

HIGHWAY INSPECTOR COMPETENCE FRAMEWORK



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ACKNOWLEDGEMENTS

This document has been commissioned by the UK Roads Liaison Group Asset Management Board, with support from the Department for Transport, the Midlands Highway Alliance and the Midlands Service Improvement Group. It supports the implementation of the Code of Practice, Well-managed Highway Infrastructure.

The Framework has been developed by Atkins with feedback incorporated from the UKRLG Asset Management Board, the Highway Inspectors Board, highway authorities, training providers and professional institutions.

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DISCLAIMER

Whilst every care has been taken in the preparation of this framework, the authors stress that it is intended for guidance purposes only. No legal liability is accepted for its contents and the framework is not intended as a substitute for legal advice. The views expressed do not necessarily reflect those of the sponsoring organisations.

COMMENTS & FEEDBACK

The UK Roads Liaison Group would welcome any comments and feedback on this Highway Inspector Competence Framework, so that it may be reviewed, improved and refined to give the sector the best support possible. To do so, please email ukrlg@ciht.org.uk with the header, 'Feedback on Highway Inspector Competence Framework'.

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1. INTRODUCTION

1.1 BACKGROUND

Research undertaken prior to this work had revealed a variety of approaches being used by different highways authorities to manage the skills, competences and training requirements of highway inspectors.

The highway inspector role has evolved over the last decade due to changes in technology, an increased culture of litigation against highway authorities, government spending constraints and amendments to relevant standards and guidance.

The latest Code of Practice (Well-managed Highway Infrastructure, 2016) recommends highway authorities adopt a risk-based approach to highway inspections. Consequently, this highlights a greater need to ensure inspectors are competent in undertaking their duties on their highway networks.

Different authorities may adopt a risk-based approach in different ways. For instance, some may manage risks through policies and the use of network hierarchy, whereby inspectors' roles will be supported by investigatory levels. Other authorities may wish to move to a dimensionless approach, where the inspector will undertake a risk assessment of the network at ground level.

The Highway Inspectors Board was established on behalf of UKRLG in 2011, to administer training and certification requirements for the role. The Highway Inspectors Board has subsequently overseen updates in 2017 and 2019, the latter seeing the introduction of the new Highway Inspector Competence Framework. Candidates who successfully complete the courses run by an approved centre are eligible for inclusion on the National Register of Highway Inspectors for a period of five years. Registration with the Highway Inspectors Board can contribute positively to risk management and defence of compensation or liability cases.

Where authorities adopt their own or alternative approach to training, they should engage with their risk, legal and insurance departments to ensure that the chosen approach to training and assessment of highway inspection competence is sufficiently robust for local corporate requirements, as this might need to be justified in any legal action taken against an authority

1.2 OBJECTIVES

The objectives behind the Highway Inspector Competence Framework (HICF) are to:

- Outline the role of the highway inspector;
- Raise the importance of the highway inspector role and provide a framework to help role progression;
- Recommend a set of competence areas and associated competences for the highway inspector role;
- Suggest evidence to demonstrate each specific competence;
- Support highway authorities to align the highways inspector role with the latest Code of Practice's risk-based approach; and
- Provide a framework that can be used by professional bodies in helping to support the development of appropriate qualifications/training for highway inspectors, helping to professionalise this role.

1.3 SCOPE AND KEY ASSUMPTIONS

The HICF is consistent with or encompasses:

- Relevant recommendations from the new Code of Practice, including the move to risk-based highway inspections and greater emphasis on safety risks;
- Use of dimension-based and dimensionless highway inspection. Highway inspectors should be able to achieve all levels of proficiency within their role regardless of which approach is used. On this point, it should be noted that neither approach is deemed better than the other – rather each provides a different way of achieving the same aim. In all cases, it is expected that an ability to effectively assess risks will be a core competence for highway inspectors.
- Work and requirements of the Footway Condition Management Group (FCMG). This a subgroup of the UKRLG which champions the role of good maintenance and asset management practices in realising the benefits associated with increased levels of walking and cycling;
- Skills and competences associated with engineering causes and treatment options as part of an appropriate system of inspection and repair;
- Requirements associated with carriageways, footways, cycleways and other ancillary assets e.g. structures, guard railing, traffic signals, street lights, street furniture etc. Any major concerns relating to other assets should also be identified, these will differ between authorities; and
- Needs of different categories of highway users, including but not limited to:
 - Drivers;
 - Pedestrians (including those with visual impairments);
 - Cyclists;
 - Mobility impaired users; and
 - Other vulnerable users.

