

GHP Architects

Empire House
Mulcture Hall Road
Halifax
HX1 1SP
FAO Steve Bell

Dear Sirs

RE: Chapel Hill, Linthwaite Proposed Car Parking Deck Structural Intent Summary

We write to confirm structural design intent for the proposed car parking deck, associated with planning application to redevelop the adjacent building into residential dwellings. The proposed car parking area is heavily constrained due to existing ground levels (being approximately 2m lower than the adjacent access gate level), tree root protection areas and the presence of a 130m long (approx.) culverted watercourse (classified as an EA main River).

GHP Architects have provided a site plan which indicates the position and alignment of the culvert. Beyond this, a visual inspection of the culvert has been undertaken and photos are shown below (video is available if considered of benefit).

In order to manage these requirements and provide a compatible solution, the development proposals comprise the construction of a steel framed, raised platform parking deck. Where the proposed arrangement has been designed to accommodate and take account of the following:

- From visual inspection, the culvert appears in reasonable condition, with no indication of defects or deterioration (stone arch construction).
- The loading applied to the culvert from an adopted highway is far in excess of the loading from a private car parking area for residential dwellings. In addition to this, the access space will prohibit any larger vehicles from accessing this area.
- The culvert runs beneath an adopted highway and numerous other private curtilages. As such, it is extremely unlikely that the entire section of culvert would ever be opened up. In conjunction with this, given the short length in question beneath our development site, there is very limited benefit to be gained from opening up the culvert in this situation.



- Compatible access level for vehicles using the existing driveway access off Waingate road.
- Elevated car parking deck to avoid conflict with existing tree root protection areas and no change to loading over the existing stone arch culvert.
- Column locations and associated foundations to the proposed deck have been located to avoid clashes with the existing stone retaining wall and watercourse culvert. In addition, alternative foundations have been proposed within the tree root protection areas (which have minimal cross-sectional area) to minimise risk of damage. The final foundation details will be subject to detailed design and confirmation of site conditions.
- The surface water will be directed through the car parking deck and into gravel trenches, to ensure tree root protection areas maintain current access to air and water.
- The existing stone wall will provide a barrier to the car park on the southern elevation (adjacent Waingate), whilst on other elevations (north and east), there will be a concrete upstand with pedestrian barrier and inset wheel stop.

The proposed design described above is further detailed on Dudleys drawings 23345-XX-XX-XX-DR-100 to 103, inclusive, all at revision C01 (Construction Issue).

We trust this will suffice to confirm the design for the planning consultation discussions which have been held to-date, in order to allow the scheme to progress the construction design stage.

Yours faithfully

A handwritten signature in black ink, appearing to read 'P. Dixon'.

