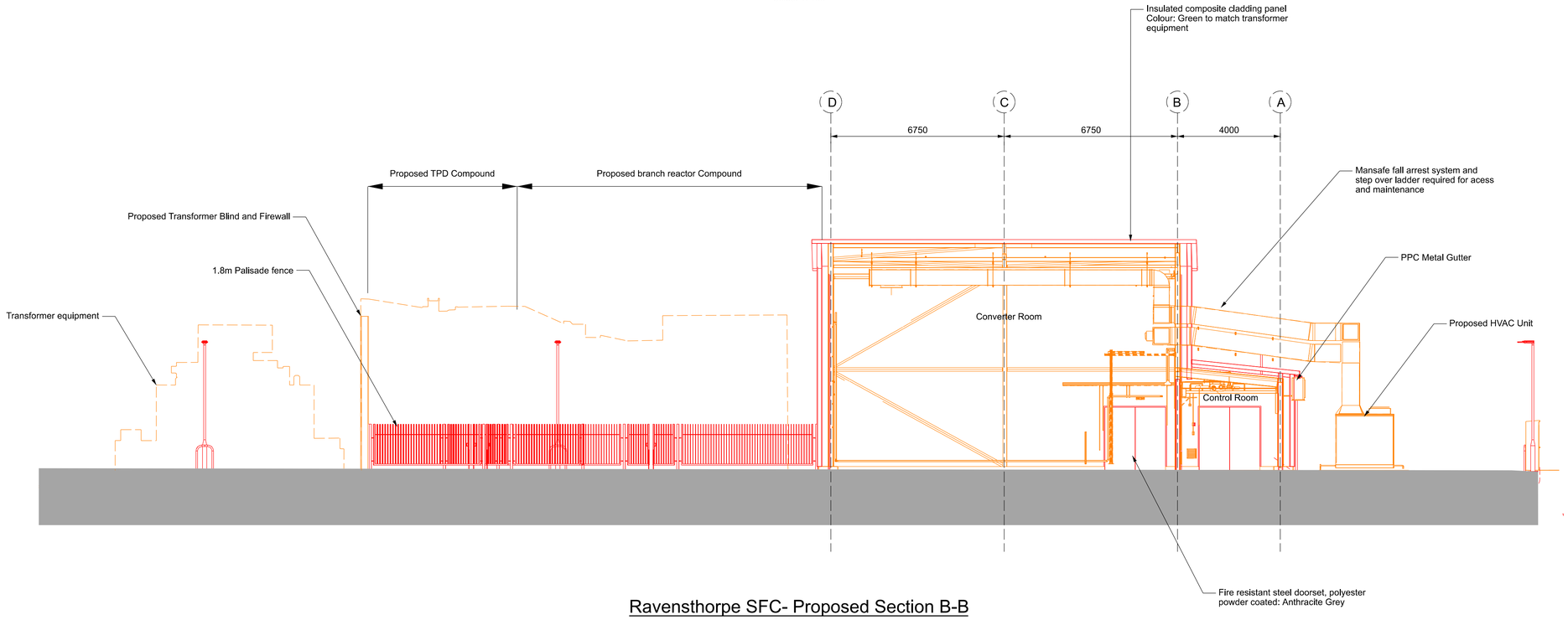


Ravensthorpe SFC- Proposed Section A-A

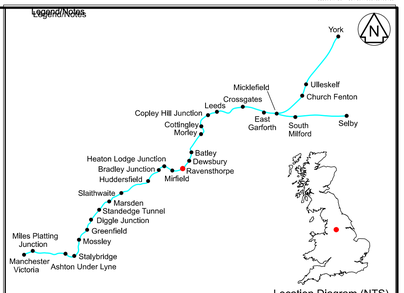
Scale: 1: 100



Ravensthorpe SFC- Proposed Section B-B

Scale: 1: 100

Legend/ Notes



Location Diagram (NTS)

Notes

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4. For surrounding context, refer to drawing 151667-TSA-35-MVN2-DRG-T-LP-150000
5. Both SFC Buildings are identical, only SFC 1 is shown for clarity

Legend

- Proposed
- To be removed
- To be modified
- Existing
- Ordnance survey data
- Aerial survey data (LIDAR)
- Indicative Network Rail land boundary
- Intervention proposed to create position(s) of safety
- Proposed future works
- Temporary works
- Mechanical & Electrical Equipment and Structural Frame

0 2 4 6 8 10m

SCALE 1:100

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
P01	23/06/23	First Issue	DB	JC	

Status: Fit for Information
Suitability: S2

NetworkRail

Authorised		Signed	Date

Contractor(s): TRU West Alliance

Location:

