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East Lothian Council

local development plan

technical note 14 2018

PROPOSED DEVELOPER CONTRIBUTIONS FRAMEWORK

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INTRODUCTION

1.1 East Lothian Council's Supplementary Planning Guidance: Developer Contributions Framework has been updated following the publication of the Local Development Plan Examination Report to take account of its findings and of updated demand assessments for Education, Transportation and Sports Facilities. It is accompanied by this updated Technical Note that describes the approach the Council and other service and infrastructure providers have adopted to the preparation of the Supplementary Guidance. The structure of the Technical Note is consistent with the 2016 Technical Note 14 but the content has been updated to present:

- Key Findings from and implications of the LDP Examination Report on the Developer Contributions Framework and the operation of Developer Contributions Policy
- Updated Education Roll Projections and subsequent impacts on additional capacities required and related developer contribution values
- Updated Transportation Appraisal and Transportation Developer Contributions Methodology, costs of interventions and subsequent changes to the contributions values sought from relevant developments.
- Updated Sports Facilities contribution values due to the removal and addition of sites to the LDP
- Updated Blindwells GP Facilities contribution

1.2 The planning system allows mitigation to be sought from applicants or developers towards delivering infrastructure capacity solutions where the need for this arises as a result of their development. Planning policies can also require that provision is made for other interventions, such as provision for affordable housing as part of market housing development. These interventions are normally called 'developer contributions'.

1.3 This TN sets out the justification for the provision of additional capacity in facilities and infrastructure in the context of Circular 3/2012: Planning Obligations and Good Neighbour Agreements in a series of 'Statements of Conformity' that explain how the test of the Circular have been met. A separate TN deals with the provision for affordable housing, although for completeness a Statement of Conformity is included in respect of that policy area too. With the exception of Transportation, these statements have not been significantly updated from the 2016 Technical Note, other than to reference more up to date Council education strategies. The Transportation Statement of Conformity now refers to the Transport Contributions Methodology Report that is published alongside this Technical Note. The Statements of Conformity relate to the justification for developer contributions towards the following interventions:

- **Transport network capacity**, including for active travel, public transport and the strategic and local road networks;

- **Education facilities capacity**, including for eligible pre-school, primary school and secondary school levels;
- **Affordable housing**, which may include provision of housing and support services to meet the needs of older people as well as those with long term health needs including learning disability, mental health needs or physical disability or younger people with health and social care needs;
- **Sport Facilities Capacity**, including formal indoor and outdoor recreation and changing facilities;
- **Environmental mitigation**, including to address development related impacts on any identified Air Quality Management Area (which in the case of Musselburgh town centre will be addressed by transport interventions);
- **Health and social care facilities capacity**, including General Practitioner Services and community health services to meet the needs of the growth in population, particularly the projected increase in number of elderly people; and

1.4 Following the section on the findings and implications of the LDP Examination Report, this Technical Note is split into sections that reflect the points above. It describes how East Lothian Council and other relevant service or infrastructure providers have interpreted and applied relevant national and regional planning policies as well as associated advice and guidance developer contributions.

SUMMARY OF FINDINGS AND IMPLICATIONS OF EAST LOTHIAN LDP EXAMINATION REPORT

2.1 This section of the Technical Note sets out a high level summary of the implications and modifications from the LDP Examination Report on the operation of developer contributions policy DEL1 and the use of the Supplementary Guidance: Developer Contributions Framework (DCF). For full details of the unresolved representations, Council responses and Reporter's conclusions on the operation of developer contributions policy and modifications to the plan, readers are directed to Issues 15, 16, 18a-f, 31 and 33 of the LDP Examination Report.

2.2 The LDP Examination Report was published in March 2018. Whilst the Developer Contributions Framework Supplementary Guidance was not subject to the examination, the policy framework for seeking developer contributions (LDP Policy DEL1) was. This set out the Council had the ability to seek developer contributions towards necessary infrastructure including schools, transportation, sports pitches and facilities, as well as a specific health centre at Blindwells. Appendix 1 of the LDP also sets out the zones for where contributions could be sought towards the necessary infrastructure. The principles and where contributions could be sought were set out in the LDP, whereas the level of contributions and methodology towards calculating those values is a matter for the Supplementary Guidance.

2.3 The Reporter has recommended modifications to Policy DEL1, which arise from the Council's own suggestions during the examination process. In October 2017, the Supreme Court determined that the Aberdeen City and Shire Strategic Transport Fund Supplementary Guidance (STF) should be quashed as it did not comply with policy and law relating to the justification for developer contributions. In effect, the STF required developers to pay a fixed rate of contributions per dwelling towards a package of transport interventions, regardless of the link between individual proposed developments and the individual transport interventions. However, developer contributions are required be determined on the basis as assessment of planning proposals and not fixed rates pre-determined in advance of a proposal. To do the latter would be tantamount to operating a development levy, which is not permitted under Scottish planning law.

2.4 The DPEA issued Further Information Request 16 which asked the Council for its view on the implications of the Supreme Court decision on its intentions to operate its Developer Contributions Policies and the Developer Contributions Framework. The Council's response to FIR16 set out the clear differences between the STF and the Council's approach and why it complied with developer contributions policy tests and law. This was accepted by the reporter in the LDP examination report. However, the Council suggested potential modifications to Policy DEL1 so that the DCF now only sets out likely scale and nature of contributions in advance of applications rather than pre-determined contribution values. These suggested modifications were accepted by the reporter who incorporated them into the suggested modifications for Issue 31: Delivery. These changes are reflected in the Policy DEL1 and in this updated Supplementary Guidance.

2.5 The effect of this is that the DCF sets out the methodology and assessment principles for how developer contributions towards education, transport, sports pitches and facilities and health infrastructure will be determined at the time of assessment of development proposals. It also sets out the likely scale and nature of contributions expected from development based on a cumulative assessment of the LDP. However, as applications come forward the context of that assessment may have changed and therefore the scale of infrastructure required or proportion related to the development proposal may have changed, and therefore so will the level of contributions. The effect of this is that the per dwelling rates in the DCF are not fixed but likely levels, with the actual levels being confirmed on a case by case basis through assessments of each application, taking all committed and planned development into account. This is reflected in the Developer Contribution Protocol section of the updated DCF.

2.6 The other notable change regarding the operation of Developer Contributions Policy DEL 1 was clarification within Table DEL1 as to which policies should be included setting out the need for developer contributions. The reporter recommended that this table now included Policy OS3: Minimis Open Space Standard for new General Needs Housing; and Policy OS4: Play Space Provision in new General Needs Housing Development; but excluded Policy DC10: The Green Network and Policy TS8: Bus Network Improvements, as neither included a reference for the need for developer contributions.

2.7 Under Issue 18(f) Transport Infrastructure Delivery Fund, the reporter recommended modifications to Policy T32: Transport Infrastructure Delivery Fund. Whilst the reporter concluded that Transport Scotland had a role in contributing to development plans, they agreed with Scottish Government that they had no role in the creation, monitoring and management of the Transport Infrastructure Delivery Fund. They therefore recommend that references to Transport Scotland are deleted from sentences three and four of Policy T32. As a result of this the Council will look to secure and gather all transport related developer contributions related to the infrastructure fund rather than requiring Old Craighall contributions to be secured through Section 48 agreements directly with Transport Scotland. The Council will hold these contributions until the delivery body for the Old Craighall improvements is agreed. If the works are not delivered by the Council, then the funds will be transferred to the delivery body.

2.8 Unrelated to the LDP Examination Report, the following sections of the DCF have been refined:

a. Introduction: more detail provided on the approach to assessing windfall applications;
b. Applying Transport Contribution Zones: rather per dwelling values being set out for each zone, Tables 2-5 set out the likely levels of contribution for each LDP sites that was assessed in the transport modelling work;
c. Demand Assessment Approach: greater clarity provided regarding the assessment for transportation contributions for windfall proposals and clarity over how campus land values contributions will be calculated.
d. Administrative Process: A detailed 14 step process from the initial assessment of processes to obligations being fulfilled by the Council. This pulls together processes and standards already in the draft DCF and in operation by the Council. Further clarity is also provided regarding indexation and the length of clawback period for cumulative transport contributions.

EDUCATION

Statement of Conformity with Circular 3/2012

PROVISON OF ADDITONAL EDUCATION CAPACITY

The following table explains why the need for additional education capacity can be justified against the 5 tests of Circular 3/2012: Planning Obligations and Good Neighbour Agreements and thus why it should feature in East Lothian's Planning Obligations Framework.

TEST1 Necessary to make the development acceptable in planning terms	On the basis that planning obligations should only be sought where it is necessary to allow development to proceed, explain why there is a need for the obligation / financial contribution: **1) Legislative Context:** The Local Authority has a number of statutory duties relating to the provision of education for eligible pre-school children, primary and secondary school age children (including those with additional support needs) in its area. These include but are not limited to: i. **Section 1** of the **Education (Scotland) Act 1980** requires authorities to secure for their area adequate and efficient provision of school education: http://www.legislation.gov.uk/ukpga/1980/44/contents ii. **Section 17** of the **Education (Scotland) Act 1980** requires authorities to provide sufficient accommodation in schools and other educational establishments under their management: http://www.legislation.gov.uk/ukpga/1980/44/section/17 iii. **Part 1** of the **Local Government in Scotland Act 2003** http://www.legislation.gov.uk/asp/2003/1/part/1 and the **2004 statutory guidance** http://www.gov.scot/Publications/2004/04/19166/35250 requires authorities to secure best value in the delivery of services, which includes agreements for the construction or maintenance of buildings or works. iv. **Section 21** of the **Schools (Consultation) (Scotland) Act 2010 Act** provides a definition for 'school' as public schools as defined in **section 135(1) of the Education (Scotland) Act 1980**. This means any school under the management of an education authority and

includes Early Learning & Childcare centres (e.g. nursery schools) which are run by the Education Authority and does not cover independent schools or nursery schools or nurseries which are managed and run independently: http://www.legislation.gov.uk/asp/2010/2/contents

v. **Section 15** of the **Standards in Scotland's Schools etc (Scotland) Act 2000** http://www.legislation.gov.uk/asp/2000/6/contents also requires education authorities to provide education for all children in mainstream schools ("a school other than a special school") unless doing so:

(a) would not be suited to the ability or aptitude of the child;
(b) would be incompatible with the provision of efficient education for the children with whom the child would be educated; or
(c) would result in unreasonable public expenditure being incurred which would not ordinarily be incurred

vi. **The Education (Disability Strategies and Pupils' Educational Records) (Scotland) Act 2002** places a duty on education authorities to prepare a strategy to increase the physical accessibility of the school environment, increase the accessibility of the curriculum and improve communication, especially in relation to the provision of school information, for those pupils who have disabilities, and also to plan for prospective pupils who may have.

vii. **The Equality Act 2010** restates the previously existing duty that an education authority is required to "make reasonable adjustment" for disabled persons in schools, where an existing arrangement places a disabled person at a substantial disadvantage in comparison to persons who are not disabled, to remove that disadvantage.

viii. The Education Authority must provide the mandatory amount of Early Learning and Childcare (ELC) for eligible pre-school children, including those with additional support needs, belonging to its area in accordance with eligibility criteria set down by the Scottish Government under the terms of the **Children and Young People (Scotland) Act 2014, Part 6**. http://www.legislation.gov.uk/asp/2014/8/part/6 Section 52 also states that "an education authority must have regard to the desirability of ensuring that the method by which it makes early learning and childcare available in pursuance of this Part is flexible enough to allow parents an appropriate degree of choice when deciding how to access the service".

ix. The Schools (Consultation) (Scotland) Act 2010 also sets out special safeguards for rural schools, which reflect the particular importance of schools to fragile rural and remote communities in Scotland http://www.legislation.gov.uk/asp/2010/2/crossheading/special-provision-for-rural-schools

x. These safeguards for rural schools were substantially amended and strengthened by section 80 of the Children and Young People (Scotland) Act 2014.

xi. The School Premises (General Requirements and Standards) (Scotland) Regulations 1967 (as amended) sets out standards in relation to the minimum requirements for school sites, playing fields and educational accommodation. They also prescribe standards for the provision of ancillary accommodation including kitchen premises, sanitary facilities, washing accommodation, storage accommodation, medical inspection accommodation, and staff accommodation.

xii. Section 3 of the Education (Lower Primary Class Sizes) (Scotland) Regulations 1999 sets out the maximum class sizes for single stage P2 and P3 classes: http://www.legislation.gov.uk/uksi/1999/1080/regulation/3/made

xiii. Regulation 2 of the Education (Lower Primary Class Sizes) (Scotland) Amendment Regulations 2010, inserted an amendment into Section 3 of the Education (Lower Primary Class Sizes) (Scotland) Regulations 1999, which set the new lower statutory class size maximum of 25 in all single stage P1 classes: http://www.legislation.gov.uk/ssi/2010/326/regulation/2/made

xiv. The SNCT Handbook Conditions of Service, Appendix 2.9 further sets out class size maxima for primary, secondary and class sizes for special schools and units: http://www.snct.org.uk/wiki/index.php?title=Appendix_2.9

xv. The maximum capacity for nursery classes under the management of education authorities are restricted by Care Inspectorate requirements for the buildings (net area of classroom spaces and numbers of pupil toilets) based on The School Premises (General Requirement and Standards) (Scotland) Regulations 1967 (as amended) http://www.legislation.gov.uk/uksi/1967/1199/made and the 'National Care Standards – early education and childcare up to the age of 16' (revised September 2009) - http://www.gov.scot/Resource/Doc/349451/0116828.pdf

xvi. Legislation on Health and Safety, Building Control and Fire Precautions as set out in the following acts and regulations:

- *Health & Safety at Work etc Act 1974* *http://www.legislation.gov.uk/ukpga/1974/37/contents*
- *Workplace (Health, Safety and Welfare) Regulations 1992* *http://www.legislation.gov.uk/uksi/1992/3004/contents/made*
- *Management of Health and Safety at Work Regulations 1999* *http://www.legislation.gov.uk/uksi/1999/3242/pdfs/uksi_19993242_en.pdf*
- *The Fire (Scotland) act 2005 as amended by The fire safety (Scotland) regulations 2006* *http://www.legislation.gov.uk/asp/2005/5*

