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24th August 2021

Shirley O'Mara – Parish Clerk
Shenstone Parish Council Office
25c Main Street
Shenstone
Staffordshire
WS14 0LZ

Dear Ms O'Mara

Re: Specific Structural Inspection of 'Calder Crossing' Footbridge at The Lammas Land & recommendations.
Please accept my apology for the unforeseen delay.

Further to your recent instruction and our site visits, we have pleasure in offering you the following observations based on our visual inspection of the above mentioned footbridge.

Brief
To inspect and comment on the structural condition of the footbridge at the above location together with any required remedial work. We have also included photographs attached herewith, taken during our inspection which are for your information/recorded evidence.

Brief description
The traditionally constructed footbridge ('Calder Crossing') spans over Crane Brook and is formed with treated hardwood, thought to have been constructed approximately 20 years ago. The bridge runs from east-south-east (A) to west-north-west (B). The bridge allows pedestrian, wheelchair and pushchair access.

The footbridge has a span 9.00m and is 1.60m wide. The bank abutment footings are formed with solid concrete cast insitu. The footbridge is supported by 3no. main beams (400mm x 200mm) incorporating threaded steel tie bars that tie in with the base of every timber post (2no. tie bars per post). Timber noggins are also present in line with timber posts. Main beams support a grooved timber deck (1560mm x 145mm). There are 18no. timber posts (1150mm high & 120mm x 70mm) are bolstered by top, intermediate and bottom horizontal timber rails (120mm x 45mm) to the flanks. Where viewed all fixings are galvanised.

General Comments and Observations

1. The footbridge remains firm and solid underfoot with no spring or bounce was encountered. The footbridge remains true and plumb.

2. All handrails/horizontal rails remain in satisfactory serviceable condition.

3. At point A, the front right-hand post and adjacent timber decking is suffering from wet rot. Please see attached photograph and diagram area 1.

4. At point B, the front right-hand timber decking and minor adjacent timbers are suffering from wet rot. Please see attached photograph and diagram area 2.

5. Timber decking at mid-point (facing upstream) is suffering from wet rot. Please see attached photographs and diagram area 3.

6. Several areas to the underside of the timber decking are noticeably damp and are harbouring yellow moss. Please attached photographs. Elsewhere several areas are also home to green moss.

7. Galvanised fixings display only minor acceptable surface corrosion.

8. External decorations are sparse.

9. The ground approaching both ends of the bridge has washed away in places forming possible trip hazards. Please see attached photographs.

10. Foliage brushes the bridge at both ends to all sides.

Recommendations

- The bridge should be carefully jet washed/cleaned off.

- All timber decking affected by wet rot (c. 10no.) should be replace accordingly as soon as practicable to avoid inevitable failure. All replacement timber should be pre-treated.

- Wet rot to the corner posts at point A and B is not considered severe although it is likely to be more cost effective replacing the posts rather than localised splice repairs etc. Elsewhere posts remain in satisfactory condition.

- All yellow moss to the underside of the bridge should be eradicated accordingly as soon as practicable.

- All replacement timber should be pre-treated of exactly the same size/gauge.

- All timberwork to the bridge should be treated with an appropriate wood preservative, sympathetic to its immediate environment. Due to the role and position of the footbridge all necessary precautions should be considered with regard to any cleaning/timber treatments/remedial work.

- The ground approaching both ends of the bridge should be made up accordingly to resolve the potential trip hazards to users.

- All foliage adjacent to the bridge should be periodically, heavily managed.

Summary

The structural condition of the footbridge structure and components appear satisfactory. There were no structural issues identified during our inspection. Based on our visual inspection, we would conclude that the footbridge structure is considered to be in a structurally stable condition at this time. No evidence of recent significant/abnormal movement, warping, rotation, distress, etc. was identified. There was no evidence of any current distress, subsidence or significant structural movement and no indication to suggest that the bank foundations are defective, under designed or inadequate. We would conclude that the footbridge structure is considered to be in a structurally stable condition at this time.

The footbridge is considered safe to use although replacing rotten timber decking must be made a priority.

You will appreciate that we have not carried out destructive exposure work and the inspection is based purely on a visual inspection carried out at ground level and from wading in at brook level.

We should make it clear that if no defects are mentioned in our observations, you should not assume that all parts of the bridge are completely free from defects, nor, where your attention is drawn to specific defects, does it mean that other concealed defects do not exist. We have provided our opinion of the general overall structural condition of the footbridge.

We trust that we have interpreted your instructions and have accurately reported on the footbridge but should any points in our report be unclear or should you wish to discuss our report in greater detail, please do not hesitate to contact us at any point.

Yours sincerely

Marcus J Friend
Bsc (Hons) Build Surv MRICS MASI Registered Valuer
For and on behalf of FRIEND ASSOCIATES

Circumstances

A visual inspection was carried out and no destructive investigation was undertaken. This Report, therefore, is based solely on those factors that were readily observable at the time of inspection. We have not inspected such parts of the bridge that were covered, unexposed or inaccessible, and cannot therefore report that any such part of the structure was free from defect.

