







GUIDANCE NOTES		
		Level 0 Assessment Tool Version OBM 3.1
<u>List of Key Updates included in OBM 3.1 (19/07/2019)</u>		
1)	Removed "Rivets" from the list of possible fastener materials (Rivets can still be selected as a "Fastener Type").	
2)	Fixed bug resulting in occasional difficulties signing Form BA0(1) and BA0(2).	
3)	Fixed bug resulting in occasional miscalculation of Highway Loading Factor on first calculation run.	
<u>List of Key Updates included in OBM 3.0 (12/04/2019)</u>		
1)	Updated Tool to run in Microsoft Excel 2016.	
2)	Updated Tool to run in Windows 10 while also remaining compatible with Windows 7.	
3)	Assessed Category of section calculated in accordance with NR/L2/CIV/035 and reported in results tables.	
4)	Comments may now be included on the results sheets. Comments are compiled onto a new results comments sheet.	
5)	Comment, warning and error registers no longer limit entries to 5 lines of text.	
6)	The CRE must now select whether the Tracking Tables have been populated and checked, before Form BA0 can be signed.	
7)	'Indeterminate' is now an option when selecting qualitative assessment result.	
8)	Amendments to Guidance Notes and Justification Reports to capture updates.	
9)	Combined bending and shear calculations have now been included in accordance with Section 9.9.3, BS 5400: Part 3.	
10)	Shear capacity of welded end connections may now be calculated, in accordance with NR/GN/CIV/025.	
11)	Pressed trough section input sheet has been amended to allow web inclines other than 2:1, further sophistication in geometry, non-standard dimensions and doubler plates.	
12)	Steel strengths post 1906 are now included in accordance with NR/GN/CIV/025.	
13)	Additional angles and plates can now be inputted for fabricated trough.	
14)	New formcode, DG-T*, incorporated into Tool to allow assessment of deck type structures with transverse troughing.	
15)	Numerous bugs amended in Tool including: <ul style="list-style-type: none">• User defined loading to cross girders• Problem opening the Tool due to 'enables Add-in'• Calculation of assessed category when <7.5 tonnes• Compact/non compact section selected for web splice bending capacity calculation	


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	<p><u>List of Key Updates included in OBM 2.3 (22/09/2017)</u></p> <p>1) Added input in the 'Scenarios' sheet to specify the 'Assessment Scenario' for the optional User-Defined Loading Scenario.</p> <p>2) Assessment Scenario and Permissible Road Speed information is now exported to CSAMS XML file for populating the CSAMS database.</p> <p>3) Added error checking to the CSAMS XML exporting procedure, to ensure all required fields have been correctly populated by the user.</p> <p><u>List of Key Updates included in OBM 2.2 (23/05/2017)</u></p> <p>1) Input added to qualitative assessment pages to allow the identification of the leading minor element with the most significant defects causing the qualitative assessment result. These entries are required for populating the CSAMS database.</p> <p><u>List of Key Updates included in OBM 2.1 (30/03/2016)</u></p> <p>1) If the form code on the FormAA does not fully describe the deck, it is mandatory to provide the correct form code for the deck and the facility to do this has been added.</p> <p>2) Additional fields provided to allow for correct BCMI references to be entered if an element is not correctly defined in sheets "Deck" and "Subdeck".</p> <p>3) The terms used to describe the condition of a section have been changed, choices include "As-built Condition", "Current Condition" and "Section with Defect". If "Section with Defect" is selected, a Defect ID is required to be provided. Imports will handle the condition of section change as shown below.</p> <table><tr><th>Old Input</th><th>New input (when imported)</th></tr><tr><td>Full section</td><td>As-built Condition</td></tr><tr><td>Corroded section</td><td>Section with Defect</td></tr></table> <p>4) Information sources have been split into a "Date" and "By" field. On import the information from older assessments will be placed in the "By" field, the assessor should manually split the information into the newly created "Date" and "By" fields.</p> <p>5) Added pop-up window to display import/calculation progress.</p> <p>6) New functionality has been added to produce an XML which can be uploaded to the CSAMS database.</p>		Old Input	New input (when imported)	Full section	As-built Condition	Corroded section	Section with Defect
Old Input	New input (when imported)							
Full section	As-built Condition							
Corroded section	Section with Defect							


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	<p style="text-align: center;"><u>List of Key Updates included in OBM 2.0 (14/08/15)</u></p> <ol style="list-style-type: none"> 1) Transfer from Excel 2003 to Excel 2010. 2) A new Assessment Menu has been added to fit with Excel 2010. 3) Guidance Notes have been removed from the Tool and are now provided as a stand alone PDF file. 4) Advanced features such as User Defined Loading are now available using the "Enable NR Version" button from the Assessment Menu. These features should only be used with advanced agreement from the relevant Network Rail Structures Manager. 5) The Form AA0 and Form BA0 no longer contain an approved list of CREs. It is the responsibility of the Assessor to ensure each form is signed by a competent and approved person taking note that once signed the Form AA0 cannot be amended. Forms are signed using "Sign Forms" from the assessment menu. The signatures will now be checked and approved by Network Rail Structures Managers. 6) Name and Title are now mandatory inputs on the Form AA0 and Form BA0 to facilitate approval by Network Rail Structure Managers. 7) During Data Transfer results from the original file are compared to the updated file with any changes being flagged within the Tool on an additional tab which will become visible if changes have occurred. If no changes occur the Form BA0 signatures will be carried forward. 8) A log file will be produced during Bulk Data Transfer which will show for each file if they contained Errors, Changes to the Results or Transferred without Change. This file will be saved in the output folder. 9) During signing of the Form BA0 forms the inputs will be automatically checked to ensure no changes have been made since the calculation was run. If changes have been made, the calculation must be re-run before signing the forms. 10) Improvements to the efficiency of the Tool have been made throughout. 11) Correction to XG bending calculation which affected some Tools. <p style="text-align: center;"><u>List of Key Updates included in OBM 1.2 (08/05/15)</u></p> <ol style="list-style-type: none"> 1) Issue with inputting Structure Name which some users experienced has been resolved. 2) Issue affecting MGE2 results being displayed has been resolved. 3) Data transfer of transverse elements has been improved. <p style="text-align: center;"><u>List of Key Updates included in OBM 1.1</u></p> <ol style="list-style-type: none"> 1) No key updates. 	


GUIDANCE NOTES		
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<u>List of Abbreviations used</u>		
CRE	Contractor's Responsible Engineer	
Assmt	Assessment	
Calcs	Calculations	
AC	Assessed Category	
BC	Bridge Capacity	
U	Utilization factor	
FE	Fire Engine	
Hp	Heavy Traffic Poor Surface	
Mp	Medium Traffic Poor Surface	
Lp	Low Traffic Poor Surface	
Hg	Heavy Traffic Good Surface	
Mg	Medium Traffic Good Surface	
Lg	Low Traffic Good Surface	
DL	Dead load	
LL	Live load	
SDL	Superimposed Dead Load	
HLF	Highway loading factor - Percentage of live loading carried by an element	
C-way	Carriageway	
BM	Bending moment	
SF	Shear force	
SecProp	Section Properties	
Prop	Properties	
BCMI	Bridge Condition Marking Index	
DK	Deck	
SD	Subdeck	
DCK	Decking/slab/jack arches incl. transverse troughing	
LSE	Secondary longitudinal beam/girder (exposed) e.g. parapet girders	
MGE	Main longitudinal beam/girder (exposed)	
MGI	Main longitudinal beam/girder (inner) incl. longitudinal troughing and filler beams	
XGE	Transverse beam/girder (end)	
XGI	Transverse beam/girder (inner)	
FB	Filler beam	
TG	Trough girder	
MG	Main girder	
XG	Cross girder	
TT	Transverse troughing	
Ed	End	
Md	Midspan	
CF	Curtailment to Flange	
CW	Curtailment to Web	
DF	Damaged Flange	
DW	Damaged Web	
WS	Web Splice	

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c/c b/w fabr.	Centre to centre Between Fabricated	
CSAMS	Civils Strategic Asset Management Solution	

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No.	Topic	General note
1	Level 0 process	The Level 0 assessment process has been developed in order to give Network Rail more contemporary bridge strength information which can be readily updated as new information becomes available or if changes are proposed. The Level 0 Assessment Tool has been developed to deliver these assessment calculations and a brief report; this will provide assessments in a common and familiar format which will greatly improve Network Rail's ability to manage their bridge stock.
2	Level 0 process	The Level 0 Assessment Tool has been developed on the basis of NR/GN/CIV/025 Issue 3, BS 5400: Part 3, BD 21/01 and BA 16/97.
3	Level 0 process	The Level 0 assessments are prepared using an Assessment Tool that introduces various agreed simplifications to the assessment method in order to reduce the time required to collect and process assessment data into calculations which determine an assessed capacity based upon principal checks on key load carrying elements.
4	Level 0 process	The assessor must determine the most reliable source of information. Generally the hierarchy of reliability for dimensional information will be: 1) Data confirmed on site 2) Data from record drawings 3) Data from drawings provided in assessment report 4) Data from assessment calculations. The hierarchy of reliability for conditional information will be: 1) Data confirmed on site, 2) Data from Detailed examination.
5	Use of the Tool	The Level 0 assessment process and this Assessment Tool are designed for use by experienced highway assessment engineers and must only be undertaken by persons with suitable competency. Each assessing organisation must have at least one person of suitable experience to be the CRE to oversee the delivery of Level 0 Assessments.
6	Use of the Tool	The OBM Assessment Tool is created for Level 0 assessment of half-through and deck type metallic occupation and accommodation overbridges, using Excel 2016.
7	Use of the Tool	The Level 0 Tool should always be saved to and run from the C: drive of the user's PC. Running the Tool from a network location may impair functionality of Excel and the Level 0 Tool.
8	Use of the Tool	The Tool will attempt to identify whether Excel 2016's Autosave function is active, and if so, disable it to avoid any interference with its operation. Autosave will automatically be disabled if the Tool is saved locally to the user's C: drive, as per above.
9	Scope of the Tool - General	Level 0 Assessment Tool is designed to assess one bridge deck at a time. Structures with more than one deck will require multiple files - one for each deck. File names are standardised in the following format: OBM2_0_ELR-No-DKNo.xls The file will be automatically renamed in the required format after click on "Add Elements" or manually if the user click on "Save" from "Assessment" menu.
10	Scope of the Tool - Elements articulation	Only simply supported elements may be assessed using the Tool.
11	Scope of the Tool - Geometrical limitations	Only bridge spans 2m to 30m and skews up to 20 degrees can be assessed using the Level 0 Assessment Tool.
12	Scope of the Tool - General arrangement limitations	The Level 0 Assessment Tool will consider decks comprising up to five main girders and supporting only one carriageway.