Peter Dixon

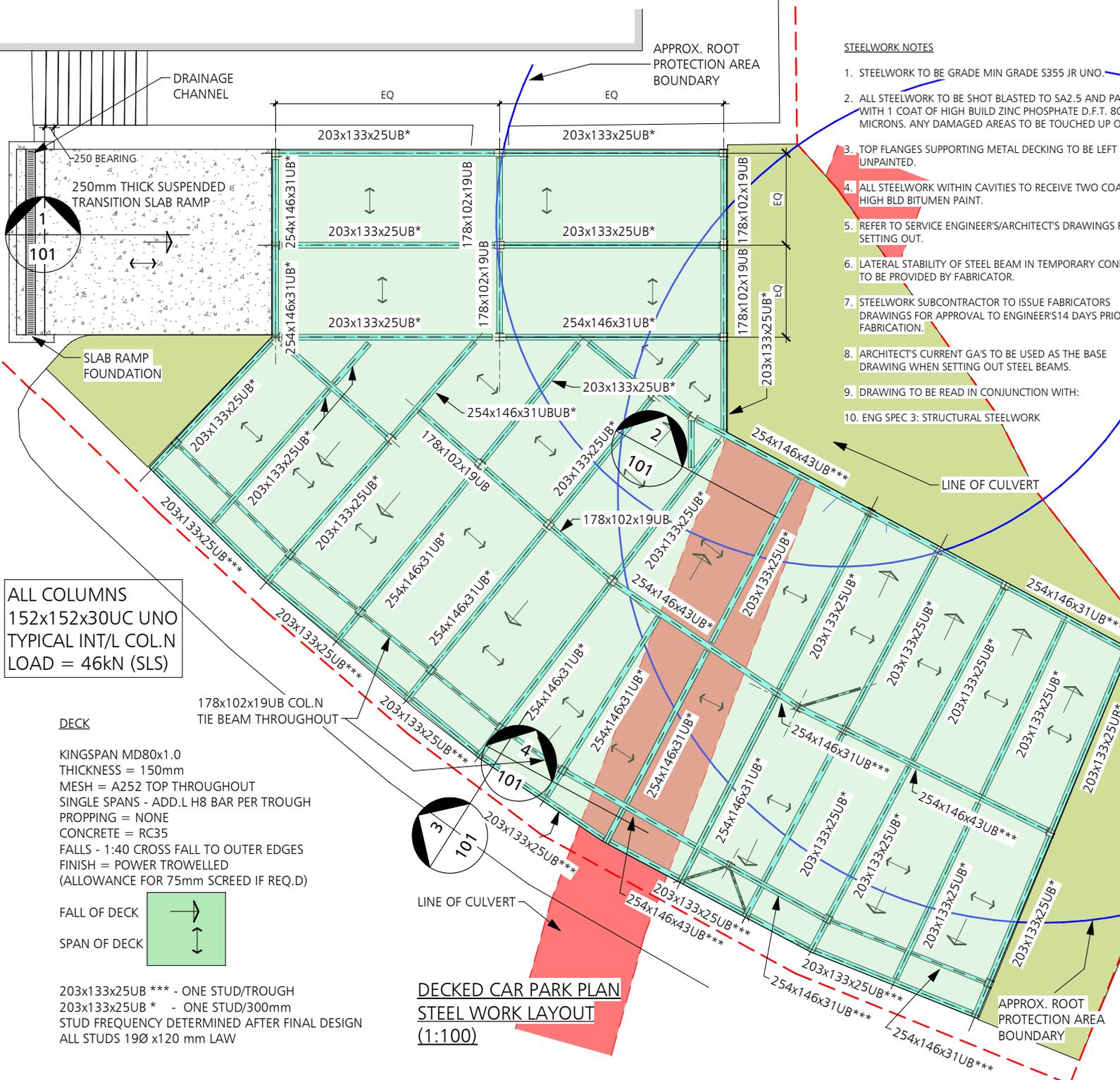
For Dudleys Consulting Engineers Ltd



Entrance to culvert to south of development site (van is driving over on Waingate)



Photograph of culvert construction



STEELWORK NOTES

1. STEELWORK TO BE GRADE MIN GRADE S355 JR UNO.
2. ALL STEELWORK TO BE SHOT BLASTED TO SA2.5 AND PAINTED WITH 1 COAT OF HIGH BUILD ZINC PHOSPHATE D.F.T. 80 MICRONS. ANY DAMAGED AREAS TO BE TOUCHED UP ON SITE.
3. TOP FLANGES SUPPORTING METAL DECKING TO BE LEFT UNPAINTED.
4. ALL STEELWORK WITHIN CAVITIES TO RECEIVE TWO COATS OF HIGH BLD BITUMEN PAINT.
5. REFER TO SERVICE ENGINEERS/ARCHITECT'S DRAWINGS FOR ALL SETTING OUT.
6. LATERAL STABILITY OF STEEL BEAM IN TEMPORARY CONDITION TO BE PROVIDED BY FABRICATOR.
7. STEELWORK SUBCONTRACTOR TO ISSUE FABRICATORS DRAWINGS FOR APPROVAL TO ENGINEERS 14 DAYS PRIOR TO FABRICATION.
8. ARCHITECT'S CURRENT GA'S TO BE USED AS THE BASE DRAWING WHEN SETTING OUT STEEL BEAMS.
9. DRAWING TO BE READ IN CONJUNCTION WITH:
10. ENG SPEC 3: STRUCTURAL STEELWORK

11. ALL STRUCTURAL DESIGN HAS BEEN CARRIED OUT IN ACCORDANCE WITH THE APPROPRIATE BRITISH STANDARDS, THE PRINCIPLES OF WHICH ARE:

- (a) BS6399:2:1997 WIND LOADS
- (b) BS6399:1:1996 DESIGN LOADS
- (c) BS5950:1:2000 STRUCTURAL STEELWORK
- (d) BS5950:5:1998 COLD ROLLED ELEMENTS
- (e) BS8110:1:1997 STRUCTURAL CONCRETE.
- (f) BS5628:1:2005 USE OF MASONRY.

