

Derby Homes

Well Managed Highway Inspections

**(To be used for the inspection of car parks, access roads,
footpaths and other hard standing areas)**



August 2019

Purpose of this Manual:

We want our tenants to live in safe and secure homes. We achieved the Decent Homes Standard in 2006 and we have a dedicated team responsible for maintaining properties to that standard.

Derby Homes will now undertake cyclical safety inspections of the car parks, access roads, footpaths and other hard standing areas associated with its properties. This manual describes how that will be achieved.

The inspection process is based on the principles adopted by Derby City Highway Maintenance in inspecting the highway network. Highways use a risk based approach to safety inspections based on Well-Managed Highway Infrastructure - A Code of Practice: October 2016.

Control

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Supporting information

Policy or strategy type (statutory/non statutory and/or internal or external)	Based on the principles of Well-Managed Highway Infrastructure - A Code of Practice: October 2016. Non statutory, but provides current national guidance and best practice. This manual is an external document. The primary evidence to be used in any defence against third party claims.
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Reviewing officer	Graham Harris Highway Senior Asset Management Technician graham.harris@derby.gov.uk 01332 643247

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1.0	1 st Draft	Graham Harris	25-9-19	

Foreword

Derby Homes is an Arm's Length Management Organisation (ALMO) and is a 100% owned subsidiary of Derby City Council. It was created in 2002 to manage and maintain the Council's housing stock. The function of management and maintenance is delegated to Derby Homes, but the Council retains ownership of the housing stock and all tenants are Council tenants.

Our turnover is around £42M a year and we have over 500 staff. Our core business is the management of and investment in, Derby City Council's social housing stock, comprising of 12,874 properties.

We want our tenants to live in safe and secure homes. We achieved the Decent Homes Standard in 2006 and we have a dedicated team responsible for maintaining properties to that standard.

It is also important to maintain external paved infrastructure areas such as car parks, hard standings and paths and this policy is designed to provide a safe environment for residents in respect of these assets.

This new Derby Homes Well Managed Highways Inspection Manual: August 2019 aligns with the Council's vision for Derby and describes how we have adopted an inspection process based on the same principles as the Highways inspection process which in turn has been devised to deliver the risk based approach described in Well-Managed Highway Infrastructure - A Code of Practice: October 2016.

The new code significantly changes from the reliance on nationally set standards and recommendations to a risk-based approach to infrastructure asset management. The purpose of a risk-based approach is to determine the scale of the risk presented by a defect, in order to prioritise the appropriate category of response.

The Derby Homes Well Manage Highway Inspections Manual: August 2019 is a dynamic document and is subject to amendments, as we continually review and reflect changes in the infrastructure supporting our housing stock.

Introduction

As a Housing Authority Derby City have a duty of care to maintain the safety and accessibility of the external infrastructure associated with its properties.

The main purpose of Derby Homes Inspections is:

- for Derby Homes to meet and provide evidence towards its obligation to maintain the car parks, access roads, footpaths and other hard standing areas associated with its properties in a safe condition
- to identify safety defects that are hazardous or likely to create a danger to residents and visitors
- to determine the extent of defects requiring prompt repair and their timing
- to reduce the likelihood of liability claims arising and to provide a defence against such liability claims
- to identify defects which should be repaired to avoid problems developing and which can be dealt with as part of a works programme.

Additionally:

- they can provide data on the condition of infrastructure assets to aid the identification of a planned improvement works programme

From August 2019 and in line with the Well-Managed Highway Infrastructure - A Code of Practice: October 2016, Derby City Council will undertake risk-based assessments in accordance with local needs, context and priorities. A trained and competent Inspector will carry out safety inspections. We will demonstrate reasonable care has been taken to identify and respond appropriately to a defect which presents a danger to residents and visitors. The Inspector will consider the potential consequences of that defect and the likelihood of the risk occurring by a dynamic risk assessment. An on-site evaluation will determine the scale of risk and the category of response applied.