2) National Policy, Strategy & Guidance Context

i. **Scottish Planning Policy** (February 2010) – paragraph 44 states that "Under section 72 of the Climate Change (Scotland) Act 2009 local development plans must require all new buildings to be designed to avoid a specified and rising proportion of the projected greenhouse gas emissions from their use through the installation and operation of low and zero carbon generating technologies": http://www.gov.scot/Publications/2010/02/03132605/7

ii. **Building Better Schools: Investing in Scotland's Future** (September 2009) - the Scottish Government and COSLA's joint school estate strategy which sets out the sets out the national and local governments shared vision, aspirations and principles for the efficient and effective management of the school estate: http://www.gov.scot/Resource/Doc/285201/0086644.pdf

iii. **Commission on the Delivery of Rural Education** (April 2013) - makes recommendations on the delivery of all aspects of education in rural areas: http://www.gov.scot/Publications/2013/04/5849

iv. **Determining Primary School Capacity** (October 2014) - Guidance for Local Authorities on the determination of the capacity of Primary Schools in Scotland: http://www.gov.scot/Publications/2014/10/6749

v. **Suitability Core Fact** (October 2008) – Guidance for local authorities on assessing the extent to which a school building and its grounds are appropriate in providing an environment which supports quality learning and teaching and those other services provided to individual children and to the school community, in terms of practicality, accessibility and convenience: http://www.gov.scot/Publications/2008/09/19123626/0

vi. **Condition Core Fact** (March 2007) - Guidance for local authorities on assessing the condition of school buildings: http://www.gov.scot/Publications/2007/03/12142801/0

vii. **School Design: Optimising the Internal Environment** (March 2007) - Guidance for local authorities on internal environmental conditions in schools: http://www.gov.scot/Publications/2007/02/28144045/0

viii. **Building The Ambition** (August 2014) **-** national practice guidance sets the context for high quality Early Learning and Childcare as set out in the Children and Young People (Scotland) Act 2014: http://www.gov.scot/Publications/2014/08/6262/0

3) Local Education Policy, Strategy & Guidance Context:

East Lothian Council has a number of local plans, policies, strategies and guidance in place to meet its statutory duties and incorporate national guidance in parts 1 and 2 above:

i. East Lothian Council's **Education Service Local Improvement Plan** (approved 21st November 2017) sets out the priority areas for improvement and measures of success organised under key themes linked to both local and national priorities, including East Lothian Council's Plan 2017-2022 and the Scottish Government's National Improvement Framework https://www.eastlothian.gov.uk/download/meetings/id/19275/08_education_service_local_improvement_plan_2017-2018

ii. East Lothian Council's **Pupil Placement Policy** (approved 15th March 2015) clarifies the Council's commitment to enrol all pupils within its area in schools, in a fair and consistent manner, in line with Scottish Government legislation, Education (Scotland) Act 1980, Education (Additional Support for Learning) (Scotland) Act 2004 and 2009 and Scottish Government guidelines http://www.eastlothian.gov.uk/meetings/meeting/5542/education_committee

iii. East Lothian Council's **Framework for Meeting Additional Support for Learning Needs (Sept 2013)** sets out the expectation that children with additional support needs will be educated wherever possible in their local school In line with Section 15 of the Standards in Scotland's Schools, etc Act 2000 http://www.eastlothian.gov.uk/downloads/file/3944/a_framework_for_meeting_additional_support_for_learning_needs

iv. The Education Authority's **Early Learning & Childcare Strategy 2016-2021** approved at Education Committee on 20th September 2016 https://www.eastlothian.gov.uk/download/meetings/id/18085/08_early_learning_and_childcare_strategy_2016-2021

v. **Expansion of Early Learning and Childcare to 1140 hours – Draft Implementation Plan** - approved at East Lothian Council meeting on 31st October 2017. Sets out East Lothian's vision and proposed model of delivery to meet the requirements of the expansion programme. http://www.eastlothian.gov.uk/meetings/meeting/6062/east_lothian_council

vi. **East Lothian Play Policy 2017 to 2020** – approved at Education Committee on 13th June 2017 https://www.eastlothian.gov.uk/download/meetings/id/18888/04_draft_play_policy_2017-20

vii. **East Lothian Education Accessibility Strategy 2017-2020** – approved at Education Committee on 21st March 2017 https://www.eastlothian.gov.uk/download/meetings/id/18628/03_education_accessibility_strategy_2017-2020

viii. ***School Estate Management Plan*** - *May 2010* **-** as per report to Education Committee on 16th November 2010 https://www.eastlothian.gov.uk/download/meetings/id/12032/04_school_estate_management_plan

ix. **Composite Classes in Primary Schools Guidelines** (Revised April 2009)

x. **Devolved School Management Policy** (March 2009)

xi. **Home to School Transport Policy** (February 2010) - http://www.eastlothian.gov.uk/schooltransport

xii. **Road Safety – Schools Health & Safety Procedures** (Updated October 2011)

xiii. East Lothian's **Policy for the Design of General Purpose Space in Primary Schools -** approved at Education Committee on 16th March 2010 https://www.eastlothian.gov.uk/download/meetings/id/11060/06_policy_for_the_design_of_general_purpose_space_in_primary_schools

4) Education Provision Geographies

i. **School Catchment Areas -** Each primary & secondary school in East Lothian has a defined catchment area. The following extract from **Education (Scotland) Act 1980, 28A (3D)** states "*In subsections (3A) and (3C) above, "catchment area" means the area from*

which pupils resident therein will be admitted to the school in terms of any priority based on residence in accordance with the guidelines formulated by the authority under section 28B(1)(c) of this Act"
http://www.legislation.gov.uk/ukpga/1980/44/section/28A

Current defined **School Catchment Areas** for East Lothian Council are as published on the Council's website:
https://www.eastlothian.gov.uk/info/210557/schools_nurseries_and_learning/12061/school_catchments

The current list of East Lothian Feeder Primary Schools and their corresponding Secondary Schools are as published on the Council's website:
https://www.eastlothian.gov.uk/downloads/download/12733/east_lothian_feeder_primary_schools_and_corresponding_secondary_schools

A school catchment area can be changed to reflect changes in population patterns or to take into account significant new housing developments but before the change can be implemented a statutory consultation must be undertaken. The **Schools (Consultation) (Scotland) Act 2010** http://www.legislation.gov.uk/asp/2010/2/contents sets out the consultation process that local authorities must follow when proposing a permanent change to any of their schools, including nursery schools, such as a closure, relocation or change of catchment area.

ii. **Cluster Areas -** refer to the six geographical areas formed from the current six secondary catchment areas and their corresponding feeder primary catchment areas to enable cluster-wide working and planning by a variety of services across the Council, including Education.

iii. **Early Learning & Childcare (ELC) Settings -** ELC provision within East Lothian Council is currently delivered through a combination of Local Authority nursery classes and private and voluntary sector Partnership Centres. In the spirit of the Children and Young People (Scotland) Act 2014, Part 6 http://www.legislation.gov.uk/asp/2014/8/part/6 there are no defined catchment areas for ELC settings and parents in East Lothian can choose the settings most appropriate for their children, depending on availability of places.

	The Education Authority aims to offer ELC provision wherever possible within local communities. Evidence from the nursery placement analysis over the last five years shows that 93% of eligible pre-school children in East Lothian attend ELC provision within the cluster area in which they reside. When looking at service delivery and planning for growth for eligible pre-school children, the Education Authority uses a combination of data from the six Cluster Areas and the Primary Catchment Areas as operational geographical tools for forecasting future demand for ELC provision. Forecasts, by primary catchment area, provide the basis for the underlying assessment of eligible pre-school children arising from new and existing housing within each catchment area. As the Council delivers ELC provision through both Local Authority and Partnership Centres, the catchment area forecasts are added together to produce Cluster Area forecasts so that an assessment can also be made against the combined total of ELC places across the Cluster. Where, due to new housing, the projected Cluster Area forecast exceeds the Cluster Area capacity, the Education Authority then uses evidence from the nursery placement analysis. This allows us to assess what proportion of the eligible pre-school children attend the Local Authority settings within each school catchment where the new housing is being built. This then enables us to determine the proportionality of additional ELC places required in each local authority catchment area. If new housing is being built in a catchment area that does not have a local authority setting, then we would look to increase capacity at local authority settings within the Cluster that eligible pre-school children from that catchment typically attend.
TEST 2	Explain the planning purpose behind the need for the planning obligations:
Serve a Planning Purpose	As set out in Test 1 above, the Education (Scotland) Act 1980 places a legislative duty on the Council to plan for growth in our communities. To assist the delivery of the LDP, the Education Authority has a duty to ensure that the number of eligible pre-school children under the terms of the Children and Young People (Scotland) Act 2014, Part 6, and primary and secondary age pupils (including pupils with additional support needs) arising from the cumulative impact of proposed new residential developments can access the necessary education accommodation in their local area, and also to ensure that the Education Authority can maintain standards of service provision for all eligible pre-school children and school age pupils. Where additional Education Provision capacity is required, as a consequence of the developments, developer contributions will be sought
TEST 3	The need for any developer contribution towards increasing Education Provision capacity (infrastructure and facilities) as a consequence of the proposed developments is assessed on a cumulative basis with other proposed developments in the area. The Education Provision

Related to the proposed development either as a direct consequence of the development or the cumulative impact of development in an area	capacity demand assessments are based on Education Provision Population forecasts (see below Education Provision Population Forecasts) which are converted into the number of nursery places, ASN specialist provision places, secondary classroom spaces and the number of primary classes required to accommodate the peak projected rolls in accordance with national regulations and guidance on capacity and class maxima set out in TEST 1. Primary School Planning Capacity and Working Capacity is calculated generally in accordance with the Scottish Government guidance on Determining Primary School Capacity (October 2014) and in accordance with Sports Scotland Guidance on Primary School Sports Facilities. Secondary School capacity is calculated in accordance with School Premises (General Requirements and Standards) (Scotland) Regulations 1967 (as amended). Relevant recognised reference documents published by the Scottish Futures Trust, including the Schools Development Handbook, are used to inform best practice. The overall size of a primary or secondary school is based on the area allocation required for the projected pupil numbers using the Scottish Futures Trust standard area metrics. Nursery places are also generally expected to be delivered within the same metric as the relevant primary school band. For example, a single stream primary school with a design capacity of 231 pupils would be expected to be delivered within 8.5 m^2 per pupil. If the school also had a 30/30 nursery this would be expected to be delivered within the same 8.5 m^2 pupil rate so a total of (231+30) x 8.5 = 2218.5 m^2. Schedule of accommodations will be developed from the global space allocation including, but not limited to, general classrooms, science laboratories, and other specialist spaces, ICT, art, music, drama and PE areas, together with general core accommodation for social, dining and staff. The capacity assessment for each set of projections prepared to assess the cumulative impact of the LDP developments on the existing Education Provision capacity, over and above current committed developments from the Established Supply, has been used to determine the amount of additional capacity needed to accommodate new uncommitted development. **Education Provision Population Forecasts** In line with legislation, Education Provision in East Lothian includes but is not limited to ELC provision for eligible pre-school children, Additional Support Needs (ASN) specialist provision, primary and secondary mainstream provision and will evolve over time to take account of changing and/or new legislation and policy in Education (e.g. maximum pupil numbers per class, the amount and flexibility of free early learning and childcare). In order to meet its statutory obligations to ensure that there is adequate and efficient Education

Provision within its area, East Lothian Council's Education Service prepares population projections to assess the impact of changing demographics of the East Lothian 0-19 population and current Education Capacity. Education Population projections include eligible pre-school children projections, ASN specialist provision projections and primary and secondary school roll projections.

The projections support pupil intake management, revenue budget and workforce planning, and to assess the impact of cumulative development on Education provision and the need for future Education Estate expansion to inform capital planning.

A "Baseline" set of projections is prepared first to establish what the impact would be in each catchment area if no further new housing developments were built. A set of "Established Supply" projections is then prepared to assess the cumulative impact of new housing development proposals of 5 units or more with planning consent (including consented windfall sites), and sites from the most recent Housing Land Audit where there is reasonable certainty of development coming forward in the medium term. Both market and affordable housing tenure are included in the number of new houses to be built. No account is taken of future windfall housing sites that have not yet received planning consent at the time of the projection assessment. Residential units exclusively for elderly populations or specialist need populations that prohibit occupation by children are also excluded from the assessment. A further set is then prepared to consider the cumulative impact of sites allocated in the Local Development Plan.

Additional projection sets are also prepared to inform the Education Authority response to planning applications. When a planning application for a residential development of 5 units or more is submitted, the development proposal is assessed against existing Education Provision capacity within the catchment area and/or cluster that the development proposal lies within and up to date Education Population projections that show the impact of cumulative development proposals within that same area that are applicable at the time of the planning application.

Education Forecasting Methodology & Limitations of Forecasting

The projection sets are trends-based forecasts and take into consideration a wide range of evidence from the local catchment area and/or local authority Education establishment (as appropriate) including the number of children (births, eligible pre-school, primary and secondary school age) from new build housing developments in each catchment area and those attending East Lothian ELC provision and schools since 2003/04. Each projection set is prepared in accordance with the methodology set out in East Lothian's Council's **Education Provision Forecasting Guide**.

	The Council acknowledges that it is difficult to accurately predict pupil populations and school rolls over a long timeframe. The projections are a best estimate of what the size of each relevant pupil population will be in the future when particular assumptions are made on the baseline rolls. The assumptions applied are based on current demographics, averages and historical trends and do not allow for future changes in local or national policy that may also influence population changes. The projections are strongly influenced by the initial baseline population as well as proposed new house build. Material changes in the number and phasing of proposed new houses between different planning applications being lodged may subsequently change previously modelled projections. Similarly, changes in baseline population and occupancy levels can have an impact on whether a proposed development can be accommodated within existing school capacity and nursery and ASN provision or not. As the baseline changes each year and house completion rates change it then impacts on the assumptions that are made about future births, migration, stay-on rates etc. The process of population change is cumulative and therefore the reliability of projections decreases over time. Projections for areas with small populations are also less reliable as baseline population changes have a bigger impact more quickly than in areas with larger populations.
TEST 4 Fairly and reasonably related in scale and kind to the proposed developme nt	**1)** Based on the outcome of the Education Provision capacity demand assessments, the need for any additional land and / or capital costs for additional accommodation is identified, and where relevant apportioned proportionally (if necessary between the service and infrastructure provider and developers) and pro-rata on the following basis: • The additional accommodation is designed and costed based on the Scottish Future's Trust standard area metrics for nursery, primary and secondary school area allocations and includes contingency to reflect the stage of design development, to derive the project cost for the provision of the necessary additional capacity; • The overall project cost for the provision of the additional capacity is divided between the assessed sources of demand in proportion with the percentage of additional impact they each generate as follows: 1. increases in baseline levels of demand beyond current capacity: to be met by service or infrastructure provider; 2. further increases in capacity to accommodate demand from committed development (including proposals that have 'minded to grant' status): to be met via 'anticipated, gathered or committed' developer contributions (including that which is 'anticipated' from 'minded to grant' proposals);

3. further increases in capacity to accommodate shortfalls in capacity notwithstanding any committed capacity increases in association with point 2: to be met by service or infrastructure provider;
4. further increases in capacity to accommodate planned development without planning permission (not including proposals with 'minded to grant' status): to be met by developer funding from any planned development proposal(s) that does not have planning permission and is therefore still 'eligible' to make a contribution.

