

Development Management Inspection Procedures

**S38, S278 and Minor Works
Authorisation (MWA)
Works for Adoptable Infrastructure**



**Think Safe
Home Safe**



**Our Actions
Our Impact**



Essex County Council

Supporting Material

The **Development Construction Manual** can be found at: <https://www.essexhighways.org/adoptions-and-land>

Other Guides can be found at the above link

Development Management New Roads & Street Works Act 1991 Road Opening Notice Form

Technical approval of 3rd Party Structures - Guidance notes

Street Lighting Development Management Specification

Essex Design Guide

Intelligent Transportation Systems and Traffic Signal Design Guidance

ECC Folio Drawings

Traffic Management Risk Assessment

Preliminary Site Meeting and Inspections

At least **two weeks** prior to the commencement of site works, the Developer shall convene a pre-start site meeting with the Project Engineer and nominated Clerk of Works, to discuss the works programme and the effect of the development on existing highways and statutory undertaker's apparatus.

Prior to works commencing on site, the Developer should give the Project Engineer/ Clerk of Works **3 days' notice**. In the case of the construction of foul or surface water sewers intended for adoption by the Water Authority, located under proposed public highway, appropriate notice shall also be given to that authority.

The Developer needs to ensure notice for required inspections once works have started shall be at least **24hrs** and should be given to the relevant Clerk of Works.

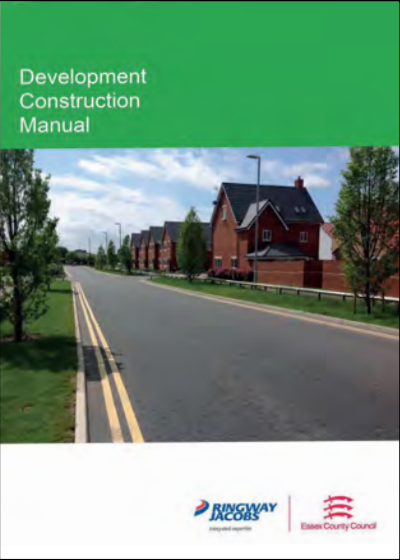
No S278 works/ MWA works are to start until the developer and contractor are in possession of a works licence/ MWA signed by the Development Manager and the NRSWA notification is approved and in place. Any works carried out without Highway permission is illegal under the Highways Act and may result in prosecution.

Please note, any works carried out on the highway will be subject to H&S audits.

The Inspection flow chart (opposite) is to be used in conjunction with the Development Construction Manual, ECC Guidance and relevant National Specifications.

The DM Team can report H&S near misses/ incidents for any element of works and we will notify/ action to the relevant parties.