Derby City Council's asset management system Confirm will be used to manage the safety inspection and defect repair regime. It will accurately record the inspector's activities and actions and along with photographic evidence, it allows for reports to be compiled for a sound defence against a liability claim. It also allows the data to be extracted and analysed against condition survey data to prepare medium- longer term planned and preventative maintenance programmes. The information can also be reported upon in response to public enquiries or complaints and advise residents on progress with defect repairs and the expected level of service to anticipate.

1. Infrastructure Assets

This Derby Homes Inspection Manual: August 2019 covers the safety inspection of the following assets/asset groups:

- Paved Surfaces
 - Access roads
 - Car parks
 - Footpaths
 - Drying areas
 - Other paved assets
- Utility covers and reinstatements
- Road Markings
- Street Lights and Illuminated Street Furniture
- Non Illuminated Signs and Posts
- Drainage
- Pedestrian guard rails
- Fences and walls

It was decided that the assets to be subject to routine inspections would be limited to those in communal areas. Assets serving single properties that have garden boundaries are not to be inspected. It is anticipated that the need for repairs to assets associated with single properties will be reported by the tenant, as part of their tenancy agreement.

2. Training and Competency

The Inspector undertaking the safety inspection is responsible for the accuracy of both the inspection and the recorded information. In the event of a third party claim, he/she may be required to provide information relating to the claim and provide statements towards the defence. In the event of a claim litigating, that Inspector may have to attend court to substantiate their actions and inspection records. A manager responsible for the policy and approved processes may also have to attend to validate the statement made by the Inspector and on behalf of Derby City Council. They will have to articulate the reasoning behind the authority's approach and what led to the Inspector making the decision they did.

The Inspector will hold a current and valid Lantra Approved Highway Safety Inspection Certificate which satisfies the requirements of the IHE certification scheme and enables Inspectors to be entered onto the National Register of Highway Inspectors.

3. Maintenance Hierarchy

Well-Managed Highway Infrastructure - A Code of Practice: October 2016 recommend that a hierarchy of assets be established to reflect the level of risk involved.

Infrastructure failure on higher hierarchy assets would have a greater impact and therefore maintenance activities would need to be effectively prioritised, in terms of response time and the type of repair completed.

In the process of identifying the assets to be inspected a number of options for establishing an inspection hierarchy were considered. For example could we relate inspection frequency to the size of the development (footfall) or to the nature of the development (vulnerable users)?

Highway assets are associated with a hierarchy that is related in turn to an inspection frequency. Highway inspection frequencies vary from 2 weeks at the highest level to 12 months at the lowest level of the hierarchy.

Having identified the workload it was decided that all of the assets would be inspected over an initial twelve month period. The process will then be reviewed in the light of experience to decide if an inspection hierarchy is appropriate.

Hierarchies need to be dynamic to reflect changes in usage, which can be a consequence of new development and changes to existing layouts. During the early implementation of the new inspection regime, they will be regularly reviewed to reflect changes in infrastructure characteristics and functionality, to ensure maintenance policies and practices reflect the current situation.

The Highway Inspector will be required to make recommendations, to reassess network hierarchies and inspection routes as a consequence of changes in characteristics and functionality observed during their inspections. These will be documented to build on our evidence base.

Similarly, where a significant increase in defects is noted, the decision to increase the frequency of inspections on that section of road, to better contain the risk may be enabled.

4. Inspection Types

Highway safety inspections fall in to the following categories:

- **Safety Inspections** - these are cyclical inspections covering the whole infrastructure networks, which are carried out at a frequency determined by any new maintenance hierarchies or in the absence of a hierarchy by this policy which has set the frequency initially to be six months.

- **Reactive Inspections** - these are inspections that are generated as a result of reports and enquiries received by members of the public, internal teams, Members and contractors. It also includes calls for service, for example, quotations for construction of a new vehicular access.
- **Service inspections** – these are inspections of the highway infrastructure assets that assess their condition with regard to programming a series of planned maintenance interventions and to maintain the asset in a serviceable condition and based on a lifecycle approach. The Inspectors will contribute to this process by recording condition related defects and observations.