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13	Scope of the Tool - Elements	The scope of assessment is limited to the following types of elements: cross girders, transverse troughing, filler beam decks, trough girder and main girder. The Tool may be used to assess girders with tension and compression flanges curved in elevation by inputting different sections. However, the Tool takes no account of the enhanced shear resistance beams with flanges curved in elevation may exhibit as described in Section 9.3.5A and 1.2E in accordance with NR/GN/CIV/025.
14	Scope of the Tool - Sections	The Level 0 Assessment Tool may be used to assess plate I-girders and plate girders with two webs, joists, troughs (pressed), troughs (fabricated), troughs (fabricated) Z-type. Girders with flanges curved or sloped in elevation are assessed without allowance for flange contribution to shear capacity. Girders with varying web depth can be assessed by adding additional sections at any locations within the length deemed potentially critical by the assessor (for example, at a change in flange gradient). It should be noted that the self-weight of an element is calculated from its mid-span section properties - this should be considered when reviewing results for sections in which dead load effects may be correspondingly under- or over-estimated.
15	Scope of the Tool - Capacity checks	Assessed elements are checked for: Bending - at midspan, at flange curtailments, at locations with damaged flange and at web splice locations (ignoring web); Shear - at the end, at web curtailments and at locations with damaged web; Web to flange connection check - at the end; Combined bending and shear check - all sections at locations other than midspan and end. The Level 0 assessment calculations also include end connections check for fasteners and welds in shear only.
16	Scope of the Tool - Qualitative assessment	Elements in deck supports and deck elements, which are not covered in the assessment calculations, are assessed qualitatively. Level 0 Assessment Tool also includes a procedure for enhanced qualitative assessment of bearing stiffener.
17	Scope of the Tool - Loading Scenarios	The Level 0 Assessment Tool has the capability to assess the structure under one of two different live loading scenarios. The default scenario is pre-defined, using standard highway loads and the permissible road speed selected on the General tab. If the NR Version is activated (see pages labelled "GN_Using_tool"), a user-defined loading scenario is enabled. This scenario uses an axle arrangement specified by the user, and also requires the input of Structure Condition and Assessment Scenario. Only one scenario, either the predefined or user-defined loading, may be calculated.
18	Scope of the Tool - CSAMS Assessment Scenarios	The CSAMS database uses a pre-defined list of 'Assessment Scenarios' to classify the loading scenario assessed in the Level 0 Assessment Tool. For the pre-defined loading scenario, the corresponding 'Assessment Scenario' is pre-set to "Standard Highway Loads" and cannot be changed. For the user-defined loading scenario, the user can either select "Standard Highway Loads", "Liability Requirement", "Abnormal Loads" or "Other" as the 'Assessment Scenario'. For all qualitative assessment, the corresponding 'Assessment Scenario' is pre-set to "Qualitative" and cannot be changed.

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No.	Topic	General note
1	Run macros	To use the Assessment Tool it is necessary for macros to be enabled. Go to "File/Options/Trust Centre/TrustCentre Settings/Macro Settings" and set "Disable all macros with notification". Re-open the Tool and choose "Enable Macros" from the "Security Warning" message box, which appears when you open file with macros.
2	"Assessment" menu	Once macros are enabled and the Tool re-opened an additional "Assessment" menu is automatically added to your Excel ribbon. Use the "Assessment" menu to progress with assessment (following the assessment steps as described in the next item) and to navigate in the Tool.
3	Assessment steps	<p>Assessor:</p> <p>Step 1 - Review structure and fill all relevant information in sheets "General" and "FormAA0". <u>Contractor's Responsible Engineer (CRE):</u></p> <p>Step 2 - Contractor's Responsible Engineer (CRE) to review and sign "FormAA0". <i>Note that no changes to Form AA0 will be allowed after the form is signed.</i></p> <p><u>Assessor:</u></p> <p>Step 3 - Fill all relevant information on general input sheets "Deck", "Subdeck", "Offsets", "End_Connections", "SSI", "DK_Qual", "PPT_Qual", "ES_IS_Qual" and "AssmtStatus".</p> <p>Step 4 (optional) - if alternative loading to the predefined scenario is required, create user-defined scenario by filling in details in "LL-User" and "Scenarios" sheets (available only once NR Version has been enabled using the ribbon button)</p> <p>Step 5 - Add elements (Assessment menu -> Add Elements) and fill all relevant information.</p> <p>Step 6 - Add sections (Assessment menu -> Add Sections) and fill all relevant information.</p> <p>Step 7 - Run calculations for either predefined scenario (Assessment menu -> Calculate -> Predefined scenario) OR for user-defined scenario if required (Assessment menu -> Calculate -> User-Defined scenario)</p> <p>Step 8 - Correct all errors in the input data (if any).</p> <p>Step 9 - Review and correct warning messages (if any).</p> <p>Step 10 - Review results.</p> <p><u>Checker:</u></p> <p>Step 11 - Steps 1 to 10 to be checked and signed by checker.</p> <p><u>Contractor's Responsible Engineer (CRE):</u></p> <p>Step 12 - Contractor's Responsible Engineer (CRE) to review assessment, write recommendations (sheet "CRE") and sign Form BA0 (Sheets "Form BA0(1)"). Note the Form BA0 cannot be signed until:</p> <ul style="list-style-type: none"> - All scenarios are calculated using the 'Calculate All' button in the ribbon (Calculate Scenarios -> Calculate All) - The CRE either selects "Yes" in the dropdown box (cell G44) to certify that the Tracking Tables have been populated and checked, or selects "No" and provides justification in the text box as to why this is not the case.
4	Input cells	There are two types of input cells in the Tool - "yellow" and "tan" coloured. "Yellow" coloured cells are data value input cells and "tan" coloured cells are either data units or data source input cells.
5	Units	"Units" must be assigned to each data input (if applicable). Select units from drop down menu: 4 options (in, ft, m, mm). When "units" are assigned to a table of values, all the input data in the table must be in the selected units.

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6	Source	"Source" must be assigned to each data input. Select information source from drop down menu - 12 options (refer to tab "General" for information sources). When "source" is assigned to a table of values and different sources are used for the input data in this table - specify the principal information source and use the comments facilities to record if any data in the table is taken from a different source. Offline supporting sources may be included in the Tool.
7	Comments	<p>Add comments only to the data value input cells i.e. "yellow" coloured cells. These comments will be listed together with the data description in a separate sheet "Comments". All comments have to be entered using the standard Excel commenting facility.</p> <p><u>How to add "Comment" in Excel?</u></p> <ol style="list-style-type: none"> 1. Go to "File/Options/General" and change "User name:" to your initials. 2. Select the "yellow" cell to which you want to add a comment. 3. Right click and choose "Insert Comment". <p><u>How to change or delete "Comment" in Excel?</u></p> <ol style="list-style-type: none"> 1. Select the "yellow" cell with the comment. 2. Right click and choose "Edit Comment" or "Delete Comment". <p>Users are encouraged to make regular use of this facility explaining their decisions. Comments should be short, brief, clear and meaningful.</p>
8	Yes / No option	If cells with this option are left blank, this will be considered as "No", however all mandatory cells must be filled in.
9	Results	Comments may be added on individual element results sheets by right-clicking in the blue cells adjacent to the 'Detailed Results' table and using the Excel commenting facility (see also Item No. 7 above). These comments can then be compiled into a formatted table (as per general input comments) by selecting the "Results_Comments" sheet and selecting "Yes" when prompted by the Tool to populate the table. The user will also be prompted to update this table during printing.
10	Printing	Note that the format of page numbering when printed is "Page 1 of N", where N is number of pages printed. Therefore one and the same page can have different page number when different printing options are used.
11	NR Version	When NR version is enabled the tabs "Scenarios" and "LL-User" will appear, allowing the user to define their own loading scenario. Once NR version is enabled it cannot be reversed.
12	Change of Input	The Tool will require re-calculation when there is any change of input. Changes to any CRE input will also result in a requirement for re-calculation, and re-signing of the forms BA0(1) and BA0(2).