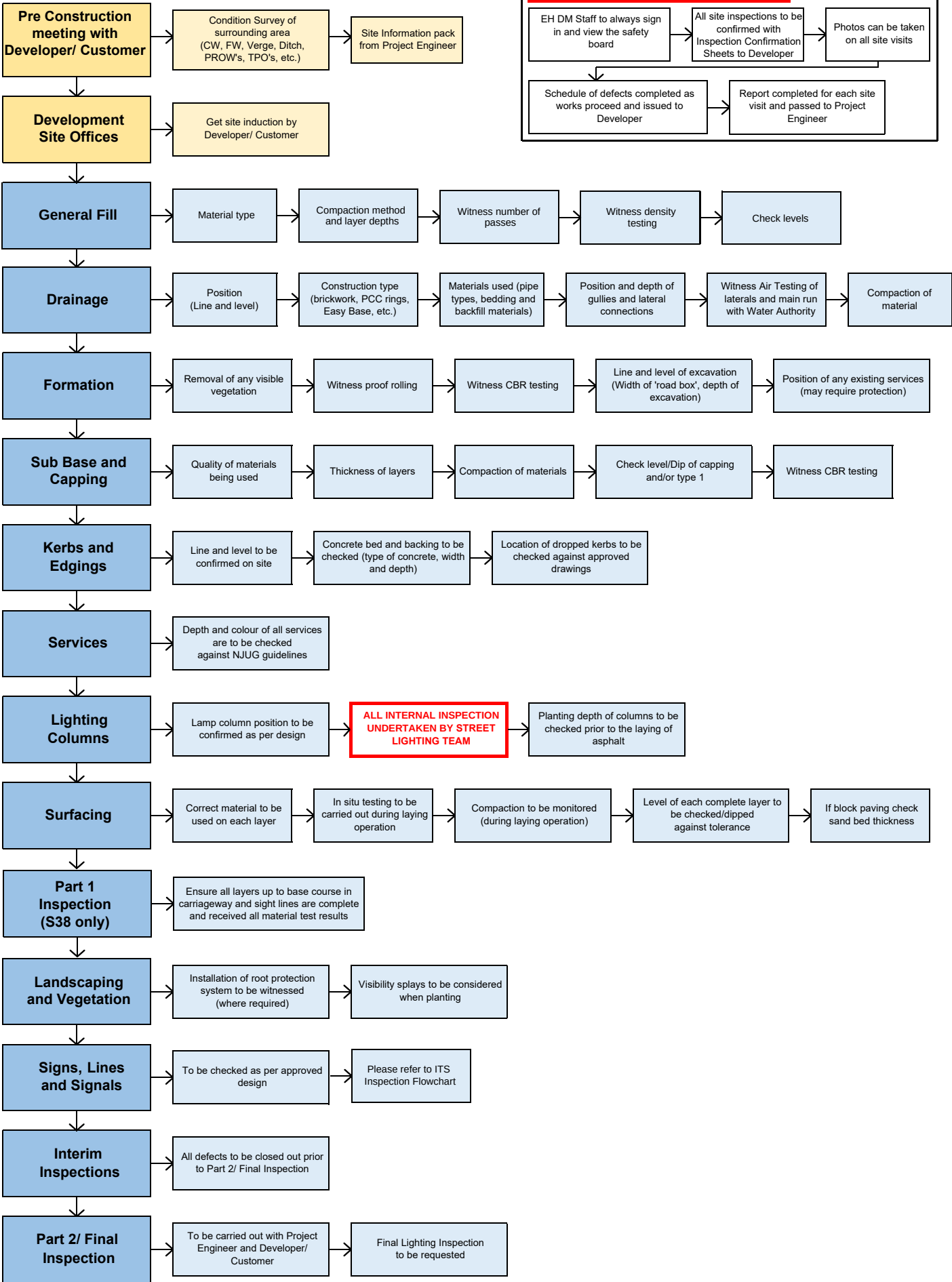
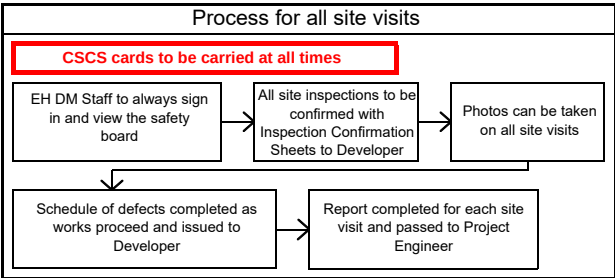
All supervisors and operatives on site **must** be NRSWA qualified with the relevant modules. Cards will be checked by the Clerk of Works on site.



Construction Method Statement

All wheel wash facilities and parking facilities, stated in the Construction Method Statement (CMS), **must** be in place at all times during the construction phase. If you fail to do so, you may be liable to planning enforcement.

Inspection Flow Chart



Testing of Materials



Blacktop Key Notes

Warm mix surface course materials are not suitable in adverse weather conditions and should be monitored more closely during colder periods. No pavement cutting and jointing on any of the regular blacktop layers. Several running surface options are contained in our ECC Folio Drawing.

General

All materials intended for use on site

Certification demonstrating compliance with all specified requirements shall be submitted to the Project Engineer prior to use.

All test certification results should be sent to the Project Engineer.

All testing to be from a UKAS accredited testing laboratory.

A summary sheet will need to accompany the set of test results showing a clear pass/ fail comment for each result.

All test results to comply with the requirements stated in the Manual of Contract Documents for Highway Works (MCHW) Volume 1 - Specification of Highway Works (SHW) documents and our Development Construction Manual.

