

Appendix F. Road safety audit response report template for stages 1, 2 and 3 only

F1 Project details

Provide:

Table F.1 Project details

Report title:	PROPOSED COMMERCIAL DEVELOPMENT, HOUGHTON MAIN, BARNLEY – PROPOSED GHOST ISLAND PRIORITY JUNCTION Combined Stage 1 and 2 Road Safety Audit
Date:	21st March 2022
Document reference and revision:	RSI-MH-0322-004 Issue 1.1
Prepared by:	Road Safety Initiatives
On behalf of:	Barnley Metropolitan Borough Council

Table F.2 Authorisation sheet

Project:	Houghton Main, Barnley
Report title:	Stage ½ RSA Designers response
Prepared by:	
Name:	Rik Binnersley
Position:	Principal Engineer
Signed:	
Organisation:	RWO Group Leeds
Date:	30.03.2022
Approved by:	
Name:	Andrew Fairburn
Position:	Director
Signed:	
Organisation:	RWO Group Leeds
Date:	30.03.2022

F2 Introduction

The designers response supplements the report results from a combined Stage 1 and 2 Road Safety Audit carried out by Road Safety Initiatives on the proposed ghost island priority junction for the commercial development at Houghton Main, Barnley scheme. Undertaken at the request of Wayne Lake, Barnley Metropolitan Borough

The designers response was produced by Rik Binnersley of the RWO Group Leeds, the Principal Designer who was involved in the design of the S278 improvement scheme.

F3 Key personnel

Provide:

Table F.3 Key personnel

Overseeing Organisation:	Barnsley Metropolitan Borough Council
RSA team:	Mark Hedley, IEng, MCIHT, MSoRSA, FIHE, RegRSA(IHE), Alan Bawn, BSc (Hons), CEng, MICE - Road Safety Initiatives
Design organisation:	RWO Group, Leeds

F4 Road safety audit decision log**Table F.4 Road safety audit decision log**

RSA problem	RSA recommendation	Design organisation response	Overseeing Organisation response	Agreed RSA action
3.1.1 - Inadequate drainage may lead to loss of control collisions. It would appear that no drainage is to be provided adjacent to the new kerblane (currently consists of informal 'over the edge' type drainage). The current system results in standing water, which was evident during the site visit. The carriageway is proposed to be widened, which will increase the amount of surface water to be removed and there will be nowhere for it to disperse, which could exacerbate the situation.	It is recommended that adequate drainage is provided.	Agree – At the time of submission of the drawings a drainage scheme for the works was not available. Since this time a preliminary drainage scheme has been produced (Y21011-D1008 – Section 278 Highway Drainage Layout) highlighting how the scheme will be drained.		
3.2.1 – Inappropriate traffic speeds and junction awareness may lead to collisions. The A6195 is subject to the national speed limit and the scheme proposes the introduction of a	It is recommended that measures to encourage appropriate traffic speeds and junction awareness are introduced. For example, • Road Lighting; • Warning lines on the approaches; • Relocate the bifurcation arrows (start of	Agree – It is intended that a full street lighting scheme will be designed and submitted to BMBC for approval covering the full extent of the S278 works. The bifurcation arrows have been updated in a manner appropriate to the design speed of the highway. Road Studs have been added in a manner in keeping with the wider		

ghost-island junction and it appears that there is no road lighting proposed. If driver approach speeds are inappropriate and/or drivers do not appreciate the junction layout, it may lead to heavy braking incidents such as loss of control or vehicle to vehicle collisions, particularly during darkness and inclement weather conditions. Furthermore, significant speed differentials between vehicles may lead to injudicious overtaking movements. It is acknowledged that pedestrian refuges are proposed with beacons and 'keep left' signs which may reduce overtaking movements. However, these may not be sufficient especially during darkness and inclement weather conditions, noting that bollards will get dirty over time and at times the beacons may not be working (and	diverges in accordance with TSM Ch. 5); • Provide 'junction' warning signs or directional signs; • Provide a double white line system; • Road studs (edge and warning lines); and • High level 'keep left' signs on the beacons.	highway network. High Level keep left signs have been added to the island beacons. Further signage has been added to the scheme inclusive of advance warning signs and directional signs.		
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no road lighting). This could result in head-on collisions or loss of control following pedestrian refuge island strikes.				
3.3.1 – Pedestrians may be struck by a passing vehicle. The pedestrian crossing points are within lengths of hatched road markings and marginal strips. A pedestrian may choose to wait within the hatching or marginal strips and could be struck by a passing vehicle.	It is recommended that LOOK LEFT and LOOK RIGHT road markings are provided in the carriageway adjacent to the kerb lines.	Agree – Look Left and Look Right road markings added at crossing points.		
3.3.2 – Pedestrians may be struck by a vehicle. There is no pedestrian crossing point proposed at the development access. Pedestrians may cross the access road injudiciously and may be struck by a vehicle. Furthermore, vulnerable pedestrians such as partially sighted pedestrians, wheelchair users etc, could be at greater risk.	It is recommended that a pedestrian crossing (including tactile paving) is provided.	Disagree – Due to the width of the junction coupled with the fact that the double give way line and right turn lane would make the crossing difficult to negotiate by pedestrians, crossing of the highway by pedestrians in this location should not be promoted. There is no desire line for pedestrians to cross the highway in this location. Adequate facilities are provided elsewhere to allow pedestrians to cross from one bus stop to the other, the same facilities also make provisions for pedestrians to access the development site from both bus stops. In addition, as there is no pedestrian thoroughfare on the development side of the scheme to allow pedestrians to access		