Type	CAD Drawing	Sub-type	Section
Role	Town and Country Planner	Sub-Role	General
Zone	Ravensthorpe and Westown (Dewsbury)		
Phasing		Grip Stage	GRIP 4

Project: Transpennine Route Upgrade

Contract No.: 151667

Contract Title: TRU - West of Leeds

Drawing Title: Ravensthorpe Triangle SFC
DPP Condition 14
Proposed Sections

Designed	J Clayton	Signed	Date 22/06/23
Drawn	D.Banbery	Signed Electronically Signed	Date 22/06/23
Checked	J.Clayton	Signed Electronically Signed	Date 22/06/23
Approved	J.Portlock	Signed Electronically Signed	Date 23/06/23
Scale(s) 1:100		ELR & Mileage	002.0248 to 050.0691

Alternative Reference:

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Revision: P01

Sheet Size A1 594 x 841

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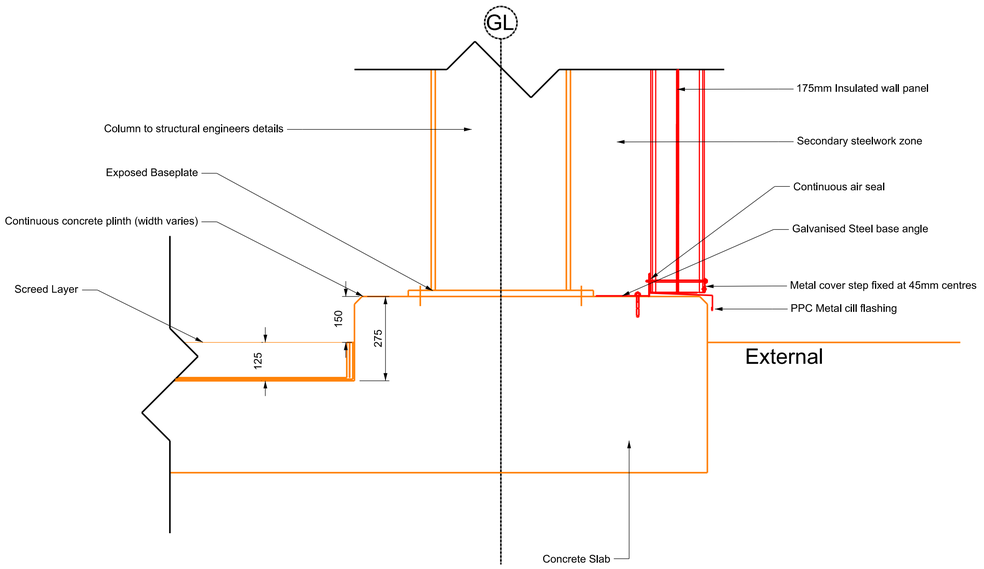
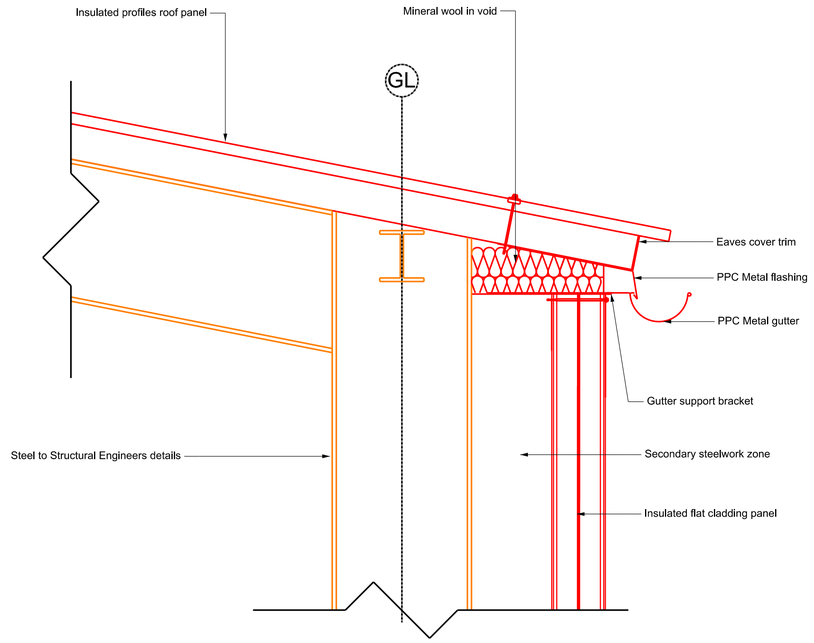


