

A12 Chelmsford – A120 Widening Scheme Development Consent Order Local Impact Report

February 2023

Chelmsford City Council Response

1. Introduction and terms of reference

Introduction

- 1.1 This report comprises Chelmsford City Council's Local Impact Report (LIR) to the A12 Chelmsford to A120 Widening Scheme Development Consent Order (DCO). The report has been prepared in accordance with the advice and requirements set out in the Planning Act 2008 (as amended) and Advice Note One (Local Impact Reports (Version 2)) issued by the Infrastructure Planning Commission in April 2012.
- 1.2 The Advice note states that the LIR is a report in writing giving details of the likely impact of the proposed development on the Authority's area. The LIR should centre around whether the Local Authority considers the development would have a positive, negative or neutral effect on the area.

Scope

- 1.3 The proposed site extends principally through the Braintree District and Colchester City administrative areas, with smaller parts located within the Chelmsford City and Maldon District administrative areas.
- 1.4 The proposal comprises improvements to the A12 between Junction 19 (Boreham Interchange) and Junction 25 (Marks Tey interchange), a distance of about 24 km or 15 miles.
- 1.5 The proposal put forward by the applicant, National Highways on behalf of the Department for Transport, includes:
 - Widening the A12 to three lanes throughout the distance (where it is not three lanes).
 - Bypass between Junctions 22 and 23 (Colemans to Kelvedon South).
 - Bypass between Junctions 24 and 25 (Kelvedon North to Marks Tey Interchange).
 - 6 new bridges for walkers, cyclists and horse riders.
 - Safety improvements including closing off private and local direct accesses onto the main carriageway and providing alternative provision for walkers, cyclists and horse riders.
 - Associated works comprising side road upgrades to connect to the A12, new or improved drainage, new signs and technology, utility improvements and resurfacing of the A12 carriageway in some areas.

1.6 Within Chelmsford City Council's administrative area, the works would comprise the following:

- Improvements to Junction 19 (Boreham interchange) through introduction of additional lanes on Boreham Bridge and additional lanes to its roundabouts (including approaches and exit roads).
- Construction of new signal-controlled crossing at Junction 19 to allow walkers and cyclists to cross safely.
- Construction of new bridge link on the north side of Junction 19 (new Paynes Lane Bridge) for use by walkers, cyclists and horse riders.
- Signage improvements, overhead gantry works and road surface improvements to the southbound carriageway.
- Mitigation within Boreham Settlement, including a proposed reduction in speed limit to 30 mph.

1.7 As the A12 moves towards Hatfield Peverel, which is within Braintree District, the works would comprise the following:

- Widening the road to three lanes in each direction at Hatfield Peverel.
- Closure of Junctions 20a and 20b and replacement with a new Junction 21 (Witham South Interchange). The new junction 21 would provide access to the A12 both northbound and southbound and would take traffic from all directions from Hatfield Peverel and Witham.

1.8 The LIR relates to the impacts of the proposed development as it affects the administrative area of Chelmsford City Council. Separate, but complimentary LIR's will be produced by Braintree District Council, Maldon District Council, Colchester City Council and Essex County Council on the impacts of the proposed development as it affects their respective administrative areas.

Purpose and Structure of Report

1.9 The Local Impact Report's primary purpose is to identify the policies in the Local Plan in so far as they are relevant to the proposed development and the extent to which the development accords with those policies. The key issues are identified, following by commentary on the extent to which the applicant addresses those issues. Finally, the adequacy of the application/ Development Consent Order is considered.

1.10 The LIR gives a brief overview of the description of the site and surroundings and a general review of the details of the proposal to highlight particular features. However, the applicants Environmental Statement (ES) provides sufficient description and details of the proposal.

1.11 This LIR covers areas where Chelmsford City Council (CCC) has a statutory function or holds particular expertise. CCC defers to Essex County Council on all other matters, to that set out in this Local Impact Report.

1.12 A Statement of Common Ground (SoCG) is under preparation with the applicants and the LIR does not intend to duplicate this, however, there may be some matters, for example, 'Requirements' where there is overlap.

2. Description of site and surroundings

Order limits

- 2.1 A full description of the site and surroundings is given in the applicant's Environmental Statement (ES). It is noted that the applicant is using the 'Rochdale Envelope' approach to provide flexibility in the development.
- 2.2 The land falls within the administrative areas of Braintree District Council, Chelmsford City Council, Maldon District Council, Colchester City Council and Essex County Council.
- 2.3 The A12 runs in parallel to the south of the Great Eastern Main Lane (GEML) for most of its length between Junctions 19 and 25. The existing carriageway is predominantly a dual two-lane carriage way with a limited length of three lane carriageway between Junctions 19 (Boreham Interchange) and 20a (Hatfield Peverel South Interchange).

Surrounding Area and allocations

- 2.4 A number of settlements lie within the vicinity of the Order limits including Boreham, Beaulieu, Springfield and Hatfield Peverel, the latter of which is located within Braintree District Administrative area. The settlement of Boreham extends along the southern boundary of the A12 to the east of Junction 19.
- 2.5 A number of residential properties, comprising individual houses, lie on or close to the boundary of the Order limits.
- 2.6 The majority of the site is located within Flood Zone 1.
- 2.7 There are no designated heritage assets within the Order limits, although several listed buildings are located close to the Order edges including Grade I listed Boreham House and its Grade II listed Park and Gardens.
- 2.8 There are no ancient woodlands within the Order limits. The proposal clips the edge of TPO/2014/001 Land north west of Milmead Cottages, Paynes Lane, Boreham (The Generals). Trees protected by Tree Preservation Order (TPO's) are sited close by at Boreham House - TPO/2002/080, Boreham House, Main Road, Boreham and Generals Farm - TPO/2002/085 - Main Road, Boreham.
- 2.9 The proposed site allows space for landscaping, habitat enhancement and mitigation.
- 2.10 Land to the north-east of the site is allocated in the Chelmsford Local Plan for the North East Chelmsford urban extension to form a new Garden Community. The site will create a community overall of around 10,000 new homes and would include employment opportunities, community facilities and a new country park.
- 2.11 Highway improvements within the locality that are due to be completed prior to construction include the Boreham Interchange Improvements, the Radial Distributor Road (RDR) and phase 1 of the Chelmsford North-East Bypass (CNEB).
- 2.12 Highway schemes expected to be completed after or during the construction phase include CNEB Phase 2 and the Northern Radial Distributor Road (RDR2).

- 2.13 Construction has begun on the creation of a new railway station on the Great Eastern Mainline (GEML). The Beaulieu Park station would be sited to the north of the A12, close to Junction 19 and would be the first new station along the Great Eastern Mainline for over 100 years. Construction is expected to be completed in 2025/26 and the proposal includes improved walking /cycling routes and associated infrastructure.
- 2.14 Other proposals under consideration include the Longfield Solar Farm National Significant Infrastructure Project which would be sited to the west of Waltham Road, with construction access from Generals Lane, Boreham and Waltham Road, Beaulieu. The Examination to the solar farm has concluded and a decision on the solar farm is expected to be issued by the Secretary of State in Summer 2023.
- 2.15 As defined in the Chelmsford Local Plan (2020) the site falls within the Rural Area beyond the Green Belt.

3. Details of the proposal

- 3.1 The proposed scheme involves widening the existing A12 to three lanes throughout in each direction, where it is not already three lanes. This would mainly involve online widening of the carriageway with offline bypasses created between Junctions 22 and 23 (Rivenhall End Bypass) and between Junctions 24 and 25 (Kelvedon to Marks Tey). This would be accompanied by junction improvements (Junctions 19 and 25), construction of new junctions catering for traffic movements both north and southbound (Junctions 21, 22 and 24) and removal of existing junctions (Junctions 20a, 20b and 23).
- 3.2 The proposal is split into design sections of which design section 1 is within Chelmsford City Council's administrative area.
- 3.3 Junction 19 is already being improved as part of the Beaulieu development and the changes are being made by and funded by the developer Countryside Zest. Construction is due to be completed by mid-2023. As construction of the improvements required for Beaulieu is due to be completed before the construction of the DCO development, the works are accounted for in the design proposals of the A12 widening scheme.
- 3.4 In addition to the developer's improvements to Junction 19, the proposed alterations within the DCO include additional lanes on the Boreham roundabout (symmetrical widening), additional traffic lights added to the southern roundabout, additional lanes on various roundabouts at the junctions, their approaches and exit roads.
- 3.5 The National Highways traffic modelling improvements takes into account development growth within the adopted Chelmsford Local Plan. Therefore, the proposed improvements to Junction 19 do not include changes to connect to a full dual carriageway Chelmsford North East Bypass. However, the proposed improvements should not prejudice the potential full dual carriageway connection in the future.
- 3.6 A new controlled crossing and new walking, cycling and horse riders (WCH) bridge (Payne's Lane Bridge) is proposed to the north of junction 19. Associated other works and alterations are proposed.