It should be noted that whilst there are significant differences between safety inspections, reactive inspections and service inspections, they are none the less closely linked, so as to maximise the use of available data and to ensure a safe and reliable infrastructure is available at all times.

5. Planning and Recording Safety Inspections

The planning and recording of data from safety inspections makes use of electronic devices and software tools whenever practical. Where necessity means a record has to be made on paper, this is transferred to the appropriate system or database at the earliest opportunity.

Derby City uses Confirm as a central depository of all asset management information, including safety inspections. This is a sustainable and secure means of information management. The due safety inspection, including maps where applicable, is transferred from Confirm to the iPad used by the inspector to record their activities. On completion of the inspection or at the end of each day, the data on the iPad is transferred back into the system through wireless technology.

The data from safety inspections can then be used to produce printed and electronic defect reports. These reports are used as instructions to carry out the repairs, referral to other departments or outside bodies, in response to public enquiries and evidence in the defence of a third party claim.

5.1 Inspection Frequencies

The due date is the final date by which an inspection must be completed, but subject to the following limitations:

- If and for reasons beyond the control of the Inspector an inspection cannot be carried out by the due date e.g. substantial snow fall, then an entry will be made to document the circumstances

- Due to the sporadic nature of the weather in the UK, it is probable that paved surfaces will be wet with some elements of standing or running water whilst an inspection is in progress. However, if the quantity of water is excessive then the inspection should be abandoned and an entry should be made to document the circumstances
- As soon as possible following these types of events, an ad-hoc safety inspection should be carried out on the affected length of highway.

A tolerance on due date will be allowed and will vary according to the inspection frequency. For a twelve monthly inspection (which will be the frequency for all assets at the outset) the tolerance will be plus or minus 15 days.

Confirm will automatically schedule the next inspection from the original due date

It may sometimes be necessary to inspect at a higher frequency where there are particular identified hazards, for example an asset is deteriorating quickly or subject to a significant increase in usage.

Derby City will regularly review inspection routes to ensure they are achievable, deliverable and practical and that the routes include all of the existing Derby Homes infrastructure and incorporate any new developments.

6. Undertaking Safety Inspections

Safety inspections shall be undertaken in a manner that minimises risk to the Highway Inspector and/or those persons using the infrastructure assets. A risk assessment has been prepared for all safety inspections and all Inspectors are required to follow the risk assessment at all times.

Risk assessments could go on to cover alternate inspections involving the use of cameras, videos and drones in line with legislation, in respect of video image capture.

Regular toolbox talks on all aspects of undertaking inspections, lone working, making safe defects and repair work will be scheduled. Audit checks will be completed to ensure the risks associated with safety inspections are understood and appropriate care is taken to ensure the safety of staff and the public.

The nature of the infrastructure in and around Derby Homes properties will require a walked inspection

It is recognised that parked vehicles can present a visual obstruction to the inspection process. The Highway Inspector will do all that is reasonably practicable to ensure that any defects are identified and recorded.

All reasonable precautions must be taken to ensure the inspection is carried out safely. If at the time of inspection, the Highway Inspector considers it too dangerous to complete a route safely, then they will advise their line manager and record any actions.

The vehicle used for safety inspections will be provided with equipment to assist with an emergency, where it is safe to do so, including road cones, barriers, keep left/right signs, sand and sweeping brush.

7. Risk Assessment

The new 'Well Managed Highway infrastructure Code of Practice' does not specify defined safety inspection frequencies, the investigation or intervention levels that determine a defect to be actionable or the response timescale where action is required to rectify a defect. These will require the authority to take a risk-based approach to the identification, assessment, evaluation and priority of defects.