For recycled materials, a contamination analysis and assessment should be provided, based on the limits contained in Land Quality Management's (LQM) 'Suitable 4 Use Levels' document.

Any new material sources will require a new set of tests from the new supplier to confirm it meets the relevant SHW standards.

California Bearing Ratios (CBRs)

Each CBR test to be carried out minimum one every 30m alternating in each lane.

CBR tests carried out at formation level **must not** be used to design the road make-up. These tests are only used to for compliance purposes with the designed CBR value. If they are lower than the designed CBR value then the Designer must re-design the construction make-up accordingly.

Cohesive soils with less than 20mm stone size **must** use the in-situ CBR plunger test (see right image above).

A Light Weight Deflectometer (LWD) may only be used prior to the agreement with the Project Engineer. It must be one of the two approved models in the SHW and have either a site-specific Falling Weight Deflectometer (FWD) correlation trial or an annual FWD correlation certificate as detailed in BS 1924-2.

The capping layer must achieve at least a **15%** CBR value and the sub-base layer at least a **30%** CBR value.

Incinerator Bottom Ash Aggregate (IBAA)

If you wish to use IBAA as your sub-base material you **must** discuss/ agree this with the Project Engineer/ Senior Clerk of Works prior to use.

IBAA may only be used in accordance with Environment Agency's requirements and can **only** be used in the carriageway.

Dioxins are also considered to be a possible hazard and testing showing that this material is free from such hazard should be available.

Density Testing for Drainage Backfill

Testing to be carried out to confirm adequate compaction has been achieved. Sand replacement density (SRD), nuclear density (NDT), non-nuclear density (NNDT) and dynamic probe super heavy (DPSH) are the accepted methods.

Number of tests on each sewer run to be confirmed with the Engineer. 95% relative compaction is the acceptable limit or the appropriate number of blows for DPSH.

All indirect testing gauges to be calibrated/ correlated against the material to be tested.

If deep backfill is present, we will require a mixture of tests about halfway during the fill.

Testing of Materials cont.

Minimum Testing Requirements

Supplier

The tests for fill need to comply with SHW's CC601

Class 1A/ 1B Granular Fill

1. Grading
2. Sulphates
3. Coefficient of Uniformity
4. Natural Moisture Content
5. Moisture/ Density Relationship
6. Constituent Materials*
7. Contamination Analysis*

Class 2A/ 2B/ 2C Cohesive Fill

These materials may not be used in trench backfill.

1. Grading
2. Sulphates
3. Natural Moisture Content
4. Moisture/ Density Relationship
5. Constituent Materials*
6. Contamination Analysis*
7. Plasticity Index

The tests for capping and sub-base need to comply with SHW's CC201

Type 1 Sub-base

1. Frost heave
2. Sulphates
3. PH value
4. Los Angeles (LA) Value (less than 6 months old)
5. Magnesium Sulphate Soundness (less than 6 months old)
6. Water absorption (reported)
7. Micro Deval (Reported)
8. Constituent materials*
9. Contamination Analysis*
10. Grading in compliance with the suppliers designated grading for the material
11. Moisture/ Density relationship
12. Natural Moisture Content
13. Crushed/broken particles
14. Plasticity Index

Class 6F1/ 6F2/ 6F4/ 6F5 Capping

1. Grading
2. Sulphates
3. Los Angeles (LA) Value (less than 6 months old)
4. Natural Moisture Content
5. Moisture/ Density relationship
6. Constituent Materials*
7. Contamination Analysis*

Site Samples

The tests for blacktop layers need to comply with SHW's CC202

Granular/ Cohesive Fill, Capping & Sub-base

1. Grading
2. Natural Moisture content
3. Sulphates**
4. Constituent materials***

Base/ Binder Course

1. Grading
2. Binder Content
3. Temperatures & Laying Records
4. Air Void Content (In-situ and Refusal)
5. Rolling Straight Edge & Surface Regularity (Binder only)****
6. Bond/ Torque Test****

Surface Course

1. Grading
2. Binder Content
3. Texture Depth
4. Temperatures & Laying Records
5. Rolling Straight Edge & Surface Regularity
6. Bond/ Torque Test****

*Recycled materials only

**If sulphate results of the supplier's certificate are approaching the limiting value, periodic checks should be carried out on materials being delivered to site.

