Scheme Title	**Dewsbury Riverside - High**
Job No.	**48206**
Doc Ref.	
Revision	
Date	**27/07/2023**

Kirklees COUNCIL

Comment Number	Design Reviewer (Kirklees)	Drawing / Document Name
1.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
2.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
3.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
4.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**

5.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
6.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
7.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
8.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
9.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**

10.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
11.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
12.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
13.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
14.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**

15.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
16.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
17.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
18.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
19.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**

20.0	**Michael Rodgers**	**Highway Phase 1 and 2 - Highways Drainage**
21.0	**Michael Rodgers**	**Highways Typical Sections**
22.0	**Michael Rodgers**	**Micro drainage Output**
23.0	**Michael Rodgers**	**Micro drainage Output**
24.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
25.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
26.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
27.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
28.0	**Michael Rodgers**	**Surface Water Drainage Strategy**

29.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
30.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
31.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
32.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
33.0	**Michael Rodgers**	**Surface Water Drainage Strategy**
34.0	**Michael Rodgers**	**Surface Water Drainage Strategy**

hway Drainage Proposals

Drawing / Document Number	Revision	Date
DR-BH-XX-XX-DR-C-00-2170	A	No Date Included
DR-BH-XX-XX-DR-C-00-2170	A	No Date Included
DR-BH-XX-XX-DR-C-00-2170	A	No Date Included
DR-BH-XX-XX-DR-C-00-2170	A	No Date Included

Specific CD 526 Calculations required for Gully Frequency	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170 **Specific CD 526 Calculations required for Gully Frequency**	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**

DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
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DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**

DR-BH-XX-XX-DR-C-00-2170	**A**	**No Date Included**
DR-BH-XX-XX-DR-C-00-2163	**P02**	**Nov-22**
SWS-PROP-REV3 ALL STORMS.PDF	**N/A**	**02/11/2022**
SWS-PROP-REV3 ALL STORMS.PDF	**N/A**	**02/11/2022**
0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**
0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**
0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**
0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**
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0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**
0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**
0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**
0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**
0048206-BHE-XX-XX-RP-C-DR01	**Rev 05**	**18/02/2022**

Cultural Heart Project - Preliminary Design com
Design Reviewer comments (Kirklees)
No Drawing Number within the Drawing Frame. Apply the Standard Drawing Name Convention to include an appropriate drawing Number for future reference.
The Buro Happold Drawing Frames do not include a dates within the drawing for creation, checking and approval within the main body of the frame. Confirm the drawing frame satisfied the Standards for Drawing Frames.
Indicate the project chainage on the drawings. It will make identification of issues easier.
Review and amend the proposed lengths for Gully Connections. Shorten the gully connections to 12 metres maximum.

Designer to provide calculations for Gully Spacing in accordance with CD 526 - Spacing of Road Gullies to confirm frequency of proposals during detailed Design Stage.
Designer shall review the proposed surface water collection to the Forge Lane / Ravensthorpe Road Junction. Compliance with CD 526 and confirmation of any drainage requirements to the footway / cycleway area during detailed design stage.
Private (Non-Highway Drainage is indicated being discharged into the Adopted / Highway Drainage System. This is not permitted. See the requirements within the Kirklees Council "Highways Guidance Note - Highways, SuDS, and Private Drainage". Car Park adjacent to Attenuation Tank #2
Designer to indicate the proposed drainage to what appears to be a parking area within the Turning Head to the No through Road section of Ravensthorpe Road. No drainage is indicated. Is this contributing to the Highway Drainage System? See note above regarding the Highway Guidance Note.
Designer to review the proposals to the gully positions to the revisions to the original No-through road section of Ravensthorpe Road. The proposed gully positions to not appear to suit the low points/ revisions to the kerb line.