Safety inspections employ an investigation level to identify the defect and a risk assessment process to determine the degree of risk the user is likely to be exposed to. Defects representing a risk to the user will be identified and assessed in terms of their significance, i.e. the likely consequence should the risk occur and the likelihood of it actually happening.

The consequence can be determined as ranging from none at its lowest level to serious at its highest, should an incident occur as a result of the defect. Statistically, the consequence is likely to increase with speed and the number of users or level of the hierarchy and these are important considerations in assessing the risk.

The likelihood can be determined by considering the probability of users encountering the defect. As the likelihood will increase with the volume of users, then the level of the network hierarchy and location of the defect within the extent of the asset are important considerations in assessing the risk.

The interaction between the consequence and the likelihood will determine the action to be taken with regard to the defect and will identify the risk-based action to be taken varying from immediate action to no further action.

Risk is managed at various levels and at different points in the process and has been considered in the development of the list of defects to be considered and the levels at which a risk category level is triggered by a defect. The subsequent action to remedy or mitigate the defect is also considered on a "by defect" basis but an indication of the default response has been made for the Inspector.

Risk is further accounted for in the frequency of carrying out surveys, any tolerances in the timings and any factors that may be considered to increase or decrease the

need for surveys. In all cases the “risk-based approach” is adopted and the assessment process recorded.

The Risk Matrix to be used is included in Appendix A.

8. Intervention Levels

The term Intervention Level has been retained within this Manual to ensure Derby City have a structured and repeatable service level which Highway Inspectors and members of the public will understand. For the purpose of this manual, by “intervention level” we mean:

- the defect will be repaired within the appropriate defect response time
- the defect will be considered for inclusion in a future maintenance scheme
- the defect will be monitored through the structured safety inspection regime.

Dependant on how the inspector risk assesses the defect will affect which element of intervention is applied.

Table 8.1 shows a summary of the intervention levels for the majority of safety defects collected. The full list of defects will be available on the ipads for the Inspector to select as required. It should be noted also that these definitions are provided as guidance for the inspector to understand the initial defect. Their risk assessment at the point of inspection will determine the appropriate response and their synchronised IPad will enable them to change the default response time if necessary, but require notes to be provided on their reasoning.

8.1 Intervention Levels

Defect	General Description
Carriageway	
Pot hole	Depth 40mm or greater
Difference in level or depression	Depth 40mm or greater
Modular paving uneven/rocking	Depth 40mm or greater
Flooding	Affecting >25% of the lane width
Rutting	Depth of 40mm or greater for a length >5m
Abrupt difference in level from an asset	Depth 40mm or greater
Footpath and other hard-standing areas	
Pot hole	Depth 25mm or greater
Difference in level or depression	Depth 25mm or greater
Modular paving uneven or rocking	Depth 25mm or greater
Flooding	Affecting >25% of the footpath width
Abrupt difference in level from an asset	Depth 25mm or greater

9. Inspection Process

The inspector uses a mobile application called ConfirmConnect which runs on an iPad.

The inspector is able to download inspection tasks to ConfirmConnect, record defects and make other observations about the inspection feature.

Inspection results are transferred by the inspector to the Confirm database and can be viewed and processed in Confirm Ondemand (the companion desktop software).

Manager supervisors are able to view the jobs generated from the inspections, authorise them and assign them to the appropriate department for action.

The system creates a history for each inspection feature in terms of inspection dates, defects found and jobs completed.

The flowchart in Figure 9.1 illustrates the safety inspection process.

Serviceability defects can be recorded as part of the safety inspection regime, but as a low risk, no immediate action defect. The Inspector is effectively completing a part service inspection which helps to inform the overall service level (or condition) of the asset, in accordance with asset management practices. It provides additional intelligence to the Asset Management Team, to assist in prioritising forward work programmes.