2. APPROACH

2.1 SOURCE CONTENT

The HICF has been developed making use of a variety of inputs, including the latest Code of Practice, existing training courses and related work undertaken in the highways sector. A complete list of references used is included in the Section 7.

2.2 DEFINITIONS

The framework has been developed by defining the following:

- Scope of the highway inspector role;
- Competence areas (general themes/competence groupings which inspectors should be competent in);
- Specific core and optional competences under each 'competence area';
- Training or other methods to achieve competence; and
- Suggested evidence to evaluate each competence.

These elements are described in more detail in the subsequent sections.

3. HIGHWAY INSPECTOR ROLE

3.1 CORE SCOPE

The core scope of the highway inspector role includes an ability to:

- Understand the law in relation to highway authority highway networks;
- Plan, coordinate and carry out inspections;
- Identify the risk level of a specific defect based on a dimension-based or dimensionless inspection approach; and
- Escalate/de-escalate the urgency level of repairs based on risk.

3.2 OPTIONAL SCOPE

In addition to the core scope, a highway inspector may optionally have the ability to:

- Update highways inventory records after works have been carried out;
- Understand the core principles of asset management;
- Avoid conflict and duplication of works by co-ordinating their works with other internal and external bodies;
- Interact with customers; and
- Create small patching programmes for approval by maintenance engineers.

The primary consideration for this framework is to ensure highway inspectors can evidence the competences outlined in the subsequent sections of this document. However, highway authorities may also take into consideration qualifications and relevant experience to supplement competences.

4. COMPETENCE AREAS

4.1 HIGH LEVEL INFORMATION

After analysing sources referenced in the Section 7, a list of competence areas was identified to cover the highway inspector role. These are listed and described in Table 1.

Table 1 – Competence Areas

Ref	Competence Area	Competence Description & Rationale for Inclusion
1	Highways Law	Understands relevant legislation in relation to highways, including the role inspections play in supporting highway authorities provide a safe highway network and defend their work against potential claims.
2	Planning and Carrying out Inspections	Able to plan, co-ordinate, carry out and record inspections on the network including highways, ancillary assets or any other assets beyond the highway that may affect it.
3	Risk Assessment/ Management	<p>Able to assess risks on highway networks using risk management principles in line with national standards and local guidance.</p> <p>The latest Code of Practice recommends the use of risk-based inspections as national best practice.</p> <p>The effective implementation of the Code of Practice will improve value in delivering the highway service and may support funding from Government.</p>
4	Record Keeping	<p>Able to carry out all relevant administrative processes as required by their authority.</p> <p>Ultimately, the success against claims made against highway authorities is dependent on highway inspectors being able to accurately and clearly identify safety defects and record this on information management systems.</p> <p>Clear recording of defects and condition of network assets and safe keeping of the records also support improved asset management and treatment decisions.</p>
5	Asset Management	Understand the core principles of asset management, including network performance, use of data, treatment selection, maintenance regimes and lifecycle planning is increasingly important, so inspectors can understand how front-line risk assessments can effectively support strategic asset management processes and decisions.
6	Customer Service	<p>Understand how their role impacts this service provision, for instance defects recorded in timely fashion can aid a faster treatment response and reduce complaints.</p> <p>Inspectors are also increasingly required to interact with customers and the need to be sensitive and be able to communicate with these groups is an important skill/competence.</p>

5. SPECIFIC COMPETENCES, TRAINING AND EVIDENCE

5.1 SPECIFIC / DETAILED LEVEL INFORMATION

A set of specific core and optional competences have been defined for each of the general competence areas identified in the previous section. These are presented in Table 2.