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Level 0 Assessment Tool
Version OBM 3.1

Frequently Asked Questions (FAQ)

1. How to start?

Read 'Using_tool' Item 3 which explains this.

2. How to add elements and sections?

'Using_tool' Item 3' explains this.

3. How to sign the Form AA0 and Form BA0 using "electronic signature"?

FormAA0', 'Form BA0(1)' & 'Form BA0(2)'. Item 'Key/Signing' explains this.

4. How to use the Tool to assess a bridge with more than one deck?

A separate assessment has to be undertaken for each deck of the bridge.

5. How to check that the Form code and the BCMI element reference are correct?

The values under 'Element Type' in column I of sheets 'Deck' and 'Subdeck' indicate what the element is, e.g. MG - main girder, XG - cross girder etc. This should be compared with Form code selected to ensure the intended elements are correct.

6. Why in the sheet 'Offsets' the total in deck/subdecks distances and offsets distances don't match?

Refer to the sketch in sheet 'Offsets'. The Total of deck/subdeck is the total width of the deck. Whereas the total of offsets is the total distance from the same datum up to the end of carriageway.

7. What is the input for the 'Width' for each type of loading for each element?

'Elements' > 'EI_Loads'. Item 'Width' in this sheet explains the loading width for each type of loading for each element.

8. In Element Loads sheet what does 'Typical XG/DCK element' mean?

This input is required to confirm the correct dead load on each element.

9. In End_Connections sheet what does 'Typical XG/DCK element' mean?

This input is required for the assessment of correct element connections.

10. How to complete the qualitative assessment of bearing stiffener, when there is NO bearing stiffener?

The assessor should answer "No" to the question: "Is there a full width or min. 8"

11. Is the self weight of the elements automatically calculated?

Yes, self weight of assessed elements is automatically calculated based on midspan section properties.


12. Is the superimposed dead load replicated causing over conservatism in the dead load effects?


No, there is NO automatic load transfer between elements and "Loading must be specified per element."


When "Typical XG/DCK element:" options in Dead Load (DL) section are used, this will add the self weight of specified element to the element's loading e.g.XGs self weights to the MG loading.


13. An error occurs when text is added to the text box on CRE Recommendations and other sheets with text boxes.


The problem may appear because the text starts with "-". Signs like "-", "+", "=" will cause this problem if they are at the beginning of the text. Please avoid this. If you add a space in front of these signs it should work without error.


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Sheet name	Input data	Description	Suggested Sources
General	Route	e.g. Midland, Southern...	TS - Level Zero Task List
General	ELR	Engineer's Line Reference	TS - Level Zero Task List
General	Number	Bridge number. Use "_" symbol instead of "/" symbol for structures with more than one identification number (e.g. use 46_47 instead of 46/47) as bridge number is used as part of the file name and therefore some symbols are not permitted. Leading zeros may be included as necessary within the bridge number (e.g. 00127).	TS - Level Zero Task List
General	Mileage	Format is "82.0022" which is 82m and 22yards.	TS - Level Zero Task List
General	OS Map Reference	Format is AA #####, e.g. TQ 1234 5678.	TS - Level Zero Task List
General	Bridge name	Local name.	TS - Level Zero Task List
General	Type of Bridge	Selection from drop down menu whether overline or side of line bridge.	TS - Level Zero Task List
General	Usage	Selection from drop down menu whether occupation or accommodation bridge.	TS - Level Zero Task List
General	Number of spans	Number input. Refer to BCMI code NR/L3/CIV/006/2C and sketch	RD - Record Drawings
General	Total number of decks	Number input. Deck is marked as DK in BCMI code. Refer to BCMI code NR/L3/CIV/006/2C and sketch	RD - Record Drawings
General	Status	Status is set by default as Network Rail owned and maintained.	
General	Construction date	Date of construction. If unknown, estimate date and add comment.	RD - Record Drawings
General	Superstructure date	Date of superstructure construction. If unknown, estimate date and add comment.	RD - Record Drawings
General	CARRS Parent GUID	Number input required	TS - Level Zero Task List
General	CARRS Child GUID	Number input required	TS - Level Zero Task List
General	BCMI deck reference	Select option from drop down menu - options from "DK1" to "DK99"	
General	Obstacle crossed: Type, Name	Type is set by default as a Rail. Name of the lines as described in SA. e.g. Up fast.	RD - Record Drawings; AR - Last Assessment Report
General	Road carried	Describe the name of the road, e.g. A321 public road.	
General	Permissible Road Speed	Number is required.	
General	Weight restriction	The bridge should be signed if any restriction exists.	


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Sheet name	Input data	Description	Suggested Sources
General	Tonnes	Input appropriate number from weight restriction sign.	
General	Min vertical clearance to soffit:	Number is required.	DE - Last Detailed Examination report; Internet
General	Source type - Last Detailed Examination report (Date)	Use the format "dd/mm/yyyy"	
General	Source type - Last Detailed Examination report (By)	Name of organisation that wrote the Last Detailed Examination Report	
General	Source type - Last Assessment Report (Date)	Use the format "dd/mm/yyyy"	
General	Source type - Last Assessment Report (By)	Name of organisation that wrote the Last Assessment Report.	
General	Source type - Last Inspection for Assessment report (Date)	Use the format "dd/mm/yyyy"	
General	Source type - Last Inspection for Assessment report (By)	Name of organisation that wrote the Last Inspection for Assessment Report	
General	Source type -Last Visual Examination report -1 (Date)	Use the format "dd/mm/yyyy"	
General	Source type -Last Visual Examination report -1 (By)	Name of organisation that wrote the Last Visual Examination Report 1.	
General	Source type -Last Visual Examination report -2 (Date)	Use the format "dd/mm/yyyy"	
General	Source type -Last Visual Examination report -2 (By)	Name of organisation that wrote the Last Visual Examination Report 2.	
General	Source type - Additional Examination reports (Date)	Use the format "dd/mm/yyyy"	


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Sheet name	Input data	Description	Suggested Sources
General	Source type - Additional Examination reports (By)	Name of organisation that wrote the Additional Examination Reports.	
General	Source type - SCMI report (Date)	Use the format “dd/mm/yyyy”	
General	Source type - SCMI report (By)	Name of organisation that wrote the SCMI Report.	
General	Source type - Supplementary Site Inspection (Date)	Use the format “dd/mm/yyyy”	
General	Source type - Supplementary Site Inspection (By)	Name of organisation that undertook the Supplementary Site Inspection.	
General	Date of last inspection for assessment (Date)	Use the format “dd/mm/yyyy”	
General	Date of last inspection for assessment (By)	Name of organisation that undertook the inspection for assessment	
General	Source type - Record Drawings	Use the format “5E/1720/1, 3, 5-7 & 21”	
General	Source type -Five Mile Plans	Use the format “Dated ...”	
General	Source type - Sectional Appendices	Use the format “Dated ...”	
General	Source type -Level 0 Task List	Use the format “Dated ...”	
General	Source type - Internet	Use the format “Dated ..., web address ...”	
General	Source type - Hidden Critical Element Examination Report	Use the format “Dated ..., by ...”	
General	Offline supporting calculations & sketches (OL1-OL10) (Source Type)	Title and/or brief description of the offline supporting document to be appended to the Level 0 Assessment	
General	Offline supporting calculations & sketches (OL1-OL10) (Date)	Use the format “dd/mm/yyyy”	


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Sheet name	Input data	Description	Suggested Sources
General	Offline supporting calculations & sketches (OL1-OL10) (By)	Name of organisation that created the document.	


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Sheet name	Input data	Description	
FormAA0	Assessment checklist	Drop down menu -options "Yes" or "No" to all the 11 questions and "N/A" is available for the questions relating to cross girders.	
FormAA0	Assessment checklist	Question 1: The Tool assumes the deck and its elements are all simply supported and statically determinate.	
FormAA0	Assessment checklist	Question 4: Only skews no greater than 20 degrees can be assessed using this Assessment Tool. Bridges with skew up to 20deg are treated as square bridges.	
FormAA0	Assessment checklist	Question 5: The Tool considers cross girders to be equally spaced.	
FormAA0	Assessment checklist	Question 9: Only decks with one carriageway can be assessed.	
FormAA0	Assessment checklist	Question 10 :The carriageway width need to be equal or more than 2.5m and less than 10m.	
FormAA0	Structural form code	Form code consists of 5 letters/numbers (Ref1-Ref5) representing: Bridge Type (Ref1), Primary Longitudinal Elements (Ref2), No. of Primary Elements (Ref3), Floor Types (Ref4) and Road Form (Ref5). Drop down menus with valid combinations for the form codes included in the Tool are provided. The assessor must choose the form code combination that defines the bridge deck correctly and completely.	
FormAA0	Assessment checklist	Question 11: This Level 0 Assessment Tool considers only those structures that can be defined from the form code options given.	
FormAA0	Enter correct form code	This field will become available if the answer to Question 11 is "No". Provide the correct form code for the structure if the bridge deck is not correctly and completely defined using the available form code options. The correct form code is selected using the form code builder which allows access to all available form codes.	