		the wider area. Ample crossing facilities have been provided elsewhere to allow pedestrians to safely access the footway on the opposing side of the road to the development should they wish to travel by foot to the wider area.		
3.3.3 – Inadequate visibility of pedestrian may lead to collisions. Vegetation may result in inadequate inter-visibility between approaching drivers from the east and pedestrians at the proposed crossing (south-side). Pedestrians must be able to see and be seen by approaching traffic. If inadequate visibility is achieved, then there is a risk of pedestrian conflicts with approaching traffic.	It is recommended that the vegetation is removed.	Agree – Vegetation will be removed from the soft margin throughout the extent of the works. However, it should be raised that this is an existing issue which should be maintained by BMBC. Planting within the soft margin should be kept at a level that does not hinder visibility.		
3.3.4 – Inadequate drainage may lead to pedestrian conflicts. It would appear that no drainage is to be provided adjacent to the new kerbline (currently consists of informal 'over the edge' type drainage). The current system results in	It is recommended that adequate drainage is provided.	Agree – At the time of submission of the drawings a drainage scheme for the works was not available. Since this time a preliminary drainage scheme has been produced (Y21011-D1008 – Section 278 Highway Drainage Layout) highlighting how the scheme will be drained. However, it should be noted that the existing ponding issues seem to be caused by vegetation		

standing water, which was evident during the site visit. The carriageway is proposed to be widened, which will increase the amount of surface water to be removed and there will be nowhere for it to disperse, which could exacerbate the situation. Drainage issues, with the potential for detritus build-up may lead to ponding in the pedestrian crossing area. This may result in pedestrians crossing at inappropriate locations and increase risk of pedestrian collisions. In addition, during wintry conditions it may lead to pedestrian slips and falls.		growing within the dished channels intended to convey water to the existing highway gullies. Upkeep of these channels to aid free draining of the existing scheme should be undertaken by BMBC.		
3.4.1 – Signposts may be a hazard. It is proposed to provide 'NEW ROAD LAYOUT' and 'Pedestrian crossing' traffic signs however, the mounting details and specific locations are not provided. These signposts may be located too close to the edge of carriageway or posts sizes may be inappropriate.	It is recommended that appropriate traffic signposts are provided.	Agree – Signage mounting heights and locations have been added to the signage drawing Y21011-D1006 - Section 278 Works To Park Spring Road Signage Arrangement.		

Furthermore, the signs may not have suitable forward visibility if masked by vegetation. If signposts are struck they may present a hazard and subsequent loss of control or increased injury severity to vehicle occupants in an errant vehicle. Heavy braking and subsequent shunt or loss of control collisions may occur if signs do not have adequate visibility. In addition, adequate warning of the hazards may not be provided which could exacerbate Problem 3.2.1.				
3.4.2 – Traffic signs may be a hazard for pedestrians. It is proposed to provide traffic signs throughout the scheme extents however, the mounting details are not provided. These signposts may be located within footways and restrict walkways. Signposts may be a hazard for pedestrians if located within the path, particularly for the visually	It is recommended that the traffic signs do not obstruct pedestrians.	Agree - Signage mounting heights and locations have been added to the signage drawing Y21011-D1006 - Section 278 Works To Park Spring Road Signage Arrangement.		

impaired. Alternatively, if the posts form an obstruction, pedestrians may attempt to enter the carriageway with a risk of being struck by a passing vehicle. This issue may be exacerbated for wheelchair users.				
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FS**Design organisation and Overseeing Organisation statements**