This Table also indicates:

- Which Code of Practice recommendation and EngTech requirement each competence relates to (if any);
- Type of training required (i.e. classroom based or on the job) to fulfil a gap in competence and further raise inspectors' skills; and
- Evidence that could be used to demonstrate each competence.

5.2 CORE / OPTIONAL

Core competences are considered those which are essential for all highway inspectors. Optional competences provide the flexibility to the authorities to choose whether they get their inspectors to obtain them. In some authorities these competences may be covered by the wider organisation and may not be essential for a highway inspector while in some other may be included in the highway inspector's responsibilities, undertaking a broader role.

Where authorities choose not to apply optional competences to their inspectors, it is recommended that the reasoning why, is recorded along with details about how such functions are covered by the wider highways service.

Table 2 – Competence Framework

	Core Competence
	Optional Competence

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
							Classroom Based	On the Job Learning/ Experience	
C1.1	Highways Law	<ul style="list-style-type: none"> Understands the requirements for collecting accurate evidence/information and precise record keeping, e.g. in taking/recording statements etc. and their use in the legal process. 	<ul style="list-style-type: none"> Uses electronic devices and software in recording data in line with requirements approach used by the relevant authority, keeping a record of all relevant issues that may be scrutinised during legal proceedings. Understands the importance of photographic evidence in relation to the defence of an insurance claim. Understands the importance of specific photos required as a standard for accurate record keeping that would be reproducible in court. Understands other parts of the law which can affect highways e.g. Environmental Law. 	✓			<ul style="list-style-type: none"> Training course where the syllabus covers highway law and its applicability in the inspection context. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Communications to colleague(s) outlining any action taken regarding collection of information for use in (potential) proceedings. CPD records demonstrating time spent learning and reflecting on requirements.
C1.2	Highways Law	<ul style="list-style-type: none"> Awareness and understanding of the highway network and familiar with legislation and associated Codes of Practice related to their area of work, such as: <ul style="list-style-type: none"> Highways Act; Town and Country Planning Act; Environment Protection Act; Footpaths and Rights of Way legislation; TSRGD; and Traffic Signs Manual etc. 	<ul style="list-style-type: none"> Aware of all legislation related to their role. Can refer to such legislation when required during the course of their work and can identify when highway operatives are acting in contravention of it. Understands and interprets the law based on local policy procedures of each highway authority. 	✓			<ul style="list-style-type: none"> Training course where the syllabus covers highway law and its applicability to works on the highway. Presentations or self-learning. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Evidence of relevant communication. CPD records demonstrating time spent learning and reflecting on requirements.

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
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C1.3	Highways Law	<ul style="list-style-type: none"> Awareness of the ownership of highways and of the responsible parties for highway defects. 	<ul style="list-style-type: none"> Can interpret printed and electronic maps of the authority with regards to public and private areas and can relate them to the relevant location on site. Aware of the status of the highways network and able to identify the responsible parties. 	✓			<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Evidence of relevant communications.
C2.1	Planning and Carrying out Inspections	<ul style="list-style-type: none"> Able to plan inspection routes and programmes effectively. 	<ul style="list-style-type: none"> Able to schedule their inspections so that they utilise their time in the most effective way by prioritising ad hoc inspections resulting from enquiries. 	✓				<ul style="list-style-type: none"> On the job training through creating/amending inspection routes and programmes under the supervision of more experienced staff. 	<ul style="list-style-type: none"> Communication to colleague(s) regarding amendments to inspection routes or programmes (or if no amendments are necessary, confirming their suitability).
C2.2	Planning and Carrying out Inspections	<ul style="list-style-type: none"> Able to conduct inspections in line with defined standards. 	<ul style="list-style-type: none"> Able to identify all defects or issues, as specified in the authority's inspection or maintenance manuals. 	✓	Y		<ul style="list-style-type: none"> Course or self-learning on quality requirements for inspections. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Entries in their inspection diary. Audits/checks of inspection records by supervisor, highlighting no discrepancies/ omissions.
C2.3	Planning and Carrying out Inspections	<ul style="list-style-type: none"> Able to identify areas where delivery can be improved and can communicate their views appropriately. 	<ul style="list-style-type: none"> Has a broad understanding of the highway service and can identify possible improvements, such as: <ul style="list-style-type: none"> Changing a diversion route; Provision of parking bays; and Widening the carriageway. 			B1	<ul style="list-style-type: none"> Presentations or self-learning on other aspects of the service. 	<ul style="list-style-type: none"> On the job training through interaction with other teams in the service. 	<ul style="list-style-type: none"> Communication to colleague(s) identifying an area where service provision is lacking with suggestions of how this shortfall might be addressed.
C2.4	Planning and Carrying out Inspections	<ul style="list-style-type: none"> Able to notify appropriate teams regarding issues related to ancillary assets. 	<ul style="list-style-type: none"> Aware of inspection cycles and maintenance regimes related to ancillary assets. 	✓			<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job interaction with other teams or shadowing other types of inspection or works. 	<ul style="list-style-type: none"> Communication to colleague(s) identifying issues with ancillary assets.

