

DESIGNER CONSIDERATION:
CONSTRUCTION SEQUENCE

- a. ERECT THE SCAFFOLDING LOCALLY FOR THE STRENGTHENING WORK OF VERTICAL TRUSS MEMBERS. (STAGE 1)
- b. ERECT THE LIGHT DUTY SCAFFOLD LOCALLY. (STAGE 1)
- c. STRENGTHENING WORK FOR THE VERTICAL TRUSS MEMBERS. SPIDER CRANE/ FLEXI-MOVER IS USED IN THE CONTRACTOR PROPOSAL. (STAGE 1)

1. EXISTING TIMBER DECK WEIGHT = 0.44KN/m².
2. MAXIMUM SCAFFOLD WEIGHT = 0.87KN/M ON ESB1;
0.54KN/M ON ESB2; (SCAFFOLD CAN ONLY BE
INSTALLED EVENLY FROM GRID 01 TO GRID 18)
3. EQUIPMENT / PLANT USED IN STAGE 1 - UNIC URW-094 -
MINI SPIDER CRANE, FLEXI-MOVER.
4. MAX. POINT LOAD OF EQUIPMENT / PLANT (INCLUDING
OPERATOR / WELDER) CONSIDERED AT THE SAME TIME
ON THE BRIDGE = 7.5kN (EACH AXLE) x2 = 15kN.
(NO OTHER IMPOSED LOAD IS ALLOWED)
5. ONLY ONE EQUIPMENT / PLANT WILL BE USED AT THE
SAME TIME ON THE BRIDGE.

DESIGNER CONSIDERATION:
CONSTRUCTION SEQUENCE

- REMOVE THE LOCAL SCAFFOLD. (STAGE 2)
- ERECT THE UNDERSIDE SCAFFOLD. (STAGE 2)
- REPLACE THE EXISTING TIMBER DECK. (STAGE 2)

1. NEW GRP DECK = 0.31KN/m².
2. MAX. POINT LOAD DUE TO UNDERSIDE SCAFFOLD ACTED ON EACH VERTICAL TRUSS MEMBER = 10.6KN.
(SCAFFOLD IS ASSUMED TO BE INSTALLED EVENLY ON THE EXISTING TRUSS).
3. DESIGN IMPOSED LOAD = 1.5kPa (EVENLY DISTRIBUTED).
4. EQUIPMENT /PLANT USED IN STAGE 2 = TMC 060 TRACKED PICK & CARRY CRANE / FLEXI-MOOR.
5. MAX. POINT LOAD OF EQUIPMENT / PLANT INCLUDING OPERATOR WILL BE CONSIDERED AT THE SAME TIME ON THE BRIDGE = 5.25KN (EACH AXLE) X 2 = 10.5KN.
6. ONLY ONE EQUIPMENT / PLANT WILL BE USED AT THE SAME TIME ON THE BRIDGE.

**DESIGNER CONSIDERATION:
CONSTRUCTION SEQUENCE**

- REMOVE THE UNDERSIDE SCAFFOLD. (STAGE 3)
- INSTALL NEW OVER DECK. TMC 060 TRACKED PICK & CARRY CRANE/ FLEX-MOVER IS USED IN THE CONTRACTOR PROPOSAL. (STAGE 3)
- INSTALL PARAPET (STAGE 3)

1. NEW GRP DECK = 0.31KN/m².
2. DESIGN IMPOSED LOAD = 1.5kPa (EVENLY DISTRIBUTED).
3. MACHINERY USED IN STAGE 3 = TMC 060 TRACKED PICK & CARRY CRANE, FLEXI-MOVER.
4. MAX. POINT LOAD OF EQUIPMENT/PLANT (INCLUDING OPERATOR, WELDER) CONSIDERED AT THE SAME TIME ON THE BRIDGE = 5.25KN (EACH AXLE) x2 = 10.5KN.
5. ONLY ONE EQUIPMENT / PLANT WILL BE USED AT THE SAME TIME ON THE BRIDGE.