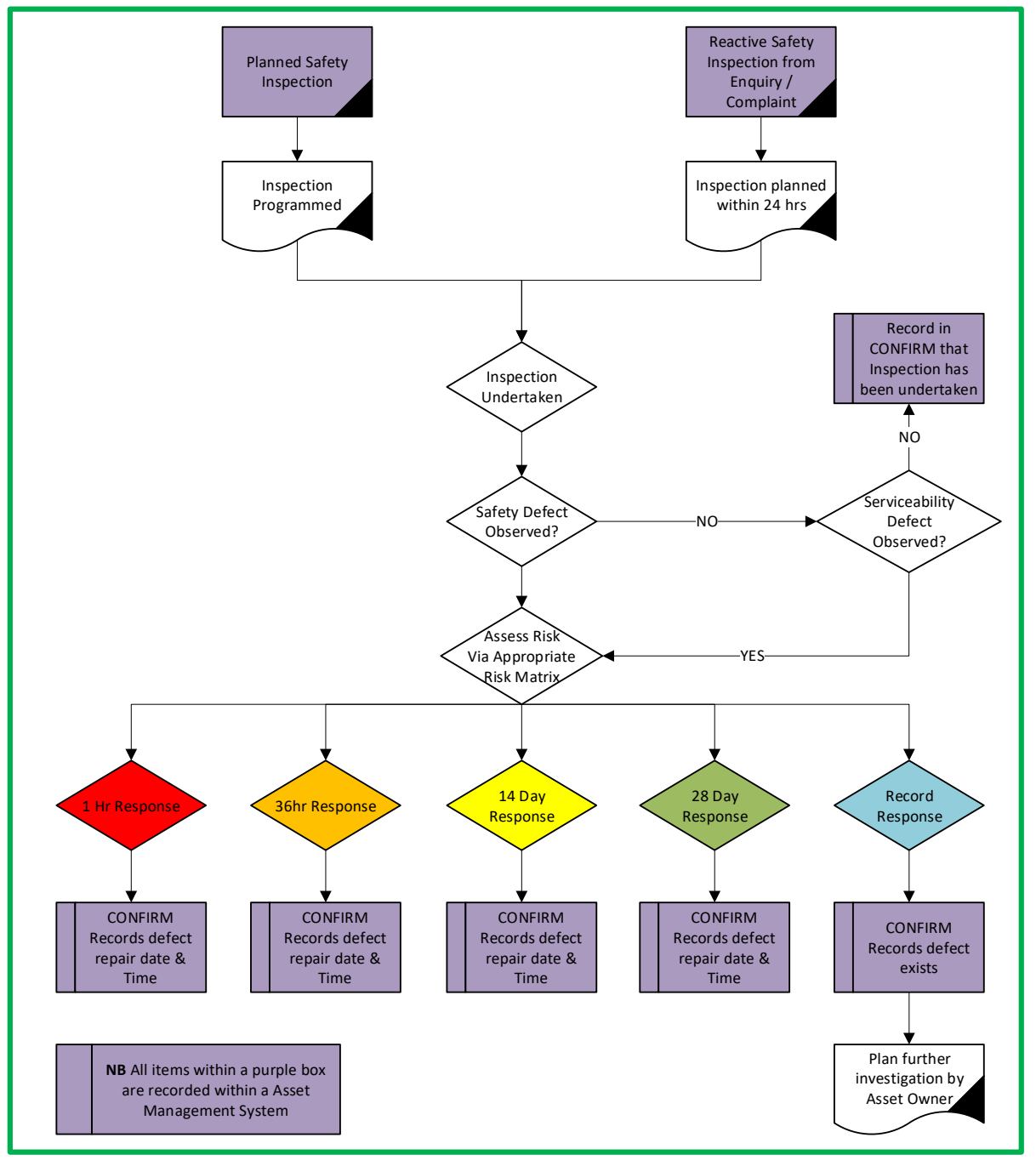
The asset owner will look at each service level defect and decide whether it warrants inclusion in a mid-long term maintenance programme for planned repair or can continue to be monitored through the cyclical inspections. The action will be recorded in Confirm.