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Sheet name	Input data	Description	
FormAA0	Justification for adopting Level 0 assessment (if required)	If the answer to any of the questions in the Assessment Checklist is left blank or answered as "No", except for Question 9, the following statement will appear: "Bridge deck is NOT suitable for Level 0 assessment.". However, a bridge should not be excluded from Level 0 assessment based on this. Assessing organisation should use their experience and engineering judgement to populate as many primary elements as possible in the Assessment Tool and record the justification in this box.	
FormAA0	Name/Signing Form AA0	Name of the CRE from the Assessing organisation. To be filled by the CRE.	
FormAA0	Title/Signing Form AA0	Title of the CRE from the Assessing organisation. To be filled by the CRE.	
FormAA0	Signing Form AA0	The Form AA0 should only signed by the CRE. After filling in the Name and Title, go to Assessment menu and select "Sign Forms". It is the responsibility of the Assessor to ensure each form is signed by a competent and approved person. The signatures will be checked and approved by Network Rail Structures Managers. Completing the signing procedure will lock all the information in Form AA0 sheet.	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	
		The form code in the Tool is to be populated using the drop down list. This may be different than what is in the spreadsheet provided by Network Rail separately. Network Rail will capture the form code from the Tool which will form the definitive list.	
FormAA0	Structural form code - Ref1	<u>Bridge Type (Ref1)</u> H - Half-through bridges D - Decks	
FormAA0	Structural form code - Ref2	<u>Primary Longitudinal Elements (Ref2)</u> E - Plate girders A - Metal girder and timber/stone deck D - Trough girders F - Filler/cased beam G - Metal girder and metal deck C - Metal girder and concrete deck J - Metal girder with jack arches	
FormAA0	Structural form code - Ref3	<u>No. of Primary Elements (Ref3)</u> 2 - Two girders/trusses 3 - Three girders/trusses M - More than 3 girders -	
FormAA0	Structural form code - Ref4	<u>Floor Types (Ref4)</u> F - Cross girders with floor plates X - Cross girders no floor plates J - Cross girders with jack arches A - Cross girders and timber deck T - Transverse troughing U - Transverse timber and timber deck C - Cross girders encased in concrete D - Cross girders and concrete deck above -	
FormAA0	Structural form code - Ref5	<u>Track/Road Form (Ref5)</u> C - Carriageway - no footway D - Carriageway with footway U - Carriageway undefined	
FormAA0	Structural form code	The allowable combinations of the above five codes can be found within the Tool.	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Deck	Span number	Number is required.	
Deck	Supports 1st	Label it as per BCMI code NR/L3/CIV/006/2C, i.e. ES1, IS1, etc. Refer to the sketch provided in the tab.	
Deck	Supports 2nd	Label it as per BCMI code NR/L3/CIV/006/2C, i.e. IS1, IS2, ES2 etc. Refer to the sketch provided in the tab.	
Deck	Skew:	Skew angle to be max 20 deg. Skew is only for information and it is not considered in the calculations. Bridges with skew up to 20deg are treated as square bridges.	RD - Record Drawings; AR - Last Assessment Report
Deck	Minor elements (individually marked)	Refer to BCMI code NR/L3/CIV/006/2C and Abbreviation list part of this Guidance Note.	
Deck	Applicable	Select "Yes" from the drop down list if the minor elements exist. Otherwise select "No". The assessor must fill this column in full as this will define the deck and subdecks. In case of filler beams deck select "Yes" for MGI1 and if applicable for LSE1, LSE2.	
Deck	Name in RD (AR)	Label/name of the element used in VERA/RD/AR for reference code.	RD - Record Drawings; AR - Last Assessment Report
Deck	Correct BCMI Code	If the element is not correctly defined using the code field, enter the correct reference.	
Deck	Correct BCMI No	If the element is not correctly defined using the code field, enter the correct reference.	
Deck	Assmt Calcs	Select whether assessment calculations are required for the elements listed using the drop down menu - options "Yes" or "No". Note that only elements that have been identified as applicable for the structure can be selected. Only elements with different cross section, condition, loading or length should be chosen for "Assmt Calcs". When two (or more) elements are the same only one should be chosen for calculations and commenting facilities used to record why other elements have not been calculated. (e.g. Element same as ...)	
Deck	Filler Beam Spacing	This will only be visible for formcode DF-. It is the distance between filler beams (c/c).	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Subdeck		XGE, XGI and DCK are collectively marked within a sub-deck (e.g. XGE1, XGI1 and DCK1 refer to all XGs and DCKs in sub-deck number 1). Refer to BCMI code NR/L3/CIV/006/2C. Level 0 assessment only allows for quantitative assessment of one DCK type - transverse troughing.	
Subdeck	No	Select from drop down menu - 5 options (1 to 5)	
Subdeck	(Index)	<p>Select reference (index) number from drop down menu - options from "(0)" to "(9)". To allow for the elements to be individually marked it is suggested an extra index (i) to be added i.e. XGE1(1), XGE1(2),...</p> <p>An index (0) can be used to mark these elements as a group e.g. XGE1(0), DCK1(0) and will have the same meaning as in the current BCMI code.</p> <p>If the assessed element can represent all inner cross girders in sub-deck number 1, the assessment results will be presented for XGI1(0).</p> <p>If there is damage/corrosion issue with inner cross girder number 2 in sub-deck number 1, then results will be presented for XGI1(2).</p> <p>The additional index (i) numbering will follow the same convention as for all minor elements in a deck i.e. high to low mileage and left to right when facing high mileage.</p>	
Subdeck	Name in RD (AR)	Label/name of the element used in VERA/RD/AR for reference.	RD - Record Drawings; AR - Last Assessment Report
Subdeck	Correct BCMI Code	If the element is not correctly defined using the code field, enter the correct reference.	
Subdeck	Correct BCMI No	If the element is not correctly defined using the code field, enter the correct reference.	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Subdeck	Assmt Calcs	Specify which minor elements will be assessed by selecting "Yes" or "No" from the drop down menu. Note that only elements that have been identified by filling the subdeck and index references can be selected. Only elements with different cross section, condition, loading or length should be chosen for "Assmt Calcs". When two (or more) elements are the same only one can be chosen for calculations and commenting facilities used to record why other elements have not been calculated. (e.g. Element same as ...)	
Subdeck	XGs' spacing	XG spacing is the distance between the cross girders (c/c). This will only be visible for formcodes where XGs are applicable.	
Subdeck	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
Subdeck	Source	Select information source from drop down menu - 12 options (refer to tab "General" for information sources)	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Offsets	Bridge Category (traffic flow and road surface)	Drop down menu - 6 options (Hp,Mp,Lp,Hg,Mg,Lg). Traffic flow 'H' for Heavy, 'M' for Medium, 'L' for Low. Road surface 'g' for good and 'p' for poor.	DE - Last Detailed Examination report; IR - Last Inspection for Assessment report
Offsets	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
Offsets	Source	Select information source from drop down menu - 12 options (refer to tab "General" for information sources)	
Offsets	Deck and sub-decks width, Distances	These are the distances between the main longitudinal elements starting from the set datum. Datum is at the centre line of the deck element at the high mileage end. The datum used for deck and subdeck width and for offsets must be the same. Enter distances as shown on the sketch i.e. distances between adjacent elements (equal to subdeck width). In case of filler beams deck the distance between MGEs must be entered as value for MGI1 and also distances from LSE to MGE need to be filled (if applicable).	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Offsets	Offsets, Distances, x1-x2	These are the distances starting from the set datum. Datum is at the centre line of the deck element at the high mileage end. The distance x1 is the width of the footway or any unloaded part of the deck. The distance x2 is the carriageway width. The datum used for deck and subdeck width and for offsets must be the same. The user can input 3 different offsets if the distances vary across the deck. Notation used to identify ends of the deck in the Tool is left and right when facing high mileage. The Tool calculates and uses the average values and therefore a minimum of one set of offsets is required. Refer to the sketch.	RD - Record Drawings; AR - Last Assessment Report;