All financial payments 'anticipated, gathered or committed' will be subject to a suitable indexation, for example in accordance with the BCIS Tender Price Index from the point a service or infrastructure provider responds to a planning application until the payment is received;

Once the liabilities of service or infrastructure providers and planning obligations 'anticipated, gathered or committed' have been taken into account, the percentage of project costs remaining will be apportioned pro-rata among the proposals generating the impact in line with the percentage of impact they each generate;

Where the planning obligation to be transferred is serviced land that would relate only to that site, the service or infrastructure provider will seek the transfer of that land in association with that development. Where the obligation to be transferred is serviced land that would relate to a wider obligation than that of solely the allocated site in which it is located, then the service or infrastructure provider will normally seek the transfer of the serviced land on a phased basis as the need arises and as resources allow, or may consider alternative mechanisms that would allow all or a greater proportion of the land to be transferred to the service or infrastructure provider at once.

TEST 5 Reasonable in all other respects	Provide any other relevant information, such as any relevant legislative requirements, or other relevant Scottish Government, regional or East Lothian Council plans, policies or strategies that the obligation relates to: **1)** The East Lothian Partnership's aim for East Lothian is set out in its statement of intent: *"We will work in partnership to achieve an even more prosperous, safe and sustainable East Lothian, with a dynamic and thriving economy that enables our people and communities to flourish."* East Lothian Council's vision is to provide the best education service in Scotland via Inclusion, Achievement, Ambition, Attainment and Progress for All. We strive to achieve our vision and these principles through the actions taken by the Education Service to improve the quality of experiences we provide for children, young people, adults and families of East Lothian.

The East Lothian Council Plan 2017-2022 outlines the strategy the Council will follow and details the objectives and strategic goals it has set itself over the next five years to strive to meet its vision. The Council Plan sets out the following themes and objectives for the next five years:

- Growing our Economy
- Growing our People
- Growing our Communities
- Growing our Capacity

East Lothian Council is committed to raising educational attainment and ensuring that all children and young people have the best opportunities in life. East Lothian's Education Service aims to provide the best education in Scotland through a relentless focus on Inclusion, Achievement, Ambition, and Progress for All. We will all work together to Get it Right for Every Child and to ensure that all children and young people are Safe, Healthy, Nurtured, Active, Respected, Responsible, and Included.

The Education Estate has a key role to play in supporting the East Lothian Partnership's overarching priority to reduce inequalities both within and between our communities and the delivery of these strategic objectives.

As set out in Section 1 above, the Education (Scotland) Act 1980 places a legislative duty on the Council to plan for growth in our communities make adequate and efficient provision of school education across their area. The Council recognises these duties as an opportunity to enhance the learning opportunities for young people through its Education Estate whilst bringing positive benefits to the whole community.

Flexible learning environments allow the creative and multiple use of spaces by staff, pupils and also by the Community. They also inspire pupils and have a positive impact on the general health and wellbeing of learners, increase aspirations, attainment, achievement and positive destinations beyond school.

2) East Lothian Council's **Education Risk Register** sets out the risks related to the education estate: in terms of School Estate Management, Education Provision Population Forecasting and the impact of proposed housing development.

3) East Lothian Council's **Education Provision Forecasting Guide**

4) School Estates Core Facts - Information on the size, capacity, condition and suitability of Scotland's schools estate is collated and managed annually by the Scottish Government through the School Estates Core Facts survey. The primary and secondary school level data collected since 2008 can be viewed on the Scottish Government's website at http://www.gov.scot/Topics/Statistics/Browse/School-Education/schoolestatestats

Education Technical Assessment

1. Introduction

Statements of Conformity with Circular 3/2012 sets out the context for and the basis upon which East Lothian Council will seek contributions from developers of new dwellings towards the cost of meeting any increase in education capacity and infrastructure necessary to enable development. This Education Technical Assessment provides information about the primary and secondary school estate and explains how the Council has assessed the anticipated impact on its capacity from proposed new developments.

School capacities are expressed in terms of total Planning Capacity together with the number of class teaching spaces needed to accommodate the projected number of pupils from year to year. This provides the basis for the Council to plan for future changes in the school estate and to assess the need for future investment. The Planning Capacities are also used to assess the impact of new development to secure appropriate developer contributions. The Council has recently reviewed the capacities of the primary school estate, taking into account the Scottish Government 2014 Guidance on determining Primary School Capacity and reflecting the changes in the capacities to many recently extended schools.

2. School Capacities

Capacities for East Lothian Primary Schools are expressed as Planning Capacities and classroom numbers. The Planning Capacity is a measure of the total number of pupils and classes which could be accommodated in a school, based on the number and size of teaching spaces. It is also informed by the pupil distribution across class stages and the class organisation required for the projected pupil numbers. This is the capacity figure which is provided to the Scottish Government in the annual School Estate Core Facts Statistical return and together with the class organisation profile prepared by the Council is the realistic figure used in the assessment of the impact of development on the schools' infrastructure.

Capacities for East Lothian Secondary Schools were established in 2002 when the Council undertook the refurbishment and expansion of its six secondary schools. Capacities are expressed in increments of 50 pupils, so a school with a stated capacity of 900 pupils can accommodate up to 949 pupils before its capacity is breached.

3. Pupil Roll Projections

Pupil roll projections have been prepared to assess the cumulative impact of the LDP developments on the existing capacity of the Primary (including early learning & childcare where relevant) and Secondary schools. These LDP projections are identified separately from the pupil impact arising from current committed developments from the Established Supply and have been used to determine the amount of additional capacity needed to accommodate new uncommitted development.

The Education Provision Forecasting Guide sets out the methodology for how the Council prepares pupil roll projections and was made available to the LDP examination under the Council's response to Further Information Request 14. For completeness it has been made available for information alongside this technical note. The methodology itself is not being consulted upon.

The following tables set out key information for the Primary and Secondary Schools which has informed the requirement for additional capacity together with the timescales for delivery of this capacity. Early Learning & Childcare (ELC) projections are shown separately. This data is used by the Council to make forward plans for the school estate and ensure that sufficient budget is in place and adequate lead-in time is allowed for additional capacity to be delivered before existing capacity is breached.

The education contribution values in the 2016 draft Supplementary Guidance and the tables set out in the 2016 Technical Note 14 were informed by school roll projections based on Housing Land Audit 2015 as well as information on sites consented and development phasing agreed up to mid 2016. Primary and Secondary school roll projection tables have now been updated to take account of the agreed Housing Land Audit 2017, permitted windfall development and agreed site phasing up to 31 March 2018. They are still based on the capacities of sites set out in the LDP, unless a consent has been granted for a different number of homes. Established Supply Projections provide the number of pupils projected to arise over time from all sites with planning consents and other demographic factors. Uncommitted projections include LDP sites, at LDP capacities, that have not yet been consented. Updated ELC projections are not yet available.

Primary School Roll Projections Overview (based on May 2018 pupil roll assessment)

School Capacities are as at August 2017

Dunbar Cluster

				Established Supply Projections					Uncommitted Projections				
School	**Planning capacity**	**No. of classes for capacity**	**Classes projected for 2018**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**
Dunbar PS – John Muir (Lower)	500	18	16	2021	501	2023	509	19	2021	522	2023	527	20
Dunbar PS – Lochend (Upper)	669	21	20	2023a	669	2025	741	24	2022	690	2025	793	25
East Linton PS	175	7	8	n/a	n/a	2022	233	9	*same as Established Supply*				
Innerwick PS	75	3	3	n/a	n/a	2019	57	3	n/a	n/a	2019, 2022/ 23	58	3
Stenton PS	50	2	2	n/a	n/a	2027	35	2	*same as Established Supply*				
West Barns PS	100	4	4	2025	107	2028	113	5	2025	109	2026	117	5

Haddington
Cluster

				Established Supply Projections					Uncommitted Projections				
School	**Planning capacity**	**No. of classes for capacity**	**Classes projected for 2018**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**
Haddington IS	330	12	12/13	2021	333	2023	360	14	2021	333	2023	360	14
King's Meadow PS	504	16	13	n/a	n/a	2022	473	16	same as Established Supply				
Yester PS	175	7	7	2017	179	2017	179	7	*same as Established Supply*				
St Mary's RC PS	125	5	5	n/a	n/a	2024	124	*RC to be managed within capacity*	n/a	n/a	2024, 2031	125	*RC to be managed within capacity*
Letham Mains PS	411	14	1	n/a	n/a	2027	371	14	2027	401	2031	471	17

Musselburgh Cluster

				Established Supply Projections					Uncommitted Projections				
School	**Planning capacity**	**No. of classes for capacity**	**Classes projected for 2018**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**
Campie PS	444	16	17	2018	445a	2018	445	17	*same as Established Supply*				
Musselburgh Burgh PS	334	12	12	2022	326	2022	326	12	*same as Established Supply*				
Pinkie St Peter's PS	595	21	16	2022	613	2026	649	23	2022	640	2026	694	24
Stoneyhill PS	309	11	8	n/a	n/a	2016	221	9	*same as Established Supply*				
Wallyford PS	408	14	13	2020	448	2030	962	34	2020	448	2031	1158	41
Whitecraig PS	125	5	5	2021	120	2024	141	6	2020	123	2031	345	13
Loretto RC PS	205	8	8	2019	212	2024-2027	226	*RC to be managed within capacity*	2019	212	2025	237	*RC to be managed within capacity*
Craighall PS	595 (planned)	21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2035	623	22

North Berwick Cluster

				Established Supply Projections					Uncommitted Projections				
School	**Planning capacity**	**No. of classes for capacity**	**Classes projected for 2018**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**
Aberlady PS	150	6	6	128	2019	2030	162	7	*same as Established Supply*				
Athelstaneford PS	75	3	3	n/a	n/a	2019	60	3	*same as Established Supply*				
Dirleton PS	100	4	4	n/a	n/a	2028-2029	85	4	n/a	n/a	2028-2029	92	4
Gullane PS	238	9	9	2021	260	2024	288	12	2020	246	2024	293	12
Law PS	891	30	23	n/a	n/a	2023	841	30	*same as Established Supply*				

Prestonpans Cluster

				Established Supply Projections					Proposed LDP Projections				
School	**Planning capacity**	**No. of classes for capacity**	**Classes projected for 2018**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**
Cockenzie PS	460	16	16	n/a	n/a	2018-2019	409	16	*same as Established Supply*				
Blindwells PS	705	24	n/a	n/a	n/a	2038	697	24	*same as Established Supply*				
Longniddry PS	271	10	8	n/a	n/a	2021	208	8	2025	285	2031	344	14
Prestonpans IS	385	14	15	2020	402	2020	402	16	*same as Established Supply*				
Prestonpans PS	504	16	12	n/a	n/a	2026	494	16	*same as Established Supply*				
St Gabriel's RC PS	175	7	7	2019	185	2040	212	*RC to be managed within capacity*	*same as Established Supply*				

Tranent Cluster

				Established Supply Projections					Proposed LDP Projections				
School	**Planning capacity**	**No. of classes for capacity**	**Classes projected for 2018**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**	**Year roll breaches capacity**	**Roll at breach**	**Peak Year**	**Peak Roll**	**No. of Classes at Peak Year**
Elphinstone PS	75	3	3	n/a	n/a	2017	60	3	2021	77	2031	105	5
Humbie PS	50	2	1	n/a	n/a	2022-23, 2028, 2031	28	2	*same as Established Supply*				
Macmerry PS	175	7	6	n/a	n/a	2017	127	7	2024	176	2027	183	8
Ormiston PS	205	8	8	2021	221	2024, 2034	234	10	*same as Established Supply*				
Pencaitland PS	205	8	8	n/a	n/a	2022-23	189	8	n/a	n/a	2022	196	8
Saltoun PS	75	3	3	n/a	n/a	2018	46	3	*same as Established Supply*				
Sanderson's Wynd PS	425	15	14	n/a	n/a	2019	369	14		n/a	2019	377	15
Windygoul PS	758	26	24	n/a	n/a	2017	641	24	2025	762	2033	903	32
St Martin's RC PS	205	8	7	n/a	n/a	2017	182	*RC to be managed within capacity*	n/a	n/a	2017	182	*RC to be managed within capacity*

Secondary School Roll Projections Overview (April 2018 assessment)

		Established Supply Projections				Proposed LDP Projections			
School Cluster	**Current capacity**	**Year breaches capacity**	**Roll at breach**	**Peak Roll**	**Peak Year**	**Year breaches capacity**	**Roll at breach**	**Peak Roll**	**Peak Year**
Dunbar^	800	2016	853	1191	2028	2016	853	1270	2028
Haddington	950	2024	1021	1173	2033	2024	1021	1248	2034
Musselburgh	1350	2023	1364	1680	2033	2022	1346	*2339**	*2039**
North Berwick	950	2019	971	1208	2028	2019	971	1219	2028
Prestonpans#	1050	2023	1090	1487	2040	2022	1053	1568	2040
Tranent	1100	2018	1131	1306	2022	2018	1131	1504	2035

^Extension to 1199 capacity is currently being build out

**Note: Musselburgh secondary rolls could still continue to rise for a couple of years depending on what happens at Craighall (PROP MH) with build out rates*

#Previously assumed Blindwells (PROP BW1) would provide a new secondary. Now BW1 falls within the Preston Lodge Catchment.

Early Learning and Childcare (ELC) Population Projections Assessments for LDP (May 2016)

Assessment 18.07.2016 Current Capacity as at 2015-16 session

Note: any slight differences between Established Supply and LDP sets will be due to rounding differences. Up to date Early Years and Childcare projections were not available at the time of the publication of this Technical Note. However, they will be used on in updated demand assessments of development proposals.