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
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C2.5	Planning and Carrying out Inspections	<ul style="list-style-type: none"> Considers all categories of users during their inspections e.g. <ul style="list-style-type: none"> Users of mobility scooters/walking aids; Car users; Users of prams; Cyclists; and Pedestrians included the visually impaired. 	<ul style="list-style-type: none"> Able to identify and mitigate issues which relate to specific user groups. These could include the following: <ul style="list-style-type: none"> Road work signage which may be blocking a cycleway which is adjacent to the kerb; and Traffic management barriers which may prevent a pushchair/ wheelchair user from accessing the footway. 	✓			<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff and reflecting on situations identified/decisions made. Specific focus groups with groups such as RNIB etc. Being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Communication to colleague(s) identifying issues with a specific user group. CPD records demonstrating time spent learning and reflecting on such instances.
C2.6	Planning and Carrying out Inspections	<ul style="list-style-type: none"> Considers all elements of the highway (carriageway, footway, cycleway etc) and beyond the highway which can affect them (e.g. falling trees etc), as separate entities when conducting inspections. 	<ul style="list-style-type: none"> Able to identify and mitigate issues which relate to a specific asset group. These could include the following: <ul style="list-style-type: none"> Ensuring that a designated cycle route is usable and clear of obstruction from start to end; and Ensuring vehicle drivers have enough space to pass on the road without having to mount the footway. 	✓			<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff and reflecting on situations identified/decisions made. Being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Evidence of communication with colleagues identifying issues with a specific asset group. CPD records demonstrating time spent learning and reflecting on such instances.
C2.7	Planning and Carrying out Inspections	<ul style="list-style-type: none"> Able to recommend/select the appropriate material and type of treatment for a defect. 	<ul style="list-style-type: none"> Understands the process of treatment identification with regards to a specific defect incorporating considerations such as: <ul style="list-style-type: none"> Value for money; Safety concerns; Environmental issues; and Network benefit. 			B2	<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> A description of the works that they issued and an explanation of why they made this decision.

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
							Classroom Based	On the Job Learning/ Experience	
C3.1	Risk Assessment and Risk Management	<ul style="list-style-type: none"> Able to conduct a risk assessment for a specific defect and critically evaluate it (including factors external to the defect) and escalate/ de-escalate as appropriate. 	<ul style="list-style-type: none"> Able to evaluate the risk of a defect and can assess the likelihood and consequence in relation to it. Understands the criteria which influences defect prioritisation and able to identify where other criteria/risk factors may warrant changes to prioritisation. Evaluates, plans and conducts a risk-based assessment. Conducts regular inspections based on the risk-based approach, being aligned with the new CoP. 	✓	Y	A2	<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. Self-studying of the new Code of Practice. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Communication to colleague(s) demonstrating that a defect's priority has been assigned based on either the established hierarchy or additional criteria. Risk assessment records/report.
C3.2	Risk Assessment and Risk Management	<ul style="list-style-type: none"> DIMENSIONLESS: Able to assess the urgency level of a defect in a highway authority where dimension-based assessments aren't used. 	<ul style="list-style-type: none"> Able to use the locally-defined method for dimensionless identification of defects and to assess their prioritisation/urgency. 		Y		<ul style="list-style-type: none"> Presentations and courses on locally-defined processes. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Communications or other records demonstrating that a defect has been identified and prioritised following the local dimensionless procedure.
C3.3	Risk Assessment and Risk Management	<ul style="list-style-type: none"> DIMENSION-BASED: Can assess the urgency level of a defect in a highway authority where dimension-based assessments are used BUT can also assess repairs in scenarios where dimension-based assessments aren't appropriate. 	<ul style="list-style-type: none"> Able to use the locally-defined method for dimension-based identification of defects and to assess their prioritisation/urgency. 		Y		<ul style="list-style-type: none"> Presentations and courses on locally-defined processes. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Communications or other records demonstrating that a defect has been identified and prioritised following the local dimension-based procedure.