1. **LOADING CONSIDERED ON THE BRIDGE:**
DEAD LOAD
 - ASSUMED SELF-WEIGHT OF 450mm DIA. PIPELINES = 0.6kN/m².
 - ASSUMED SELF-WEIGHT OF 600mm DIA. PIPELINES = 0.85kN/m².
 - NEW GRP DECK = 0.31kN/m².**IMPOSED LOAD**
 - FLEETRIAN / CYCLING UDL = 2.94kN/m².
 - CONCENTRATED LOAD = 10kN.
 - SERVICE VEHICLES ARE CONSIDERED NOT TO BE CARRIED ON THE BRIDGE.**WIND LOAD**
 - PEAK VELOCITY PRESSURE $q_p(z) = 0.86kN/m^2$
2. **ASSUMPTION DURING CONSTRUCTION:**
 - CONSTRUCTION PERIOD = 2 YEARS.
 - THE BRIDGE WILL NOT BE IN USE DURING THE CONSTRUCTION.
 - THE EQUIPMENT / PLANT WILL BE OPERATED / TRANSPORTED IN BETWEEN THE 2 MAIN WATER PIPES.
 - ONLY ONE EQUIPMENT / PLANT WILL BE USED AT THE SAME TIME ON THE BRIDGE.

PROPOSED STEEL MEMBER SCHEDULE		
REF.	STEEL MEMBER SIZE	GRADE
NSB1	UC 152x152x23	S355
NSB2	UC 152x152x23	S355
NSB3	UC 152x152x23	S355
NSB4	CHS 76.1x5.0	S355
NSB5	UB 254x146x31	S355
NSB6	UB 203x133x25	S355
NSC1	UC 152x152x23	S355
NSC2	CHS 88.9x8.0	S355
NBR1	CHS 76.1x5.0	S355

Project:

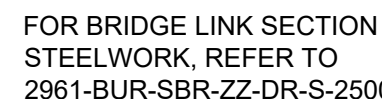
DOLGARROG PIPE BRIDGE
CONWY

 EXISTING ABOVE GROUND VALVE HOUSING

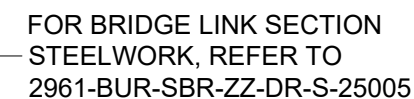
1. ALL LEVELS ARE IN METERS (m) AND DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE STATED.
2. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NATIONAL STRUCTURAL STEELWORK SPECIFICATION FOR BUILDING CONSTRUCTION.
3. ALL PROPOSED STEELWORK SHALL BE GALVANISED AND GRADE S355.
4. ALL WELDING SHALL BE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE STATED. GALVAFOID COATING SYSTEM TO BE APPLIED AFTER WELDING AND OVERCOAT TO A COLOUR.
5. ALL STRUCTURAL STEEL TO BE CLEANED OF LOOSE SCALE AND ANTI RUST.
6. ALIGN STRUCTURAL MEMBERS ACCURATELY TO THE SPECIFIED TOLERANCE IN ACCORDANCE WITH THE NATIONAL STRUCTURAL STEELWORK SPECIFICATION FOR BUILDING CONSTRUCTION.
7. BOLTED CONNECTIONS UTILISE MINIMUM CLASS 8.8 TO BS EN 1993-1-8:2005.
8. EXISTING STEELWORK CORROSION TO BE TREATED BY CLEANING AND PAINTED WITH CARBOXIDE ANTI-CORROSIVE METAL PRIMER.
9. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER BURROUGHS PROJECT DRAWINGS AND SPECIFICATIONS.

1. EWP STRUCTURAL DIMENSION SURVEY
DRAWINGS "DPB-8737-EWP-XX-ZZ-DR-Y-0100",
"0101" & "0102", RECEIVED ON 09/06/2021.
2. EWP TOPOGRAPHIC SURVEY
"DPB-8737-EWP-XX-ZZ-DR-Y-0103", RECEIVED
ON 02/12/2021.
3. SURVEY OPERATIONS TOPOGRAPHIC
SURVEY "21268 (ID 19813) RECEIVED ON
01/02/2022.
4. LEWIS THRUST BLOCK SURVEY
"2961-LW-XX-XX-M2-C-00001" RECEIVED ON
10/06/2022.

1. CONNECTION DETAILS SHOWN ON BURROUGHS DRAWINGS ARE TYPICAL DETAILS ONLY. ALL OVERDECKING CONNECTION DETAILS ARE TO BE DESIGNED AND CONFIRMED BY THE APPOINTED FABRICATOR.
2. FABRICATOR TO CHECK ANY DISCREPANCIES BETWEEN SITE SURVEY INFORMATION, BURROUGHS CONSTRUCTION PACK AND ACTUAL ON-SITE CONDITIONS. ANY DISCREPANCIES / DEVIATIONS TO BE COMMUNICATED TO BURROUGHS AND DCWW IMMEDIATELY.



SCALE 1:100



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