3.7 To the north-east of Boreham, within Braintree District, the proposal involves the closure of junctions 20a and 20b to the north of Boreham at Hatfield Peverel and their replacement with a new junction 21 (Witham South Interchange), to provide access to the A12 northbound and southbound.

Construction, operation and management

3.8 Construction is scheduled to commence in 2024. The proposed scheme would take about four years to construct with assuming opening of year 2027. The scheme would be constructed as a single project, split into several phases of development.

3.9 Two main construction compounds would be formed around existing Junction 20b and at Junction 22. A satellite compound would be formed at Junction 19 (Boreham Interchange) which would be utilised for local works and accessed from Junction 19. The compound would be powered by generator.

3.10 The proposal aims to maintain two running lanes on the A12 for public access across the proposed scheme during construction at weekday peak traffic hours (06:00 and 21:00). Where construction activities such as online bridge demolition or construction prohibit safe road operation, road closures would be required at nights and weekends. When road closures are required, the strategic diversion route would be (from west to east) along the A130, A131 and A120.

3.11 At Junction 19, it is anticipated that 24/7 narrow lanes with speed restrictions would be installed. Occasional full carriage closures would be put in place to allow for demolition of existing bridge parapets, installation of new beams and associated works.

3.12 The approximate size of the workforce is expected to be at peak 1500 staff on site per day, of which about two thirds would be site based and the remaining one-third would be site office based on working from home. Staff would stay overnight in the local area using settlements such as Chelmsford, Witham, Braintree and Colchester.

3.13 Standard working hours would be between 07:30 and 19:00 between Monday to Friday and between 07:30 and 18:00 on Saturday. During the summer months, the working hours would extend to 07:00 to 21:00 to make use of longer daylight hours. In addition, there would be an hour before and after these times for site set up and site close down.

3.14 Off peak working would take place during night times, weekends and bank holidays for a limited number of prescribed purposes. Whilst operational, activity across the site would be minimal and restricted to monitoring.

3.15 It is expected that construction of Beaulieu Park Station would be completed by 2026. The Beaulieu Park Station would be a significant and important asset for Chelmsford and the surrounding area. To ensure that appropriate walking/cycling and other routes are provided before the Station opens, the City Council would ask that the construction and completion of the Paynes Lane footbridge is timed so that its construction is completed to coincide with the opening of the Station.

3.16 Once operational, works would be limited to basic maintenance and landscaping aftercare. It is highly unlikely that the proposed scheme would be demolished and decommissioned.

4. Planning History

- 4.1 There is no relevant planning history relating to the A12.
- 4.2 A scoping opinion was adopted by the Secretary of State.
- 4.3 Applications have been received by the City Council relating to the construction of ecological mitigation areas 1, 2 and 3 around Boreham (references 22/02270/FUL and 23/00168/FUL refer). At the time of submission of this Local Impact Report the applications remain under consideration.

5. Relevant planning policy

National Planning policy

- 5.1 The overarching National Policy Statement (NPS) for Transport is known as the National Policy Statement for National Networks, published in 2014. The statement sets out national policy for the delivery of nationally significant highways infrastructure and include assessment principles for judging impacts of national network proposals. It is a material consideration when considering development proposals.
- 5.2 The Government is reviewing and updating the NPS for National Networks, with publication expected in 2023.
- 5.3 The Environment Act 2021 contains legislation to protect and enhance the UK's Environment for future generations and contains a series of principles to guide future policy making to protect the environment. It contains legally binding environmental targets that will be enforced by law through a new independent Office for Environmental Protection (OEP).
- 5.4 The National Planning Policy Framework (NPPF, chapter 9, promoting sustainable transport) is supportive of large-scale transport facilities, although the environmental impacts of traffic and transport infrastructure should be identified, assessed and taken into account.

Local Planning Policy

- 5.5 The adopted Chelmsford Local Plan 2020 and Making Places Supplementary Planning Document (SPD) set the key principles for development within Chelmsford. There are several local planning policies that are relevant to the consideration of the proposal.
- 5.6 Strategic Policy S1 seeks to ensure that existing and planned infrastructure is used effectively. Strategic Policy S9 seeks to set out priorities for infrastructure provision or improvements including junction improvements on the A12 and other main roads to reduce congestion. Strategic Policy S10 sets out how infrastructure provision will be secured and mitigated.
- 5.7 Several other local plan policies are relevant to the consideration of proposals including:
 - Strategic Policy S2 – Addressing climate change and flood risk
 - Strategic Policy S3 - Conserving and enhancing the historic environment
 - Strategic Policy S4 - Conserving and enhancing the natural environment
 - Strategic Policy S7 – The spatial strategy
 - Strategic Policy S11 - The role of the countryside

- Policy DM8 - New buildings and structures in the rural area
- Policy DM10 - Change of use (Land and buildings) and Engineering operations
- Policy DM13 - Designated heritage assets
- Policy DM14 - Non designated heritage assets
- Policy DM15 - Archaeology
- Policy DM16 - Ecology and biodiversity
- Policy DM17 - Trees, Woodland and landscape features
- Policy DM18 - Flooding / SUDs
- Policy DM23 - High quality and inclusive design
- Policy DM27 - Parking standards
- Policy DM29 - Protecting living and working conditions
- Policy DM30 - Contamination and pollution

5.8 Other relevant adopted local planning policies and guidance include:

- Chelmsford Local Plan 2013-2036, May 2020
- Essex County Council and Southend-on-Sea Waste Local Plan, 2017
- Essex County Council Minerals Local Plan, July 2014
- Chelmsford Surface Water Management Plan (SWMP) 2018
- Chelmsford City Strategic Flood Risk Assessment (SFRA) 2019
- Made Neighbourhood Plans
- Emerging Making Places Supplementary Planning Document (SPD)
- Emerging Planning Obligations SPD

5.9 The Council has started its review of the local plan to consider changes to National Policy and ensure it stays up to date. The reviewed Local Plan will have a plan-period from 2022- 2041. An Issues and Options Regulation 18 consultation was undertaken for 10 weeks and closed in October 2022. As it is at early stages of preparation, the Local Plan Review is not yet material to the consideration of the proposal, but further information will be provided on the status of the document during the examination period.

6. Principle of development and likely significant effects

Introduction

6.1 The following are identified as main issues / key areas of concern.

- Principle of development
- Effect on Boreham village
- Construction of new bridge
- Acceptability of the Environmental Statement

Principle of the development

Chelmsford Local Plan (2020)

6.2 Policies S1, S9 and S10 apply. These seek to ensure that existing and planned infrastructure is used effectively and support in principle, improvements to the A12 to reduce congestion, subject to appropriate mitigation,

Key Local Issue

6.3 Whether the principle of development is acceptable.

Consideration / Adequacy of the DCO

6.4 Chelmsford City Council (CCC) recognises that the improvements to the 15-mile section of the A12 between Junctions 19 and 25 will help remove traffic from the outskirts of the City; in turn this will limit traffic travelling through the City Centre to avoid congestion on the A12, by providing more reliable journey times on the trunk road network.

6.5 Suggestions within the Transport Assessment (TA) submitted within the Environmental Statement (ES) indicate that the A12 currently experiences high levels of traffic flow and congestion. As a two-lane carriageway, traffic levels are close to or exceeds the recommended limits that a new two-lane road could support (TA 3.2.3). As the road has become closer to its capacity, queues and delays have become more regular and severe and are expected to increase in the future, leading to increased journey times (TA 3.2.4). The section of the road is now within the worst performing 10% of links on the National Highways network in the East of England.