Dunbar Cluster

Establishment	Type	Current Capacity (Places)	Established Supply (Places)	LDP Projections (Places)
Dunbar PS	Local Authority	128	143	178
East Linton PS	Local Authority	20	21	25
Innerwick PS	Local Authority	20	8	8
West Barns PS	Local Authority	20	11	11
Stenton		n/a	5	5
Dunbar Partner Providers		*50*	*26*	*25*
	Cluster Total	**238**	**203**	**241**

Haddington Cluster

Establishment	Type	Current Capacity (Places)	Established Supply (Places)	LDP Projections (Places)
Haddington IS	Local Authority	40	70	70
St Mary's RC PS	Local Authority	40	38	38
Yester PS	Local Authority	20	22	22
Letham Mains PS	Local Authority	*planned capacity 50*	55	74
Haddington Partner Providers		*83*	*39*	*39*
	Cluster Total	**233**	**215**	**222**

Musselburgh Cluster

Establishment	Type	Current Capacity (Places)	Established Supply (Places)	LDP Projections (Places)
Campie PS	Local Authority	60	46	47
Musselburgh Burgh PS	Local Authority	40	41	41
Pinkie St Peter's PS	Local Authority	50	63	84
Stoneyhill PS	Local Authority	30	17	17
Wallyford PS	Local Authority	40	117	148
Whitecraig PS	Local Authority	20	24	46
Loretto RC PS	Local Authority	20	20	23
Craighall PS	Local Authority			53
Musselburgh Partner Providers		*185*	*78*	*91*
	Cluster Total	**445**	**389**	**506**

North Berwick Cluster

Establishment	Type	Current Capacity (Places)	Established Supply (Places)	LDP Projections (Places)
Aberlady PS	Local Authority	20	19	24
Athelstaneford PS	Local Authority	20	10	10
Gullane PS	Local Authority	30	30	47
North Berwick NS	Local Authority	70	108	111
Dirleton		n/a	12	14
North Berwick Partner Providers		*68*	*12*	*13*
	Cluster Total	**208**	**180**	**206**

Prestonpans Cluster

Establishment	Type	Current Capacity (Places)	Established Supply (Places)	LDP Projections (Places)
Cockenzie PS	Local Authority	80	53	53
Blindwells	Local Authority	n/a	112	112
Longniddry PS	Local Authority	22	25	64
Prestonpans IS	Local Authority	60	104	103
Prestonpans Early Learning & Childcare Centre	Local Authority			
St Gabriel's RC PS	Local Authority	50	40	42
Prestonpans Partner Providers		*45*	*20*	*18*
	Cluster Total	**257**	**231**	**243**

Tranent Cluster

Establishment	Type	Current Capacity (Places)	Established Supply (Places)	LDP Projections (Places)
Elphinstone PS	Local Authority	20	5	12
Humbie PS	Local Authority	17	6	6
Macmerry PS	Local Authority	30	20	26
Ormiston PS	Local Authority	30	44	44
Pencaitland PS	Local Authority	30	33	36
Saltoun PS	Local Authority	10	6	10
Sanderson's Wynd PS	Local Authority	66	39	43
Windygoul PS	Local Authority	70	89	115
St Martin's RC PS	Local Authority	20	18	23
Tranent Partner Providers		*50*	*13*	*16*
	Cluster Total	**343**	**237**	**309**

4. School Expansions and Costs

The need for any additional capacity (including land where relevant) has been identified on a school by school basis reflecting the above updated school roll projections. The Planning Capacity sets out the number of class bases needed and in addition to this other accommodation will be required to meet the guidance, standards and policies for education. This will include provision for general purpose activities, learning support, kitchen / dining facilities, PE accommodation, tutorial and meeting rooms, administration and offices, medical rooms as well as core areas for IT, resources, toilets and changing rooms. The Early Learning & Childcare (ELC) projections inform the additional capacity required to provide for LDP development and is based on the demand assessment and ELC pupil projections as set out above. Each school has been assessed and an outline schedule of accommodation prepared to provide for the additional pupil numbers. These assessments are in line with the Scottish Government 2014 Guidance on Determining Primary School Capacity and identify any existing requirements which are currently the responsibility of the Council.

Outline design proposals and costs have been prepared for the required expansion of existing primary schools and where relevant, apportioned proportionally and pro-rata (including between the Council where necessary) on the following basis:

- Existing Primary School expansion: the project cost is based on the total gross internal floor area of the expansion proposals, together with other costs required to enable the development, factoring in a range of actual school build contracts and based on the Scottish Futures Trust metric for all –in project cost (£2,350 at Q2 2012 indexed to £3,228.70 at 2Q 2018). However, the Council has continued to use a rounded value of £3,000m2 as per the draft Supplementary Guidance. The explanation for this rate was described as reasonable in the LDP Examination Report (paragraph 29, page 674)
- The areas of any new school facilities are based on the Scottish Futures Trust pupil and area metrics for nursery, primary and secondary schools and project costs are also based on the Scottish Futures Trust metric for all – in project cost (£2,350 at Q2 2012 indexed to £3,228.70 at 2Q 2018). However, the Council has continued to use a rounded value of £3,000m2 as per the draft Supplementary Guidance. The explanation for this rate was described as reasonable in the LDP Examination Report (paragraph 29, page 674)
- The overall project cost for the provision of the additional capacity is divided between the assessed sources of demand in proportion with the percentage of additional impact they each generate as follows:

    1. increases in baseline levels of demand beyond current capacity: will be met by the Council service or infrastructure provider;

2. further increases in capacity to accommodate demand from committed development (including proposals that have 'minded to grant' status): to be met via 'anticipated, gathered or committed' developer contributions (including that which is 'anticipated' from 'minded to grant' proposals);
3. further increases in capacity to accommodate shortfalls in capacity or accommodation notwithstanding any committed capacity increases in association with point 2: to be met by the Council service or infrastructure provider;
4. further increases in capacity to accommodate planned development without planning permission (not including proposals with 'minded to grant' status): to be met by developer funding from any planned development proposal(s) that does not have planning permission and is therefore still 'eligible' to make a contribution.

All financial payments 'anticipated, gathered or committed' will be subject to indexation using the BCIS All – in Tender Price Index from the date of adoption of the Supplementary Guidance until the payment is received. If the scale of the infrastructure required changes, then costs will need to be recalculated and financial payment will be indexed from the date of the demand assessment for the planning application.

The Council has identified its own responsibilities with associated costs for providing for existing deficiencies. The Council also takes account of developer contributions already received, but not yet expended, towards any required expansion. Once the liabilities of service or infrastructure providers and planning obligations 'anticipated, gathered or committed' have been taken into account, the percentage of project costs remaining will be apportioned pro-rata among the LDP proposals generating the impact in line with the percentage of impact they each generate.

Summary of accommodation requirements and costs is detailed in the following table using this formula

Contribution Per Home = (A-B-C)/D
A – Total Project Cost
B – Committed Developer Contributions (From pre 2016 LDP sites, including indexed sums received)
C – Council Liability Funding
D – Number of contributing homes (LDP site capacities are used except where a different number of homes have been permitted)

SCHOOL	Accommodation required	Existing School capacity	LDP School roll projection	LDP number of classes	area / pupil sqm	total additional area	cost /sqm	total project cost	committed developer contributions	Council funding liability	net project cost to LDP development	number of homes contributing	cost per home £
Dunbar Cluster													
Dunbar GS	LDP accommodation requirement for increase in capacity from Established (1199) to LDP (1299) new build and alterations to provide 4 classrooms, 1 science, 1 art and ancillary accommodation. 850 sqm additional new build and internal alterations are required	800	1,270	n/a	n/a	850	£3,000	£2,650,000 (includes £100k for internal; alterations)	£811,800	**n/a**	£1,838,200	534	£3,442
Dunbar - Lochend (P4-P7)	3 classrooms, 1 GP, breakout, stairs, toilets and cloaks, PE hall expansion	669	793	25	n/a	948	£3,000	£2,844,000	£966,1614	n/a	£1,8877839	415	£4,525
Dunbar - John Muir (P1 -P3)	2 classrooms and 1 GP space (1 new classroom and GP space: 1 additional classroom by internal alterations)	500	527	20	n/a	450	£3,000	£1,470,000 (Includes £120k for internal alterations)	£316,409	£180,000	£973,591	415	£2,346
Dunbar Nursery	additional 50 Early Learning and Childcare (ELC) (Council and committed development) liable for 30 places	128	178		n/a								
West Barns	additional classroom and ancillary space required	100	109	5				£331,778	£308,000		£23,778	6	£3,963
Haddington Cluster													
Knox Academy	Overall accommodation requirement to increase from existing to LDP capacity - 14 classrooms, 1 science, 1 technology, 2 art, PE changing and ancillary requirement for increase in capacity from Established (1199) to LDP (1300) new build and alterations to provide 6 classrooms, 1 science, 1 art and ancillary accommodation.	999	1,248	n/a	n/a	2180	£3,000	£6,590,000 (includes £50K for internal alterations)	£3,274,957	£1,743,852	£1,571,191	275	£5,713
Letham	Costs are for extension to proposed Letham PS for additional proposed LDP impact only. Requirement is for 3 additional classrooms, 1 GP and dining extension and a 7s MUGA	411	471	17		720	£3,000	£2,310,000 (includes £150,000 for MUGA)	n/a	**n/a**	£2,310,000	275	£8,400
	ELC extension for 20 places	50	74										

SCHOOL	Accommodation required	Existing School capacity	LDP School roll projection	LDP number of classes	area / pupil sqm	total additional area	cost /sqm	total project cost	committed developer contributions	Council funding liability	net project cost to LDP development	number of homes contributing	cost per home £
Musselburgh Cluster													
Musselburgh - New Secondary School	Projections for new secondary school	0	1148	n/a	11	12,628	£3,000	£37,884,000					
Based on provision of a new second secondary school for Musselburgh	Total projected number of pupils in Musselburgh area based on Established roll												
	Total number of pupils in Musselburgh area based on 2016 LDP roll projections		2386										
	Council responsible for Established pupil numbers in new school		66.51%						£5,724,324	£19,472,325			
	Developers responsible for additional LDP pupils		33.49%								£12,687,352	2,913	£4,355
Pinkie St Peter's	3 classrooms, new PE hall: internal alterations to form new GP/dance space: Council liable for 1/3 part contribution towards new hall reflecting current shortfall.	595	694	24				£1,995,000		£400,000	£1,595,000		
	90 ELC places to be provided (Council is currently responsible for 70 places and LDP for 20 places:	50	84					£1,335,000		£945,000	£390,000		
	Total costs for Pinkie							£3,330,000		£1,345,000	£1,985,000	263	£7,548
Whitecraig	Major expansion to 13 classrooms, new PE hall, GP space, additional dining and core accommodation and 30 additional pre-school places: Council is liable for cost of extending for 2 classrooms	125	345	13		1760	£3,000	£5,280,000	£239,612	£300,000	£4,740,388	550	£8,619
	Additional ELC	20	46										
Wallyford	New school proposals being developed. Additional capacity for LDP is calculated using metric of 6 sqm / pupil	n/a	1,158	41	6	1,452							
	Additional ELC	120	30		6	180							
	Total Wallyford					1632	£3,000	£4,896,000				600	£8,160

SCHOOL	Accommodation required	Existing School capacity	LDP School roll projection	LDP number of classes	area / pupil sqm	total additional area	cost /sqm	total project cost	committed developer contributions	Council funding liability	net project cost to LDP development	number of homes contributing	cost per home £
Craighall	New school - area based on SFT metric for pupils	n/a	623	22	6.5	4049.50	£3,000	£12,148,500					
	ELC Facility	n/a	100		6.5	650	£3,000	£1,950,000					
	Total Craighall	n/a				4699.50		£14,098,500				1500	£9,399
North Berwick Cluster													
North Berwick HS	Overall accommodation requirement - 11 classrooms, 1 science, 1 technology, 1 music, 1 art, additional dining, PE hall, changing and other core requirements to increase from existing capacity (950) to LDP capacity (1200). Additional PE hall will offset need for additional community requirements for LDP developments. Proposals include both new build and internal alteration / extension of existing school.	950	1,219	na	n/a	2390	£3,000	£7,170,000					
	Internal alterations and external works							£110,000					
	Total cost (excluding land)							£7,280,000	£4,923,456	n/a	£2,356,544	350	£6,733
	0.858 ha additional land required for the school												
Gullane	3 classrooms, 1 GP and PE hall	238	292	12		715	£3,000	£2,145,000					
	20 additional ELC capacity	30	47			120	£3,000	£360,000					
								£2,505,000	£889,548	£1,615,452		213	£7,584

SCHOOL	Accommodation required	Existing School capacity	LDP School roll projection	LDP number of classes	area / pupil sqm	total additional area	cost /sqm	total project cost	committed developer contributions	Council funding liability	net project cost to LDP development	number of homes contributing	cost per home £
Tranent Cluster													
Ross	Overall accommodation requirement - 15 classrooms, 2 science, 1 technology, 1HE, 2 music, 1 art, additional dining/social, changing and other core requirements to increase from existing capacity (1100) to LDP capacity (1550). Proposals include both new build and internal alteration / extension of existing school and new MUGA (not- floodlit)	1,100	1,504	n/a		2800	3000	£8,400,000					
	MUGA and external works							£432,000					
	Total – Council liable for increased required from pre LDP sites (36.93%)							£8,832,995	£1,917,995	£1,609,232	£5,304,773	1071	£4,953
Elphinstone	1 additional classroom -and ancillary	75	105	5	6.5	130		£470,000 (jncludes £80k for internal alterations)	n/a	n/a	£470,000	80	£5,875
Macmerry	1 classroom, 1 GP space, additional dining and ancillary	175	183	8		270	3000	£810,000				170	£4,765
Windygoul	6 additional classrooms required to meet LDP roll. Council to fund costs for 1 for increase in Established roll. Additional GP and core accommodation required and new PE hall and changing rooms. Council to fund 50% cost of new hall to reflect current deficit. Alterations and replacement MUGA required.	758	903	32	n/a	1517	£3,000	£4,771,000 (includes £100k for alterations and £120k for MUGA)	£90,802	£939,016			
	50 new ELC places needed: Council to fund 20.	70	115					£900,000		£360,000			
	Total cost apportioned							£6,232,000		£1,350,000	£4,882,000	670	£7,287.00
	Additional 1.124ha land required for school campus: Council liable for 0.5ha and Developer for 0.624ha												

SCHOOL	Accommodation required	Existing School capacity	LDP School roll projection	LDP number of classes	area / pupil sqm	total additional area	cost /sqm	total project cost	committed developer contributions	Council funding liability	net project cost to LDP development	number of homes contributing	cost per home £
Prestonpans Cluster													
Preston Lodge	Calculation is based on incorporating Blindwells 1600 dwellings into PL HS. 15 classrooms, 3 science, 1 HE 1 music, 1 Technology, additional social/dining external works etc.	1,050	1568	n/a	n/a			£8,410,000	£150,595	n/a	£8,259,405	2050	£4,029
Longniddry	Expansion proposed with internal alterations to achieve increase of 2 classrooms and additional EY&C capacity for 30 children. New PE hall to provide indoor PE space in lieu of additional land	271	344	14	n/a	890	£3,000	£2,670,000					
	internal alterations - to form ELC, dining and toilets	30	64					£475,000					
	Total							£3,145,000				450	£6,989

5. Campus Land Contributions

Developer contributions will be required to fund land purchases for the New Secondary School in Musselburgh as well as extensions to Whitecraig Primary and Windygoul Primary. How the values for these contributions will be calculated is set out below.

Musselburgh Secondary Campus Land Contribution

The Approved Council Budget contains a land purchase cost for the New Musselburgh Secondary School of £3,703,000. As per the calculation for the Musselburgh Secondary Capital Contribution, the Council will be liable for 66.51% of cost of this, the remaining 33.49% is the responsibility of developers, as it is that proportion of the total Musselburgh Secondary School Roll that arises from LDP development. In order to calculate a per dwelling estimate, the cost attributed to LDP Development is divided by the number of contributing homes as follows:

Per Home Rate = £1,240,135 / 2913 homes = £426 per home

Whitecraig Primary and Windygoul Campus Land Contributions

The purchase costs for both areas of campus land required has yet to be determined. However, they will be based on District Valuer valuations. Costs will be apportioned to contributing developments based on the number of homes in each proposal as a proportion of the total capacity of LDP developments in the catchment. Where the landowner of the campus land is also the developer/owner of one of the contributing housing sites, the Council expects that the proportion of the campus land required for that site will be transferred to the Council at a zero value. For Windygoul, as part of the need for the additional campus land is because of existing conditions, the Council will contribute that proportion of the campus land cost.