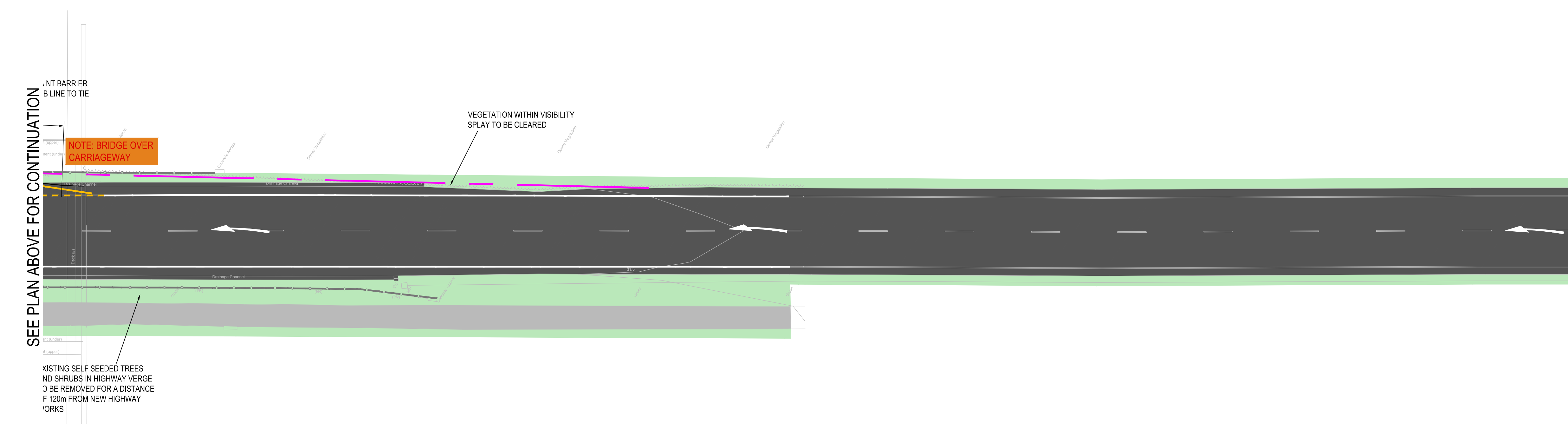
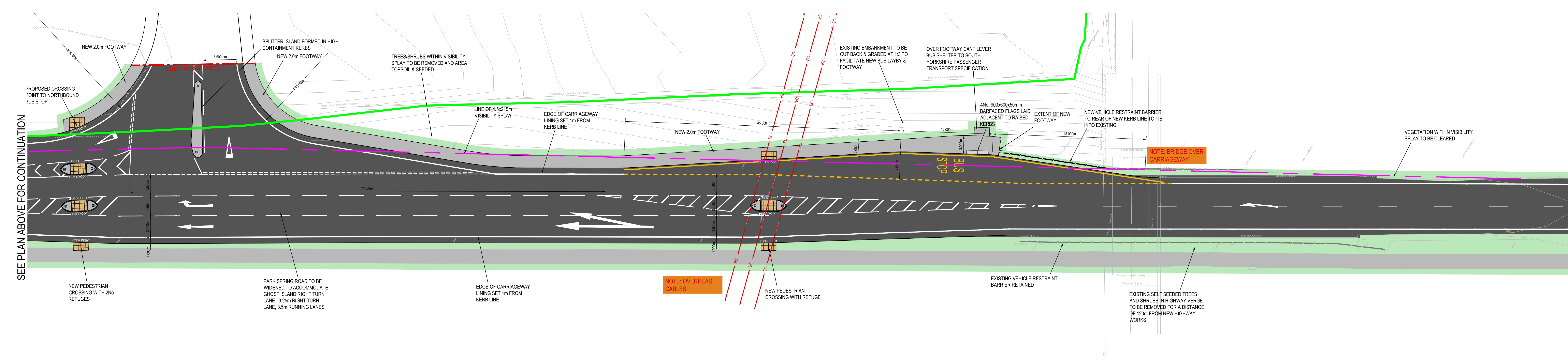
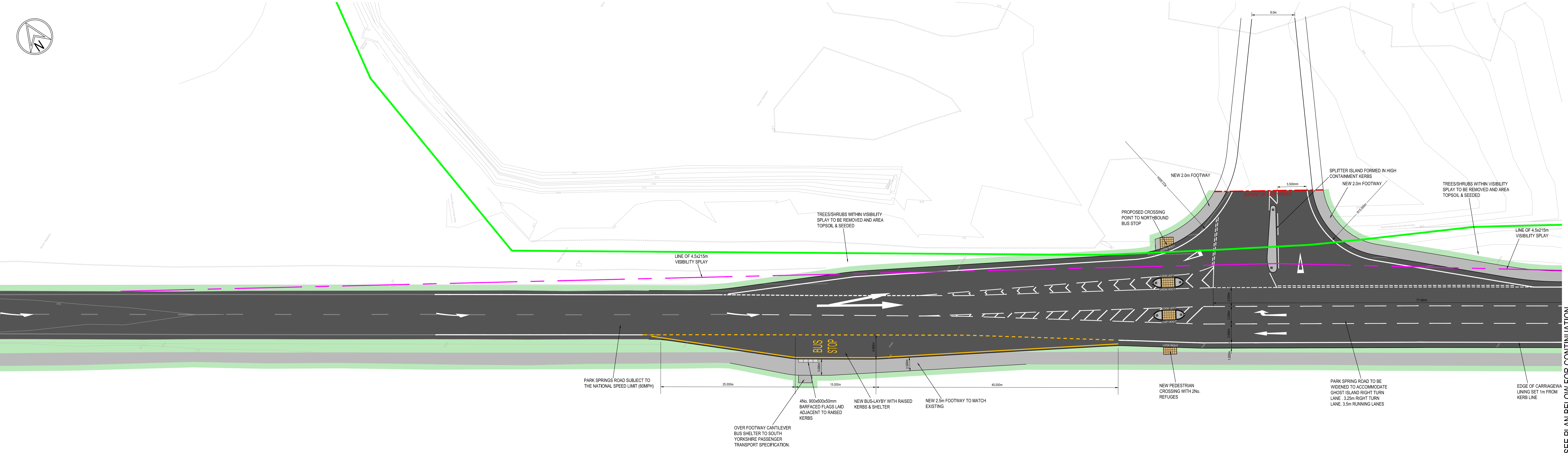
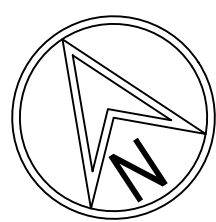
Include the following statements to be signed by the design organisation and the Overseeing Organisation.