6.6 In relation to Chelmsford, due to the introduction of the Chelmsford North East Bypass (CNEB), there are expected to be some reductions in traffic movements along Essex Regiment Way and other local routes, however, these are the exception.

6.7 Without improvements, Junction 19 has been identified in particular to experience a worsening in congestion and by 2027 is expected to experience heavy congestion and up to 20 minutes of delays at the Boreham Interchange roundabout, and three minutes on the existing dumbbell roundabouts.

6.8 With improvements to the A12 in place, Junction 19 would operate satisfactorily, with queues of up to one minute by 2027 and 2042 (TA 4.3.4 refers).

6.9 CCC welcomes the commitment to ensuring that the A12 remains fully functioning during the course of the works, as this will be vital to supporting Chelmsford's economy over the four-year construction period.

Effect on Boreham Village

Chelmsford Local Plan (2020)

6.10 Policies S1, S9, S10 apply. These seek to ensure that existing and planned infrastructure is used effectively and support in principle, improvements to the A12 to reduce congestion, subject to appropriate mitigation.

6.11 Policy DM29 - Protecting living and working conditions and Policy DM30 - Contamination and pollution also apply.

Key Local Issue

6.12 The development should not have an unacceptable and harmful significant effect on the living and working conditions on the settlement of Boreham.

Consideration/ Adequacy of the DCO

6.13 The proposed alterations to Junction 19 (Boreham) and the construction of the Paynes Lane WCH bridge are not expected to harmfully and unacceptably impact upon Boreham settlement.

6.14 However, the closure of Junctions 20a and 20b to the north of Boreham at Hatfield Peverel and their replacement with a new junction 21 (Witham South Interchange), to provide access to the A12 northbound and southbound, is expected to impact upon Boreham village.

6.15 The closure of the Junction 20A access which currently allows vehicles to travel southbound along the A12 towards Junction 19 and Chelmsford has been shown by National Highways modelling that the proposal would lead to a sizable increase in traffic on the B1137 (Main Road) through Boreham in the AM peak hour.

6.16 The reason for this is that most traffic who used this route would be required to travel north towards the new Junction 21 to access the south bound carriageway. Whilst most traffic which previously used this route is expected to join the A12 at the new Junction 21, due to human behaviour/nature, some traffic is expected to travel southbound along Main Road (B1137) to access the A12 southbound at Junction 19. This would lead to a traffic increase on the B1137 through Boreham village, particularly within AM travel times.

Traffic

6.17 The Transport Assessment submitted with the proposal considers that although traffic levels are predicted to increase along Main Road, the increase in traffic can be safely accommodated (TA 5.2.4). Yet, the number of vehicles predicted to use Main Road, with the proposed A12 scheme in place, has been modelled assuming reduced speed limits through Boreham village and between Boreham and Hatfield Peverel. If these speed limits are not adhered to, it is likely that the B1137 will be more attractive as a route for drivers heading to the south from Hatfield Peverel and Maldon district, which could lead to even higher traffic increases in Boreham.

- 6.18 National Highways is proposing to reduce the speed limit from 40mph to 30mph through Boreham village as part of the A12 scheme, and from 60mph to 40mph between Boreham and Hatfield Peverel. At present, National Highways proposes only to update speed limit signs in connection with the speed limit reductions.
- 6.19 The majority of the B1137 (Main Road), between A12 Junction 19 and Hatfield Peverel, is rural in nature with the main users being vehicular traffic. However, a section of the route runs through Boreham village, a residential settlement with shops, restaurants, a nursery, a school and other community facilities. Therefore, although vulnerable road users are present on the whole length of the road, they are particularly present within Boreham village.
- 6.20 Main Road is also an important route for larger vehicles; the road serves bus routes 71, 73, 371, 673 and 676 and HGVs made up around 3% of all vehicles in 2019. Additionally, there is a need for farm traffic and emergency vehicles to use this route. The width of these vehicles, how low they sit to the ground, their turning radii and the speed at which they need to travel will all impact the type of speed reduction measures that can be implemented along this route. Vertical measures such as speed humps have been discounted as a potential traffic calming measure as they can cause damage to low-sitting vehicles such as buses.
- 6.21 Within Boreham, modelling has been undertaken for B1137 Main Road/Church Road, B1137 Main Road/Plantation Road and B1137 Main Road / Waltham Road junctions (TA 5.3.3).
- 6.22 In relation to Church Road, it states that the junction operates satisfactory in 2027 and 2042 in AM and PM peak hours and there would be minimal queuing and about 20 seconds of delay.
- 6.23 In relation to Plantation Road, the junction is expected to operate satisfactorily in 2027 with minimal queues and up to 40 seconds of delay. By 2042, the junction is close to capacity in the AM peak hours, but queues are only about 10 vehicles and delays up to two minutes. The PM peak hour is satisfactory.
- 6.24 At Waltham Road, the junction operates satisfactorily in 2027 but by 2042, would be over capacity in both weekday AM and PM peak hours, with queues up of to 100 vehicles and delays over 20 minutes. After a review of the data modelling, the National Highways assessment shows that the A12 scheme itself provides a benefit at this location as the increase in traffic would not be as a direct result of the A12 widening proposal, but rather the expansion of Chelmsford itself.
- 6.25 Within the Development Consent Order (DCO) proposals for the A12 Chelmsford to A120 widening scheme, National Highways is proposing to reduce the speed limit on the B1137 from 40mph to 30mph through Boreham village and from 60mph to 40mph between Boreham and Hatfield Peverel. Yet this is considered insufficient.
- 6.26 Chelmsford City Council, Essex County Council, Braintree District Council plus other interested stakeholders have reviewed the existing conditions on the B1137 and assessed a number of measures that could help to ensure that National Highways proposed speed limit reductions are adhered to, once the A12 DCO scheme in place.
- 6.27 The following options to be the most appropriate for implementation as part of the A12 DCO Scheme are listed as follows:
- Average speed cameras covering the section of Main Road from the southern end of Boreham village to the existing A12 J20a on-slip

- A new signalised pedestrian crossing with road narrowing in the vicinity of Boreham Co-op
- Road narrowing at: Location 1 (Boreham village entrance for SW traffic), Location 2 (outside Orchard cottages) and Location 3 (pedestrian entrance to recreation ground)
- Softer measures at: Location 1 (outside of Orchard Cottages) and location 2 (just before the recreation ground) and location 3 (outside of the Little Hedgehogs Day nursery).

6.28 The above measures should be included within the proposal as mitigation for the predicted increases in traffic in Boreham, and to help ensure that the reduced speed limits proposed by National Highways are adhered to – thus preventing even greater traffic increases from occurring.

6.29 The City Council also requests that full and substantive consideration be given to the consideration of retaining Junctions 20a and 20b as requested by a number of Interested Parties as part of their relevant representations. A response to the concerns was prepared by National Highways “A12 Junction 20A Southbound merge assessment of alternatives” Appendix B – 9.3 Applicants Response to Relevant Representations. This concluded that options to retain the on slip at junction 20A perform significantly worse overall in the assessment exercise than the DCO design.

6.30 Chelmsford City Council would ask the Examining Authority to undertake a balanced view regarding whether Junction 20a can be retained, subject to a deliverable scheme to be forthcoming that complies with relevant highways safety policies and audits.

Air Quality

6.31 An Air Quality Assessment has been submitted as part of the Environmental Statement (ES) and has considered both the construction and operational impacts of the development with regard to both human health and ecology.

6.32 One residential property, and one receptor lying between the B1137 Main Road and A12 carriageway were expected to experience high levels of Nitrogen Dioxide (NO₂) (ES 6.9.19 refers), however, the effect is not considered by National Highways to be significant (ES 6.11.7).

6.33 There would also be a change in levels at Boreham Road Gravel Pits Local Wildlife Site (Table 6.17 of ES chapter 6 refers).