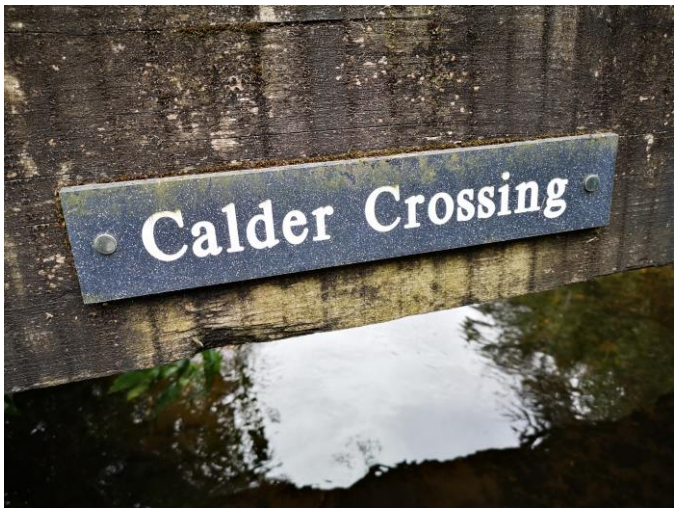
No trial holes were excavated to assess the adequacy of the foundation design/construction or load bearing characteristics of the sub-soils.

We have not carried out an inspection for Japanese knotweed and we have assumed that there is no Japanese knotweed within the boundaries of the property or in neighbouring properties. Further checks may be prudent.

This report is not an inventory of every single defect or intended to be an exhaustive list of minor defects. The report is primarily based on concerns with any significant defects apparent from a brief visual inspection.

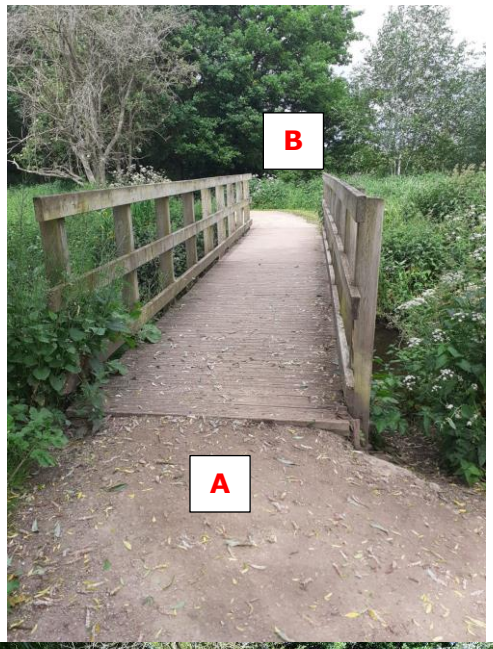
Further defects may be encountered upon a more extensive investigation, involving exposure of structural elements etc.

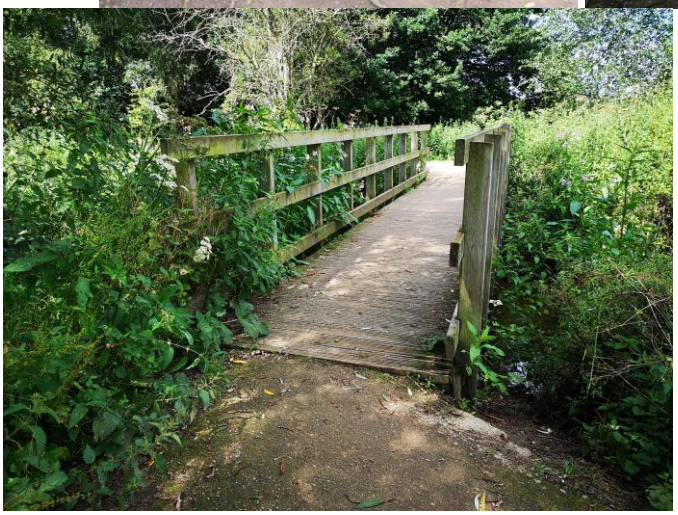
PHOTOGRAPHS

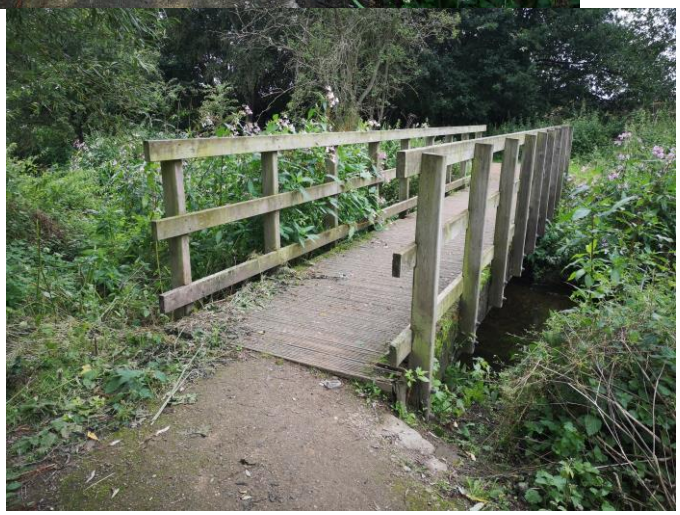


FOOTBRIDGE - SIDE FACING UPSTREAM.