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
							Classroom Based	On the Job Learning/ Experience	
C3.4	Risk Assessment and Risk Management	<ul style="list-style-type: none"> Able to interpret and manage risks which occur from interactions between assets and from elements that affect the assets. 	<ul style="list-style-type: none"> Understands how different elements of the highway and beyond them can affect each other and knows what action to take to mitigate risks e.g. from falling trees in a carriageway or lighting problems on carriageways. 	✓			<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff and reflecting on situations identified/ decisions made. Being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Evidence of communications which shows they have identified an issue relating to interaction between different elements. CPD records demonstrating time spent learning and reflecting on such instances. Risk assessment records/report.
C3.5	Risk Assessment and Risk Management	<ul style="list-style-type: none"> Understands the network hierarchy and the factors that influence the assignment of levels. 	<ul style="list-style-type: none"> Able to establish and regularly review the risk management basis of both the network hierarchy and the inspection frequency. 	✓	Y		<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Evidence of communications which shows they have identified an issue relating to the network hierarchy and the factors that influence the assignment. Risk assessment records/report.
C3.6	Risk Assessment and Risk Management	<ul style="list-style-type: none"> Understands the requirements of the expected users and how they will use the network. 	<ul style="list-style-type: none"> Able to understand and foresee the network's usage based on the user's needs. 				<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Evidence of communication which shows they have identified an issue relating to understanding the mindset of the expected users and how they will use the network.

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
							Classroom Based	On the Job Learning/ Experience	
C4.1	Record Keeping	<ul style="list-style-type: none"> Able to complete all administrative functions and appropriate paperwork with regards to site related work, involving both internal and external contractors/developers. 	<ul style="list-style-type: none"> Able to keep a record of works orders to be issued and any other relevant notes in digitally enabled equipment such as tablets or any other electronic device. Able to interrogate the works ordering system to identify works orders raised for specific site works. 	✓			<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Relevant notes. Communications with relevant internal/external parties. Orders raised by the inspector in works ordering system (or similar) to the correct quality level.
C4.2	Record Keeping	<ul style="list-style-type: none"> Able to identify appropriate internal and external parties in the event of a discrepancy in site related paperwork and can liaise with them to resolve any such issues. 	<ul style="list-style-type: none"> Able to confirm correct dates from adoption certificates. Able to raise retrospective works orders for emergency site works. Able to identify when site works haven't been carried out according to the issued works order. 				<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Relevant notes. Communications with relevant internal/external parties. Orders raised by the inspector in works ordering system (or similar) to the correct quality level.
C4.3	Record Keeping	<ul style="list-style-type: none"> Able to keep appropriate and precise records in relation to highway inspections and customers' enquiries/defect reports. 	<ul style="list-style-type: none"> Ensures that all site inspection records are completed correctly and precisely and are up to date. Identifies safety defects and records them on information management systems. Uses appropriate terminology when recording defects. Investigates queries from network users, carrying out site visits and acting if appropriate. 	✓	Y		<ul style="list-style-type: none"> Appropriate training which can be carried out by the highway authority themselves. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Relevant notes. Communications with relevant internal/external parties. Site inspection records.