Figure 9.2 recognises that the Inspector is picking up defects for all main asset groups and will forward them to the relevant asset owner, who in turn will follow the serviceability defect process in line with their scheme prioritisation methodology and forward work programme for that asset.

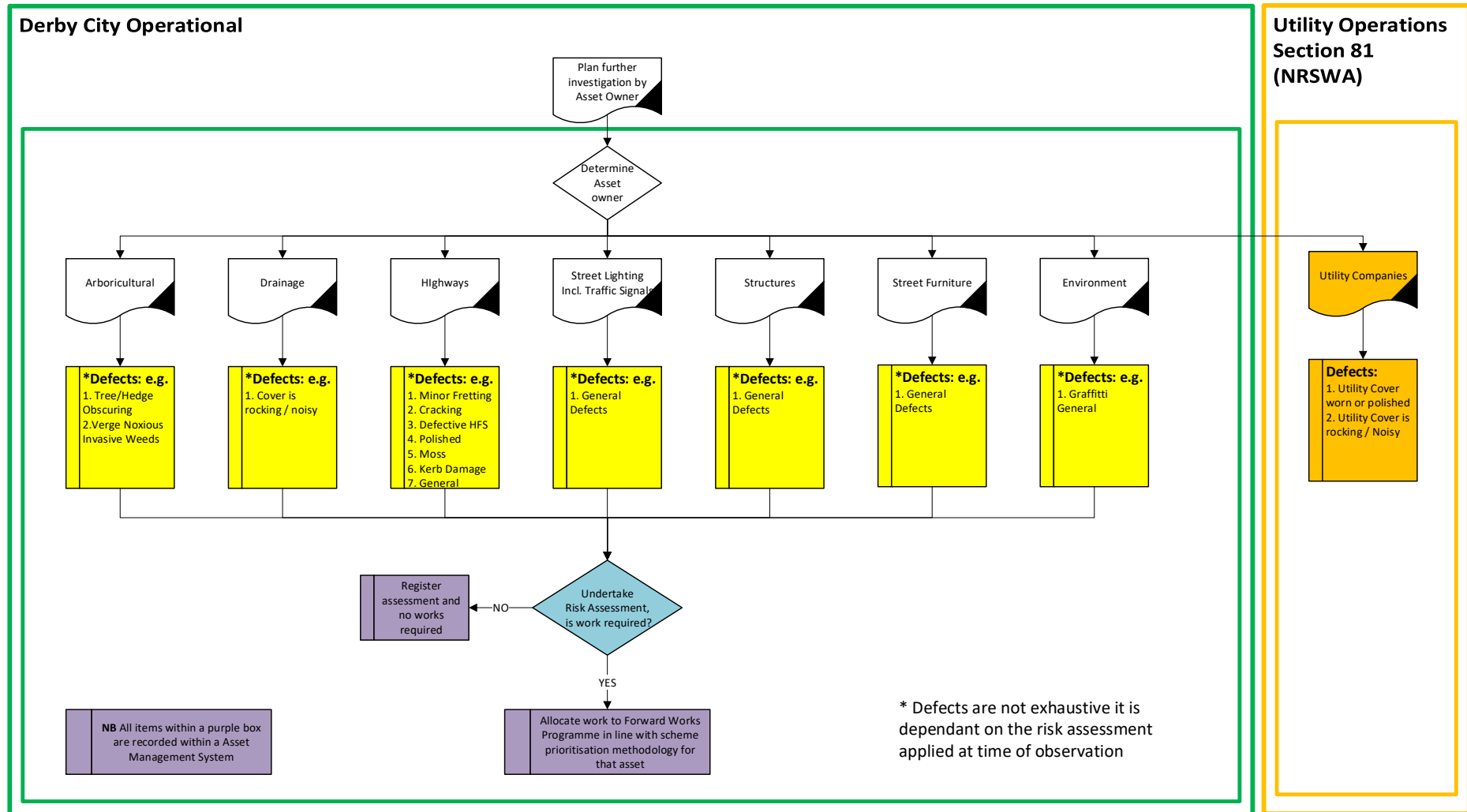
Figure 9.3 sets out the defect response options available to the Inspector as part of the safety inspection regime.