Table F.5 Design organisation statement

On behalf of the design organisation I certify that:	
1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.	
Name:	Rik Binnersley
Signed	
Position:	Principal Engineer
Organisation:	RWO Group Leeds
Date:	30.03.2022

Table F.6 Overseeing Organisation statement

On behalf of the Overseeing Organisation I certify that: 1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design Organisation; and 2) the agreed RSA actions will be progressed.	
Name:	
Signed:	
Position:	
Organisation:	
Date:	



- GENERAL SAFETY NOTES:**
- WHERE THE BASE ROAD BASE HAS BEEN USED AS A TEMPORARY RUNNING SURFACE DURING THE CONTRACT, IT SHALL BE THOROUGHLY CLEANED AND POWER RAKED AS NECESSARY, AFTER SETTING AND IMMEDIATELY BEFORE THE BINDER COURSE IS Laid. A TACK COAT OF BITUMEN EMULSION CLASS 45-HR OR 47-HR SHALL BE APPLIED AT A RATE OF 0.25-0.35 LITRES/SQ METRE.
 - ALL RADIIUS KERBS WITH A RADIUS OF 12m OR LESS SHALL BE FORMED WITH PROPRIETARY MATCH KERBS.
- HEALTH & SAFETY:**
- CONTRACTOR SHOULD BE AWARE OF GENERAL CONSTRUCTION RISKS TO PREVENT SLIPS, TRIPS AND FALLS AND TAKE NECESSARY PRECAUTIONS WITHOUT SPECIAL INSTRUCTION.
- ROADS & DRAINAGE:**
- CONTRACTOR TO PROVIDE TRENCH SUPPORTS AS APPROPRIATE AND ENSURE THAT PLANT REMAINS A SAFE DISTANCE FROM TRENCHES PRIOR TO INSTALLING DRAINAGE.
 - THE TIME THAT EXCAVATIONS ARE OPEN ON SITE SHOULD BE KEPT TO A MINIMUM AND ALL TRENCHES SHOULD BE SURROUNDED BY A BARRIER.
 - CONNECTIONS TO EXISTING SERVICES TO BE MADE BY APPROVED CONTRACTOR ONLY.
 - CONTRACTOR TO TAKE OPERATIONAL AWARE OF ASSOCIATED DANGERS TO HEALTH SUCH AS DEPTHOPORES, WELLS, DISEASE, AND RECOMMENDED PRECAUTION, ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING TO BE PROVIDED AS REQUIRED.
 - UNDERGROUND MANHOLES MUST BE COVERED WITH LOAD BEARING MATERIALS AND SURROUNDED WITH BARRIER.
- Pipes & Cables:**
- CONTRACTOR TO OBTAIN ALL SERVICE RECORDS PRIOR TO WORKS COMMENCING.
 - SERVICE RECORDS TO BE REFERRED TO PRIOR TO WORK COMMENCING. CONTRACTOR TO PROCEED WITH CAUTION AND SERVICES TO BE LOCATED BY HANDING AND PROTECTED ACCORDINGLY.
- EXCAVATIONS:**
- CONTRACTOR TO ENSURE RELEVANT MEASURES ARE TAKEN TO KEEP PLANT AND PEOPLE A SAFE DISTANCE FROM STEEP SLOPES DURING THE WORKS.
 - CONTRACTOR TO ENSURE THAT PROCEDURES ARE IN PLACE TO KEEP PEOPLE A SAFE DISTANCE FROM WORKING PLANT WHERE NECESSARY.
 - CONTRACTOR TO REFER TO GEOTECHNICAL INVESTIGATION REPORT FOR CONTAMINATION TESTS AND TO PROVIDE ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING AS REQUIRED.
- DESIGN NOTES:**
- PROPOSED LEVELS HAVE BEEN BASED ON THE EXISTING TOPOGRAPHICAL SURVEY BY MIDLAND SURVEYING & ENGINEERING DRAWING REF: HD008508-A1 (DATED 21.07.2021).
 - ALL WORKING TO COMPLY WITH CURRENT VERSION OF THE FOLLOWING DOCUMENTS:
 - DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB)
 - SPECIFICATION FOR HIGHWAY WORKS (SHW)
 - LOCAL AUTHORITY DESIGN GUIDE AND SPECIFICATION
 - PRIOR TO COMMENCING WORKS THE CONTRACTOR SHOULD INVESTIGATE AND LOCATE ANY NECESSARY ANY EXISTING UTILITY UNDERGROUNDS EQUIPMENT WITHIN THE WORK ACCESS AND DISCLOSE REQUIREMENTS FOR LOWERING/OVERSEEN AND PROTECTION WITH THE RELEVANT UNDERFAKER.
 - ALL WORKING WITHIN THE PUBLIC HIGHWAY TO MEET LOCAL AUTHORITY REQUIREMENTS. CONTRACTOR TO APPLY FOR ROAD OPENING NOTICES ETC AS REQUIRED.
 - CBR VALUE NOT AVAILABLE. ROAD CONSTRUCTION DETAIL SUBJECT TO CONFIRMATION OF CBR VALUES. CONTRACTOR TO ALLOW FOR LAB TESTS TO BE UNDERTAKEN IN AGREEMENT WITH LOCAL AUTHORITY HIGHWAY ENGINEER PRIOR TO WORKS COMMENCING.
 - SLOPES GREATER THAN 1 IN 5 MAY REQUIRE STABILISATION. GEOTECHNICAL ENGINEER TO BE CONTACTED TO CONFIRM REQUIREMENTS.