DESIGN SUPERIMPOSED LOADS

- (a) CAR PARKS - 2.5kN/m²
- (b) PARTITIONS - NONE
- (c) STAIRS - NONE
- (d) ROOF - NONE

SUPERIMPOSED DEAD LOADS

- (a) SERVICES (OFFICE) 0.20kN/m²

12. CONNECTIONS TO BE DESIGNED FOR THE RELEVANT FORCES AS PER STRUCTURAL ENGINEERING CALCULATIONS

13. FIRE PROTECTION TO NEW STEELWORK TO COMPLY WITH CURRENT BUILDING REGULATION REQUIREMENTS AND TO ARCHITECT'S DETAILS.

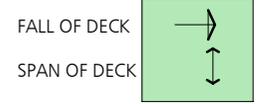
14. ALL BELOW GROUND STEELWORK IS TO BE ENCASED IN MIN. 100mm C28/35 CONCRETE REINFORCED WITH D49 WRAPPING MESH (MINIMUM 300mm LAPS). LENGTHS TO BE ENCASED IN CONCRETE ARE TO REMAIN UNPAINTED AND FREE FROM OIL, GREASE, DIRT, LOOSE RUST, AND MILL SCALE. APPLY 2 COATS OF RIW TOUGHSEAL TO CONCRETE/CONCRETE JUNCTION AND STEEL/CONCRETE JUNCTION, LAPPED TO DPM/DPC TO MANUFACTURER'S SPECIFICATION AND DETAIL. CASING TO BE CONSTRUCTED PRIOR TO SLAB BEING CAST.

15. BASEPLATE HOLDING DOWN BOLTS TO BE CAST INTO FOUNDATIONS BY MAIN CONTRACTOR. BOLTS TO BE SUPPLIED AND SET OUT CONFIRMED BY STEEL FABRICATOR TO SUIT THEIR BASEPLATE DESIGN.

ALL COLUMNS
152x152x30UC UNO
TYPICAL INT/L COL.N
LOAD = 46kN (SLS)

DECK

KINGSPAN MD80x1.0
THICKNESS = 150mm
MESH = A252 TOP THROUGHOUT
SINGLE SPANS - ADD.L H8 BAR PER TROUGH
PROPPING = NONE
CONCRETE = RC35
FALLS - 1:40 CROSS FALL TO OUTER EDGES
FINISH = POWER TROWELLED
(ALLOWANCE FOR 75mm SCREED IF REQ.D)



203x133x25UB *** - ONE STUD/TROUGH
203x133x25UB * - ONE STUD/300mm
STUD FREQUENCY DETERMINED AFTER FINAL DESIGN
ALL STUDS 190 x120 mm LAW