6.34 The Environmental Statement identifies that the modelled effect of the proposed scheme is that nitrogen dioxide (NO₂) concentrations have been predicted to increase by 4.0µg/m³, from a modelled concentration of 36.3 µg/m³ to 40.3 µg/m³ at receptor R225, located between B1137 Main Road in Boreham and the A12 carriageway. Air quality modelling undertaken by Chelmsford City Council for the Local Plan submission, did not identify an exceedance of the air quality objectives at R225.

6.35 This is an exceedance of the annual mean air quality objective for nitrogen dioxide (NO₂) and would result in Chelmsford City Council having to declare an AQMA (Air Quality Management Area) and develop an air quality action plan. The dispersion modelling of nearby receptors confirmed that the exceedance in the DS was limited to one residential property. The Environmental Statement provides no commentary of an AQMA being required at R225 nor provide appropriate air quality mitigations.

6.36 The LAQM policy guidance (PG22) sets out National Highways as a relevant public authority. Should an AQMA be declared, National Highways will need to work with Chelmsford City Council

to undertake monitoring, dispersion modelling and provide air quality mitigations to reduce emissions and exceedances of the air quality objectives caused by the Strategic Road Network.

- 6.37 To mitigate against the effects of air quality, Standard Mitigation in line with legislative requirements or standard sector practices is proposed. This should be set out ahead of the works, rather than waiting for an exceedance to be measured.
- 6.38 The effect of the proposal is to turn Boreham village into an 'island', exposed to increased traffic levels from traffic along the A12 and Main Road. The proposal will expose Boreham village to higher levels of particulates than it is currently used to.
- 6.39 Mitigation needs to have a threefold approach, through the reduction in traffic along Main Road by implementation of the measures to address traffic control as proposed above, the introduction of monitoring to establish whether an AQMA will be declared and what measures and form this will have and finally the introduction of physical barriers along the northern boundary of the A12 alongside Boreham village. This could take the form of natural and main made (fencing) measures to mitigate and lower air quality.

Noise and Vibration

- 6.40 Sensitive noise receptors within Boreham include residential dwellings and Boreham Primary School. During the construction of the development, some receptors including the Premier Inn, are expected to experience likely significant effects, but these would be temporary and could be mitigated.
- 6.41 During operation, increases in traffic volume and speed on the A12 may result in increase in road traffic noise at the closest sensitive receptors to the A12, yet these increases are expected to be minor (Noise Assessment 12.9.41).
- 6.42 Along Main Road (B1137), there would be a minor increase in noise due to an increase in traffic volume. Some of the sensitive receptors that front onto the road would experience some noise levels above the Significant Observed Adverse Effect Level (SOAEL), with the proposed scheme in place. (12.9.42).
- 6.43 For the remainder of Boreham, there would be a negligible increase in noise (12.9.96).
- 6.44 To mitigate against the impacts of noise from the A12, Standard Mitigation is proposed, together with additional mitigation in the form of Additional Mitigation Surfacing (AMS) between Junction 19 and existing Junction 20a on the southbound carriageway (AMS1 – 12.10.17).
- 6.45 Consideration was given to the use of noise barriers alongside the A12 in Boreham, but this was ruled out by National Highways because their installation would likely create adverse environmental effects on landscape visual and biodiversity as they would require large amounts of vegetation.
- 6.46 Overall, there would be 28 dwellings along Main Road (through Boreham to Junction 20a) where there would be minor increase in noise (between 1dBA and 2.9 dBA where it would not be possible to mitigate against the significant adverse effects. The reasons for this are stated in the Noise Assessment 12.11.31 as follows:

- A low noise surface is only considered effective when average speeds are above 75 km/h. The predicted speeds along Main Road are between 48 and 62 km/s and would be so low not to be effective.
- To be effective, a noise barrier needs to be unbroken. In an urban situation such as Main Road, where access is required to the residential receptors along Main Road, it is not possible to have a barrier that is unbroken.
- The proposal would reduce the speed limit from 40 mph to 30 mph which is considered acceptable mitigation.

6.47 As with Air Quality, the effect of the proposal is to turn Boreham village into an 'island', exposed to increased traffic levels from traffic along the A12 and Main Road. The proposal will expose Boreham village to higher levels of noise and vibration than it currently used to.

6.48 The introduction of mitigation will have a positive impact upon living conditions and quality of life within Boreham. Chelmsford City Council does not agree with the proposal to only surface the southern section of the A12 between junction 19 and 21 with a noise reducing surface. The resurfacing of both surfaces would help to reduce noise levels along the roadside and mitigate against negative effects to quality of life.

6.49 It is premature to discount the environmental effects of introducing a noise and air quality barrier along the A12 roadside frontage. The management of the mitigation to achieve noise reduction, whilst not causing harmful environmental impacts is a sensitive balancing act. However, there is likely to be an appropriate scheme of mitigation that reduces noise impacts whilst complying with environmental legislation. Measures for this mitigation should be included within the proposal.

Human Health

6.50 An assessment of Human Health and population considers that the construction of the proposal is considered to have a neutral impact on Boreham settlement, with disruption resulting from the indirect impacts of road closures and other works on local residents and business expected to be temporary and intermittent (13.10.3).

6.51 There would be major disruption to walking and cycling routes across Boreham Bridge and Generals Lane Roundabout, with diversion routes being less direct resulting in a moderate adverse effect in walkers, cyclist and horse riders. However, these effects would be temporary (13.10.26) and once the works are completed, would result in a moderate beneficial effect (13.10.48).

6.52 No reference is made within the assessment to the overall impact upon quality of life arising from the day-to-day impact of the increased AM traffic flow in Boreham. The City Council have given consideration to these matters above and consider that further mitigation is required to mitigate against the harmful impacts upon Boreham village.

Conclusion

6.53 Chelmsford City Council have previously raised concerns regarding the impact of the proposal on Boreham village and the position of new Junction 21 and the nature of the proposals.

6.54 Whilst traffic, noise and air quality modelling indicate that the effect of the development on Boreham is largely acceptable, it does not negate the fact that the proposal would lead to a change in the residential living and working environment of Boreham residents and businesses, who will

experience higher levels of congestion and associated noise, disturbance and vibration than they are accustomed to.

6.55 The proposal to implement only Standard Mitigation as suggested within the Environmental Statement, and the introduction of a 30-mph speed limit whilst welcomed, is not considered to be enough to manage and mitigate against the above identified effects on Boreham village.

6.56 The Council's position is that a package of measures is required to discourage traffic from routeing through Boreham village to access Junction 19. This view is shared by City Councillor Cllr Mackrory (Cabinet Member for Sustainable Development), Boreham Parish Council, Boreham Conservation Society, Essex County Council, the County Council member for this division (Cllr John Spence CBE) and Kemi Badenoch MP. A range of suitable measures has been identified and should be explored further.

6.57 In addition to discouraging traffic, a package of measures including air quality monitoring and noise and air quality mitigation is required in addition to those proposed by National Highways. The effect upon human health and the village of Boreham needs to be considered holistically, such that all affected receptors receive appropriate and reasonable mitigation.

6.58 Whilst the proposal may not cause major adverse impact to all receptors, the perception of the impacts of the proposal will not be experienced by those who live in the effected receptors to be minor /modest. It is essential that mitigation is proposed and implemented to all affected receptors where reasonable and appropriate to reduce the impact upon human health and maintain reasonable quality of life.

6.59 The City Council will continue to engage with National Highways and Essex County Council Highways to ensure that an acceptable level of mitigation is proposed. Ongoing discussions will continue as part of the Statement of Common Ground (SoCG).

Construction of new bridge

Chelmsford Local Plan (2020)

6.60 Policies S1, S9, S10 of the Chelmsford Local Plan apply. These seek to ensure that existing and planned infrastructure is used effectively and support in principle, improvements to the A12 to reduce congestion, subject to appropriate mitigation.

6.61 Policies DM23 – High Quality and Inclusive design, DM29 - Protecting living and working conditions and Policy DM30 - Contamination and pollution also apply.

Key Local Issues

6.62 The proposal will need to integrate with Chelmsford Garden Community and comply with its aspirations, designs and values as set out in the emerging Chelmsford Garden Community Development Framework Document (Masterplan).