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
End_connections	Typical XG element	A drop down list will be available if XG are present. In case of half-through bridge with transverse troughing you have to skip the input pages for end connections. The web to flange connection rivets have been loaded additionally from the transverse troughing.	
End_connections	Typical MG element	A drop down list will be available if MG are present.	
End_connections	Type of fasteners	Select detail from drop down menu - "rivets" / "bolts"	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
End_connections	Bolted/riveted connection?	Yes/no input. If a bolted or riveted end connection is present, select 'Yes' from the drop-down menu.	
End_connections	Welded connection?	Yes/no input. If a welded end connection is present, select 'Yes' from the drop-down menu. Note that 'Yes' may be input for both bolted/riveted and welded connections (i.e. cases where the minor element is welded to an end plate, which is in turn fastened to the major element with bolts/rivets).	
End_connections	Fasteners' Material	Select fastener material from drop down list - 6 options (Wrought iron, Steel - Pre 1906, Steel - After 1906, Gr 4.6 Bolts, Gr 8.8 Bolts, Gr 10.9 Bolts). If not applicable you must leave blank.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
End_connections	Number	Input the number of fasteners which are in single shear, i.e. count the number of rivets/bolts to the web of the element to which the relevant element is connected as shown on the sketch	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
End_connections	Size	Input the diameter of rivets or input the diameter of the shank of bolts.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
End_connections	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
End_connections	Source	Select information source from drop down menu - 12 options (refer to tab "General" for information sources)	
End_connections	Weld length (per web face)	Input the length of weld along one face of the web only. For example, for a 400mm deep web welded to an end plate along its full depth, weld length should be entered as 400mm.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
End_connections	Throat thickness	Input the throat thickness of the weld (note - not leg length)	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
End_connections	End plate material	Select end plate material from drop down menu - 11 options (Wrought iron, Steel - Pre 1906, Steel - After 1906, Steel BS 15: 1906, Steel BS 15: 1948, Steel BS 15: 1961, Steel BS 548: 1934, Steel BS 968: 1941, Steel BS 968: 1962, Steel BS 2762:1956 NDIA, IIA, IIIA, IVA, VA, Steel BS 2762:1956 NDIB, IIB, IIIB, IVB, VB). If welded directly to the web of the major element, select major element web material instead.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
End_connections	End plate thickness	Input the thickness of the end plate that the minor element is welded to. If welded directly to the web of the major element, input web thickness of major element.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
SSI		Free text space provided for recording the findings of supplementary site inspection (SSI).	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
PPT_Qual	Parapet material	Select option from the drop down menu: <ul style="list-style-type: none"> • “Metal” • “Masonry” • “Concrete” • “Timber” • “Unknown” 	DE - Detailed Examination Report
PPT_Qual	Parapet containment (as-built condition)	The Assessor shall define the level of containment provided in the as built condition (e.g. irrelevant of condition). Select option from drop-down menu (note: the options available are a function of the material specified previously): <u>Metallic:</u> <ul style="list-style-type: none"> • “H4a parapet or welded steel half through type structure” • “N1 / N2 parapet or riveted steel / wrought iron half through type structure” • “Less than N1 parapet / cast iron” <u>Masonry:</u> <ul style="list-style-type: none"> • “Minimum thickness of 450mm and a height greater than 800mm” • “Minimum thickness of 450mm and a height greater than 1000mm” • “Minimum thickness of 350mm and a height greater than 1000mm” • “Minimum thickness less than 350mm and / or height greater than 1000mm” <u>Concrete:</u> <ul style="list-style-type: none"> • “H4a parapet” • “N1 / N2 parapet” • “Less than N1 parapet” 	DE - Detailed Examination Report
PPT_Qual	Containment provided (due to defects)	Based on the defects identified, the Assessor shall qualitatively assess whether the defects are considered to affect the performance of the parapet. Select option from drop-down menu: <ul style="list-style-type: none"> • “Observed defects do not adversely affect the containment provided” • “Observed defects may adversely affect the containment provided” • “Little or no containment level provided due to observed defects” 	DE - Detailed Examination Report


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
PPT_Qual	Parapet Condition	<p>Select option from drop-down menu – “Yes” or “No” for each type of defect listed (note: the defects listed are a function of the material specified previously):</p> <ul style="list-style-type: none"> • Strike damage (e.g. from previous vehicle incursions) • Metallic corrosion • Tears, fractures, cracked welds (for metallic parapets) • Buckling, permanent distortion (for metallic parapets) • Spalling or hollowness (for masonry or concrete parapets) • Cracking (e.g. hairline etc.) • Bulging, distortion or tilting (of masonry or concrete parapets) 	DE - Detailed Examination Report
PPT_Qual	Highway environment	<p>For the purposes of this Tool, the highway environment is defined by 7 parameters. These parameters are used to assess the probability of a Road Traffic Accident (RTA) occurring. The parameters and scoring are based on the Guidance Note Road Vehicle Incursions: Risk Assessment of Bridge and Neighbouring Sites (NR/GN/CIV/00012)</p> <p><u>Road alignment – horizontal</u></p> <p>Select option from drop-down menu:</p> <ul style="list-style-type: none"> • “Straight road with at least 7.3m carriageway” • “Straight road with less than 7.3m carriageway, or curved road with at least 7.3m carriageway” • “Curved road less than 7.3m carriageway” • “Reverse curves with less than 7.3m carriageway” <p><u>Road alignment – vertical</u></p> <p>Select option from drop-down menu:</p> <ul style="list-style-type: none"> • “Level or constant grade road” • “Slight hump back road” • “Hump back road where vehicles are inter-visible” • “Hump back road where vehicles are not inter-visible” 	DE - Detailed Examination Report Digital Mapping