**DECKED CAR PARK PLAN
STEEL WORK LAYOUT
(1:100)**

18.11.25	CONSTRUCTION ISSUE	AS	PD	C01
22.05.25	PRELIMINARY ISSUE	AS	PD	P02
DATE	REVISION DESCRIPTION	BY	CHK.	REV.

DUDLEYS
CONSULTING ENGINEERS

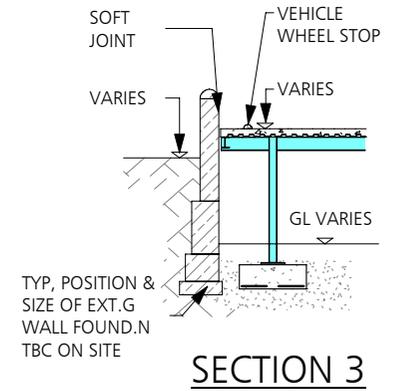
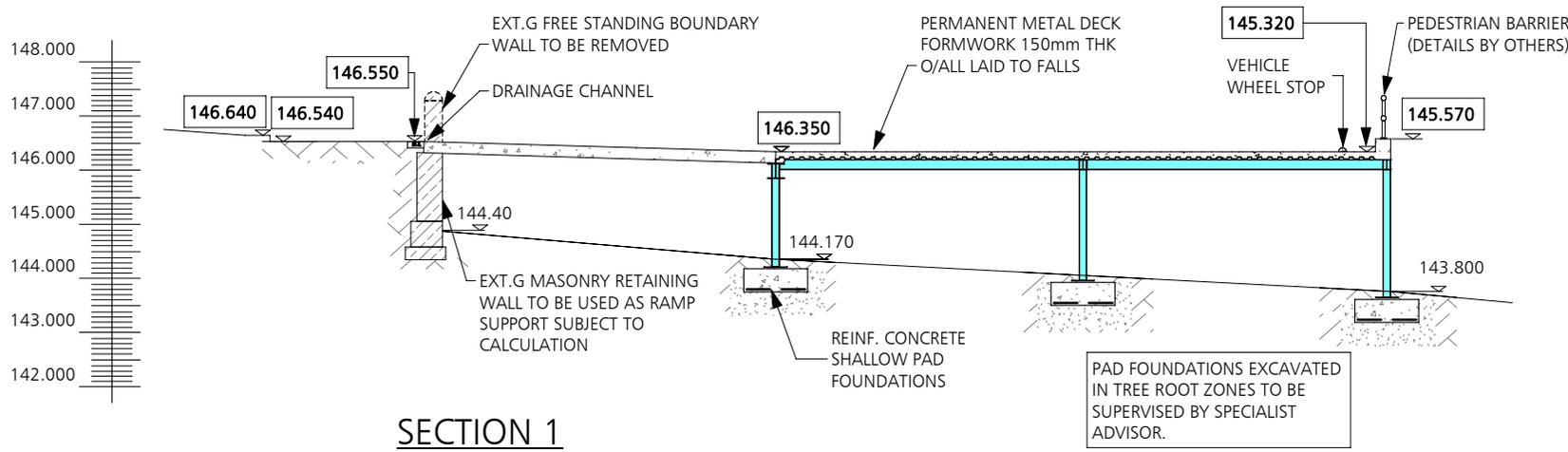
Tithe House
35 Town Street
Leeds, LS18 5LJ
0113 258 3611
info@dudleys.co.uk

PROJECT
**CHAPEL HILL
LINTHWAITE**

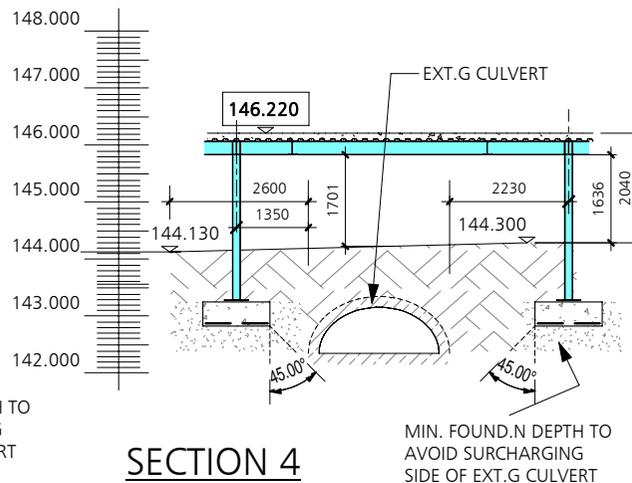
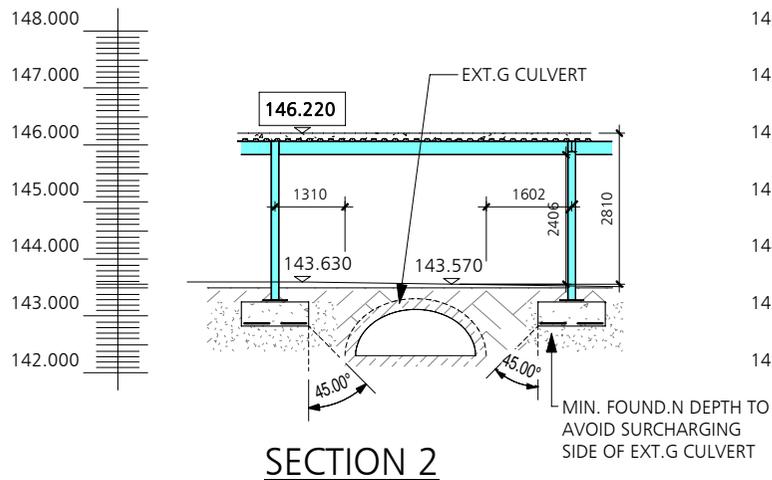
TITLE
**RAISED DECK CAR PARK
FLOOR GA**