9.1 Derby City Safety Inspection Process

Derby City Safety Inspection Process



9.2 Derby City Service Inspection Process



9.3 Derby City Defect Response Options

Defect Type	Defect Response	Description
Safety Defect	1 Hour Response	This response time is to be used where the defect/incident has the potential to be very serious or create major disruption of the highway network. The Inspector will request this response to make safe and may not be able to leave the defect, until it has been made safe.
	36 Hour Response	This is a high priority defect and will be made safe as soon as is reasonably practicable within 36 hours. The repair in the first instance may be temporary.
	14 Day Response	This response time is for a medium/high defect. This is required to enable a permanent first-time repair and also allows for any required materials or goods to be ordered.
	28 Day Response	This response time is the maximum time Derby Homes will allow for all remaining defect(s) which require a reactive repair. It allows for co-ordinating work with other maintenance requirements and ordering any required materials or goods.
Service Level Defect	Record within CONFIRM	This response records within CONFIRM that a defect exists but does not meet the criteria of intervention through the safety inspection regime. However, it may be affecting the service level required for the asset. Therefore, it is recorded within CONFIRM to be considered alongside other defects in the surrounding area, other condition surveys and scheme prioritisation processes to potentially become included in a medium term forward works programme for maintenance.
Not Defective	Record inspection completed in CONFIRM	This response registers within CONFIRM that a safety inspection had been carried out on the asset as scheduled and no actionable defects have been identified.

Defects that pose an immediate threat to life or serious injury are considered an emergency and must be responded to, normally within one hour (or two hours outside of normal working hours) and made safe or repaired urgently. An Inspector identifying defects requiring urgent repair should take steps to ensure the danger or risk is mitigated once observed.

Defects assessed as Immediate Risk (One Hour Response) should:

- be called into the Depot as soon as it is safe to do so, to pass on the relevant information to Operations and ensure that the defect is dealt with urgently. The defect and response time requested will be recorded onto the iPad
- if reasonable to do so, be repaired or made safe at the time of inspection. This may include such actions as displaying warning notices or signs, placing cones and/or barriers / fencing off to isolate the defect from users or remaining at the scene of the defect to warn users of the hazard, until such time as appropriate mitigation can be put in place or a repair actioned
- where possible, be repaired permanently, however it may, due to the location, or prevailing weather only be possible to achieve a temporary repair. In this instance, the original defect can be considered to have been addressed and the defect should be recorded as requiring a lesser response time, i.e. 14-day, 28 day or planned maintenance scheduled for a permanent repair within these timescales. A temporary repair might also be considered if planned maintenance work is likely to be undertaken or scheduled within a reasonable timescale.

Other Defects not within Derby City Council's Stewardship:

- Not all defects are within the remit or responsibility of the highway authority to affect a repair. Apparatus belonging to service providers of electricity, gas, water, telecommunications and other services are the responsibility of other agencies. These defects will be passed to those statutory undertakers for action as appropriate.
- These defects may range from those requiring immediate attention to those not presenting an immediate danger or risk to users of the highway. However, where defects associated with statutory undertakers apparatus are identified as Immediate Action (One Hour), then the Council will take measures to make safe at the time of inspection. This may again include such actions as displaying warning notices or signs, placing warning cones and/or barriers / fencing off to isolate the defect from users of the highway or remaining at the scene of the defect to warn users of the hazard until such time as appropriate mitigation can be put in place or a repair actioned.
- All relevant information will be communicated to the third party responsible for continued maintenance of the temporary repair and for the subsequent full repair of the defect.
- In the event the Utility Company / Third Party fails to provide an acceptable response, Derby City may, undertake appropriate action itself to instigate the necessary repairs and recover costs.