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
PPT_Qual	Highway environment (cont.)	<u>Actual speed of road traffic</u> Select option from drop-down menu: <ul style="list-style-type: none"> • “Less than 30mph” • “30mph or greater, but less than 50mph” • “50mph or greater, but less than 70mph” • “Greater than 70mph” <u>Site specific hazards</u> Site specific hazards increasing the likelihood of an RTA include the following features in proximity to the bridge: farm access, road junction, private driveway, lay-by, bus stop, school, hospital, etc. Select option from drop-down menu: <ul style="list-style-type: none"> • “No obvious hazards” • “Single site specific hazard” • “Multiple site specific hazards and / or railway infrastructure likely to increase severity of incident” <u>Road verges and footpaths</u> Select option from drop-down menu: <ul style="list-style-type: none"> • “Verge or footpath of at least 2m width to both sides of the road” • “Verge or footpath of at least 1m width to both sides of the road” • “Verge or footpath less than 1m to one or both sides of the road” <u>Road signage / carriageway markings</u> Select option from drop-down menu: <ul style="list-style-type: none"> • “Signage / marking fit for purpose and 	DE - Detailed Examination Report Digital Mapping
		<u>Road signage / carriageway markings</u> Select option from drop-down menu: <ul style="list-style-type: none"> • “Signage / markings are not fit for purpose, non-existent or obscured” <u>Volume of road traffic</u> Select option from drop-down menu: <ul style="list-style-type: none"> • “Less than 200 vehicles per day (e.g. lane or farm track)” • “Less than 2,000 vehicles per day (e.g. unclassified road)” • “Less than 7,150 vehicles per day (e.g. B classified road)” • “Less than 12,500 vehicles per day (e.g. A classified road)” • “More than 12,500 vehicles per day (e.g. primary / strategic routes)” 	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
PPT_Results	Highway Environment	<p>For each highway parameter considered on sheet "PPT_Qual", a level of risk is provided by the Tool, as summarised below:</p> <ul style="list-style-type: none"> • "Green" – lowest risk with respect to an RTA occurring • "Amber" – medium risk with respect to an RTA occurring • "Red" – highest risk with respect to an RTA occurring 	
PPT_Results	Railway Environment	<p>The route criticality is assessed within the Tool as a function of the ELR and mileage.</p> <p>Based upon the ELR and mileage input by the Assessor, the Tool will automatically look up the Strategic Route Section (SRS) applicable for this location. The SRS is then used by the Tool to assign a level of risk with respect to the consequence of an incident on the railway environment (e.g. cost of disruptions, unplanned possessions etc.)</p>	
PPT_Results	Qualitative Assessment	An automated output is generated by the Tool as summarised below:	
PPT_Results	Output 1a	<p>Provides the containment level (or comparative containment level) of the parapet in an <u>as-built condition</u>.</p> <p>The following outputs are available:</p> <ul style="list-style-type: none"> • "H4a high containment" • "N2 normal containment (or comparative containment)" • "N1 normal containment (or comparative containment)" • "Less than N1 normal containment" 	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
PPT_Results	Output 1b	<p>Provides the containment level (or comparative containment level) of the parapet in its <u>current condition</u>. This is based on the qualitative assessment of the parapet defects and the following logic:</p> <ul style="list-style-type: none"> • “Observed defects do not adversely affect the containment provided” <i>The containment level in the current condition will be that provided for the as built condition.</i> • “Observed defects may adversely affect the containment provided” <i>The containment level in the current condition will be a downgrading (of one category) of that provided for the as built condition, e.g. H4a containment (as built) will be reported as N2 containment (for the current condition).</i> • “Little or no containment level provided due to observed defects” <i>The containment level will be reported as less than N1 normal containment</i> 	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
PPT_Results	Output 2	<p>Provides the level of risk associated with the highway and railway environment.</p> <ul style="list-style-type: none"> • Risk of an RTA is considered to be – “High” or “Low” • Consequence of an RTA on NR infrastructure is considered to be – “High” or “Low” <p>If the mileage entered for the structure is outside the extents of the ELR, no result will be provided and a message stating this will appear in the results. The mileage should be checked and amended if necessary.</p> <p>This output will also provide a recommended action based on the current parapet condition (and therefore the level of containment provided) and the risk of an RTA occurring / consequence of an RTA / incursion occurring.</p> <p>“Parapet containment level is...</p> <ul style="list-style-type: none"> • adequate • recommended for upgrade to H4a • considered to be a lower priority upgrade • recommended for upgrade to N2 or above <p>...based on the current condition”</p>	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
DK_Qual		For elements where a qualitative check is appropriate, the Tool has been designed so that the assessing engineer can record the judgement on whether the structure is adequate or not (as opposed to automating it based on the defect details input). Defects are noted using a drop down list to show the basis of the judgement.	
DK_Qual		Elements are grouped together by similar type. For example all bearings are included in one table with one list of standard defects. So a noted crack could apply to any bearing. Greater details can be included, where necessary, by using the commenting facility.	
DK_Qual	Material	Select element material from drop down menu - 7 options (Masonry, Concrete, Steel, Wrought Iron, Cast Iron, Timber, N/A).	DE - Last Detailed Examination report; IR - Last Inspection for Assessment report
DK_Qual	Defects	Record whether any defects have been identified. Select from drop down menu - 4 options (Yes, No, Unknown, N/A). These affect the recommendation for further action. Commenting excel facilities must be used to record the defects appropriately.	DE - Last Detailed Examination report; IR - Last Inspection for Assessment report
DK_Qual	Source	Select information source from drop down menu - 12 options (refer to tab "General" for information sources)	
DK_Qual	Qualitative assessment result	Record the qualitative assessment result from drop down menu - 3 options (Adequate, Inadequate, Indeterminate). Indeterminate should be selected when it has not been possible to determine the adequacy from the information available.	
DK_Qual	Question: Does the structure beneath the carriageway and the verge/footway differ?	Drop down menu - 3 options (Yes, No, N/A). This is needed for qualitative assessment of the verge/footway supporting structural elements.	
DK_Qual	Question: Are there tie bars attached, at or near the bottom flange level, between the edge girders of the jack arch deck?	Drop down menu - 3 options (Yes, No, N/A). This is needed to determine if further investigation of edge girder stability is required. It is only visible for jack arch decks.	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
DK_Qual	Qualitative Result based on Minor Element	Choose the leading minor element (with the most significant defect) that the qualitative result is based on. If no defects, select the first relevant element code listed above this entry and choose an element number of 1 (e.g. DCK1).	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
ES_IS_Qual		For elements where a qualitative check is appropriate, the Tool has been designed so that the assessing engineer can record the judgement on whether the structure is adequate or not (as opposed to automating it based on the defect details input). Defects are noted using a drop down list to show the basis of the judgement.	
ES_IS_Qual		Elements are grouped together by similar type. For example all abutments and wing walls are included on one table with one list of standard defects. So a noted crack could apply to either abutment or any wing walls. Further details can be included, where necessary, by using the commenting facility.	
ES_IS_Qual	Material	Select element material from drop down menu - 7 options (Masonry, Concrete, Steel, Wrought Iron, Cast Iron, Timber, N/A).	IR - Last Inspection for Assessment report; DE - Last Detailed Examination report
ES_IS_Qual	Defects	Record whether any defects have been identified. Select from drop down menu - 4 options (Yes, No, Unknown, N/A). These affect the recommendation for further action. Commenting excel facilities must be used to record the defects appropriately.	IR - Last Inspection for Assessment report; DE - Last Detailed Examination report
ES_IS_Qual	Source	Select information source from drop down menu - 12 options (refer to tab "General" for information sources)	
ES_IS_Qual	Qualitative assessment result	Record the qualitative assessment result from drop down menu - 3 options (Adequate, Inadequate, Indeterminate). Indeterminate should be selected when it has not been possible to determine the adequacy from the information available.	
ES_IS_Qual	Qualitative Result based on Minor Element	Choose the leading minor element (with the most significant defect) that the qualitative result is based on. If no defects, select the first relevant element code listed on the tab above this entry and add an element number of 1 (e.g. ABT1).	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
AssmtStatus	Assessment status	Select status of this assessment from the drop down menu - 3 options (Provisional, Updated, Revalidated). The assessment status will automatically be changed to Final once the Form BA0(1) is signed by the CRE.	
AssmtStatus	Outstanding actions -Review of record drawings	Select from drop down menu - options "Yes", "No" or "N/A".	
AssmtStatus	Outstanding actions -Site measurement of key/missing dimensions	Select from drop down menu - options "Yes", "No" or "N/A". CRE is responsible for the review of the comments inserted for outstanding actions and making recommendations regarding site attendance to confirm/collect data.	
AssmtStatus	Outstanding actions - Confirmation of current condition	Select from drop down menu - options "Yes", "No" or "N/A".	
AssmtStatus	Outstanding actions - Other	Select from drop down menu - options "Yes", "No" or "N/A". If "yes" insert a comment.	
AssmtStatus	Reason/basis for update	Select from drop down menu - options "Bridge bash damage" or "Other".	
AssmtStatus	Reason/basis for revalidation	Select from drop down menu - 4 options (Reconfirmed at next DE, Review of current condition, Review of current use, Other)	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
LL-Predef		Predefined live load is 40t HA Assessment live loading. For longitudinal and transverse elements different standards used as described. There are no cells for input.	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Applicable only when NR Version activated			
Sheet name	Input data	Description	Suggested Sources
LL-User		User defined live loads can consist of	
LL-User	No. of wheels per axle	This is for the User Defined Live Load. There are two options to select from the drop down menu, 2 or 4.	
LL-User	Name	This is free text to allow identification of the load applied.	
LL-User	Axle Weight	Up to 32 axles are permitted for the User Defined Live Load. Input the weight per axle (kN) including any dynamic, impact and overload factors where applicable.	
LL-User	Distance between axles	Input a distance in metres for all axles that are applicable.	
LL-User	gamma fl for LL (ULS)	For HB loading use gamma fl=1.3 (see Cl. 1.1 BD 37/01 Table 3.1), for SOV/SV loads use gamma fl = 1.1 (see Cl. 2.6 BD 86/11 Table 2.1)	
LL-User	Wheel spacing, x4, x5, x6	<p>These are the distances starting from the set datum. Datum is at the centre line of the deck element at the high mileage end. The datum used for deck and subdeck width and for offsets must be the same as the datum used for User Defined Live Load.</p> <p>Notation used to identify ends of the deck in the Tool is left and right when facing high mileage. The Tool calculates and uses the average values and therefore a minimum of one set of wheel spacings for x4, x5 and x6 is required where four wheels per axle has been selected and only x4 is required where 2 wheels per axle has been selected. Refer to the sketch.</p>	
LL-User	Wheel spacing, x3	Values for x3 should be entered for all MGs being assessed. MGs to be assessed should be selected for assessment on the Deck tab. If transverse element being assessed leave x3 blank.	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Applicable only when NR Version activated			
Sheet name	Input data	Description	Suggested Sources
Scenarios	User defined scenario	There are two calculation scenarios included in the Tool - one predefined scenario and one user defined scenario.	
Scenarios	Structure Condition	Select from drop down menu - options "Current" or "Proposed Change"	
Scenarios	Assessment Scenario	Select from drop down menu. For the user-defined loading scenario, Assessment Scenario options are "Standard Highway Loads", "Liability Requirement", "Abnormal Loads" or "Other". If "Other" is selected, a form appears allowing the user to specify their own Assessment Scenario name. There is no option to add/change the Assessment Scenario for the predefined loading scenario, as this is fixed as "Standard Highway Loads".	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
CRE		Contractor's responsible Engineer's (CRE) recommendations to be written here.	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Form BA0(1)		First part of the Certificate	
Form BA0(1)	Address	Input the address of the Company responsible for the assessment in Royal Mail standard format.	
Form BA0(1)	Name/Signing Form BA0	Name of the CRE from the Assessing organisation. To be filled by the CRE.	
Form BA0(1)	Title/Signing Form BA0	Title of the CRE from the Assessing organisation. To be filled by the CRE.	
Form BA0(1)	Signing Form BA0	<p>The Form BA0(1) should only be signed by the CRE. After filling in the Name and Title, the CRE must either verify that the Tracking Tables have been populated and checked by selecting "Yes" from the provided dropdown box, or otherwise select "No" but provide justification as to why this has not been carried out. The CRE may then go to the Assessment tab and select "Sign Forms" to complete Form BA0 sign-off. It is the responsibility of the Assessor to ensure each form is signed by a competent and approved person. The signatures will be checked and approved by Network Rail Structures Managers. Completing the signing procedure will lock all the information in Form BA0(1) sheet.</p> <p>Before signing the Form BA0(1) form the inputs will be checked to ensure no changes have been made since the calculation was run. If changes have been made, the calculation must be re-run before signing the forms. The Form BA0(1) cannot be signed unless Tracking Table status has been verified (with either a 'Yes' response, or a 'No' response with accompanying justification) and all scenarios have been calculated using the 'Calculate Scenarios' > 'Calculate All' button. This is even the case if only Scenario 1 (predefined) is being used.</p>	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Form BA0(2)		Second part of the Certificate	
Form BA0(2)	Name/Signing Form BA0	Name of the Structure Manager, Network Rail. To be filled by the Structure Manager.	
Form BA0(2)	Title/Signing Form BA0	Title of the Structure Manager, Network Rail. To be filled by the Structure Manager.	
Form BA0(2)	Signing Form BA0	<p>The Form BA0(2) should only be signed by the Structure Manager. After filling in the Name and Title, go to Assessment menu and select "Sign Forms". Completing the signing procedure will lock the relevant information in Form BA0(2) sheet (i.e. "Structures Manager's comments on assessment") and change the Assessment Status to "Final".</p> <p>Before signing the Form BA0(2) form the inputs will be checked to ensure no changes have been made since the calculation was run. If changes have been made, the calculation must be re-run before signing the forms.</p> <p>On signing two XML files will be created which are used for adding assessment information to the Level 0 database and CSAMS database respectively.</p>	


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
EI_Loads		<p>Loading must be specified per element. Dead loads are calculated automatically based on midspan section properties for each element.</p> <p>There are 3 options to specify SDLs: The user may input</p> <ul style="list-style-type: none"> a) Area and material b) Area and unit weight c) Direct loading input. <p>If the applicable partial factor is not 1.2 the input value has to be corrected with the ratio $g_f L / 1.2$.</p>	
EI_Loads	Typical XG/DCK element	It is applicable only for MGs and only when XG/DCK are present. A drop down list will be available if XG/DCK are present. The self weight of the chosen XG/DCK will be considered.	
EI_Loads	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
EI_Loads	Source	Select information source from drop down menu - 12 options (refer to tab "General" for information sources)	
EI_Loads	Surfacing material: Depth	<p>Surfacing material depth is set by default equal to 100mm. In accordance with BD 21/01, Table 3.1, the top 100mm of road construction shall be considered as surfacing material and shall be factored by $g_f L = 1.75$.</p> <p>Any additional depth of the road construction should be described as an area SDL. If a significant difference in depth occurs along the element, input the maximum depth and insert a comment. The depth more than 100mm shall be factored by 1.2.</p> <p>If the depth of road construction is less than 100mm or the road construction top 100mm are mixture of different materials the loading can be adjusted by adding additional area SDL with a minus sign.</p>	IR - Last Inspection for Assessment report