Consideration /Adequacy of the DCO

6.63 Junction 19 is being improved as part of the Beaulieu development, with changes being made by the developer, Countryside Zest. Construction is due to be completed in mid-2023 and includes

the completion of the Radial Distributor Road (RDR) which will serve the business park and residential development.

- 6.64 The main works to Junction 19 are listed above and include the formation of additional lanes on Boreham Bridge through widening the existing bridge, the installation of additional traffic lights to the southern roundabout, additional lanes on various roundabouts, their approaches and exit roads and a dedicated link from the A131 onto the northbound A12.
- 6.65 For walkers, cyclists and horse riders, a new controlled crossing and a new bridge on the north side of Junction 19 (Paynes Lane) is proposed.
- 6.66 Paynes Lane is an existing Public Right of Way (PRoW) 213_45) located south of the existing A12 and leads to but is not connected to the public footpath network to the north of the Great Eastern Main Lane (GEML) railway.
- 6.67 The proposed new bridge would link the two bridleways/footpaths and would provide a continuous Walking, Cycling and Horse Riders (WCH) route across the A12, side roads and railway. The bridge would connect all users to the proposed Beaulieu Park Station and wider Chelmsford area from Boreham without them negotiating Junction 19.
- 6.68 The bridge has been the subject of protracted discussions between National Highways, Chelmsford City Council, Essex County Council and Countryside Zest during Spring / Summer 2022.
- 6.69 At the time of submission, the principle and location of the bridge had been informally agreed, but the final design had not. The scheme follows the National Highways Option 3 plan, which was agreed in principle by all parties (CCC, ECC, Countryside Zest and National Highways) during summer 2022. Chelmsford City Council was not provided with any elevations of the bridge pre-submission of the DCO application.
- 6.70 The proposed bridge would cross horizontally from Paynes Lane in Boreham over the A12 and GEML railway line. Access ramps and stairs would be provided either side of the bridge extending in a north-east/southwest configuration parallel to the A12 and railway line.
- 6.71 The Design and Access Statement and Engineers Drawings submitted with the application indicate that the bridge would form part of a family of bridges that would share similar site consideration, characteristics and requirements. Therefore, the optioning and choice of bridge applies to each WCH bridge (7.4.1 of the Design and Access Statement refers).
- 6.72 The preferred option is known as a 'Warren Truss' bridge, comprising a lightweight structure with angle asymmetrical truss formation. It would comprise two spans (100.7 metres wide into total) and would be formed of multiple welded hollow section members supported on reinforced concrete column piers.
- 6.73 On Paynes Lane, the Design and Access Statement states that the surfacing would be specialised rubber matting designed for equestrian use with water proofing beneath. The colour of the painted finish to the steel trusses would be determined at detailed design stage.
- 6.74 The bridge would be served by two long ramps allowing users to enter and access the bridge. The southern ramp would comprise a series of multi span hollow section decks supported on reinforced concrete piers on pad form foundations forming part of the upper ramp. The lower

ramp would comprise an earth work embankment. To the north the lower ramp would be supported on concrete.

- 6.75 The City Council's key objective is to ensure a high-quality pedestrian, cycle and equestrian route which connects Boreham with the new railway station, the Business Park and the wider Chelmsford Garden Community as well as reconnecting the currently severed bridleway.
- 6.76 As noted above, the elevations and design of the bridge have not been shared with CCC prior to submission of the DCO. It is understood from discussions with National Highways, that the design of the bridge has not been fixed and a detailed design review at stage 5 of their development process (implementation) will form a separate part of the proposal.
- 6.77 However, in accordance with Development Consent Order Procedures, the DCO proposal is made on the basis of the 'Rochdale envelope' with maximum parameters applied.
- 6.78 The initial design of the bridge can at best be described as adequate, based on principles of functionality rather than aesthetic. Based on the elevation provided with the submission, the proposed bridge has an undistinctive utilitarian appearance. The bridge provides a connection for an existing bridleway, however it also provides an important connection to a new train station and a new entrance into the Chelmsford Garden Community. The Garden Community at Chelmsford has already won two Housing Design Awards (2021 and 2022) and has been a finalist in the RTPi Awards for Planning Excellence, both nationally and in the east of England. The City Council has equally high expectations for future development at the site.
- 6.79 Having regard to its prominence and scale, the design and aesthetic of the bridge represents a significant opportunity to deliver a structure that adds to the character of the Garden Community and provides a distinctive gateway into Chelmsford. The City Council would therefore encourage a greater degree of ambition with regards to the bridge design. There is also an opportunity to recognise and celebrate the historic connection between the two Grade I listed heritage assets of Boreham House and New Hall which the new bridge will reconnect.
- 6.80 Looking in detail at the proposal, the provision of long ramps is an inevitable consequence of the available space, levels and the need to achieve an acceptable gradient for all users. The ramps will be a distinguishing element and so high-quality materials will be required. The arrangement appears to allow the footpath/cycle path to continue past the Business Park as it can go beneath / to the sides of the ramps.
- 6.81 Countryside Zest's Business Park is proposed to the north of exit ramps on the station side and as they have yet to design the scheme, they do have the option of being able to landscape the boundary to offer some visual screening which would help to integrate the scheme into the development.
- 6.82 Greater clarification is required as to how the design and aesthetic of the Paynes Lane Bridge will tie in with existing and proposed routes and the extent of the works being proposed to deliver this eg: the general arrangement plan showing the bridge highlights the bridleway to the north and south and in the key refers to this as 'Existing Public Rights of Way' but the plan does not indicate whether these routes would be subject to improvements; the objective must be to ensure a surface level improvement so that the route from Boreham to the station and indeed other parts of the Chelmsford Garden Community is capable of use in all weathers.

- 6.83 The Paynes Lane section of the bridleway would require some form of improvement as some sections are not currently surfaced; there also appears to be no existing track for the bridleway to the north. The extent of proposed works must be clarified by National Highways.
- 6.84 A more detailed plan and elevation of the proposed bridge is presented on page 4 of the 'Structures and Engineering Drawings and Sections Document (Part 2 - TR010060)'; whilst this provides additional information regarding the design of the bridge itself including ramps and stairs, it provides no detail regarding works that will be facilitated to achieve onward connections to the north and south. Clarity is required on how the bridge and ramps/stairs will dovetail with existing or future routes.
- 6.85 Further, the design of the southern side of the bridge appears to undermine, or contradict the proposal outlined within the general arrangement plan. The general arrangement plan suggests that Paynes Lane would have an almost seamless connection with the southern ramp however the detailed plan shows that the pedestrian stairs would partially block this.
- 6.86 Connections of the northern side of the bridge are more complicated. The scheme must deliver an onward bridleway link whilst also connecting with the new primary strategic pedestrian/cycle route from the west, which provides an important route to the new train station at Beaulieu. The Masterplan for Beaulieu also includes employment land on the site to the immediate north and east; it is likely that this site will also include pedestrian/cycle links. The landing of the ramp and the stairs on the north side of the bridge will therefore mark the convergence of numerous routes with different users. Careful consideration needs to be given as to how these routes will converge and effectively link with one another and this piece of work should be developed in collaboration with Countryside Zest, ECC and the City Council. Should the footpath/bridleway be delivered as shown in the general arrangement plans it will likely over complicate the arrangement of these routes.
- 6.87 The above considerations may also influence the design and aesthetic of the bridge and it is therefore essential that adequate thought is given to these detailed elements before the design of the bridge is fixed.
- 6.88 Whilst in principle the bridge layout is welcomed, it is clear that that substantive works are needed to ensure that the design and aesthetic of the bridge integrates and recognises the important linkage to Chelmsford Garden Community and adjoining new railway station are required before the design of the bridge can be agreed. In the past, options such as providing a green bridge have been considered and this and other options will need to be explored prior to finalising the bridge design.
- 6.89 The City Council will continue to engage with National Highways, Essex County Council Highways and other stakeholders to ensure that an acceptable level of mitigation is proposed. Ongoing discussions will continue as part of the Statement of Common Ground (SoCG).

Environmental Statement

Chelmsford Local Plan (2020)

- 6.90 The Policies listed at section 5 of this LIR apply and for brevity are not repeated here again.