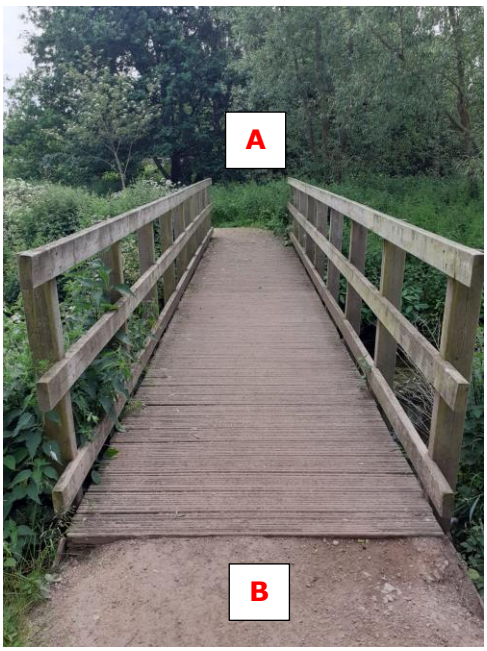
FOOTBRIDGE - SIDE FACING DOWNSTREAM.







VIEW – UPSTREAM TO LEFT AND DOWN STREAM TO RIGHT. (VIEWPOINT A TO B).



VIEW – UPSTREAM TO RIGHT AND DOWN STREAM TO LEFT. (VIEWPOINT B TO A).

VIEWPOINT A – WET ROT AT LOW-LEVEL TO FRONT RIGHT-HAND AREA TO TIMBER DECKING & ADJACENT TIMBER POST. (SEE DIAGRAM POINT 1)
GROUND FALLEN AWAY ADJACENT TO BRIDGE ABUTMENT.

VIEWPOINT A – WET ROT AT LOW-LEVEL TO FRONT RIGHT-HAND AREA TO TIMBER DECKING & ADJACENT POST. (SEE DIAGRAM POINT 1).


VIEWPOINT B – WET ROT AT LOW-LEVEL TO FRONT RIGHT-HAND CORNER POST.
(SEE DIAGRAM POINT 2)
GROUND FALLEN AWAY ADJACENT TO BRIDGE ABUTMENT.


MID-POINT FACING UPSTREAM - WET ROT TO TIMBER DECKING. (SEE DIAGRAM POINT 3).


VIEWPOINT A – UNDERSIDE OF BRIDGE.

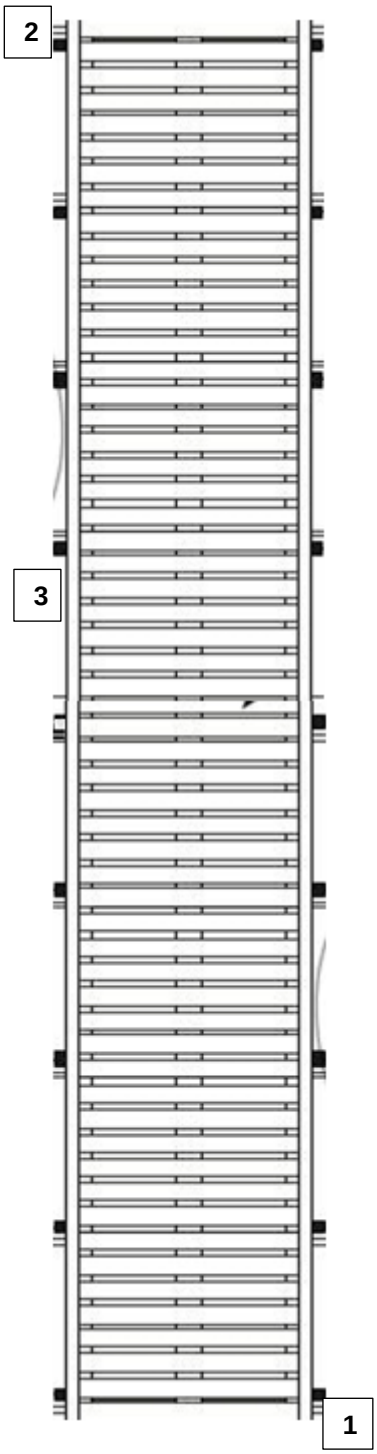


VIEWPOINT B – UNDERSIDE OF BRIDGE.

MID-SECTION EXAMPLE OF TIE BARS RUNNING ACROSS WIDTH OF BRIDGE.

MID-SECTION - EXAMPLE OF YELLOW MOULD TO DAMP AREAS.

B



A

DIAGRAM PLAN VIEW OF FOOTBRIDGE.