SUBJECT TO LOCAL HIGHWAY AUTHORITY APPROVAL				
20.03.2022	AMENDED IN ACCORDANCE WITH RHA COMMENTS	RPS	AMF	4
13.07.2022	BUS STOP ARRANGEMENT AMENDED	RPS	AMF	3
08.11.2021	AMENDED TO ACCORD WITH DESIGN PARAMETER REVIEW	RPS	AMF	1
07.11.2021	FIRST ISSUE	AMF	RPS	1
Date	Revisions	Drawn	Checked	Rev
07/11/2021				
PRELIMINARY				
NORTH EAST 0191 256602				
YORKSHIRE 0113 5320500				
Client HARWORTH				
Project HOUGHTON MAIN BARNESLEY				
Title SECTION 278 WORKS TO PARK SPRING ROAD GENERAL ARRANGEMENT				
DO NOT SCALE	Scale @ A2: 1:200	Drawn	AMF	Checked RPS
Job No	Y21011	Drawn	D1000	Date: 07.11.2021
				Rev 4

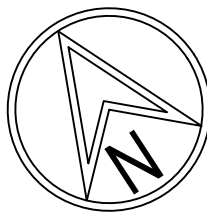
STREET LIGHTING IN ACCORDANCE WITH BARNESLEY MBC REQUIREMENTS

SEE PLAN BELOW FOR CONTINUATION

SEE PLAN ABOVE FOR CONTINUATION

SEE PLAN BELOW FOR CONTINUATION

SEE PLAN ABOVE FOR CONTINUATION



- GENERAL NOTES:**
- WHERE THE BASE ROAD BASE HAS BEEN USED AS A TEMPORARY RUNNING SURFACE DURING THE CONTRACT IT SHALL BE THOROUGHLY CLEANED AND POWER WASHED AS NECESSARY AFTER DRYING AND IMMEDIATELY BEFORE THE FINISH COURSE IS LAYED TO A COAT OF FINISHES.
 - ALL ROAD WORKS WITH A RADIUS OF 15m OR LESS SHALL BE FORMED WITH PROPRIETARY RADIUS KERS.
- HEALTH & SAFETY:**
- CONTRACTOR SHOULD BE AWARE OF GENERAL CONSTRUCTION RISKS TO PREVENT SLIPS, TRIPS AND FALLS AND TAKE NECESSARY PRECAUTIONS WITHOUT SPECIAL INSTRUCTION.
- ROADS & DRAINAGE:**
- CONTRACTOR TO PROVIDE TRENCH SUPPORTS AS APPROPRIATE AND ENSURE THAT PLANT REMAINS A SAFE DISTANCE FROM TRENCHES PRIOR TO INSTALLING DRAINAGE.
 - THE TIME THAT EXCAVATIONS ARE OPEN ON SITE SHOULD BE KEPT TO A MINIMUM AND ALL TRENCHES SHOULD BE SURROUNDED BY A BARRIER.
 - CONNECTIONS TO EXISTING SERVICES TO BE MADE BY APPROVED CONTRACTOR ONLY.
 - CONTRACTOR TO MAKE OPERATIVES AWARE OF ASSOCIATED DANGERS TO HEALTH SUCH AS LIFT TOPSIDES, HOLE IN ROAD AND RECOMMENDED PRECAUTIONS, ADEQUATE WEARARE FACILITIES AND PROTECTIVE CLOTHING TO BE PROVIDED AS REQUIRED.
 - UNPROTECTED MANHOLES MUST BE COVERED WITH LOCK-BEAMING MATERIALS AND SURROUNDED WITH BARRIER.
- Pipes & Cables:**
- CONTRACTOR TO OBTAIN ALL SERVICE RECORDS PRIOR TO WORK COMMENCING.
 - SERVICE RECORDS TO BE REFERRED TO PRIOR TO WORK COMMENCING. CONTRACTOR TO PROCEED WITH CAUTION AND SERVICES TO BE LOCATED BY HAND SIG AND PROTECTED ACCORDINGLY.
- EXCAVATIONS:**
- CONTRACTOR TO ENSURE RELEVANT MEASURES ARE TAKEN TO KEEP PLANT AND PEOPLE A SAFE DISTANCE FROM STEEP SLOPES DURING THE WORKS.
 - CONTRACTOR TO ENSURE THAT PROCEDURES ARE IN PLACE TO KEEP PEOPLE A SAFE DISTANCE FROM WORKING PLANT WHERE NECESSARY.
 - CONTRACTOR TO REFER TO GROUND INVESTIGATION REPORT FOR CONTAMINATION TESTS AND TO PROVIDE ADEQUATE RELEASE FACILITIES AND PROTECTIVE CLOTHING AS REQUIRED.
- DESIGN NOTES:**
- PROPOSED LEVELS HAVE BEEN BASED ON THE EXISTING TOPOGRAPHICAL SURVEY BY MIDLAND SURVEYING & ENGINEERING CONSULTING LTD. (MIDLANDS) (DATED 17/07/2021).
 - ALL WORKS TO COMPLY WITH CURRENT VERSION OF THE FOLLOWING DOCUMENTS:
 - DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB)
 - SPECIFICATION FOR HIGHWAY WORKS (SPEL)
 - LOCAL AUTHORITY DESIGN GUIDE AND SPECIFICATION
 - PRIOR TO COMMENCING WORKS THE CONTRACTOR SHOULD INVESTIGATE AND LOCATE AS NECESSARY ANY STATUTORY UNDERTAKERS EQUIPMENT WITHIN THE NEW ACCESS AND DISCUSS REQUIREMENTS FOR UNDERGROUND DESIGN AND PROTECTION WITH THE RELEVANT UNDERTAKER. CONTRACTOR TO APPLY FOR ROAD OPENING NOTICES ETC AS REQUIRED.
 - ORIGIN VALUES NOT AVAILABLE. ROAD CONSTRUCTION DETAIL SUBJECT TO CONFIRMATION OF ORIGIN VALUES. CONTRACTOR TO ALLOW FOR LAB TESTS TO BE UNDERTAKEN IN AGREEMENT WITH LOCAL AUTHORITY HIGHWAY ENGINEER PRIOR TO WORKS COMMENCING.
 - SLOPES GREATER THAN 1 IN 10 MAY REQUIRE STABILISATION. GEOTECHNICAL ENGINEER TO BE CONTACTED TO CONFIRM REQUIREMENTS.