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
EI_Loads	Surfacing material: Material	Select the element material from the drop down menu. The menu includes all the options for materials in NR/GN/CIV/025-3, table 4.2 and will use the unit weight therein in calculating the SDL to apply. If the top 100mm of road construction is a mixture of different materials the heaviest material can be inputted and the loading can be adjusted by adding additional area SDL with a minus sign.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	Surfacing material: Unit Weight	Where the user selects the Material from the Material drop down menu, the Unit Weight (always in kg/m3) in NR/GN/CIV/025-3 table 4.2 is considered. If no Material has been selected from the Material drop down menu, input a value.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	Loading width (for surfacing material)	This is the loading width per element for the surfacing material loading. It is usually equal to the elements' spacing, i.e. the spacing between main beams (if considering internal main beams).	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	SDLs: Name	Add name of another SDL if different than the SDLs pre-defined. All input units to be kN and m.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	General comment	Additional SDLs may be input or calculated in the Tool. They are classified as either "Area loads" (e.g. waterproofing) or "Line loads" (e.g. parapets) when the deck plan is considered.	
EI_Loads	SDLs: Area loads: Depth	The user may input the depth (or thickness) of the element and the Tool will calculate the Area load to apply. Input must be in metres. (Refer to general comment for this Tab).	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	SDLs: Area loads: Width	This is the loading width per element for the specified area loading. It is usually equal to the elements' spacing. Loading width for troughing must be entered equal to the width of the trough (B).	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	SDLs: Area loads: Loading	It may be input by the user if required. In the calculations a factor $g_{fL} = 1.2$ is applied to all additional loads.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report


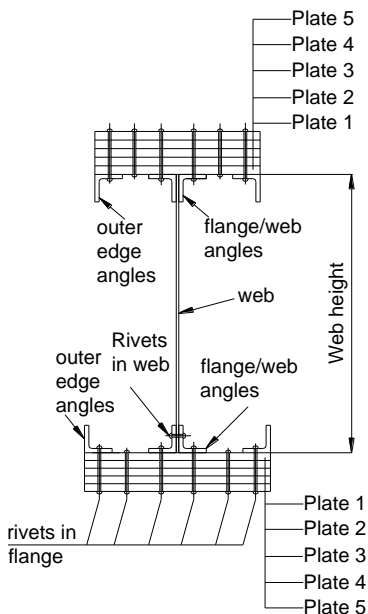
GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
EI_Loads	SDLs: Line loads: Area	The user may input the area of the element and the Tool will calculate the line load to apply. Input must be in square metres. (Refer to general comment for this Tab). A factor $gfL = 1.2$ is applied to these loadings in the calculation.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	SDLs: Material	Select the element material from the drop down menu. The menu includes all the options for materials in NR/GN/CIV/025-3, table 4.2 and will use the unit weight therein in calculating the SDL to apply. If no material has been selected from the Material drop down menu, input value.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	SDLs: Unit Weight	Where the user selects the Material from the Material drop down menu, the Unit Weight (always in kg/m^3) in NR/GN/CIV/025-3 table 4.2 is considered. If no material has been selected from the Material drop down menu, input value.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	SDLs: Line loads: Loading	A Line load (always in kN/m) may be input by the user if required.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Loads	Live Load (Offsets): Distances at XG location, x1 -x2	These are the distances as per the sketch. The distances start from the set datum. Datum is at the centre line of the deck element at the high mileage end.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report


GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
EI_Sections	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
EI_Sections	Source	Select information source from drop down menu - 12 options (refer to tab "General" for information sources)	
EI_Sections	Effective span	Refer to NR/GN/CIV/025 and sketch in the tab. Generally this is the distance between supports of the girder although a number of support arrangements are possible (including bearing plates, rocker bearings, whether there are bearing stiffeners). Insert a comment on how the effective span is calculated.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Length of the web panel for end shear "a"	This is the distance between bearing stiffener and 1st transverse stiffener. If there is no bearing stiffener fill the distance from end of girder to first transverse stiffener. If plate girder without any transverse stiffeners or rolled section fill the effective span.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	l_e / L	Ratio effective length for lateral torsional buckling (l_e) to effective span (L) of the element. Commenting facilities has to be used to justified the input.	
EI_Sections	Loaded Length	The length over which the live load is applied.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Material	Select material from drop down menu - 11 options (Wrought iron, Steel - Pre 1906, Steel - After 1906, Steel BS 15: 1906, Steel BS 15: 1948, Steel BS 15: 1961, Steel BS 548: 1934, Steel BS 968: 1941, Steel BS 968: 1962, Steel BS 2762:1956 NDIA, IIA, IIIA, IVA, VA, Steel BS 2762:1956 NDIB, IIB, IIIB, IVB, VB).	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Strengthening material (if strengthened)	Select material from the drop down menu. (This option is not active for Level 0 Assessment.)	IR - Last Inspection for Assessment report; RD - Record Drawings
EI_Sections	Cross section type	Select cross section type from drop down menu - 6 options (Plate I-girder, Two webs plate girder, Joist, Trough (pressed), Trough (fabricated), Trough (fabr.) Z-type)	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Riveted/Welded	Select connection detail from drop down menu - "riveted" / "welded" girder.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report

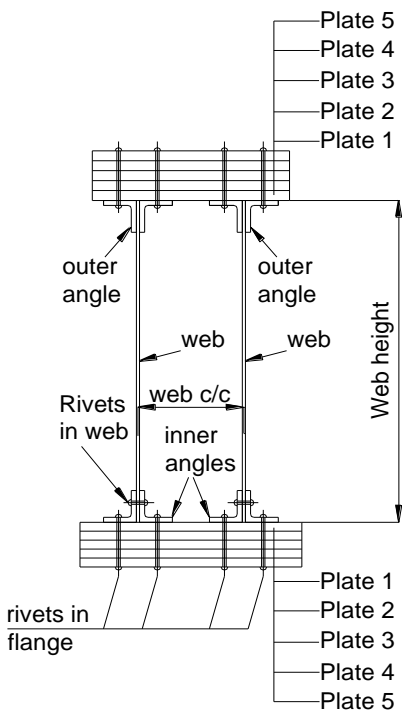
GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
EI_Sections	Effective weld throat (g) (if applicable)	Input effective weld throat thickness.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Type of fasteners	Select fastener detail from drop down menu - "rivets" / "bolts"	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Fasteners' material	Select fastener material from drop down list - 6 options (Wrought iron, Steel - Pre 1906, Steel - After 1906, Gr 4.6 Bolts, Gr 8.8 Bolts, Gr 10.9 Bolts). If not applicable you must leave blank.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Fasteners' size	Input diameter of rivets/bolts. Input the minimum rivet/bolt diameter if section is fabricated with different sizes.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Fasteners' pitch	Input distance between the fasteners c/c. Input the maximum rivet/bolt pitch if it is different along the length of the element.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	Code	<p>Select the relevant position along the element from the drop down menu - 7 options (Ed, Md, CF, DF, CW, DW, WS). Used for "section reference". Refer to abbreviation list in this document. In addition to the distance from the start point each section is assigned a code/type -Ed, Md, CF, DF, CW, DW, WS. The type is used to identify capacity checks for each section: Ed-Shear, Web/Flange connection; Md-Bending; CF-Bending; DF-Bending; CW-Shear; DW-Shear; WS-Bending ignoring the web. Refer to the sketch in this sheet.</p> <p>All sections should be entered with no empty rows between sections.</p>	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
EI_Sections	No.	Select a reference number from the drop down menu - options from "1" to "9". Used for "section reference".	
EI_Sections	Section Reference	<p>No manual input required: It has been received from the adjacent input. For clarification see the example: For inner cross girder number 2 in sub-deck number 1 the full reference will be: XGI1(2)-Ed1 at 0 m; XGI1(2)-CF1 at x m. Refer to sketch</p>	


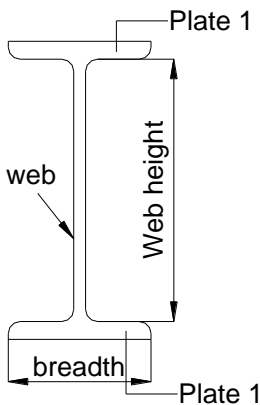
GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
El_Sections	Distance	Input the distance from the start point of the girder. Sections along the girder are identified according to this distance. Note that start point of the girder is defined as the beginning of the effective span. (Refer to the sketch). For all longitudinal elements the start point of the girder is at the left end of the element when facing high mileage. For all transverse members the start point is at the high mileage end. Distance to curtailment locations along the girder must be entered as the effective curtailment length measured from the beginning of effective span. All sections should be entered sequentially with no empty rows between sections.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
El_Sections	Condition	<p>Select appropriate condition description from the dropdown, choose from "As-built Condition", "Current Condition" and "Section with Defect".</p> <p>As-built Condition: The section has been taken as-built taking no account of deterioration.</p> <p>Current Condition: The section has been taken at a location of general deterioration.</p> <p>Section with Defect: The section has been taken at a point of a specific defect.</p>	DE - Last Detailed Examination report; IR - Last Inspection for Assessment report; BCMI - BCMI report
El_Sections	Defect ID	If the condition of a section is chosen to be "Section with Defect", a Defect ID should be provided.	Detailed examination report