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
							Classroom Based	On the Job Learning/ Experience	
C5.1	Asset Management	<ul style="list-style-type: none"> Able to update asset inventory database(s) as a result of any works issued and can interpret condition survey results. 	<ul style="list-style-type: none"> Able to locate and update the relevant record in the asset database relating to an asset which has been replaced/renewed, for example: <ul style="list-style-type: none"> If a lighting column/gully is re-set, find the appropriate record within the system and change the installation date; and If major patching work is done, update the appropriate polygon on the works history map with the date and type of works. Aware of the different types of condition survey which are carried out by their authority, the main methodology for each and how to interpret the associated condition survey results. 		Y	A2	<ul style="list-style-type: none"> If expertise is available within the highway authority, appropriate training can be delivered in-house. Otherwise, it will need to be procured externally or provided by the asset management system provider. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Works order screen shot and export of appropriately updated information from asset management system. Communication to colleague(s) detailing an asset which needs treatment, with reference to the appropriate condition survey results.
C5.2	Asset Management	<ul style="list-style-type: none"> Able to target maintenance by drafting small works programmes. 	<ul style="list-style-type: none"> Able to draft small works programmes for major assets based on their knowledge of asset condition and appropriate remedial treatment, for example: <ul style="list-style-type: none"> Able to identify where a section of carriageway/footway has been subject to repeated minor repairs and can group such sections into small works programmes to use funds effectively. 		Y	B1		<ul style="list-style-type: none"> On the job training through shadowing experienced staff (completing asset assessment pro-formas relating to condition). 	<ul style="list-style-type: none"> Small works programme referenced to condition survey results and site photos.
C5.3	Asset Management	<ul style="list-style-type: none"> Understands the relevance of Key Performance Indicators (KPIs) in relation to their role and, if required, can record statistics relating to their highway authority's and contractors' performance. 	<ul style="list-style-type: none"> Familiar with the overall process of producing KPIs Supplies all relevant information regarding works that they have issued to the officer responsible for calculating KPIs. 		Y		<ul style="list-style-type: none"> In-house training on the specific KPIs used within the authority. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff collating KPI data. On the job training through providing KPI data when requested, to a suitable standard. 	<ul style="list-style-type: none"> Communication to colleague(s) providing input to support KPI data collation, analysis or interpretation. Relevant records/report.

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
							Classroom Based	On the Job Learning/ Experience	
C5.4	Asset Management	<ul style="list-style-type: none"> Understands environmental and sustainability principles and can apply them in the context of their role. 	<ul style="list-style-type: none"> Able to identify where an environmental or sustainability issue has negatively affected the highway asset. For example, identifying the following: <ul style="list-style-type: none"> Drainage screens that are blocked with rubbish which will potentially cause flooding; Areas of the carriageway that require re-profiling due to ineffective drainage; and Sections of carriageway which are prone to repeated defects due to high usage by vehicles such as HGV's and buses. 	✓	Y	B2	<ul style="list-style-type: none"> If expertise is available within the highway authority appropriate training can be delivered in-house. Otherwise it will need to be procured externally or provided by the asset management system provider. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff and reflecting on any examples encountered. 	<ul style="list-style-type: none"> Record of decision(s) made by the inspector influenced by environmental or sustainability principles. CPD records demonstrating time spent learning and reflecting on environmental and sustainability issues encountered by others.
C5.5	Asset Management	<ul style="list-style-type: none"> Understands the differences between different types of maintenance regimes and aware of innovations in maintenance and inspection techniques. 	<ul style="list-style-type: none"> Understands when to use different maintenance techniques and why they are chosen e.g. resurfacing, surface dressing, reconstruction. Aware of innovative techniques and can identify and assess whether they offer benefits (e.g. value for money) and can recommend their usage where appropriate. 		Y	B1, B2	<ul style="list-style-type: none"> If expertise is available within the highway authority, appropriate training can be delivered in-house. Otherwise, it will need to be procured externally or provided by the asset management system provider. Presentation/ demonstration by the company supplying the new technique. Self-study or reading appropriate professional journals. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff and reflecting on decisions made. 	<ul style="list-style-type: none"> Communications to colleague(s) recommending the usage of a certain type of maintenance technique for a defect and stating why they have recommended it. CPD records demonstrating time spent learning about innovations and reflecting on their applicability.