SEE PLAN BELOW FOR CONTINUATION

YELLOW MARKING TO BUS LAYBY DIAG.1025.1 MARKINGS

YELLOW MARKING TO BUS LAYBY DIAG.1025.1 MARKINGS

DIAG 1008.1, 1041 & 1040 PROVIDED WITH REFLECTIVE DIRECTIONAL ROAD STUDS AT 9m CENTRES. STUDS TO BE ALIGNED IN CARRIAGEWAY TO THE LINING

DIAG 1008.1, 1041 & 1040 PROVIDED WITH REFLECTIVE DIRECTIONAL ROAD STUDS AT 9m CENTRES. STUDS TO BE ALIGNED IN CARRIAGEWAY TO THE LINING

DIAG 1040 PROVIDED WITH REFLECTIVE DIRECTIONAL ROAD STUDS AT 9m CENTRES.

ROAD MARKING NOTES	
DESCRIPTIONS	
1. ALL UNPAVED ROAD MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING: - TRAFFIC SIGN REGULATION AND GENERAL DIRECTIONS (TSRD) AND - TRAFFIC SIGN MANUAL CHAPTER 5 - ROAD MARKINGS	
2. THERMOPLASTIC ROAD MARKING COLOURS AS INDICATED BELOW. MATERIALS AND SKIDING RESISTANCE TO BE IN ACCORDANCE WITH WORKS SPECIFICATION.	
KEY:	
1008.1 JUNCTION CUE WAY PARALLEL LINE AND 1008.1 LINE MARK. 300 GAP. 200 WIDE. 300 SPACING. WHITE	
1008.1 ROAD CENTER LINE WARNING LINE. 8000 MARK. 3000 GAP. 150 WIDE. WHITE	
1008.4 JUNCTION. 800 MARK. 300 GAP. 200 WIDE. WHITE	
1010 EDGE OF CARRIAGEWAY. 1000 MARK. 1000 GAP. 150 WIDE. WHITE	
1012.1 EDGE OF CARRIAGEWAY. 150 WIDE CONTINUOUS LINE. WHITE	
1014 DIRECTIONAL WARNING ARROWS. 800 LONG. 300 WIDE HEAD. 200 WIDE TAIL. END. WHITE. 20m ARROWS ON EACH APPROACH LOCATED AT 30m & 60m FROM START OF TAPER TO TOP OF ARROW	
1025.4 BUS LAYBY MARKINGS. 1000m LINE AND 1000m LINE MARK. 1000 GAP. WITH 100m WIDE TEXT. 1000mm HIGH WITH 1000mm GAP	
1028 DIRECTIONAL WARNING LINE ARROWS. 800 LONG. 150 WIDE HEAD. (R, L) 1750 WIDE HEAD. (B) 500 WIDE HEAD. 300 WIDE TAIL. END. WHITE	
1039 BIFURCATION ARROW. 1800 LONG. 2100 WIDE @ HEAD. 200 WIDE TAIL. WHITE	
1040 OPPOSITE FLOW SEPARATION HATCHING. LINE 8000 LINE MARK. 3000 GAP. 10 WIDE. WHITE. HATCH 2000 SPACING. 200 WIDE. 45° TO TRAFFIC DIRECTION. WHITE	
1041 SAME DIRECTION FLOW SEPARATION HATCHING. LINE 8000 LINE MARK. 3000 GAP. 10 WIDE. WHITE. HATCH 2000 SPACING. 200 WIDE. 45° TO TRAFFIC DIRECTION. WHITE	

ROAD STUDS TO BE IN L&B	
KEY:	
■ B-DIRECTIONAL REFLECTING ROAD STUD. RED LENS FACING ONCOMING TRAFFIC. AMBER LENS FACING OPPOSING CARRIAGEWAY.	
■ B-DIRECTIONAL REFLECTING ROAD STUD. RED LENS FACING ONCOMING TRAFFIC. GREEN LENS FACING OPPOSING CARRIAGEWAY.	
■ SINGLE DIRECTIONAL REFLECTING ROAD STUD. GREEN LENS FACING ONCOMING TRAFFIC.	
■ SINGLE DIRECTIONAL REFLECTING ROAD STUD. RED LENS FACING ONCOMING TRAFFIC.	