Where the serviced land required to be transferred to the Council is only required because of a single site's impacts, the service or infrastructure provider will seek the transfer of that land in association with that development. Where the serviced land would relate to a wider need than that of solely the allocated site in which it is located, then the service or infrastructure provider will normally seek the transfer of the serviced land on a phased basis as the need arises and as resources allow, or may consider alternative mechanisms that would allow all or a greater proportion of the land to be transferred to the service or infrastructure provider at once.

TRANSPORTATION

Statement of Conformity with Circular 3/2012

PROVISON OF TRANSPORT NETWORK CAPACITY

The following table and Appendix 1 explains why Road Services Network Improvements and Mitigation can be justified against the 5 tests of Circular 3/2012: Planning Obligations and Good Neighbour Agreements and thus why it should feature in East Lothian's Planning Obligations Framework.

TEST1 Necessary to make the development acceptable in planning terms	On the basis that planning obligations should only be sought where it is necessary to allow development to proceed, explain why there is a need for the obligation / financial contribution. Local Authority operations with regard to Road Services are underpinned by various pieces of legislation, international directive and national policy and guidance. These include, but are not limited to: **1) National Policy, Strategy & Guidance Context** **2) Scottish Planning Policy (SPP) -** Scottish Planning Policy (SPP). SPP has two principal policies, one on 'sustainability' and one on 'placemaking'. Due weight is to be given to net economic benefit in planning decisions, and Scottish Government advice on this is awaited. SPP expects plans to be tailored to their area, contribute towards the delivery of economic strategies and Single Outcome Agreements and complement work of the Community Planning Partnership. Placemaking means linking the planning strategy with design tools and other processes and decisions to achieve positive, design-led outcomes on the ground that help create better places. SPP also contains subject policies on matters such as natural and cultural heritage, rural development and coastal planning, and on town centres, business and employment and housing as well as energy, resources and infrastructure. http://www.gov.scot/Publications/2010/02/03132605/0 **3) Planning Advice note (PAN) 75 – Planning for Transport**

4) **Transport Assessment Guidance –** The guidance sets out requirements according to the scale of development being proposed; from a local development which requires a simple Transport Statement providing an explanation of transport issues through to a major development where detailed technical analyses will be required in a Transport Assessment accompanied by a supporting travel plan. When the proposed development is not in accordance with the Development Plan then the proposal should be appraised in accordance with the Development Planning and Management Transport Appraisal Guidance.
http://www.transport.gov.scot/sites/default/files/private/documents/tsc-basic-pages/Planning_Reform_-_DPMTAG_-_Development_Management__DPMTAG_Ref__17__-_Transport_Assessment_Guidance_FINAL_-_June_2012.pdf
http://www.transport.gov.scot/stag
http://www.transport.gov.scot/development-planning-and-management-transport-appraisal-guidance-dpmtag

5) **National Planning Framework -** NPF3 sets out the long term development strategy for Scotland and identifies National Developments that should be included in development plans. South east Scotland, including East Lothian, is to continue as the driver of the Scottish economy. NPF3 notes a need to deliver land for new homes and to invest in associated infrastructure, including where cross local authority boundary impacts are expected such as on the trunk road network, including the A720 city by-pass. Opportunities for regeneration are to be maximised. The importance of towns in the city region is also recognised. NPF3 acknowledges that infrastructure capacity in general is a significant issue: in some cases new facilities will be needed, but best use should first be made of existing capacity and facilities where appropriate; innovation and joint working will be needed to secure funding and delivery mechanisms for more capacity. Into the longer term the spatial strategy for the city region will need to acknowledge regional infrastructure constraints.

6) **SESplan Strategic Development Plan -** The SDP sets out the broad strategic planning vision, strategy and policies as well as development requirements for the city region, including East Lothian. It was approved

with modifications by Scottish Ministers on the 27th June 2013. This approval was subject to the preparation of Supplementary Guidance on Housing Land, which was adopted as part of the SDP on 28th October 2014. The SDP and its Supplementary Guidance set out specific land requirements to be planned for by LDPs for the periods up to 2019 and 2024. The SDP is also accompanied by an Action Programme which identifies actions associated with the delivery of the SDP. Some of these actions are specific to East Lothian while others have cross local authority boundary implications including for East Lothian**.**

The SDP sets out a spatial strategy which broadly continues that of previous plans. The SDP is clear that land allocations made by previous plans are to be carried forward and must be complemented and not undermined by land allocations made by LDPs. The SDP identifies Strategic Development Areas (SDAs) to prioritise as locations to accommodate the SDPs housing and employment land requirements. The East Coast SDA follows the key transport corridor of the A1 and East Coast railway line from Musselburgh to Dunbar. http://www.sesplan.gov.uk/main-issues-report/strategic-development-plan-

7) **Sestran's Regional Transport Strategy (2015-2025) -** SEStran's Regional Transport Strategy (2015 – 2025) was approved by Scottish Ministers in July 2015. East Lothian's Local Transport Strategy 2017 is being developed in parallel with the LDP. There are a range of other plans, policies and strategies to which this LDP has regard. These include the Council's Draft Open Space and Sports Pitch Strategy, its Biodiversity Action Plan and its Core Path Plan. Adjoining planning authorities have been consulted in the preparation of the LDP and account has been taken of their emerging LDPs. Cross boundary opportunities and constraints have also been explored. http://www.sestran.gov.uk/about/35/regional-transport-strategy/

8) **Designing Streets, A policy Statement for Scotland –** Sets out government aspirations for design and the role of the planning system in delivering these. Along with Designing Places they are the Scottish Governments two key policy statements on design and place-making. Both documents are national planning policy and are supported by a range of design based planning advice notes (PAN'S) http://www.gov.scot/Publications/2010/03/22120652/0

	9) **Climate Change (Scotland) Act (2009) -** This sets the framework for combating climate change in Scotland. The approach includes reductions in carbon emissions and promotes adaptation to a low-carbon economy. Use of sustainable modes of transport is part of the process towards reducing carbon emissions. http://www.legislation.gov.uk/asp/2009/12/contents 10) **Local Policy, Strategy & Guidance Context:** 11) **East Lothian Council Transport Strategy 2017:** The Local Transport Strategy has been prepared by East Lothian Council to cover the period from 2015 to 2020. The strategy sits within a complex planning hierarchy and focuses on local issues that the council has the power to make significant changes to during its lifetime. The strategy is supplemented by supporting delivery plans focusing of Parking Management, Active travel, Asset management and Road safety. However, the strategy also looks at the more strategic, long term issues which will require partnership working with other industry bodies. 12) **ELC Design Standards for New Housing Areas –** Supplementary planning guidance to draw together in a single document East Lothian Councils key planning and Transportation requirements for the design of new housing areas. http://www.eastlothian.gov.uk/downloads/download/374/design_standards_for_new_housing_areas
TEST 2	Explain the planning purpose behind the need for the planning obligations:
Serve a Planning Purpose	Effective and efficient transport and digital communications networks are fundamental to today's lifestyles and to supporting sustainable economic growth. The transport network is needed to attract economic development and encourage job creation, to conveniently access work, education, services, leisure and recreation opportunities, and to allow for the delivery of goods and services. Digital communications can help reduce the need to travel and provide new ways to work, learn and to access information, goods and services. Investment in these networks, including with new development, will be required to maintain and enhance their performance and the area's

competitiveness. This will help to ensure the need to travel is minimised, encourage the use of sustainable transport modes, and contribute towards the transition to a low carbon economy.

The LDP takes the Council's Local Transport Strategy 2015 – 2025 into account. The LDP seeks to integrate new development with East Lothian's existing transport networks and services and the LTS's vision for how these will change and be improved in future. The LTS promotes an enhanced active travel network that is integrated as part of East Lothian's Green Network and public transport options: this could provide a realistic alternative to the private car for some journeys, including longer ones, and may in time form part of the national walking and cycling network. The LTS vision includes improvements to the road and rail networks, including the enlargement of station car parks and platforms (for larger trains), the potential provision of new rail halts, and improvements to the trunk and local road network, including to junctions and interchanges. Real time travel information systems and integrated timetabling and ticketing are also promoted. The LTS will discuss where in the area there may be opportunities to support additional freight or passenger transport, including the potential for a new port related to energy development.

East Lothian is a relatively well connected place, but its transport and digital networks could be improved to reflect that it is a part of Edinburgh's housing and labour market areas. The majority of new development is planned in parts of East Lothian that are, or will become, connected via high speed digital networks or that are, or can become, accessible, including by public transport. Nodes where interchange between different modes of travel can occur are to be enhanced and will provide a focus for new development. Promoting local services and new development alongside sustainable transport options will help maximise accessibility and social inclusion. In areas of significant change, or in the design of sites, the Council will ensure that digital networks can be provided and that the order of travel priority can be walking, cycling, public transport then private cars where possible

A Transport Appraisal has informed the LDP with a micro-simulation traffic model developed for the western side of the county and a multi-modal model for the whole County. These identify a package of measures required to maintain the performance of the transport networks. The traffic models predicts changes in travel movements and

	has informed decisions on development associated infrastructure improvements with East Lothian. This is particularly relevant for the growth planned for by the LDP. Where it would be inappropriate for developers to provide, or fund the provision of, transport infrastructure in its entirety, financial contributions to an infrastructure fund maintained by the Council will be required. In accord with Policy DEL1, the type and scales of development that will normally be expected to contribute to this fund
TEST 3 Related to the proposed development either as a direct consequence of the development or the cumulative impact of development in an area	Explain how the direct impacts of the development, or the cumulative impact of development in the area, have been attributed to the proposed development, on an individual or cumulative basis as appropriate – e.g. explain the nature of the demand assessment / standards / policies that have been applied to determine the amount of additional capacity needed to accommodate new uncommitted development. This is set out in the Transport Appriaisal published alongside the Proposed Plan and the updated DPMTAG report. The interventions for which contributions are sought, are required wholly or partially because of conditions arising from LDP scales of development and therefore it is appropriate to recover all or a proportion of their costs from planned LDP development. This was confirmed in the Reporter's conclusion to Issues 18A to E of the LDP Examination Report. The accompanying Developer Contribution Framework: Outline Methodology Technical Note sets out the proportion of need for the intervention that relates to LDP development.
TEST 4 Fairly and reasonably related in scale and kind to the proposed development	Explain how, based on the outcome of the demand assessment, the need for additional land and / or capital costs for the mitigation has been derived, and apportioned proportionally (if necessary between the service and infrastructure provider and sites) and pro-rata among sites as appropriate: This is defined in the Transport Technical Assessment below as well as the associate Transport Appraisal prepared in support of the Proposed Local Development Plan, the Updated DPMTAG Report and the Developer Contribution Framework: Outline Methodology Technical Note. In summary the value of each contribution is based on the number of additional trips arising from each site as a proportion of the total number of additional journeys as a result of all LDP and uncommitted sites.

	Active Travel contributions are based on a spatial catchment of 1.2km either site of the Proposed Route. Full details of this are set out in the Developer Contribution Framework: Outline Methodology Technical Note
TEST 5 Reasonable in all other respects	Provide any other relevant information, such as any relevant legislative requirements, or other relevant Scottish Government, regional or East Lothian Council plans, policies or strategies that the obligation relates to: Workshops were held with colleagues involved in countryside management, open space and parks management, sports development and healthy living. Planning obligations were identified by each team and per cluster area. Opportunities were sought to combine obligations within the same parcel of land to reduce the financial burden. Further refinements were made by each specialist team. Most of the Road Services planning obligations are large infrastructure projects and shall therefore be required to be designed to the Design Manual for Roads and Bridges standards along with the East Lothian Council Standards for Development Roads. A number of additional strategies and supplementary planning guidance reports are in preparation for the Local Development Plan. Provision of the Road Services Planning Obligations will help deliver the aims of these reports, including: i) East Lothian Council - Local Transport Strategy. a. Roads Asset Management Plan b. Parking Management Strategy c. Active Travel Improvement Plan. d. Road Safety Plan iii) East Lothian Council Green Network Strategy. This sets out ideas, concepts and actions for enhancing biodiversity and access to the countryside across East Lothian, in line with the aspirations of the Central Scotland Green Network.

Transportation – Technical Assessment

The Statement of Conformity, 2016 Transport Appraisal, DPMTAG Final Report and Developer Contribution Framework: Outline Methodology Technical Note all provide justification for Road Services Planning Obligations: Trunk Road Interchanges, Local Public Road Network, public transport, local path networks and the segregated active travel corridor.

The following table sets out the costs and the proportion of the interventions that should be recovered through developer contributions. Please note these have changed since the 2016 consultation. This is because further scheme development and preliminary designs have been prepared by transport consultants. Details are set out in the DPMTAG Final Report and the Developer Contribution Framework: Outline Methodology Technical Note, both of which are being made available alongside this Technical Note. Although both the DPMTAG Final Report and Outline Methodology Technical Note set out that the need for works at Dolphingstone A1(T) Interchange, the A198 Link and Meadowmill arise from the cumulative effect of LDP developments, the Council will not seek developer contributions towards these works as there are no developer contribution zones for these interventions in the LDP.

Transport Intervention	Indicative cost	Developer Proportion
PROP T15: Old Craighall A1(T) Junction Improvements	£995,000	£194,520
PROP T17: A1(T) Interchange Improvements (Salter's Road Interchange)	£272,000	£272,000
PROP T17: A1(T) Interchange Improvements (Bankton Interchange)[1]	£848,767	£848,767
PROP T9 + PROP T10: Rail Package	£5,007,000	£4,369,000
PROP T21: Musselburgh Town Centre improvements	£283,000	£243,019
PROP T27 & T28: Tranent Town Centre improvements	£449,000	£449,000
PROP T3: Active Travel Corridor	£23,400,000	£3,856,501

[1] The A198 Link costs, including dualling and Blindwells access roundabout, are not included in the Bankton Interchange costs. The Bankton costs solely related to signal control of northern roundabout with local widening and redesign of southern roundabout with local widening.

Securing Transportation Developer Contributions

Since 2016 publication of DCF, the Council has had further meetings with Network Rail and Transport Scotland regarding gathering contributions towards Old Craighall and the Rail Package. For the Rail Package, developer contributions will be gathered through Section 75 agreements and transferred to Network Rail when a project to deliver to platform improvements is confirmed. With Old Craighall, contributions will also be gathered through Section 75 Agreements and will then be transferred to the party who undertakes the works, when that is confirmed.

Please note that values of the transportation contributions for some of the sites as set out in tables 2 to 5 the DCF have changed since 2016. This is because of further modelling work undertaken using the micro-simulation, the changes to the costs of the interventions and a change in the proportion of the costs to be received through developer contributions. Where development proposals have already been granted minded to grant status and the values of the transportation contributions have been agreed between the Council and the developer/applicant, the Council will not look to recover any increase from the level of contributions agreed.