Designer to review the proposals to the gully positions to the Ravensthorpe Road (Through Road Section). Where the kerb line is revised to remove existing parking bays, the gully positions will need to be revised.
The Designer shall review and consider the footway drainage to Ravensthorpe road where the footway is widened. The threshold level for the houses and existing carriageway level will restrict the ability to achieve the necessary crossfall to discharge surface water from the footway. The Designer shall demonstrate consideration of footway drainage.
Reconsider the Location of the Chamber connection to the existing drainage network. This is located to the centre of the carriageway. This would require the full closure of the carriageway to Access / Open / Maintain. Offset to one side of the carriageway. Demonstrate the Designer has considered Future maintenance of all drainage assets.
Designer to demonstrate the proposed changes to the surface water collection / gullies to the No-through Road Section of Ravensthorpe Road where this is designated as a cycle lane only with realigned kerbing.
Demonstrate how the surface water from the roundabout approached / circulatory carriageway enters into the adjacent swales. No Detail is proposed.

Demonstrate a detail showing the interface of Swale at pedestrian and cycle crossing points
Designer to reconsider the location of gullies at the dropped crossings tot eh Ravensthorpe Road Junction. The Gullies are within the dropped crossing. They could be moved to immediately outside the dropped crossings as indicated elsewhere.
Designer to demonstrate how the assumed Invert Level of 40.25AOD was determined as the invert for the existing drain. An adjacent chamber within what appears to be the same drainage run indicates an invert level of 41.55 AOD. Designer to confirm levels to avoid assumptions. (Ravensthorpe Road (No through road section))
Designer may wish to reconsider the length of Swale to the eastern side of the proposed highway at the pinch point where shared use footway / cycleway is proposed for a short length. Suggest this 8-10m length could merit removal to simplify the arrangements. (Immediately adjacent to the cut line)
Drawing Key / Annotation indicates Check Dams on Attenuation Basins. Designer to confirm if these are proposed, as it is not clear from the drawing.

Are trees to be planted within the Swales? This would limit the ability to maintain the perforated drainage. Also despite a geotextile wrap, roots will ingress into the filter drainage.
Demonstrate consideration of the surface water from adjacent land at the highway boundary where proposed earthworks tie into existing ground. Also demonstrate consideration for groundwater drainage within cutting. Demonstrate there is no requirement for a Filter Drain at the toe of embankment / cutting.
The 1:100 year calculations indicate flooding. The Designer shall demonstrate the extent of the flooding and determine that flooding does not extend beyond the highway boundary. The Designer shall demonstrate the results of the sensitivity testing in accordance with CG 501 Clause 4.4 Phase 1 Only
The Micro drainage analysis has been undertaken with FSR Rainfall Modelling. Why was FSR Data selected rather than FEH (Flood Estimation Handbook? The FEH data is based upon more recent rainfall data, with enhanced statistical analysis, therefore based upon the Flooding identified within the 100 Year return period, we would expect to see FEH data. The results may have a positive impact.
Section 2, Paragraph 2.1, why no reference to the Design Manual for Roads and Bridges within the Design Codes and Standards? Also, Multiple references to British Standards would be anticipated.
Section 2, Paragraph 2.2 references a level of protection including 1:100 year with 40% Climate Change. The Microdrainage output within the Planning application. This includes 30% only. Amend the Microdrainage output within the Planning application accordingly to match the information within the Drainage Strategy.
Check reference to 1080mm / 1050mm Diameter Yorkshire Water Sewer. Confirm which is correct through inspection. KomPASS system indicates 1080mm Internal Diameter.
Clause 2.4.2 - Designers expectation that Greenfield Run Off will be agreed with Yorkshire Water. Current correspondence does not give an indication that greenfield discharge would be agreed. How will the development be viable, if Yorkshire Water will not permit an appropriate discharge into their network?
The Masterplan Drainage Strategy identifies an allowance of 70% of the Swales Area . Demonstrate how this figure has been determined.

Section 2 Paragraph 2.7.2 Drainage Designer to correct the statements regarding Climate Change Allowances.
Designer to determine the discharge rates for the Highway Calculations have been agreed with Yorkshore Water for entry into the existing Sewerage System.
Drainage Designer to confirm if any planting is proposedwithin the Swales? The Designers response to the Road Safety Audit seems to indicate trees within the Swales, which raises concerns regarding future maintenance and root ingress into the filter drain.
Clause 2.9 - Drainage Designer to confirm the values for Climate Change used within the Micro drainage Assessment. See Point above.
Clause 2.10 Pollution Control - Intrigued to understand how the Pollution control to the main access road within the Swales and Basins is achieved?
Clasue 2.11 - Design for Ecxeedence - Demonstrates flood would not impact the development, but has the potential to flood existing building / school adjacent to the development boundary as a result of the loss of cropped farmland. Designer to demonstrate exceedence through modelling.