10. Lessons Learned

There will be a formal annual review and continuous monitoring of this process. Lessons learned will be agreed with everyone contributing. These will be formally minuted and actions incorporated into the Confirm system and Highway Safety Inspection Manual where appropriate. The Inspectors is personally involved in the work and his/her insight needs to be understood, including:

- what problems have been encountered?
- how were they solved?
- what cause-effect relationships were noticed?
- what insights were observed?
- are the work processes correct? can they be improved?
- what were our successes?
 - what should we start doing?
 - what should we stop doing?
 - what should we keep doing?
 - what is causing us issues?

Lessons learnt will also be discovered through the experience of highways inspections through:

- local, regional and national benchmarking of other authorities progress and experiences of adopting a risk based approach
- the processing of third party claims under the new code of practice
- the results of third party claims that have been litigated.

Performance Management

Defects recorded by Inspectors will be subject to performance management analysis and monthly reports generated to identify the performance and quality of the safety inspections process. Additional support and training will be provided as considered necessary to maintain an efficient, effective and consistent safety inspection regime.

Audit

To maintain the integrity of the safety inspections process, regular audits will be undertaken of the process of recording, accuracy and completeness of safety inspections based on the content and principles of this manual. Additional support and training will be provided, if considered necessary, to maintain an efficient, effective and consistent safety inspection regime.

Review Process

This Derby Homes Infrastructure Safety Inspection Manual: August 2019 will be subject to an annual review process, however any amendments as a consequence of change in legislation, emerging good practice, feedback from the Inspector or Managers will be made as necessary, with document controlled versions formally approved and disseminated to all key stakeholders.

APPENDIX A – RISK MATRIX

(Referenced Risk Matrix C in the CONFIRM system)

CONSEQUENCE / IMPACT	DESCRIPTION		PROBABILITY / LIKELIHOOD				
			NEGLIGIBLE	LOW	MEDIUM	HIGH	VERY HIGH
	NEGLIGIBLE	Little or no inconvenience to highway user	Record Inspection completed in CONFIRM	Record Inspection completed in CONFIRM	Record Inspection completed in CONFIRM	Record Inspection completed in CONFIRM	Record within CONFIRM
	LOW	- Potential to create minor vehicle damage - Potential to create minor inconvenience¹ to highway user	Record Inspection completed in CONFIRM	Record Inspection completed in CONFIRM	Record within CONFIRM	Record within CONFIRM	28 Days
	MEDIUM	- Potential to create vehicle damage - Potential for a slight injury² to one or more persons - Potential to create moderate disruption³ of highway network	Record Inspection completed in CONFIRM	Record within CONFIRM	28 Days	28 Days	14 Days
	HIGH	- Potential to be a serious injury⁴ to one or more persons - Potential to create major disruption⁵ of highway network	Record Inspection completed in CONFIRM	Record within CONFIRM	28 Days	14 Days	36 Hrs
	SEVERE	- Potential to be serious injury to one or more persons - Potential to create serious disruption⁶ of highway network	Record within CONFIRM	28 Days	14 Days	36 Hrs	1 Hr

¹ Minor inconvenience – Requires the road user to manoeuvre around defect and doesn't create Moderate or Major disruption

² Slight injury: An injury of a minor character such as a sprain (including neck whiplash injury), bruise or cut which are not judged to be severe, or slight shock requiring roadside attention. This definition includes injuries not requiring medical treatment.

³ Moderate disruption – Requires lane closure <= 50m i.e. for a single vehicle/event

⁴ Serious injury: An injury for which a person is detained in hospital as an "in-patient", or any of the following injuries whether or not they are detained in hospital: fractures, concussion, internal injuries, crushing's, burns (excluding friction burns), severe cuts, severe general shock requiring medical treatment and injuries causing death 30 or more days after the accident

⁵ Major disruption – Requires lane closure >50m i.e. for multiple vehicle/event

⁶ Serious disruption – Potential to close whole road