A representation was received on the Proposed Plan that the small size of some of the transport contributions sought indicated that there was an insufficient strength of relationship to warrant a developer contribution under the necessity test. The LDP Examination Reporter in dealing with this unresolved representation set out the following (page 1060) “regarding the scale of contribution varying within zones, such an effect is to be expected if the strength of scale and kind relationship between individual sites and interventions is to be reflected. This does not mean that where this results in small amounts it is necessarily trivial. Therefore, I consider that the reference to contribution zones should remain within Policy DEL1. The threshold for the application of Policy DEL1 which excludes proposals of less than five dwellings and commercial development of less than 100 square metres also suggests a proportionate response in dealing with this matter.” As set out in the updated DCF page 13, the Council will confirm in all cases whether a contribution is required with each being assessed on a case by case basis.

SPORTS FACILITIES

Post LDP Examination Report Update

The following changes have been made to the likely contributions rates towards sports facilities. They are as a result of the removal of the Howe Mire LDP allocation and the inclusion of the Newtonlees South (PROP DR12) housing allocation in Dunbar.

- Land at Dolphingstone (PROP MH10) likely contribution increased from to £761 per home. This is because the same level of provision is required as previous but without the Howe Mire proposal. Therefore the per dwelling rate has increased.
- All Dunbar Cluster Proposals Sports Facilities contribution levels have decreased from £1,276 per home to £980 per home. This is because the same level of provision is required as previous but now with Newtonlees South (PROP DR12) also contributing. Therefore the per dwelling rate has decreased.

The Technical Assessment following the Statement of Conformity sets out the exact figures and calculations for each of the Sports Facilities contribution levels.

Statement of Conformity with Circular 3/2012

PROVISON OF ADDI0TONAL CAPACITY IN SPORTS FACILITIES
The following table explains why the need for additional capacity in outdoor sports facilities can be justified against the 5 tests of Circular 3/2012: Planning Obligations and Good Neighbour Agreements and thus why it should feature in East Lothian's Planning Obligations Framework.

TEST1 Necessary to make the development acceptable in planning terms	On the basis that a planning obligations should only be sought where it is necessary to allow development to proceed, this section sets out why there is a need for the obligation / financial contribution. Need arises in order to mitigate the impact of the increased population on current active infrastructure, more specifically, outdoor sports facilities.

	The Local Government (Scotland) Act 1994 requires the Council to provide adequate community services. Anticipated demographic changes due to new housing development in the area will generate demand for community services and for provision of more capacity, specifically in relation to outdoor sports and the provision of new facilities to ensure that high quality service delivery can be maintained. <u>Supporting national Outcomes Framework:</u> Active Scotland's Outcome Framework outlines Scotland's ambitions for sport and physical activity and the identified need for additional sports facilities allows us to meet the specific outcome – 'We improve our active infrastructure - people and places' http://www.gov.scot/Topics/ArtsCultureSport/Sport/Outcomes-Framework 'Reaching higher' – Scotland's sports strategy to 2020: http://www.gov.scot/Resource/Doc/169113/0047106.pdf Scottish Planning Policy 2014: http://www.gov.scot/Publications/2014/06/5823/7
TEST 2 Serve a Planning Purpose	This section explains the planning purpose behind the need for the planning obligations. To ensure that new residents can access appropriate sports facilities and to ensure that the local authority can maintain standards of service provision for all residents. The Council recognises the importance of conducting an active and healthy lifestyle and is committed to providing healthy choices for residents and visitors. To ensure that residents have access to appropriate sports facilities to enable them to meet the minimum recommended national daily physical activity levels (Adults min 150 minutes per week & Children min 60 minutes every day) https://www.gov.uk/government/publications/uk-physical-activity-guidelines
TEST 3 Related to the proposed development either as a direct	This section sets out how the direct impacts of the development, or the cumulative impact of development in the area, have been attributed to the proposed development, on an individual or cumulative basis as appropriate.

consequence of the development or the cumulative impact of development in an area	To assist the delivery of the LDP, taking into account financial impact and development viability, we have looked to co-locate these facilities with education campuses where possible. This approach is further applied in relation to indoor sports hall facilities where there are no additional needs highlighted beyond those identified by the Education Authority as these will service both education and community requirements. As part of the spatial strategy, consideration has been given to where best use can be made of existing facilities and where and how new facilities can be provided to support a sustainable pattern of development and local service provision in the area. The approach is informed by the Council's open space audit and strategy, which includes an assessment of playing field provision. The need for additional open space and playing fields in association with LDP strategy and sites has been based on this work. These documents assess how well the needs of East Lothian's communities are being met against the Council's standards and help to identify the new provision needed to meet increased demands while maintaining associated quantitative, qualitative and accessibility standards. The open space quantity standard is 60m2 per dwelling. Provision of formal and informal open space is expected. Open spaces should be multifunctional and can include district, town and local parks, sports pitches and civic space. The Council has set maximum catchments for facilities, including 1.2km for sports pitches. Guidance for Open space and play provision show that 160 – 499 dwellings require the provision of sports facilities and 500 upwards will require the provision of formal sports facilities E.g. 1 full size pitch and associated changing facilities.
TEST 4 Fairly and reasonably related in scale and kind to the proposed development	This section sets out how, based on the outcome of the demand assessment, the need for additional land and / or capital costs for the mitigation has been derived, and apportioned proportionally (if necessary between the service and infrastructure provider and sites) and pro-rata among sites as appropriate. Based on the open space strategy guidance that 160 – 499 dwellings require the provision of sports facilities and 500 upwards will require the provision of formal sports facilities, the need for any additional land/or capital costs of grass sports pitches and associated changing facilities has been identified, and where relevant apportioned proportionally and pro-rata on the following basis:

	The grass sports pitch design meets the standards set out by Sportscsotland and the relevant governing bodies of sport to accommodate football and rugby participation, and has been costed based on Sportscotland's 'Changing places' data sheet 2012 and recent costs for the design and build of sports pitches in East Lothian with a contingency of 15% to derive the project costs for the provision of the necessary additional capacity. The overall project cost for the provision of the additional capacity is divided between the assessed sources of demand in proportion with the percentage of additional impact they each generate as follows: 1. Increases the baseline levels of demand beyond current capacity: to be met by service or infrastructure provider; 2. Further increases in capacity to accommodate demand from committed development (including proposals that have 'minded to grant' status): to be met via 'anticipated, gathered or committed' developer contributions (including that which is 'anticipated' from 'minded to grant' proposals); 3. Further increases in capacity to accommodate shortfalls in capacity notwithstanding any committed capacity increases in association with point 2: to be met by service or infrastructure provider; 4. Further increases in capacity to accommodate planned development without planning permission (not including proposals with 'minded to grant' status):to be met by the developer funding from any planned development proposal(s) that does not have planning permission and is therefore still 'eligible' to make a contribution. Once the liabilities of service or infrastructure providers and planning obligations 'anticipated, gathered or committed' have been taken into account, the percentage of project costs remaining will be apportioned pro-rata among the proposals generating the impact in line with the percentage of impact they each generate. The land needed to deliver sport pitches and associated facilities will form part of the open space requirement for a site. Where the pitch is to serve a wider area than the site on which it is to be located, then the capital cost for the creation of the pitch shall be shared between the developments that generate a need for the facilities.
TEST 5	This section set out other relevant information, such as any relevant legislative requirements, or other relevant Scottish Government, regional or East Lothian Council plans, policies or strategies that the obligation relates to.

Reasonable in all other respects	Linked directly to the **Council's SOA 2013 - 2023** – Outcome 6 and the contributory outcome ' People are more physically active' it is essential that we have the appropriate active infrastructure to allow East Lothian Residents the opportunity to be physically active through participation in sport http://www.eastlothian.gov.uk/downloads/file/9787/the_east_lothian_plan_single_outcome_agreement_2013 **The physical activity framework and action plan for East Lothian** identifies the importance active infrastructure plays in allowing residents to meet the daily recommended physical activity levels and to increase opportunities to become and stay regularly physically active. This has been approved by the RPP subject to consultation and impact assessment which will be complete in June 2016. **Sportscotland 'Guide to preparation of sports pitch strategies':** http://www.sportscotland.org.uk/Documents/Resources/guidetopreparationofsportspitchstrategies.pdf This outcome is also a key objective in **East Lothian's Sport, countryside & Leisure business plan 2014 - 17:** SCL Business Plan 2104 - 17 **East Lothian Open Space Strategy 2012:** Open Space Strategy **Sportscotland – School playing fields, planning and design guidance:** http://www.sportscotland.org.uk/Documents/Resources/SSC0100192AmendedPlayingFields_PlayingFields_WEB.pdf

Sports Facilities – Technical Assessment

The following tables set out the level of additional Sports Facilities Provision required in each contribution zone and how the likely per home contribution rate has been calculated.

Musselburgh Cluster

Provision Required	Comments	New Total Project Cost	Deficit in New Project Cost	No. Of Eligible LDP Dwellings	Pro-rata Cost per Eligible Dwelling	Contributing Sites
Craighall						
Craighall - 3 x full size grass sports pitch provision - 3 ha required: costs given are for construction of pitches only - no land costs identified	grass required - not all-weather	£555,000	£555,000	1550	£358.06	Craighall (MH1), Newton Farm (MH2)
6 team changing facility		£1,088,000	£1,088,000	1550	£701.94	Craighall (MH1), Newton Farm (MH2)

Wallyford						
For existing Wallyford 1450 allocation and proposed LDP allocation (600) a total of 2 grass and 1 all-weather pitches are required. This is a net increase of 1 grass pitch.	All Outdoor Sports provision should be co-located. The 1 x 3G pitch and 1 x grass pitch identified for the Established developments to be co-located with additional 1 x grass = 2 grass and 1 x 3G in total	£185,000	£185,000	600	£308.33	Dolphinstone (MH10
For existing 1450 and proposed LDP 600 dwellings, a 6 team changing facility is required (4 team changing already agreed)		£401,000	£401,000	600	£668.33	Dolphinstone (MH10)

Whitecraig						
1 x full size grass sports pitch		£185,000	£185,000	500	£370.00	Whitecraig South (MH14, Whitecraig North (MH15)
2 team changing pavilion linked to new full sized sports pitch		£450,000	£450,000	500	£900.00	Whitecraig South (MH14, Whitecraig North (MH15)

Prestonpans Cluster

Provision Required	Comments	New Total Project Cost	Deficit in New Project Cost	No. Of Eligible LDP Dwellings	Pro-rata Cost per Eligible Dwelling	Contributing Sites
Longniddry						
1 x full size grass sports pitch	Provide all formal sports infrastructure within new development/Urban Park	£ 185,000.00	£ 185,000.00	450	£411.11	Longniddry South (PS1)
	2 team changing pavilion no longer required. Instead will utilise existing changing pavilion in recreation park as long as safe access routes are in place		£ -	450	£	

Tranent Cluster

Provision Required	Comments	New Total Project Cost	Deficit in New Project Cost	No. Of Eligible LDP Dwellings	Pro-rata Cost per Eligible Dwelling	Contributing Sites
Tranent						
1 x full size grass sports pitch linked to developments at Windygoul South.	within 1 ha land south of Windygoul PS, Tranent - costs £185K included for construction of pitch. Title of land to be transferred to Council	£185,000	£185,000	670	£276.12	Windygoul South (TT1), Lammermuir Terrace (TT4)
Enhance provision within Polson Park including upgrade to existing 11aside grass park		£21,297	£21,297	200	£106.48	Lammermuir Terrace (TT4), Bankpark (TT5)
Elphinstone						
Contribution towards modest refurbishment of existing pavilion	To take account of increased usage arising from increase in population	£50,000	£50,000	80	£625.00	Elphinstone (TT11)

Blindwells Cluster

Provision Required	Comments	New Total Project Cost	Deficit in New Project Cost	No. Of Eligible LDP Dwellings	Pro-rata Cost per Eligible Dwelling	Contributing Sites
Blindwells						
3 full size grass community sports pitches		£550,000	£550,000	1,600	£346.88	Blindwells (BW1)
6 team changing pavilion	Pavilion to include referee room, storage and social space	£960,000	£960,000	1,600	£600.00	Blindwells (BW1)
1 x cricket wicket		£8,000	£8,000	1,600	£5.00	Blindwells (BW1)
4 tennis court provision with changing pavilion as part of main facility		£200,000	£200,000	1,600	£125.00	Blindwells (BW1)

Haddington Cluster

Provision Required	Comments	New Total Project Cost	Deficit in New Project Cost	No. Of Eligible LDP Dwellings	Pro-rata Cost per Eligible Dwelling	Contributing Sites
Haddington						
Land required for additional 7 a side grass pitch 60mx40m informal recreational area within Letham development	costs are for construction of pitch - excluding land costs	£92,500	£92,500	275	£336.36	Letham Mains Expansion (HN2)

Dunbar Cluster

Issues	Comment	New Total Project Cost	Deficit in New Project Cost	No. Of Eligible Dwellings Remaining	Pro-rata Cost per Eligible Dwelling	Contributing Sites
Dunbar						
1 x full size grass sports pitch at Hallhill	Area for community sports pitch identified east of the Primary School, south of Hallhill	£185,000	£185,000	495	£373.74	Hallhill North (DR2), Brodie Road (DR4), Newtonlees South (DR12), Abbeylands, Abbeylands Garage, Belhaven Hospital Field, Coastguard Site, Assembley Rooms
2 x team changing extension to Hallhill Healthy Living Centre	£300K allowance	£300,000	£300,000	495	£606.06	

North Berwick Cluster

Issues	Comment	New Total Project Cost	Deficit in New Project Cost	No. Of Eligible Dwellings Remaining	Pro-rata Cost per Eligible Dwelling	Contributing Sites
Gullane						
Improve quality of existing 11 a side grass pitch in Recreation Park (Levelling/drainage) to take account of increased usage		£18,191	£18,191	195	£93.29	Saltcoats (NK7), Fenton Gait East (NK8), Fenton Gait South (NK9)
Land required south of the school site and construction of new additional 7 a side football pitch - overall 70 x 50		£92,500	£92,500	195	£474.36	
Aberlady						
Improve drainage to increase capacity and usage of existing 11 a side grass pitch		£12,323	£12,323	100	£123.23	Aberlady West (NK10)

AFFORDABLE HOUSING

Statement of Conformity with Circular 3/2012

PROVISON FOR AFFORDABLE HOUSING (See also the Technical Note in Support of the Affordable Housing Policy and Supplementary Planning Guidance).
The following table explains why the need for affordable housing can be justified against the 5 tests of Circular 3/2012: Planning Obligations and Good Neighbour Agreements and thus why it features in East Lothian's Planning Obligations Framework.