nments log

Conditional / Advisory	Discipline
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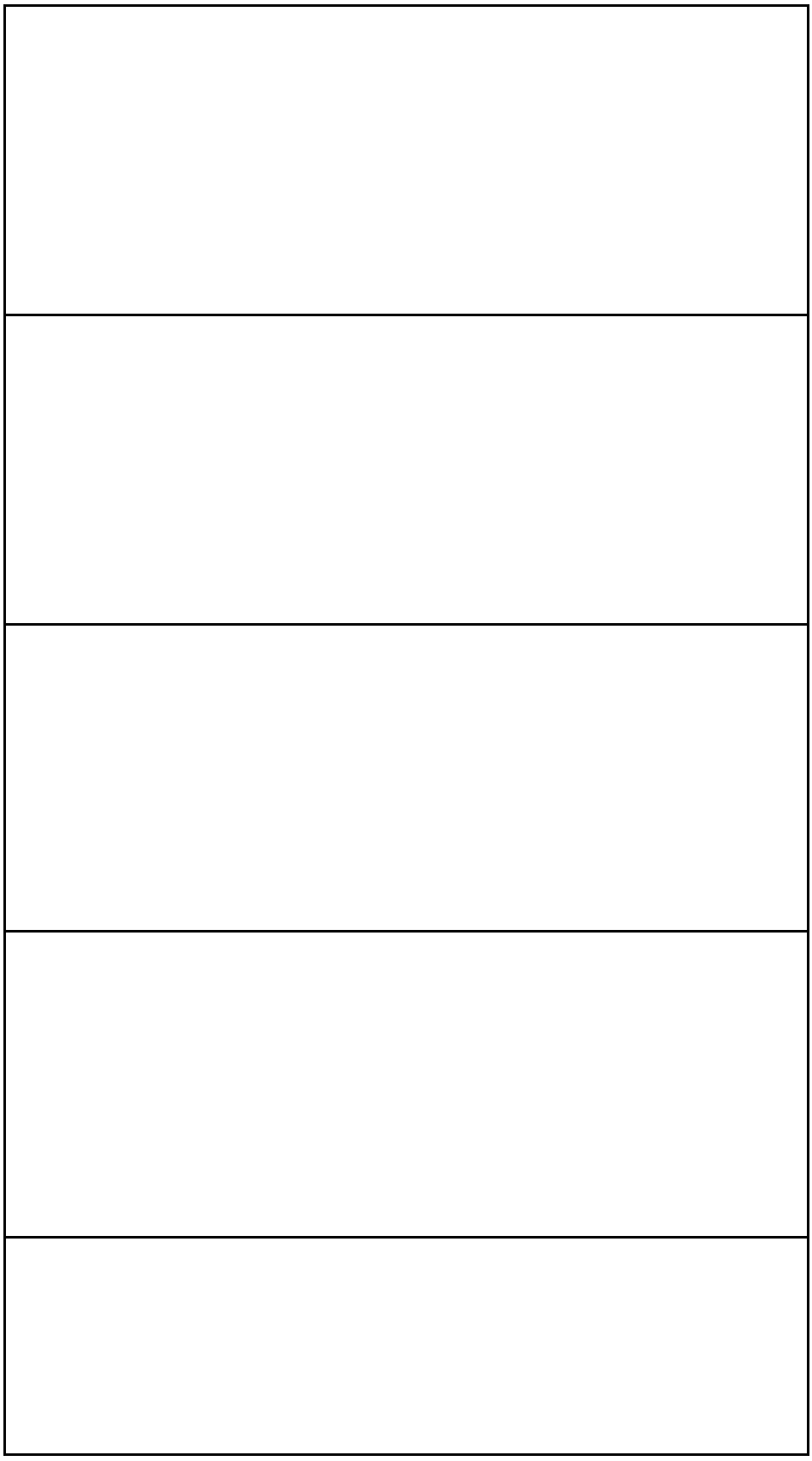
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Designer Response



Design Reviewers Response (Kirklees)	**Design Reviewers Comment Closed out? (Kirklees)**	**TA Sign off (Kirklees)**