Key Local Issues

6.91 The Environmental Statement (ES) is a key tool in assessing the significance of harm on an application and Chelmsford City Council's main concern is to ensure that the proposal will not lead to unacceptable significant adverse harm.

Consideration

6.92 The Environmental Statement covers the following environmental aspects: air quality, cultural heritage (including archaeology and built heritage), landscape and visual amenity, biodiversity, geology and soils, material assets and waste, noise and vibration, population and human health, road drainage and the water environment, climate and cumulative effects.

6.93 Consideration of these matters is given below:

Air Quality

6.94 The Council's main concern relate to the impacts of the proposal on the settlement of Boreham. Consideration and the Council's assessment of this matter has been given above.

Cultural Heritage

Chelmsford Local Plan

6.95 Policies S3 –Conserving and Enhancing the Historic Environment, DM13 – Designated heritage assets and DM14 – Non designated heritage assets of the Chelmsford Local Plan are also relevant.

Key local issues

6.96 The main issues relate to the impact of the development on designated and non-designated heritage assets, protected lanes. Chelmsford City Council also wishes to ensure that adequate mitigation is secured.

Consideration / Adequacy of the DCO

6.97 The proposed works at Junction 19 Boreham Interchange would impact on the setting of The Generals (Grade II listed) and Boreham House (Grade I listed) and its Registered Park and Garden (Grade II). The heritage assessment which accompanies the application assesses the significance and impact on these heritage assets and others on the route of the works.

6.98 The Generals is a timber frame former inn of seventeenth century origins. For The Generals the impact is defined as moderate for the construction period and slight for operational phase. This is concurred with as the change to the road alignment is minor and the Boreham Interchange already has a significant impact. The heritage statement notes that the tree group to the east would be retained, but the landscape removal plan notes the trees are 'at risk' of being removed. This should be clarified and every effort made to retain the trees or mitigate their loss. As part of the landscaping scheme it is desirable to include new planting to the east of The Generals to mitigate the impacts of the development.

- 6.99 Boreham House is an early eighteenth-century country house, set within extensive grounds including a contemporary lake to the frontage. The impact is defined as a moderate for the construction period and slight for the operational phase.
- 6.100 Boreham House Registered Park and Garden, which is an important designed landscape forming part of the setting to Boreham House, is defined separately under the historic landscape section, with construction impacts defined as moderate and operational impacts as slight.
- 6.101 The proposals indicate realignment of Main Road, which would include removal of the trees and vegetation to the east and west the entrance to Boreham House and also with trees 'at risk', including those on the north side of Main Road. The landscaping plan at present indicates no replacement planting, but the heritage assessment notes new planting will be provided. The combination of widening the road, taking part of the lawned verge within the RPG, earthworks and removal of large areas of screening, would be a notable change to the setting and open up the site to the visually intrusive highway paraphernalia at Boreham Interchange and also the site to the north. The change is considered to be minor to an asset of high value, resulting in an impact of moderate magnitude (significant for EIA purposes), rather than slight as indicated in the assessment. The magnitude of impact could be reduced if a comprehensive landscaping scheme were provided. Large scale plans should be provided to show the works at the entrance to Boreham House and adjacent The Generals to be able to fully consider the proposals. A landscaping scheme taking in the frontages should also be proposed.
- 6.102 There is a culvert under Main Road, aligned with the centre of the lake to the front of Boreham House heading north. This is not shown on the plans and should be identified, retained and protected during the works. This culvert feeds the lake from a natural spring to the north. There have been ongoing issues over the last few years due to the feeder not providing water to the lake, possibly a result of changing ground water conditions in the locality. This is significant because the lake is an important part of the designed landscape and a defining feature of the setting to the house. The lower water levels change how this is experienced and also put the retaining walls at risk of collapse. Underground storage tanks are proposed to the west of the entrance to the Premier Inn/The Grange to deal with surface water drainage. Further technical information should be provided to ensure the situation with the feeder is no worse than at present as a result of the proposed works. It is also desirable to explore if, rather than underground attenuation, the dried up pond on the north side of Main Road (in the copse east of The Generals) could be utilised for surface water attenuation, thereby improving the feed to the lake and offsetting the harm to the designated heritage assets resulting from the scheme. Historic plans show a series of sluices along Main Road, where the road would be widened, there may be evidence of this below ground and/or part of the feed to the lake remaining, which should be investigated.
- 6.103 The landscaping and drainage works to the far west of the scheme (adjacent the A12) fall within and directly adjacent the Chelmer and Blackwater Navigation Conservation Area. Beyond the navigation itself the water meadows and agricultural land are a significant landscape feature. Two separate planning applications have been received for attenuation ponds (22/02270/FUL and 23/00168/FUL refer) and the proposals are considered on their merits under the relevant Town and Country Planning legislation. It would be desirable to reinforce the planting along the A12 to give screening in this location (22/02270/FUL) as part of the scheme of mitigation.
- 6.104 Minor impacts are identified to the setting of the Boreham Main Road/Plantation Road Conservation Area and its associated listed buildings. This impact is concurred with. If additional traffic calming measures are considered on Main Road due to the closure of the southbound

Junction 20A and resultant increase in traffic through Boreham, the residual impact of any additional signage, speed cameras, alterations to the road, speed humps, etc on the heritage settings would need to be considered and balanced against the public benefit in delivering these features. However, it is likely that the benefit of delivering these mitigation measures will outweigh any harm to heritage.

- 6.105 Other neutral or slight heritage impacts are identified in the ES and are concurred with.
- 6.106 In weighing applications that directly or indirectly affect designated and non-designated heritage assets, a balanced judgement is required having regard to the scale of any harm or loss and the significance of the heritage asset.
- 6.107 Overall, on balance, when weighing up the overall benefits of the proposal, the proposal would not have a significant adverse cultural heritage effect, such that it would warrant a specific objection from Chelmsford City Council on this ground. However, consideration should be given to mitigating against the Cultural impacts of the proposal around Boreham House.
- 6.108 The introduction of mitigation will continue to be reviewed as part of discussions on the Statement of Common Ground (SoCG).

Archaeology

- 6.109 Chelmsford City Council will be guided by Essex County Council on archaeological assets within/adjacent to the site.

Landscape and Visual Amenity

Chelmsford Local Plan

- 6.110 Policies S4 – Conserving and Enhancing the Natural Environment, S11- The role of the countryside, DM8 – New buildings and structures within the rural area, DM11- Change of use (land and buildings) and Engineering operations and DM23 – High quality and inclusive design of the Chelmsford Local Plan are relevant

Key local issues

- 6.111 The City Council's main concern is the construction of the Paynes Lane footbridge does not have an unacceptable visual impact and would not harmfully affect the character and appearance of the area. Consideration, and the Councils assessment of this matter, has been given above.
- 6.112 Consideration of the landscape and visual amenity effects upon Cultural Heritage has been given above.

Consideration / Adequacy of the DCO

- 6.113 In respect of the other alterations and improvements to Junction 19 and other works within Chelmsford City, these are modest in nature.
- 6.114 The introduction of new and additional planting along the boundaries of the A12 is welcomed. Any mitigation in the form of additional boundary planting and screening alongside

the settlement of Boreham would need to be well designed in itself and not cause unacceptable residual impacts / effects.

6.115 Any significant effects of the proposal would appear to be limited in extent and duration to the location and locality of the A12. From close quarters, the proposal would lead to a change in high sensitivity visual receptors (local residents and Public Rights of Way Users) and medium sensitivity users (motorists), but these would not be so harmful, and could be mitigated, such that they would not have a major significant adverse effect.

6.116 With the exception of the proposed Paynes Lane footbridge, the City Council is satisfied that the proposal is acceptably designed and there would be no major significant adverse impact upon landscape and visual amenity that would warrant an objection to the proposal.

6.117 Chelmsford City Council will be guided by Essex County Council Place Services in respect of the Landscape and Visual Impacts of the proposal.

Biodiversity and Ecology

Chelmsford Local Plan

6.118 Policies S4 – Conserving and enhancing the Natural Environment, DM16 – Ecology and Biodiversity and DM17 – Trees, Woodland and Landscape Features of the Chelmsford Local Plan are relevant.