TEST1 Necessary to make the development acceptable in planning terms	On the basis that a planning obligations should only be sought where it is necessary to allow development to proceed, explain why there is a need for the obligation / financial contribution : **1) National Legislative and Policy Context:** East Lothian Council has a number of statutory duties relating to the provision of affordable housing. These include, although are not limited to the Local Housing Strategy (LHS); fuel poverty; house condition; housing support (specialist provision) and homelessness as well as a strategic response to national outcomes and national housing priorities i.e. the Scottish Housing Quality Standard, town centre living, the housing contribution to the reduction of carbon emissions, improving environmental and design standards and supporting the development of sustainable communities. **Local Housing Strategy** – Housing (Scotland) Act 2001: Increasing the supply of homes is a national performance indicator and a high profile policy objective for the Scottish Government, with a 2020 vision for 'a housing system which provides an affordable home for all'. The achievement of this objective is at the heart of the housing planning framework. The East Lothian LHS sets out the joint and strategic approach of the local authority and its partners to delivering

high quality housing and housing related services across all tenures, to meet identified need in its area, including the need for affordable housing.

Fuel Poverty – The fuel poverty strategy is a key element of the East Lothian LHS, covering all tenures including affordable housing, aiming to meet the national target to end fuel poverty as far as is reasonably practicable.

House condition – Introduction of the Scottish Housing Quality Standard in 2004, to ensure social housing (a key component of affordable housing) in East Lothian meets a minimum level of housing quality including energy efficiency and compliance with Energy Efficiency in Scottish Social Housing (EESSH) milestone set for 2020.

Homelessness – Housing (Scotland) Act 2001 and Homelessness etc (Scotland) Act 2003 including assessment of homelessness (extent and nature) and Strategy for preventing and alleviating homelessness. The strategic approach to homelessness is a key area of the East Lothian LHS and given the highly pressured housing system, is closely linked to increasing affordable housing.

Housing Support (Specialist Provision) – Housing (Scotland) Act 2001, The Public Bodies (Joint Working) (Scotland) Act 2014 and assessment of provision of housing and related services. Affordable housing has a key role to play in contributing to the effective integration of health and social care. The East Lothian LHS clearly sets out the contribution that housing can make in support of this agenda, through the design and delivery of housing and housing related services, capable of responding to the needs of individuals as they arise.

Regeneration and Town Centres - Housing can have a significant impact on regeneration outcomes, making an important contribution to the creation of sustainable places and improvements to the physical environment. Achieving a Sustainable Future: Regeneration Strategy (2011) outlines the Scottish Government's vision for regeneration, with housing playing

a key role. The East Lothian LHS sets out the role of housing with regard to regeneration, opportunities that exist for town centre living and the scope that town centres may provide to meet housing need and demand, including affordable housing. It sets out how opportunities for affordable housing will be prioritised to support effective delivery.

Climate Change – Climate Change (Scotland) Act 2009 including mitigation, adaptation and sustainability and 2020 milestone. The Act sets out a statutory framework for the reduction of greenhouse gas emissions. It requires emissions to be reduced by 42% by 2020 and 80% by 2050. East Lothian Council recognises that housing is a critical factor in achieving a shift towards a low carbon economy, with housing (all tenures, including affordable housing) accounting for circa 12% of total emissions nationally.

2**) National Policy, Strategy and Guidance Context:**

i) Part 5, Section 89 (1) and (2) of the **Housing (Scotland) Act 2001** places a statutory requirement on local authorities to produce a **Local Housing Strategy (LHS)** which will set out its strategy, priorities and plans for the delivery of housing and related services. This must be supported by an assessment of housing provision and related services.

The **Housing Need and Demand Assessment (HNDA)** forms a critical part of the evidence base for both the LHS and Development Plans, with regard to the provision of affordable housing. Local authorities, as both the statutory housing and planning authority are responsible for assessing housing requirements, ensuring a generous supply of housing land and enabling the delivery of both market and affordable housing.

ii) **Scottish Planning Policy (SPP)** paragraph 128 states that "Local Development Plans (LDPs) should clearly set out the scale and distribution of the affordable housing requirement for their area." The HNDA is a joint evidence base, linking together the LHS and LDP. SPP states "Where

the HNDA and LHS identify a shortage of affordable housing, the LDP should set out the role that Planning will take in addressing this". SPP provides guidance which harmonises the LHS and LDP through a shared evidence base in HNDAs. http://www.gov.scot/Resource/0045/00453827.pdf

ii) Informed by evidence in the HNDA, the LHS and Development Plans should set out a **Housing Supply Target (HST)** for both affordable and market housing. SPP states that the HST is a "policy view of the number of homes the authority has agreed will be delivered in each housing market area over the periods of the LHS and LDP, taking into account wider economic, social and environmental factors, issues of capacity, resource and deliverability".

iii) **Planning Advice Note (PAN) 2/2010** – Section 1 of this PAN outlines in more detail, the categories of affordable housing which can contribute to the delivery and increased supply of affordable housing within local authority areas.
http://www.gov.scot/Publications/2010/08/31111624/4

3) Local Housing Policy, Strategy & Guidance Context:

East Lothian Council has a number of local plans, policies and strategies in place which contribute towards meeting its statutory duties and national guidance set out in parts 1 and 2 above:

i) Local Housing Strategy (LHS)

The East Lothian LHS 2012-2017 sets out the nature, extent and type of housing need and demand across the county and the role that specific tenures are likely to play, both now and over the longer term. It sets out the local authority's strategic vision for the future of housing across all tenures, taking into account national priorities. The LHS also provides clear direction for investment in affordable housing throughout East Lothian, with the LDP supporting the strategic aims set out in the LHS. The LHS sets out five outcomes including outcome 1 "Increase housing supply and improve access to appropriate housing including affordable housing."

http://www.eastlothian.gov.uk/downloads/file/6106/east_lothian_local_housing_strategy_2012-17

A revised LHS will be published in 2018 to cover the period 2018-2023 and this will align with Development Plans as appropriate.

Strategic Housing Investment Plan (SHIP)

East Lothian Council published a Strategic Housing Investment Plan (SHIP) in 2015, covering the period 2015/16 – 2019/20, in accordance with revised Scottish Government Guidance on Preparing Strategic Housing Investment Plans (2014).

The SHIP sets out East Lothian's housing development priorities over a five year period to help achieve the outcomes set out in its LHS and demonstrate how they will be delivered through a range of funding streams. It is a working tool to improve long-term strategic planning and provides an opportunity for East Lothian Council to:

- Set out key investment priorities for affordable housing;
- Demonstrate how these will be delivered;
- Identify the resources required to deliver these priorities; and
- Enable the involvement of key partners in the delivery of new affordable housing.

The priorities identified in the SHIP will deliver the outcomes set out in East Lothian's LHS and guide the application of Scottish Government and local authority funding for housing development through the Strategic Local Programme (SLP). The SHIP includes affordable housing supply through new provision, replacement, rehabilitation, remodelling, housing provided or assisted by other Scottish Government initiatives and housing provided by the local authority.

The SHIP makes reference to the Council's policy of maximising Scottish Government investment in East Lothian. Where potential under spend is identified in the Scottish Government Programme, the Council will continue to examine alternative opportunities with RSL partners and

	the Scottish Government to ensure investment is fully spent, to support the further provision of affordable housing. **Equalities** - Comply with Section 106 of Housing (Scotland) Act 2001 and Equality Act 2010
TEST 2 Serve a Planning Purpose	**Explain the planning purpose behind the need for the planning obligations:** To ensure that the provision of affordable housing in East Lothian contributes towards the Scottish Government's vision for housing by 2020 *'…a housing system which delivers an affordable home for all'*[2]. Provision of affordable housing in East Lothian seeks to comply with the Scottish Government's Joint Delivery Plan (2015), developed by the Joint Housing Policy and Delivery Group. This identifies priority actions to ensure delivery of the strategic objectives set out in Homes Fit for the 21st Century, specifically the requirement to build new, high quality, affordable homes to meet need and demand from a growing and ageing population, including the needs of those on lower incomes. Paragraph 129 of Scottish Planning Policy states that 'Plans should identify any expected developer contributions towards the developer of affordable housing.'
TEST 3 Related to the proposed development either as a direct consequence of the development or the cumulative impact of development in an area	**Assessing the Need for Affordable Housing** The East Lothian housing market is a part of the wider South East Scotland Strategic Development Plan (SESPlan) housing market area. This includes the administrative boundaries of the City of Edinburgh, East Lothian, Midlothian, West Lothian, Scottish Borders and Fife (Southern half) Councils.

[2] http://www.scotland.gov.uk/Publications/2011/02/03132933/2

SPP requires Development Plans and the LHS to be informed by and aligned through a Housing Need and Demand Assessment (HNDA), prepared in line with the Scottish Government's HNDA Guidance. This assessment provides part of the evidence base to inform both LHSs and Development Plans. Where the Scottish Government is satisfied that the HNDA is robust and credible, the approach used will not normally be considered further at Development Plan examination.

SESPlan HNDA1 was signed off as robust and credible by the Scottish Government in June 2011, with two modifications subsequently made by Scottish Ministers. It covers housing need and demand across the South East Scotland area including East Lothian and provides part of the evidence base to set Housing Supply Targets (HSTs) in the LHS. The Housing Supply Target is used to determine the housing land requirement for the LDP and ensure suitable land is allocated to meet this requirement.

The HNDA provides an estimate of total housing need by calculating current housing need and estimating future housing demand. The estimated supply from existing stock turnover is then deducted to provide the net housing need and demand figure. SESplan HNDA1 identifies a need for 10,050 dwellings from 2009-2024 with 6,250 up to 2019 and a further 3,800 from 2019-24. Over a 10 year period, the average number of households anticipated to need affordable housing is 547 per annum, with 314 affordable units projected to become available each year from turnover, leaving a deficit of 232 affordable dwellings each year.

The HNDA sets out evidence showing that to meet identified need, 33% of the total housing supply in East Lothian should be for affordable housing. In the period up to 2019, it demonstrates that affordable housing need is more acute with a 41% annual requirement. This is significantly higher than SPP, which suggests the quota of affordable homes that can be expected from a market housing site should normally be no more than 25% of units.

	In accordance with SPP, the HNDA provides part of the evidence base for setting Housing Supply Targets (HSTs) in the LHS. These HSTs are then used to determine the housing land required for the Local Development Plan (LDP). The cumulative impact of providing the required affordable housing will necessitate S75 contributions from developers and allocated funding from the Scottish Government. There is significant pressure on existing housing in the form of high levels of need and demand for all housing tenures, including affordable housing. The population of East Lothian is growing significantly, with households becoming smaller in size, combined with an ageing population. Further population growth, reducing household size and a continued ageing population are projected. An increase in affordable housing is required to both meet existing need, changing needs and fulfil anticipated requirements of demographic change. Changing homelessness legislation has a significant impact upon affordable housing provision, placing increased pressure on this resource. Difficulties arising for first time buyers with high open market prices and challenges around mortgage lenders and borrowing.
TEST 4 Fairly and reasonably related in scale and kind to the proposed development	**Explain how, based on the outcome of the demand assessment, the need for additional land and / or capital costs for the mitigation has been derived, and apportioned proportionally (if necessary between the service and infrastructure provider and sites) and pro-rata among sites as appropriate:** Paragraph 129 of Scottish Planning Policy states that 'Plans should identify any expected developer contributions towards the developer of affordable housing. Where a contribution is required, this should generally be for a specified proportion of the serviced land within the development site to be for affordable housing. Planning authorities should consider the level of affordable housing contribution which is likely to be deliverable in the current economic climate,

	as part of a viable housing development. The level of affordable housing required as a contribution within a market site should generally be no more than 25% of the total number of houses. Evidence from the SESplan HNDA support provision of 25% affordable housing as part of market housing developments.'
TEST 5 Reasonable in all other respects	**Provide any other relevant information, such as any relevant legislative requirements, or other relevant Scottish Government, regional or East Lothian Council plans, policies or strategies that the obligation relates to:** **East Lothian Single Outcome Agreement (SOA) 2011** The SOA is the overarching plan for the future of East Lothian, which sets out how East Lothian Community Planning Partners will contribute to the 15 national outcomes, local needs and priorities. It provides the strategic direction for the LHS and in turn, the LHS is a key driver in delivering the SOA and national outcomes. Outcome 9 of the SOA is "Everyone in East Lothian has access to high quality sustainable housing". Meeting the need for affordable housing is a key priority for the East Lothian Housing Partnership with the SOA stating the Partnership "must make every effort to meet the need for affordable housing by maximising opportunities to increase supply. One of East Lothian's strengths is the strong sense of community in each of its towns and villages. The projected increase in population with significant housing developments being planned across the county could threaten this sense of community. Therefore new settlements or significant additions to existing communities should be accompanied by the community infrastructure required to make viable, balanced and sustainable communities. **Housing Need and Demand Assessment Guidance (Managers and Practitioners Guides) (2014)** HNDA Guidance sets out a step by step prescriptive approach to preparing HNDAs, the evidence base used to both inform decisions and align the LHS and Development Plans.

GENERAL PRACTICE HEALTH CARE CAPACITY

Post LDP Examination Report Update

The only change to the DCF relating to General Practice Health Care is a reduction in the per home rate for Blindwells, down from £1,250 per dwelling to £1,125 per dwelling. This is because the costs of the facility at Blindwells has be updated to £1,800,000, which is less than previously assumed.

Following representations received on the 2016 Proposed Plan, the Reporter agreed with the Council's position that it is justified to seek developer contributions towards primary healthcare facilities at Blindwells. For more detail, please see the Reporters Conclusions to Issue 16 in the LDP Examination Report.

Statement of Conformity with Circular 3/2012

PROVISION OF ADDITONAL GENERAL PRACTICE HEALTH CARE CAPACITY
The following table explains why the need for additional NHS capacity can be justified against the 5 tests of Circular 3/2012: Planning Obligations and Good Neighbour Agreements and thus why it features in East Lothian's Planning Obligations Framework.

TEST1 Necessary to make the development acceptable in planning terms	NHS Lothian has a statutory duty to ensure all residents can register with a General Practice to allow access to primary care services. Support to and development of primary care services within East Lothian is the responsibility of East Lothian Health and Social Care Partnership which has a particular strategic focus on meeting the needs of East Lothian's increasingly elderly population.
TEST 2 Serve a Planning Purpose	East Lothian Health and Social Care Partnership supports provision of 'community hubs' or multi-use facilities to provide access to primary care, social care and community health support for all age groups and client groups. Any developments need to be jointly planned between partners to assess the viability of developing single points of access to a range of services within communities, to simplify access and to reduce duplication of services.