SCALE	PAPER	STATUS
1:100	A3	CONSTRUCTION

DRAWING NO.	REV.
23345-XX-XX-XX-DR-100	C01



REFER TO 23345-100 FOR DECK PLAN AND SPECIFICATION



18.11.25	CONSTRUCTION ISSUE	AS	PD	C01
22.05.25	PRELIMINARY ISSUE	AS	PD	P02
15.04.25	FIRST ISSUE	AS	PD	P01
DATE	REVISION DESCRIPTION	BY	CHK.	REV.

DUDLEYS
CONSULTING ENGINEERS

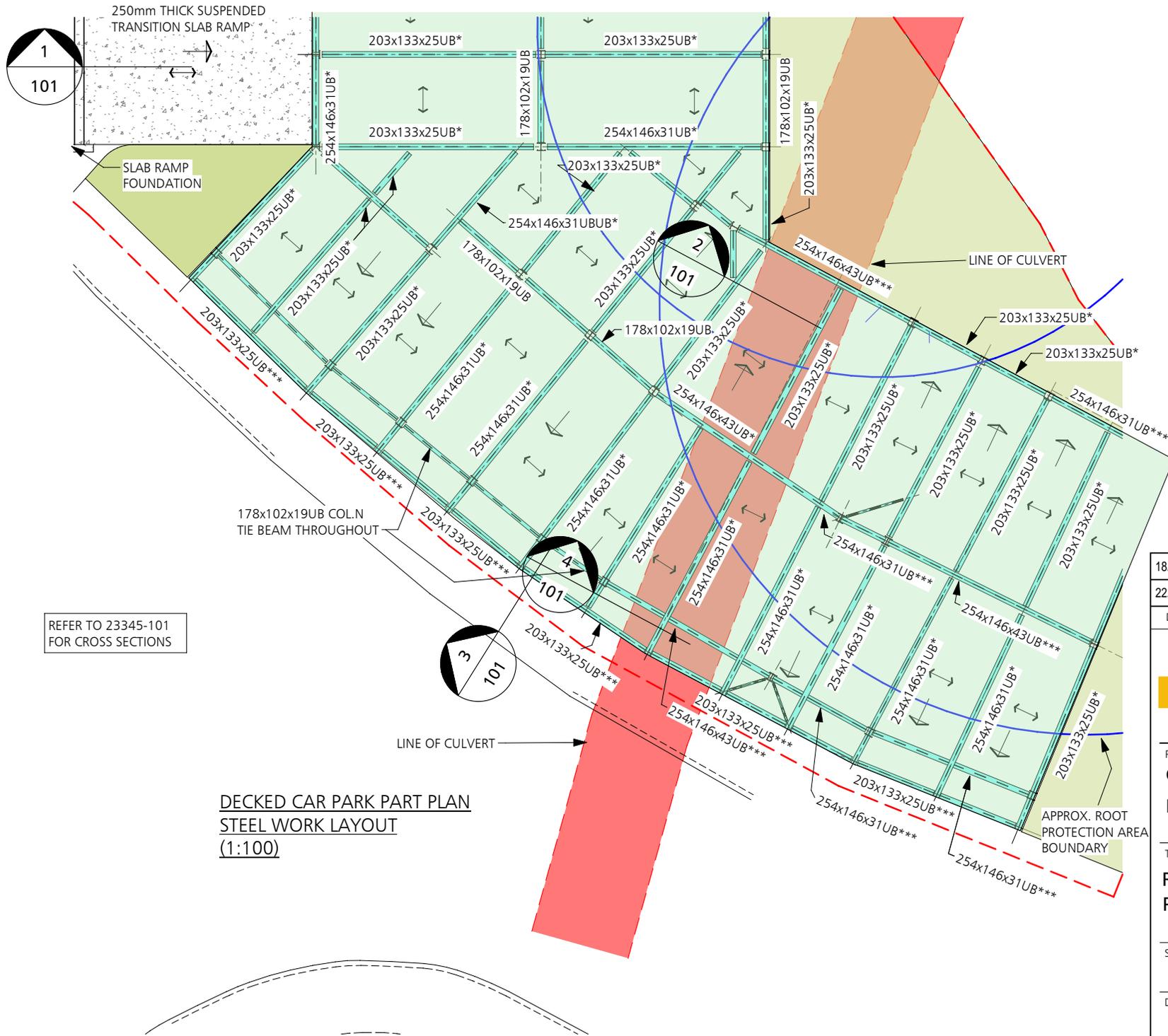
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PROJECT
**CHAPEL HILL
LINTHWAITE**