6.119 Consideration of ecological effects upon Cultural Heritage (including impact upon trees), Landscape and Visual Impact and Boreham village has been given above.

Key Local Issues

6.120 Chelmsford City Council's main concern is that the proposal minimises the ecological and biodiversity impacts of the development and that adequate mitigation is secured.

Consideration / Adequacy of the DCO

6.121 The Environmental Statement identifies and proposes measures to address the potential impacts and effects of ecology brought about by the proposal during the construction, operation and decommissioning.

6.122 The habitats surrounding the Chelmsford section of the A12 comprise mainly arable fields. There are mature trees and hedges, small wooded copses and ponds. Other habitats include residential development, Beaulieu Park and water courses, ponds. Active gravel workings are located at Bulls Lodge Quarry. There is a concentration of woodland stands between Boreham and Witham. Plantation woodland extends along the A12 and larger residential properties in rural areas.

6.123 The field systems are demarked by hedgerows with varying densities of standard trees. There are no confirmed or potential SPA's, SAC's or Ramsar sites within 2km of the Order limits and no SAC's designated for bats within 30km of the study area.

6.124 There are no statutory designated sites for nature/ biodiversity conservation within the Order limits. Non statutory designated sites include the River Chelmer LWS which is partially

within / adjacent to the Order limits, Other LWS include Boreham Road Gravel Pits. A full list of these (including Trees Protected by Tree Preservation Order) are given with the Environment Statement. Trees protected by Tree Preservation Order include TPO/2014/001 Land north west of Milmead Cottages, Paynes Lane, Boreham (The Generals), TPO/2002/080 Boreham House, Main Road, Boreham and TPO/2002/085 Generals Farm, Main Road, Boreham.

- 6.125 Within Chelmsford City, much of the development would be sited on existing built and engineered form. Ecological management areas 1, 2 and 3 would be formed off site and are the subject of planning applications 22/02270/FUL and 23/00168/FUL which are under separate consideration. These would facilitate an increase in water vole habitat.
- 6.126 Hedgerow removal is proposed during the construction of the development, but this would be temporary. This would result in loss of habitat for breeding bird assemblage across the scheme. Construction lighting would impact upon bats.
- 6.127 The scheme has been designed to avoid impact to important habitats including ancient woodland, veteran trees, hedgerows and running water. However, there are badger setts in proximity to Junction 19 and the proposal would need to avoid mortality of the species during construction and operation.
- 6.128 Disturbance from construction to protected species could result from habitat loss and fragmentation as well as changes in noise, light, vibration or visual stimuli as well as air quality changes arising from construction traffic which could affect sensitive designated sites and habitats within 200 m of the construction ANR.
- 6.129 The main sources of habitat degradation in the operational phase would be as a result of road noise and lighting disturbance. Noise has the potential to impact upon local populations of breeding birds and bats, potentially reducing the suitability of habitat close to the road and the availability of habitat in the vicinity of the proposed scheme. There is a risk to mortality from animals attempting to cross a wide road, used by fast moving traffic that bisects the landscape. Lighting is particularly likely to primarily affect bat species but also birds, invertebrates and other mammals.
- 6.130 Mitigation measures seeks to avoid habitat loss, fragmentation and species disturbance. Embedded mitigation would include siting of temporary and permanent works areas away from designated sites, notable habitats and resting places of protected and notable species and habitats likely to support reptiles and species of principal importance.
- 6.131 Some mitigation is proposed prior to construction and includes the formation of Ecological Management areas 1, 2 and 3 listed above.
- 6.132 The use of permanent lighting would be developed at the detailed design stage in accordance with best practice guidance to minimise impacts on wildlife. Lighting would be limited to junctions, handrail lighting on the bridges for walkers, cyclists and horse riders (WCH), and side road approaches to junctions, and designed to best practice to reduce light spill. LED luminaires would be used, which use less energy than conventional luminaires, while reducing light spill into adjacent areas.
- 6.133 New road verges would support low-nutrient grassland habitats. The habitat would be managed in accordance with the LEMP, which is included within the first iteration EMP [TR010060/APP/6.5.~0.)

- 6.134 In general, removal of mature and TPO trees would be avoided, however, in areas where mature trees are within the proposed scheme footprint and loss cannot be avoided, replanting of trees of the same species would need to be incorporated into the proposed scheme designs. Any works to protected and mature trees, will need to be undertaken in accordance with BS:5387 in accordance with up-to-date surveys. An up to date arboricultural impact assessment and method statement are required.
- 6.135 It is suggested that the planting design would use native species of local origin and be designed to support green infrastructure objectives through the use of planting to link to existing field boundary vegetation to provide screening and connectivity of existing wildlife corridors. This is acceptable in principle, but the precise details would need confirmed at Requirement stage within a detailed Landscape and Ecological Management Plan (LEMP). Landscape planting would need to maximise biodiversity delivery by improving the value of habitat throughout the proposed scheme and improving wildlife connectivity by incorporating linear habitats such as hedgerows and lines of trees, linking with retained woodland and hedgerows where feasible.
- 6.136 Given the extensive tree and upgraded scrub and tree planting in association with Beaulieu, the proposal will need to ensure that it is not prematurely lost as a direct result of the scheme. Where vegetation loss is unavoidable, mitigation in the form of compensation habitat is required so that there is no net loss of habitat during the scheme. These details should be provided within the detailed LEMP.
- 6.137 The proposal suggests that other 'Standard Mitigation' measures would be provided, with embedded and additional mitigation provided under License to ensure that the proposal complies with legal requirements for protected species.
- 6.138 The proposal is not expected to lead to any significant adverse residual effects upon ecology, trees and biodiversity. The scheme has been designed to avoid impact to important habitats including ancient woodland, veteran trees, marshy grassland, hedgerows, running water and ponds and ecology.
- 6.139 The biodiversity enhancements are noted, and the Biodiversity Net Gain Assessment confirms that the proposal would deliver 2% area-based habitat, 36% hedgerow units and 156.7% river units. It is noted that five 'potential' veteran trees may be lost as part of the development proposals (not within Chelmsford City) and due to the irreplaceable value of the trees and the measures provided in partial compensation for the loss of these trees has been excluded from the BNG calculation.
- 6.140 Requirements (conditions) relating to the appliance of a Landscape and Ecological Management Plan (LEMP) would ensure the protection and conservation of ecology and trees during operation during the operation of the development.
- 6.141 Chelmsford City Council be guided in respect of biodiversity and tree matters from Essex County Council as well as guidance from other statutory consultees including Natural England.
- 6.142 No objections are raised to the proposed requirements in principle, although these will continue to be reviewed as part of discussions on the Statement of Common Ground (SoCG).

Geology and soils

6.143 Chelmsford City Council defers to Essex County Council Minerals and Waste Planning Authority on this matter. In respect of Loss of Agricultural Land as stated In the Examining Authorities Questions ExQ1, the Council's position is as follows:

Chelmsford Local Plan

6.144 Policy S4- Conserving and enhancing the Natural Environment, of the Chelmsford Local Plan states that the Council will seek to minimise the loss of best and most versatile agricultural land (grades 1, 2 and 3a) to major development.

Key Local Issues

6.145 Chelmsford City Council's main concern is the loss of Best and Most Versatile agricultural land and disruption of agricultural activities as a consequence of the loss of agricultural land.

Consideration and Adequacy of the DCO

6.146 The NPPF at paragraph 174 (b) states that planning policies and decisions should contribute to and enhance the natural environment by recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services - including the economic and other benefits of the best and most versatile agricultural land. Annex 2: Glossary of the NPPF defines Best and Most Versatile (BMV) agricultural land as land in Grade's 1, 2 and 3a of the Agricultural Land Classification.

6.147 Overall, the proposal would lead to the loss of about 72.4 hectares (39% of the site boundary) of Best and Most Versatile Agricultural Land. This would be broken up in Grade 2 (11.4 hectares) and 3a (61.1 hectares). The loss of this amount of BMV land would be significant and would be of high magnitude and could not be mitigated or offset elsewhere. Some of the Grade 2 land would be within Chelmsford City.