***Constituent materials checks at least one from material being delivered to site with further testing if the make-up of the material appears to be of concern.

****Test only required as requested by Clerk of Works or Engineer

Site Testing Frequency

Granular/ Cohesive Fill, Capping & Sub-base

1 sample per 200t per day per source. Where deliveries are less than 200t, 1 sample per day per source.

Base & Binder Course

1 sample per 100t

Surface Course

1 sample per 75t

Stages of Construction & Contact Details

S38 Part 1 Certificate can be requested once the following items are completed:

- 1. All highway drainage
- 2. All other drainage contained within the highway
- 3. All kerb foundations and where appropriate kerbs including lowering at vehicle crossings and pram-ramps

- 4. Carriageway sub-base, road base and any supporting structures
- 5. Carriageway base course surfacing where appropriate
- 6. Test results for all materials above
- 7. Demarcation of sight lines and clearance of vision plays
- 8. Any other items listed in the legal agreement

S38 Part 2/ S278 & MWA Completion Certificates can be requested once all of the highway element of works are completed as described in the specification and shown in the drawings

S38 Final/ S278 & MWA Maintenance Certificates can be requested once the agreed maintenance period has ended and any defects, raised during the maintenance period, are rectified

(Please note, these are the standard stages, for a definitive list please refer to your Section 38/ Section 278 Agreement)

Contact

**Service Management
Office 1 (Ardleigh)**
Responsible for: Braintree,
Colchester, Tendring.

Development Management
Ardleigh Depot, Harwich Road,
Ardleigh, Colchester,
Essex, CO7 7LT

**Service Management
Office 2 (Springfield)**
Responsible for: Chelmsford,
Maldon, Rochford, Uttlesford

Development Management
Springfield Depot,
Colchester Road
Chelmsford, Essex, CM2 5PU

**Service Management
Office 3 (Childerditch)**
Responsible for: Basildon,
Brentwood, Castle Point, Epping
Forest, Harlow.

Development Management
Childerditch Depot, Unit 36,
Childerditch Industrial Estate,
Brentwood, Essex, CM13 3HD



Ringway Jacobs PPE Requirements for all S278/MWA works

Description	Specification		Escorted Visitors	Site Visits	General Roadworker (Working on any speed of road)	General Roadworker (Working on any road at night)	Highway Safety Inspections, LAT site inspections and marking up of works, works order generation
Face Protection	Polycarbonate Full-face visor to EN166 139B				If required as part of the task being performed	If required as part of the task being performed	
Eye Protection	Spectacles to EN166 1F		Must be worn	Must be worn	Must be worn	Must be worn	Must be worn
Eye Protection	Goggles to EN 166 1B		As required according to task and RAMS	As required according to task and RAMS	As required according to task and RAMS	As required according to task and RAMS	As required according to task and RAMS
Hi Vis Jacket	Class 3 EN ISO 20471		Must be worn	Must be worn	Must be worn	Must be worn	Must be worn
Hi Vis Trousers	Class 3 EN ISO 20471			Must be worn	Must be worn	Must be worn	Must be worn
Gloves	EN388			Must be worn – type according to task and RAMS	Must be worn – type according to task and RAMS	Must be worn – type according to task and RAMS	Must be worn – type according to task and RAMS
Safety Footwear	EN ISO 20345		Must be worn – type according to task and RAMS	Must be worn – type according to task and RAMS	Must be worn – type according to task and RAMS	Must be worn – type according to task and RAMS	Must be worn – type according to task and RAMS
Hard Hat	EN 397 / EN 166		Must be worn	Must be worn	Must be worn	Must be worn	Must be worn
Ear Muffs / Plugs	EN 397 / EN 166		If signage designates area to be a hearing protection zone	If signage designates area to be a hearing protection zone	When using equipment as per the requirements of the RAMS	When using equipment as per the requirements of the RAMS	

RAMS – Risk Assessments & Method Statements

NOTE: Minimum requirements unless specified within specific risk assessments, method statements or permits to work