TITLE
**RAISED DECK CAR PARK
TYPICAL SECTIONS**

SCALE 1:100	PAPER A3	STATUS CONSTRUCTION
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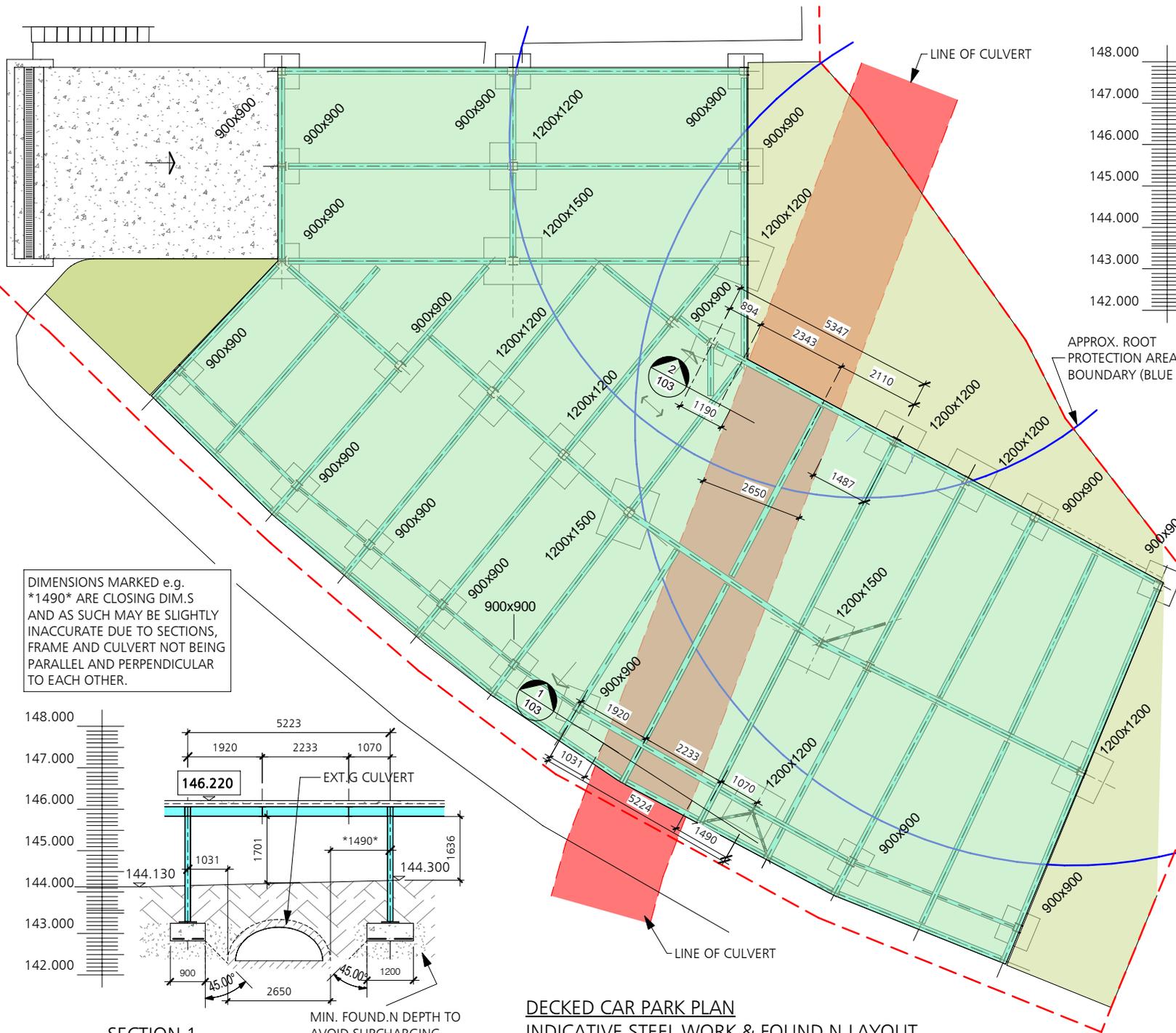
DRAWING NO. 23345-XX-XX-XX-DR-101	REV. C01
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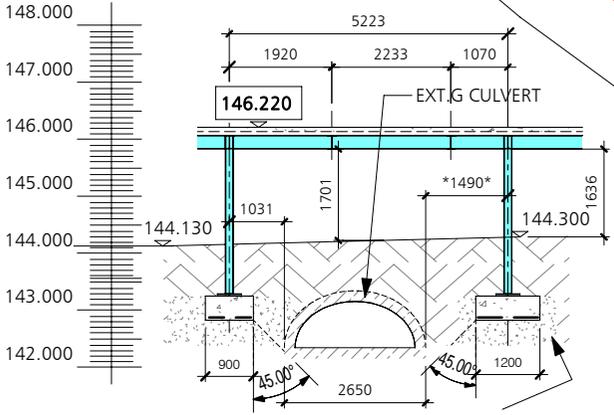
DECKED CAR PARK PART PLAN
STEEL WORK LAYOUT
(1:100)