Competence Reference	Competence Area	Specific Competence	Competence Detail	Core Competence	CoP Recommendation	EngTech competence	Appropriate Training		Examples of Appropriate Evidence
							Classroom Based	On the Job Learning/ Experience	
C5.6	Asset Management	<ul style="list-style-type: none"> Able to identify instances where the integrity of the highway or any other asset that affects the highway is being compromised. 	<ul style="list-style-type: none"> Able to identify issues which can compromise the integrity of the highway such as lack of drainage on a road or throughput of HGV's on a road not designed to support it etc. Able to take/ recommend action to mitigate the effects of such issues such as traffic regulation orders or a change to the gully cleaning schedule etc. 	✓			<ul style="list-style-type: none"> If expertise is available within the highway authority, appropriate training can be delivered in-house. Otherwise, it will need to be procured externally or provided by the asset management system provider. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff and reflecting on situations identified/ decisions made. 	<ul style="list-style-type: none"> Communication to colleague(s) explaining their concern for the integrity of the highway in a particular situation and suggesting remedial measures. CPD records demonstrating time spent learning and reflecting on such instances.
C6.1	Customer Service	<ul style="list-style-type: none"> Able to communicate effectively with all stakeholders. 	<ul style="list-style-type: none"> Able to identify who the main highway authority stakeholders are. Able to adjust their interaction depending on the type of stakeholder they're interacting with. 	✓	Y	D2	<ul style="list-style-type: none"> Course or self-learning covering communication methods, channels and styles. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff or being supervised while following appropriate processes. 	<ul style="list-style-type: none"> Communications to a variety of stakeholders, with evidence of messaging being tailored to their needs.
C6.2	Customer Service	<ul style="list-style-type: none"> Able to deal effectively with residents on site. 	<ul style="list-style-type: none"> Able to converse safely, clearly and politely with residents if they are approached by them on site. Addresses customer concerns relating to highway assets effectively. 	✓			<ul style="list-style-type: none"> Induction to customer service policy conducted by the highway authority. 	<ul style="list-style-type: none"> On the job training through shadowing experienced staff. 	

6. FRAMEWORK IMPLEMENTATION

6.1 LOCAL REQUIREMENTS

Each highway authority will have the flexibility to use the HICF in a way that suits its needs but will need to consider aligning competence reviews with staff development appraisals, so that any gaps established can feed training and development plans. Re-assessment frequencies will need to be determined by each individual authority.

The framework is offered as guidance and is created to support highway authorities without being prescriptive. The highway inspector role in some highway authorities may be structured in such a way that can only embody the core competences while in some other may also use the optional.

6.2 FEEDBACK

Users of the framework are encouraged to provide feedback on the use and content of the HICF via email to ukrlg@ciht.org.uk with the header, 'Feedback on Highway Inspector Competence Framework'.

7. REFERENCES

Name	Type	Publishing Organisation
<u>Well-managed Highway Infrastructure a Code of Practice</u>	Code of Practice	UK Roads Liaison Group (UKRLG)
<u>Highway Infrastructure Asset Management - Guidance Document</u>	Guidance Document	UK Roads Liaison Group (UKRLG)
<u>Engineering Council Specification for Engineering Technicians</u>	UK Standard for Professional Engineering Competence	Engineering Council
<u>MSIG Risk Based Approach to Highway Safety Defects</u>	High level Definition of Risk Based Approach	Midland Service Improvement Group (MSIG)
<u>Bridge Inspector Certification Scheme</u>	Detailed Competence and Training Framework	UK Bridges Board / Lantra
<u>Well Managed Highway Liability Risk</u>	Guidance Document	IHE
<u>SCOTS - Risk Based Inspection Approach</u>	Detailed Definition of Risk Based Inspections	SCOTS
<u>IHE Highway Inspector Training and Certification Scheme</u>	Training Specifications	IHE
<u>Lantra Training Course Specifications</u>	Training Specifications	Lantra