SUBJECT TO LOCAL HIGHWAY AUTHORITY APPROVAL

Date	Revised	Drawn	Checked	Rev
28.08.2022	UPDATED TO SUIT R&A COMMENTS	RPS	AMF	1
13.07.2022	REDO TOP ARRANGEMENTS AMENDED	RPS	AMF	4
07.07.2022	BUS STOP LAYBY REFERENCE CORRECTED	RPS	AMF	3
08.11.2021	APPROVED TO ACCORD WITH DESIGN PARAMETER REVIEW	RPS	AMF	1
07.11.2021	FIRST ISSUE	AMF	RPS	1

PRELIMINARY



Client
HARWORTH

Project
**HOUGHTON MAIN
BARNSELEY**

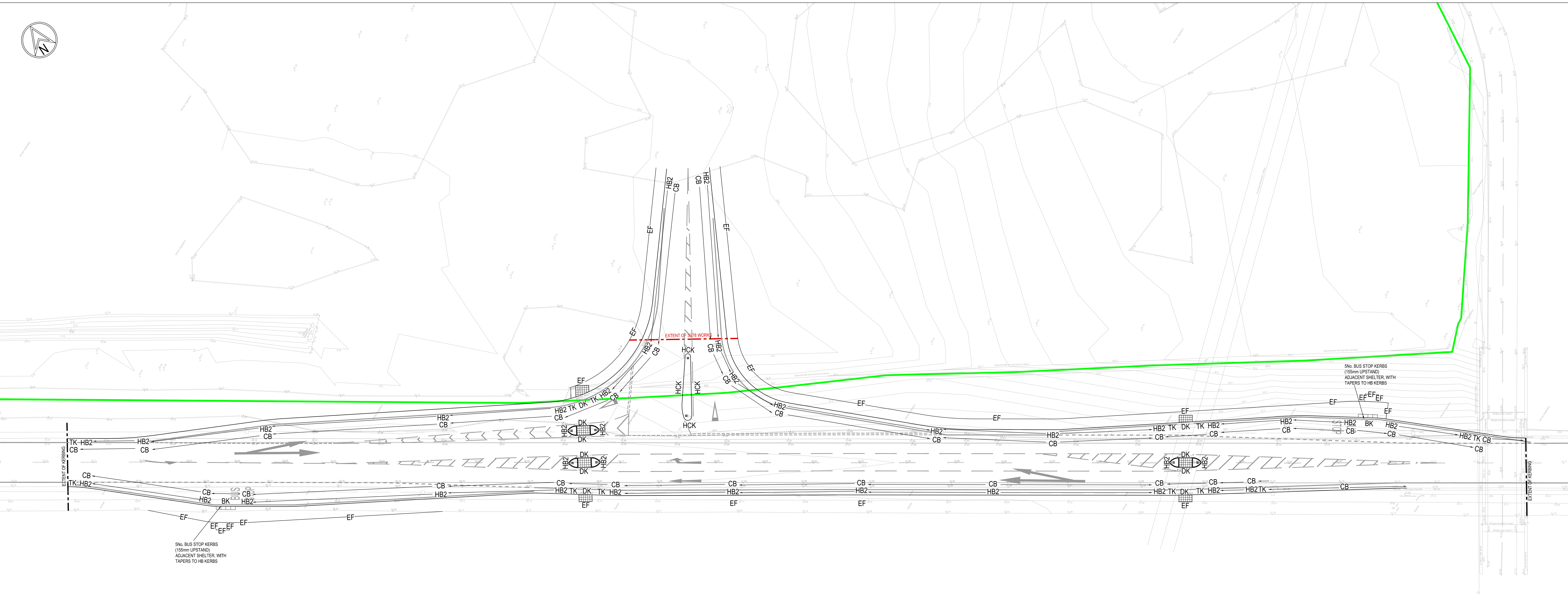
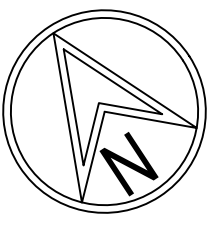
Title
**SECTION 278 WORKS TO PARK SPRING ROAD
ROAD MARKINGS ARRANGMENT**

DO NOT SCALE	Scale @ A2: 1:200	Drawn	AMF	Checked	RPS	Date	07.11.2021
Job No	Y21011	Draw No	D1003	Rev	5		

SEE PLAN ABOVE FOR CONTINUATION

SEE PLAN ABOVE FOR CONTINUATION

SEE PLAN BELOW FOR CONTINUATION



DESIGN NOTES	
ALL KERBS TO BE HB2 EXCEPT DROPPED KERBS AT PEDESTRIAN CROSSINGS AND BEAM KERB DRAINS	
EF	EXISTING FINISH
HB2	150x250mm HALF BATTERED KERB (150mm UPSTAND)
CB	250x125mm CHANNEL BLOCK
DK	125x150mm BALLNOSED DROPPED KERB (FROM 50mm TO 60mm UPSTAND)
TK	150x250mm TRANSITION KERB (HB2 TO DN)
BK	50x150mm FLAT TOP EDGING
EF	BUS STOP KERB (150mm UPSTAND)
HCK	HIGH CONTAMINANT KERB (TIEF KERB OR SIMILAR)