REFER TO 23345-101
FOR CROSS SECTIONS

18.11.25	CONSTRUCTION ISSUE	AS	PD	C01
22.05.25	FIRST ISSUE	AS	PD	P01
DATE	REVISION DESCRIPTION	BY	CHK.	REV.
		Title House 35 Town Street Leeds, LS18 5LJ 0113 258 3611 info@dudleys.co.uk		
PROJECT				
CHAPEL HILL				
LINTHWAITE				
TITLE				
RAISED DECK CAR PARK PART PLAN				
SCALE	PAPER	STATUS		
1:100	A3	CONSTRUCTION		
DRAWING NO.				REV.
23345-XX-XX-XX-DR-102				C01

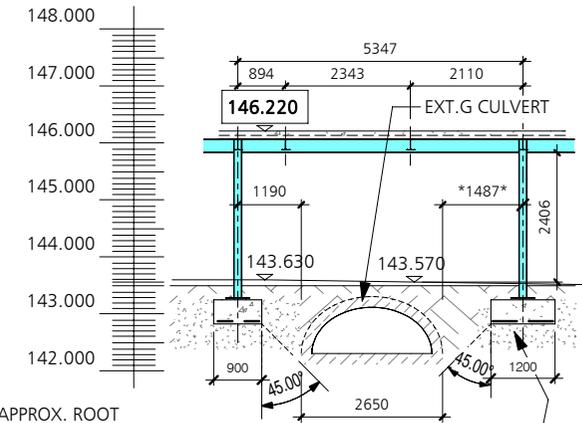


DIMENSIONS MARKED e.g. *1490* ARE CLOSING DIM.S AND AS SUCH MAY BE SLIGHTLY INACCURATE DUE TO SECTIONS, FRAME AND CULVERT NOT BEING PARALLEL AND PERPENDICULAR TO EACH OTHER.



SECTION 1

MIN. FOUND.N DEPTH TO AVOID SURCHARGING SIDE OF EXT.G CULVERT



SECTION 2

MIN. FOUND.N DEPTH TO AVOID SURCHARGING SIDE OF EXT.G CULVERT

NOTE: ALL DIMENSIONS, CULVERT LOCATION & FRAME SETTING OUT TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF THE WORKS.

DECKED CAR PARK PLAN
INDICATIVE STEEL WORK & FOUND.N LAYOUT
(1:100)

18.11.25	CONSTRUCTION ISSUE	AS	PD	C01
12.09.25	SECTIONS UPDATED	AS	PD	P02
27.06.25	FIRST ISSUE	AS	PD	P01
DATE	REVISION DESCRIPTION	BY	CHK.	REV.

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PROJECT
CHAPEL HILL
LINTHWAITE

TITLE
RAISED DECK CAR PARK
FOUND.S & FLOOR GA

SCALE	PAPER	STATUS
1:100	A3	CONSTRUCTION

DRAWING NO.	REV.
23345-XX-XX-XX-DR-103	C01