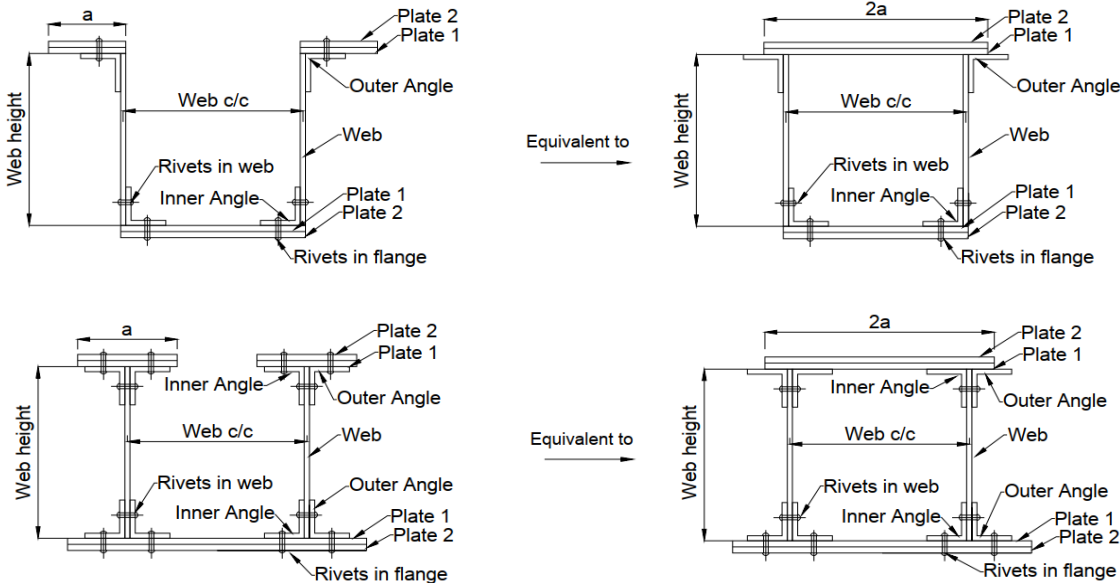
GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
EI-BS_Qual	General	The sheet is applicable for MGs only. The sheet is not applicable and does not appear when MGs are TG (Trough girders) or FB (Filler beams).	
EI-BS_Qual	Enhanced qualitative bearing stiffener assessment questions	Drop down menu - 3 options (Yes, No, N/A). Answer the questions starting with the top one. Subsequent questions depend on the response to the previous question. The assessor must provide justification for the answers including any corrosion using the commenting facility.	RD - Record Drawings IR - Last Inspection for Assessment report


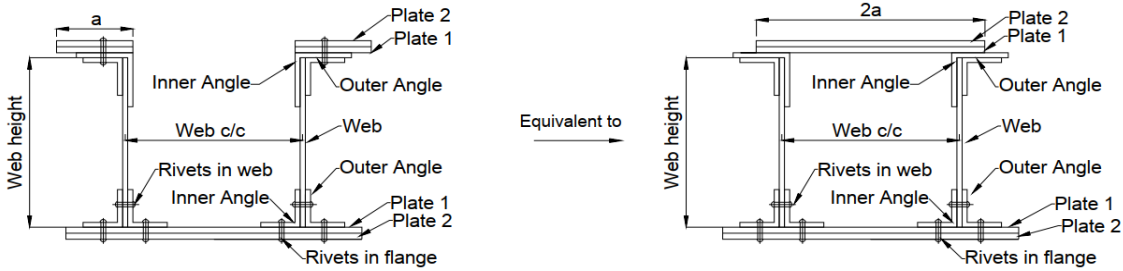
GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Sec_Plate I-girder	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
Sec_Plate I-girder	Breadth	Horizontal dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Plate I-girder	Depth	Vertical dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Plate I-girder	No. rivets in web (Tension flange)	It is assumed that all the rivets are equal in web and flange.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Plate I-girder	No. rivets in flange (Tension flange)	Input the number of rivets in bottom flange. (See the sketch below.)	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Plate I-girder	bfo	As per NR/GN/CIV/025. Figure A1.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Plate I-girder	tfo	As per NR/GN/CIV/025. Figure A1.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Plate I-girder	Angle dimensions	Please only specify dimensions for one angle within a pair. For example, one of the compression flange inner angles.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
 <p>The diagram illustrates the cross-section of a Sec_Plate I-girder. It shows a central web with five horizontal plates (Plate 1 to Plate 5) attached to its top and bottom flanges. Rivets are shown in the web and flange. Labels include: 'Plate 5', 'Plate 4', 'Plate 3', 'Plate 2', 'Plate 1' for the top plates; 'Plate 1', 'Plate 2', 'Plate 3', 'Plate 4', 'Plate 5' for the bottom plates; 'outer edge angles' for the top and bottom flanges; 'flange/web angles' for the angles between the flange and web; 'web' for the central vertical part; 'Rivets in web' for the rivets along the web; 'rivets in flange' for the rivets along the flange; and 'Web height' for the vertical dimension of the web.</p>			


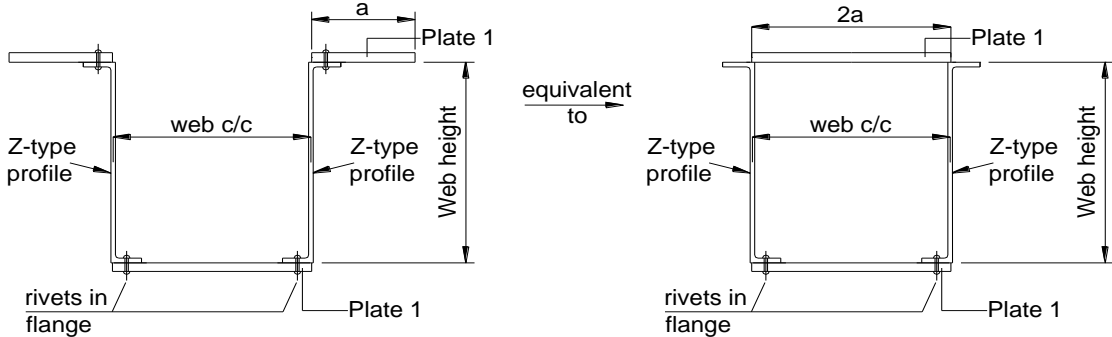
GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Sec_Two webs plate girder	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
Sec_Two webs plate girder	Breadth	Horizontal dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Two webs plate girder	Depth	Vertical dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Two webs plate girder	No. rivets in one web (Tension flange)	Input the number of rivets in ONE web. (See the sketch below.)	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Two webs plate girder	Input the no. rivets in flange (Tension flange)	Input the number of rivets in bottom flange. (See the sketch below.)	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Two webs plate girder	bfo	As per NR/GN/CIV/025, Figure A1.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Two webs plate girder	tfo	As per NR/GN/CIV/025, Figure A1.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report



GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Sec_Joist	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
Sec_Joist	Breadth	Horizontal dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Joist	Depth	Vertical dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
			

GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Sec_Trough (fabricated)	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
Sec_Trough (fabricated)	Breadth	Horizontal dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabricated)	Depth	Vertical dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabricated)	No. rivets in one web (Tension flange)	Input the number of rivets in ONE web. (See the sketch below.)	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabricated)	No. rivets in flange (Tension flange)	Input the number of rivets in bottom flange. (See the sketch below.)	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabricated)	bfo	As per NR/GN/CIV/025, Figure A1.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabricated)	tfo	As per NR/GN/CIV/025, Figure A1.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
			

GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
			

GUIDANCE NOTES			
			Level 0 Assessment Tool Version OBM 3.1
Sheet name	Input data	Description	Suggested Sources
Sec_Trough (fabr.) Ztype	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
Sec_Trough (fabr.) Ztype	Breadth	Horizontal dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabr.) Ztype	Depth	Vertical dimension.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabr.) Ztype	No. rivets in tension flange	Input the number of rivets in bottom flange. (See the sketch below.)	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabr.) Ztype	bfo	As per NR/GN/CIV/025, Figure A1.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (fabr.) Ztype	tfo	As per NR/GN/CIV/025, Figure A1.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
			

GUIDANCE NOTES



Level 0 Assessment Tool
Version OBM 3.1

Sheet name	Input data	Description	Suggested Sources
Sec_Trough (pressed)	Units	Select units from drop down menu - 4 options (in, ft, m, mm)	
Sec_Trough (pressed)	Width (B)	See the sketch below.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (pressed)	Depth (D)	See the sketch below.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (pressed)	Thickness (t_1)	See the sketch below.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (pressed)	Thickness (t_2)	See the sketch below.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (pressed)	Thickness (t_3)	See the sketch below.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (pressed)	Slope (y)	Slope can take values between 0.5 and 6. See sketch below.	
Sec_Trough (pressed)	Width of doubler plate (2a)	See the sketch below.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report
Sec_Trough (pressed)	Thickness of doubler plate (t_d)	See the sketch below.	RD - Record Drawings; AR - Last Assessment Report; IR - Last Inspection for Assessment report