- GENERAL SAFETY NOTES:**
- WHERE THE BAG ROAD BASE HAS BEEN USED AS A TEMPORARY RUNNING SURFACE DURING THE CONTRACT IT SHALL BE THOROUGHLY CLEANED AND POWER WASHED AS NECESSARY AFTER DRYING AND IMMEDIATELY BEFORE THE FINISH COURSE IS Laid A THICK COAT OF BITUMEN (EMULSION CLASS A4-40 OR A41) TO BEAPPLIED AT A RATE OF 1.0kg/m² (175lb/1000 SQ METER)
 - ALL TRENCH KERBS WITH A RADIUS OF 150mm OR LESS SHALL BE FORMED WITH PROPRIETARY RADIUS KERBS
- HEALTH & SAFETY:**
- CONTRACTOR SHOULD BE AWARE OF GENERAL CONSTRUCTION RISKS TO PREVENT SLIPS, TRIPS AND FALLS AND TAKE NECESSARY PRECAUTIONS WITHOUT SPECIAL INSTRUCTION
- ROADS & DRAINAGE**
- CONTRACTOR TO PROVIDE TRENCH SUPPORTS AS APPROPRIATE AND ENSURE THAT PLANT REMAINS A SAFE DISTANCE FROM TRENCHES PRIOR TO INSTALLING DRAINAGE
 - THE TIME THAT EXCAVATIONS ARE OPEN ON SITE SHOULD BE KEPT TO A MINIMUM AND ALL TRENCHES SHOULD BE SURROUNDED BY A BARRIER
 - CONNECTIONS TO EXISTING SEWERS TO BE MADE BY APPROVED CONTRACTOR ONLY
 - CONTRACTOR TO MARK OPERATING NAME OR ASSOCIATED DANGERS TO HEALTH SUCH AS LEFT OPEN RIGGS (WELL DREADED) AND RECOMMENDED PRECAUTIONS. ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING TO BE PROVIDED AS REQUIRED
 - UNPROTECTED MANHOLES MUST BE COVERED WITH LOAD BEARING MATERIALS AND SURROUNDED WITH BARRIER
- PEES & CABLES**
- CONTRACTOR TO OBTAIN ALL SERVICE RECORDS PRIOR TO WORKS COMMENCING
 - SERVICE RECORDS TO BE REFERRED TO PRIOR TO WORK COMMENCING CONTRACTOR TO PROCEED WITH CAUTION AND SERVICES TO BE LOCATED BY HAND DIG AND PROTECTED ACCORDINGLY
- EXCAVATIONS**
- CONTRACTOR TO ENSURE RELEVANT MEASURES ARE TAKEN TO KEEP PLANT AND PEOPLE A SAFE DISTANCE FROM STEEP SLOPES DURING THE WORKS
 - CONTRACTOR TO ENSURE THAT PROCEDURES ARE IN PLACE TO KEEP PEOPLE A SAFE DISTANCE FROM WORKING PLANT WHERE NECESSARY
 - CONTRACTOR TO REFER TO GEOTECHNICAL INVESTIGATION REPORT FOR CONTAMINATION TESTS AND TO PROVIDE ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING AS REQUIRED
- DESIGN NOTES**
- PROPOSED LEVELS HAVE BEEN BASED ON THE EXISTING TOPOGRAPHICAL SURVEY BY MICHAEL SURVEYING & ENGINEERING DRAWING LTD (HWS/MS/008-A1 DATED 21.07.2017)
 - ALL WORKS TO COMPLY WITH CURRENT EDITIONS OF THE FOLLOWING DOCUMENTS:
 - DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB)
 - SPECIFICATION FOR HIGHWAY WORKS (SHW)
 - LOCAL AUTHORITY DESIGN GUIDE AND SPECIFICATION
 - PRIOR TO COMMENCING WORKS THE CONTRACTOR SHOULD INVESTIGATE AND LOCATE AS NECESSARY ANY EXISTING UNDERGROUND EQUIPMENT WITHIN THE WORK ACCESS AND DISCUSS REQUIREMENTS FOR LOWERING/VERSION AND PROTECTION WITH THE RELEVANT UNDERTAKER
 - ALL WORKS WITHIN THE PUBLIC HIGHWAY TO MEET LOCAL AUTHORITY REQUIREMENTS. CONTRACTOR TO APPLY FOR ROAD OPENING NOTICES ETC AS REQUIRED
 - CBR VALUE NOT AVAILABLE. ROAD CONSTRUCTION DETAIL SUBJECT TO CONFIRMATION OF CBR VALUES. CONTRACTOR TO ALLOW FOR LAB TESTS TO BE UNDERTAKEN IN AGREEMENT WITH LOCAL AUTHORITY HIGHWAY ENGINEER PRIOR TO WORKS COMMENCING
 - SLOPES GREATER THAN 1 IN 6 MAY REQUIRE STABILISATION. GEOTECHNICAL ENGINEER TO BE CONTACTED TO CONFIRM REQUIREMENTS

**SUBJECT TO LOCAL HIGHWAY
AUTHORITY APPROVAL**

28.03.2022	SOUTHERN KERB TIE IN AMENDED TO ADD DRAINAGE. CDR:ADK/22	RPS	AMF	4
13.01.2022	BUS STOP ARRANGEMENT AMENDED	RPS	AMF	3
18.11.2021	APPROVED TO ACCORD WITH DESIGN - PARAMETER REVIEW	RPS	AMF	1
07.11.2021	FIRST ISSUE	AD	AMF	1

Date	Revised	Drawn	Checked	Rev
07/11/2021				

PRELIMINARY

NORTH EAST 0/91 255662			
YORKSHIRE 0113 332050		www.rwo.co.uk RWO GROUP	
Client HARWORTH			
Project HOUGHTON MAIN BARNESLEY			
Title SECTION 278 WORKS TO PARK SPRING ROAD KERBING ARRANGEMENT			
DO NOT SCALE	Scale @ A2: 1:200	Drawn: AD	Checked: AMF
Job No: Y21011	Drawn: D1004	Rev: 4	Date: 07.11.2021