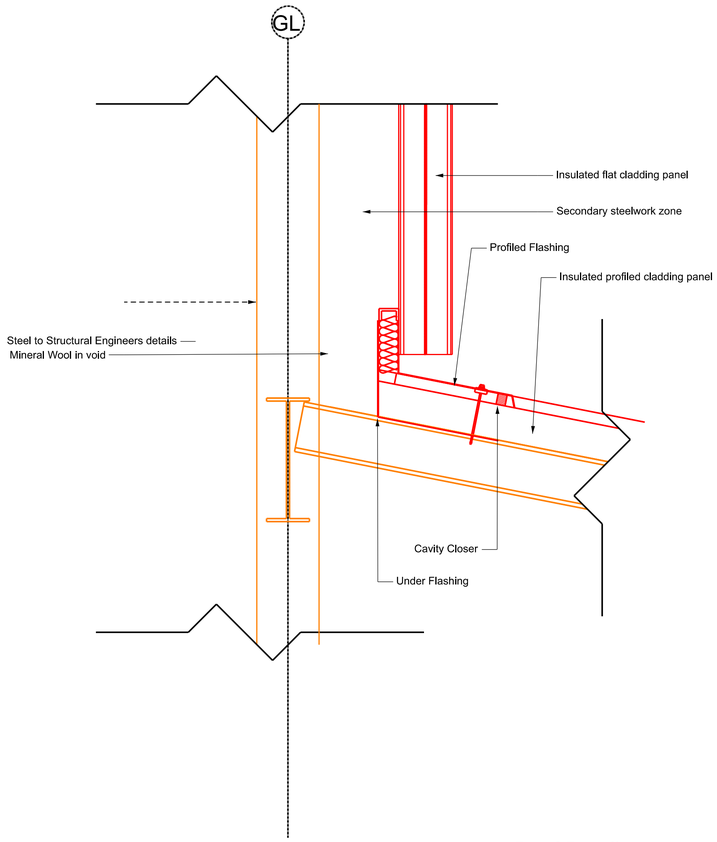
Ravensthorpe SFC- Proposed Slab Detail

Scale: 1: 10



Ravensthorpe SFC- Proposed Roof and Eaves Detail

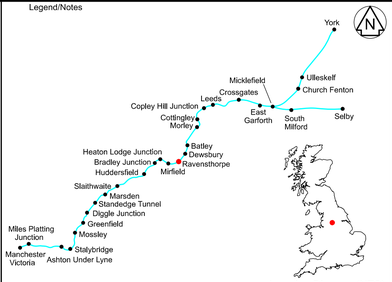
Scale: 1: 10



Ravensthorpe SFC- Proposed Cladding and Roof Detail

Scale: 1: 10

Legend/Notes



Location Diagram (NTS)

Notes

1. All dimensions are in millimetres unless stated otherwise.
2. Do not scale from this drawing.
3. This drawing is based on available topographical survey information, examination reports and archive information.
4. For surrounding context, refer to drawing 151667-TSA-35-MVN2-DRG-T-LP-150000
5. Both SFC Buildings are identical, only SFC 1 is shown for clarity

Legend

- Proposed
- To be removed
- To be modified
- Existing
- Ordnance survey data
- Aerial survey data (LIDAR)
- Indicative Network Rail land boundary
- Intervention proposed to create position(s) of safety
- Proposed future works
- Temporary works
- Structural Frame

0 200 400 600 800 1000mm

SCALE 1:10

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
P01	23/06/23	First Issue	DB	JC	

Status: Fit for Information
Suitability: S2

NetworkRail

Authorised | Signed | Date

Contractor(s): TRU West Alliance

Location: THORPES BRIDGE JN - NORMANTON (MANCHESTER - NORMANTON LI

Type: CAD Drawing
Sub-type: Detail
Role: Town and Country Planner
Sub-Role: General
Zone: Ravensthorpe and Westown (Dewsbury)
Phasing
Grip Stage: GRIP 4

Project: Transpennine Route Upgrade

Contract No.: 151667

Contract Title: TRU - West of Leeds

Drawing Title: Ravensthorpe Triangle SFC DPP Condition 14 Proposed Cladding Interface Details

Designed	J Clayton	Signed	Date 22/06/23
Drawn	D.Banbery	Signed Electronically Signed	Date 22/06/23
Checked	J.Clayton	Signed Electronically Signed	Date 22/06/23
Approved	J.Pollock	Signed Electronically Signed	Date 23/06/23

Scale(s): 1:10
ELR & Mileage: 002.0248 to 050.0691

Alternative Reference
Sheet of

Drawing Number: 151667-TSA-35-MVN2-DRG-T-LP-150005
Revision: P01

Sheet Size A1 594 x 841

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