6.148 The loss of 39% of BMV land is significant and weighs against the proposals as National and Local Planning policies seek to protect this finite resource.

6.149 The removal of productive agricultural land is a material consideration, but this must be balanced against the benefit of the proposal in easing congestion and improving the highways network.

6.150 Requirements (conditions) relating to the appliance of Soil Handling Management Plan appended to the Environmental Management Plan could ensure the protection and conservation of soil resources on site during operation during the operation of the development.

6.151 On balance, it is considered that these measures are likely to outweigh the loss of Best and Most Versatile Agricultural Land, particularly when considered in the wider context of the benefit of the proposal in its totality. In this context, Chelmsford City Council does not therefore, object to the loss of agricultural land in principle.

Material assets and waste

6.152 Chelmsford City Council defers to Essex County Council Minerals and Waste Planning Authority on this matter. The construction of the proposal will raise operational waste management and disposal issues and consideration would need to be given at Requirements stage within a Site Waste / Materials Management Plan.

Noise and Vibration

6.153 The Council's main concern relate to the impacts of the proposal on the village of Boreham and impacts upon Ecology. The development should not lead to any major adverse and significant and harmful implications upon the settlement and other affected receptors. In cases where the proposal causes adverse impact, this must be mitigated.

6.154 Harm is harm and in cases where a low number of receptors are unacceptably and significantly impacted upon, appropriate mitigation should be provided to all affected receptors throughout the proposal in accordance with details / scheme of mitigation that has been secured at Requirements stage or through the submission of a S106 or other appropriate mechanism during the Examination.

6.155 Further consideration and the Council's assessment of this matter on the village of Boreham has been given above.

Population and Human Health

6.156 The impacts of the proposal on residential receptors and the impact of the proposal on Boreham village is material to consideration of the acceptability of this application. Please refer to the consideration in respect of Boreham village given above.

Road drainage and the water environment

6.157 Chelmsford City Council defers to Essex County Council Local Lead Flood Authority, Highways Authority and the Environment Agency in respect of these matters. Further comments relating to the need for culverts and drainage to Boreham House Registered Park and Garden are given in the Cultural Heritage section above.

Climate and Cumulative Effects

6.158 The proposal has the potential to affect Earth's climate by causing (either directly or indirectly) the emission of Greenhouse Gas (GHG) emissions into the atmosphere, both as a result of its construction and throughout its operational life. The assessment and management of GHG emissions offers the opportunity to reduce the impact of a project on climate by reducing the magnitude of GHG emissions, as far as practicable.

6.159 Chelmsford City Council declared a Climate Change emergency in 2019. Strategic Policy S2 indicates that the Council will encourage developments that reduce GHG emissions and encourage design and construction techniques which contribute to climate change mitigation and adaptation.

6.160 The proposal indicates that over time, there will be an overall decrease in road user GHG emissions occurs because of a substantial projected increase in the proportion of electric vehicles

in the national vehicle fleet (which result in much lower GHG emissions than conventionally fuelled vehicles), coupled with improvements in vehicle efficiency. However, there could be future impacts relating to climate as a result of Climate change.

6.161 It is likely that the effect upon Climate Change can be mitigated through suitable mitigation, including embedded mitigation and those designed to support active travel. On balance, it is considered that these measures are likely to outweigh any impact upon Climate Change when considered in the wider context of the benefit of the proposal in its totality.

Other Matters

6.162 The Highways implications of the proposal are complex and largely a matter for ECC as the Highway Authority to the proposal, in addition to National Highways themselves.

6.163 In respect of the Highways implications upon the village of Boreham, these have been considered above and should be read in conjunction with the Council's comments relating to air quality and human health.

6.164 Appropriate controls relating to Construction work would need to be implemented in accordance with the Construction Traffic Management Plan.

6.165 Overall within Chelmsford, there may be some significant adverse effects upon landscape and visual amenity within the immediate locality, but these will need to be taken in the context that this is an industrialised form of development relating to the construction of infrastructure, which has a functional, rather than an aesthetic design.

6.166 There would be likely some significant adverse effects for some residential and other receptors within Boreham village as identified above and these cannot be mitigated against. The effect will need to be balanced against the overall need and benefit of the proposal.

6.167 The proposed requirements (conditions) will be reviewed as part of discussions on the Statement of Common Ground (SoCG).

DCO Obligations and impact upon the local authority's area

6.168 Chelmsford City Council will continue to work with National Highways and the Host Authorities to refine and agree the proposals and to ensure that appropriate mitigation is provided for Boreham village and to ensure that a high-quality designed bridge is provided.

7. Conclusions

- 7.1 The A12 is at capacity and there is a recognised need for capacity improvements and Chelmsford City Council support in principle its upgrading and improvement.
- 7.2 The proposals would not impact upon Chelmsford City Centre and would be beneficial to the growth of the Beaulieu development and Chelmsford Garden Community. This is given significant weight in favour of the proposal.
- 7.3 Due to the closure of Junctions 20 and 20b and the construction of a new Junction 21, the proposal would lead to an increase in users along Main Road, Boreham, particularly during the morning.
- 7.4 The proposal to implement only Standard Mitigation and reduce the speed limit to 30 mph along Main Road, Boreham is not considered to be enough to manage and mitigate against the effects on the living environment of Boreham residents and businesses who may experience higher levels of congestion and associated noise, disturbance and vibration than they are accustomed to. What is required is a package of measures to make the route unattractive and to encourage road users to use the new Junction 21.
- 7.5 This view is shared by City Councillor Cllr Mackrory (Cabinet Member for Sustainable Development), Boreham Parish Council, Boreham Conservation Society, Essex County Council, the County Council member for this division (Cllr John Spence CBE) and Kemi Badenoch MP. The Council's position is that a package of measures is required to discourage traffic from routing through Boreham village to access Junction 19.
- 7.6 The effect upon human health and the village of Boreham needs to be considered holistically, such that all affected receptors receive appropriate and reasonable mitigation. Whilst the proposal may not cause major adverse impact to all receptors, the perception of the impacts of the proposal will not be experienced by those who live in the affected receptors to be minor/modest. It is essential that mitigation is proposed and implemented to all affected receptors where reasonable and appropriate to reduce the impact upon human health and maintain reasonable quality of life.
- 7.7 The proposed Paynes Lane Bridge would provide a continuous Walking, Cycling and Horse Riders (WCH) route across the A12, side roads and railway. The bridge would connect all users to the proposed Beaulieu Park Station and wider Chelmsford area from Boreham without negotiating junction 19.
- 7.8 The proposal would comply with City Council's key objective to ensuring a high-quality pedestrian, cycle and equestrian route which connects Boreham with the new railway station, the Business Park and the wider Chelmsford Garden Community as well as reconnecting the currently severed bridleway. However, the proposed design of the bridge is considered adequate, having a functional, rather than an aesthetic appearance, such that a design of a higher standard is required to integrate the bridge with the wider Garden Community development.
- 7.9 Measures have been identified to set out in this LIR as to how the bridge design can be improved, to ensure that it effectively integrates within the Garden Community and forms a landmark to the northern gateway to Chelmsford, whilst recognising historic connections.

- 7.10 Overall within Chelmsford, there may be some significant adverse effects upon landscape and visual amenity but this would be limited to the immediate locality. Concerns relating to the historic environment will need to be considered, and most likely balanced and mitigated through an appropriate scheme of mitigation.
- 7.11 There would be likely significant adverse effects for some residential and other receptors within Boreham and these cannot be mitigated against. The City Council considers that mitigation should be explored and applied where reasonable to all affected receptors. The effect will need to be balanced against the overall need and benefit of the proposal.
- 7.12 Comments provided by Essex County Council, the Highways Authority and the Local Lead Flood Authority will be material to the consideration of and acceptability of the proposal.
- 7.13 If appropriate and reasonable mitigation can be secured to Boreham village and the proposed Paynes Lane footbridge can meet the Council's design aspirations, then it is likely that the overall benefits of the A12 Chelmsford – A120 Widening Scheme will be greater than the localised harm identified.
- 7.14 Chelmsford City Council will continue to engage with the applicant and other stakeholders and further comments will be made throughout the examination of the proposal.