TEST 3 Related to the proposed development either as a direct consequence of the development or the cumulative impact of development in an area	East Lothian Health and Social Care Partnership has embarked on the development of the new East Lothian Community Hospital on the Roodlands Hospital site in Haddington. This new facility (the first phase of which is scheduled to open in 2017/18) will provide modern health and care services for the county. Similarly, the provision of frail elderly services will be improved through a review of Belhaven Hospital in Dunbar and Edington Hospital in North Berwick as well as social care services in Belhaven Hospital in Dunbar, Abbey Care Home in North Berwick and Eskgreen Care Home in Musselburgh. There is an intention through the review to improve capacity to care for older people at home, so reducing the need to increase care home capacity. Population growth arising from housing developments across East Lothian will need to be accommodated within the new community hospital, in other community health services and in GP services.
TEST 4 Fairly and reasonably related in scale and kind to the proposed development	Because of current population growth, GP services across the County are at capacity, meaning demand for access to primary care services is outstripping availability. As a result, GP Practices are close to restricting their patient lists, limiting the number of patients who can register. Any marked growth in population risks new residents being unable to register with their local practice and as pressures increase may have to travel to a neighbouring town to access primary care services. This would potentially disadvantage people without transport. Work is underway to increase capacity of the existing GP practices in Prestonpans and Cockenzie/Port Seton. Recent work has increased capacity in Ormiston, Tranent and Musselburgh. Further expansion or reprovision of the existing premises at Haddington, North Berwick and East Linton is still required. These developments may in due course reach capacity as their local population continues to grow, but developer contributions will not be sought for this during this plan period for committed developments. The implications of future proposed developments on GP Practices whose boundary they are within will need to be assessed and considered in terms of the direct impact (and therefore cost) of meeting the needs of an increased practice population. Developer contributions might need to be sought in these cases.

	Accelerated population growth arising from the East Lothian Development Plan will place further pressure on GP Practices. In the case of Blindwells, which is not in an area currently served by any GP practice a further 1 to 2 new practices will be needed in a new facility, ideally containing other health, social care and public services. Although a review of GP Practice boundaries adjoining Blindwells could be carried out there is no obligation on Practices to extend their boundaries to bring Blindwells into their catchment or to increase the size of their patient list. It is therefore necessary to plan for the staged introduction of a new GP practice accommodated within new GP premises at Blindwells: • Initial development of a new GP Practice for Blindwells residents might initially be accommodated in the short term within another practice until new dedicated premises provision in Blindwells is available. • The first stage requirement for primary care premises on the Blindwells site would serve 5,000 patients and would need approximately 600m^2 of premises to accommodate a GP practice and attached services – this would be at an initial capital cost of around £1.8m. • If in time the population at Blindwells increases to its ceiling of circa 18,000 patients this will need provision of 2 large, 9,000 patient GP practices with a space requirement of approximately 1,500m^2 in order to accommodate required GP and attached services – this would be at a capital cost of around a further £4m. Provision would need to be made in both these scenarios for any non-GP services that are to be co-located within the new premises.
TEST 5 Reasonable in all other respects	The provision of modern, co-located and co-delivered services for health and social care fits with the Scottish Government's integration agenda and will reduce duplication or gaps in service delivery while simplifying the pathways to providing appropriate health and social care as close to a service user's home as possible. Local strategies supporting such developments include the NHS Lothian Strategic Plan 2014 – 2024 and the East Lothian Integration Joint Board's Strategic Plan for adult services, 2016-2019.

Primary Care and Community Service Implications of Population Growth

1.0 Background

1.1 The 16 GP Practices in East Lothian and the practice team of General Practitioners, Practice Nurses and other staff serve populations (table 1) of all ages in defined practice boundary areas, some of which overlap.

Table 1 – East Lothian GP Practices (at 15 December 2015) [3]

Practice Name and Location	List Size
Eskbridge Medical Practice, Musselburgh	8,768
Riverside Medical Practice, Musselburgh	9,820
Inveresk Medical Practice, Musselburgh	8,740
Tranent Medical Practice, Tranent	14,074
Prestonpans Group Practice, Prestonpans	8,693
The Harbours Medical Practice, Cockenzie	9,807
Ormiston Medical Practice, Ormiston	3,166
Tyne Medical Practice, Haddington	5,861
Lammermuir Medical Practice, Haddington	4,601
The Orchard Medical Practice, Haddington	4,668
East Linton Surgery, East Linton	2,670

[3] http://www.isdscotland.org/Health-Topics/General-Practice/Workforce-and-Practice-Populations/_docs/Prac_ContactDetails_Oct2015_final.xls

Gullane Medical Practice, Gullane	5,183
North Berwick Group Practice, North Berwick	8,106
Whitesands Medical Practice, Dunbar	4,445
Lauderdale Medical Practice, Dunbar	3,591
Cromwell Harbour Medical Practice, Dunbar	3,898

1.2 List sizes of registered patients within the practice boundary are agreed with NHS Lothian, through its Primary Care Contracts Organisation (PCCO) and in discussion with the relevant Health and Social Care Partnership. In recent months, pressures on Practices have resulted in 30 practices across Lothian restricting growth of their list size. At present only one East Lothian Practice has a restricted list. Where lists are restricted this can have a knock-on effect on neighbouring Practices which then have to register further patients.

1.3 There has been a steady growth in practice list registrations in East Lothian from 2009 to 2015 (table 2). This is projected to continue.

Table 2 – Growth in East Lothian Practice List Size (at October each year) [4]

GP List Sizes in East Lothian (1000s)								**List Increase**	
Year	2009	2010	2011	2012	2013	2014	2015	2009-15	Average per annum
List size	101.59	102.15	103.96	103.39	104.22	104.96	106.10	4.51	0.64

1.4 Some current NHS Lothian funding is available to support limited practice list size growth. However where growth is ongoing and creates pressure on existing premises and staffing, more permanent solutions are required to maintain quality of service delivery.

[4] https://isdscotland.scot.nhs.uk/Health-Topics/General-Practice/Publications/2015-12-15/2015-12-15-GPWorkforce2015-Report.pdf?71847170592

2.0 Impact of Population Growth and Demographic Change on Primary Care

2.1 The population increases resulting from planned housing developments across East Lothian will have an impact on a number of practices through an influx of people seeking to register as patients. Increasing demand for registrations creates pressures on practices at a time when there is a national shortage of GPs and many GP vacancies are being filled in the medium term through temporary (and more expensive) locum appointments.

2.2 In addition, the workload of GPs and of practice teams is increasing as the population ages (with an 18% increase in over 65s registrations in recent years) and as older people live longer at home with chronic and often multiple illnesses.

2.3 Primary care has a central role in supporting the development of pathways of care to avoid unnecessary hospital admissions and to facilitate timely supported discharge home. This is important in meeting various targets.

2.4 Recent years have seen a shift in the balance of care from hospital-based provision to primary care and community provision. This changed focus has had an impact on primary care, with increased demands through developments such as point of care testing and the transfer from secondary care of patient management for conditions such as Type 2 diabetes.

3.0 Current, Planned and Required Premises Developments

3.1 Modern primary care premises increasingly provide a 'one stop' solution under the one roof, providing health, social care and other services to local populations. This has the advantage of reducing duplication and increasing partnership working to meet patient/client needs and bringing services closer to patients.

3.2 NHS Lothian has in recent years invested in new build and extended primary care premises across East Lothian. A number of practices however remain in need of extension or replacement to meet the natural growth in patient numbers and demand associated with this. In the larger towns of Musselburgh, Haddington and Dunbar several GP practices share a building.

3.3 'Our Health, Our Care, Our Future' NHS Lothian's Strategic Plan 2014-2024 notes that the capital costs of building new practice premises or of extending current premises can vary widely. It suggests that every 1,000 patients require 90m^2 of floor space, thus an average sized practice of 5,000 patients needs 450m^2.

3.4 The build cost of a single practice or multi-practice/multi-service building might range between £3m and £6m. Added to which are the ongoing revenue costs and staffing costs.

3.5 The impacts on practices associated with the committed and proposed developments are set out below. Only in the case of Blindwells, where new dedicated practice premises will be needed, are developer contributions to be sought as other practices are either not in need of an extension, already being extended, are past of planned reprovision or are privately owned/leased.

3.6 Prestonpans/Cockenzie/Longniddry

To meet existing population growth a £2m renovation and extension of Prestonpans Group Practice is planned. Work will commence on this in 2016. A £1.8m extension to The Harbours Medical Practice in Cockenzie is also planned.

Housing developments near Longniddry will require increased primary care provision. This growth is within the catchment area of The Harbours Medical Practice.

Edinburgh Road/Dolphingstone developments, may be outwith existing practice boundary areas catchments. Discussion will be needed with neighbouring primary care practices to see what solutions are possible to meet such growth.

3.7 Haddington

Current housing commitments will create pressure on the three existing practices: Lammermuir Medical Practice, The Orchard Medical Practice and Tyne Medical Practice, which are all within the Newtonport Surgery building.

Work is needed to develop alternative premises as the current building cannot be extended to accommodate growth in patient registrations.

3.8 Musselburgh

The three Musselburgh Practices: Eskbridge, Riverside and Inveresk are accommodated in purpose-built premises in the Musselburgh Primary Care Centre completed in 2012.

Although the building can accommodate projected population growth around Musselburgh, the three Practices are at capacity and would need to recruit further GP and practice team staff to accommodate the projected increase in population.

3.9 Tranent

Having been extended, Tranent Medical Practice has sufficient capacity to respond to the small amount of expected population growth resulting from committed developments.

However, the proposed developments will create extra pressure which may not be possible to accommodate within the practice, which is already the largest in East Lothian.

3.10 Ormiston

As Ormiston Practice is within a new building it has spare capacity to respond to the limited population growth expected within its catchment area.

3.11 North Berwick

With the projected local housing growth, North Berwick Group Practice will be unable to cope and will need to be extended or reprovided.

3.12 Gullane

The new building accommodating Gullane Medical Practice has inbuilt capacity sufficient to respond to projected population growth.

3.13 Dunbar

The Dunbar Medical Centre accommodates three Practices: Cromwell Harbour Medical Practice, Lauderdale Medical Practice and Whitesands Medical Practice. The Practices have some room to grow to meet the committed further possible population growth.

3.14 East Linton

The impact on East Linton Surgery from population growth is expected to be minor, though there will be issues with the existing building arising from any population growth.

3.15 Blindwells

The area of the Blindwells development is not within any existing practice boundary and the initial projected population growth cannot be easily accommodated by the neighbouring practices in Tranent, Cockenzie or Prestonpans.

One initial, short-term solution would be to seek to accommodate a small number of patients within one of the local practices.

Another option is the establishment of a branch surgery (operated by one of the existing practices) within the Blindwells development to meet initial population need.

In the longer term, to cope with projected population growth, two new GP Practices will need to be established. This will have capital cost implication of between £3m to £6m. It is appropriate to seek contributions to the capital costs of a building which will in due course accommodate two practices as well as other health and social care services.

4.0 Conclusion

4.1 The committed and proposed developments of housing across East Lothian and the population growth this brings will place high demands on an already pressed primary care service. Some practice teams and the premises they occupy are prepared for growth in their local population.

However to meet demand many practices need to modernise their buildings and associated service provision while ensuring they have sufficient multi-disciplinary team members to deliver services to a growing and increasingly complex patient group.

4.2 Where existing premises are a limiting factor for the practice team work will be needed to either extend the premises if feasible or to provide replacement premises. Any development will need to be designed with flexibility of use in mind and sized to meet growth.

4.3 The Blindwells development poses particular problems as the scale of planned population growth means that in due course up to two large GP practices will be needed. This will require considerable investment by East Lothian Health and Social Care Partnership. The size of this investment will need to be assessed as the development moves nearer to delivery and a business case prepared.

East Lothian Council

Education Provision Forecasting Guide

May 2018

EAST LOTHIAN COUNCIL

DEPARTMENT OF RESOURCES & PEOPLE SERVICES

EDUCATION SERVICE

GUIDE TO EDUCATION PROVISION POPULATION FORECASTING IN EAST LOTHIAN

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1. Introduction

1.1. The East Lothian Partnership's aim for East Lothian is set out in its statement of intent:

"We will work in partnership to achieve an even more prosperous, safe and sustainable East Lothian, with a dynamic and thriving economy that enables our people and communities to flourish."

1.2. The East Lothian Council Plan 2017-2022 outlines the strategy the Council will follow and details the objectives and strategic goals it has set itself over the next five years to strive to meet its vision. The Council Plan sets out the following themes and objectives for the next five years:

- Growing our Economy
- Growing our People
- Growing our Communities
- Growing our Capacity

1.3. The overarching objective of 'reducing inequalities within and across our communities' that was adopted when the 2012-2017 Council Plan was reviewed in 2014, remains the overarching objective of the new Council Plan.

1.4. East Lothian Council is committed to raising educational attainment and ensuring that all children and young people have the best opportunities in life. East Lothian's Education Service aims to provide the best education in Scotland through a relentless focus on Inclusion, Achievement, Ambition, and Progress for All. We will all work together to Get it Right for Every Child and to ensure that all children and young people are Safe, Healthy, Nurtured, Active, Respected, Responsible, and Included.

1.5. The Education Estate has a key role to play in supporting the East Lothian Partnership's overarching objective to reduce inequalities both within and between our communities and the delivery of these strategic objectives.

2. Legislative Context

2.1. The Council has a number of statutory duties relating to the provision of education in its area. Education Authorities have a legislative duty in terms of the *Education (Scotland) Act 1980* to make adequate and efficient provision of school education across their area, including the provision of education for eligible pre-school children and includes any school or Early Learning & Childcare centre, which are run by the Education Authority. This duty applies in respect of both the current school population and anticipated pattern of demand. In addition, Councils have a statutory duty to secure best value in terms of the Local Government in Scotland Act 2003.

2.2. The Council recognises these duties as an opportunity to enhance the learning opportunities for young people through its Education Estate whilst bringing positive benefits to the whole community. Flexible learning environments allow the creative and multiple use of spaces by staff, pupils and the Community. They also inspire pupils and have a positive impact on the general health and wellbeing of learners, increasing aspirations, attainment, achievement, and positive destinations beyond school.

2.3. Section 21 of the *Schools (Consultation) (Scotland) Act 2010* Act provides a definition for 'school' as public schools as defined in section 135(1) of the *Education (Scotland) Act 1980*. This means any school under the management of an Education Authority and includes nursery schools which are run by the Education Authority. It does not cover independent schools or nursery schools or nurseries which are managed and run independently.

2.4. Section 1 of the *Education Scotland Act 1980* provides a definition for 'school education' as "progressive education appropriate to the requirements of pupils…, regard being had to the age, ability and aptitude of such pupils, and includes – (i) early learning and childcare; (ii) provision for special educational needs; (iii) the teaching of Gaelic in Gaelic-speaking areas".

2.5. Section 15 of the *Standards in Scotland's Schools, etc. Act 2000* also requires that education be provided within a mainstream school ("a school other than a special school") unless doing so:

a) would not be suited to the ability or aptitude of the child;
b) would be incompatible with the provision of efficient education for the children with whom the child would be educated; or
c) would result in unreasonable public expenditure being incurred which would not ordinarily be incurred

2.6. The Council's Pupil Placement Policy clarifies the Council's commitment to enrol all pupils within its area in schools, in a fair and consistent manner, in line with Scottish Government legislation, *Education (Scotland) Act 1980, Education (Additional Support for Learning) (Scotland) Act 2004* and 2009 and Scottish Government guidelines.

2.7. In line with Section 15 of the *Standards in Scotland's Schools, etc. Act 2000*, East Lothian Council's Framework for Meeting Additional Support for Learning Needs and Placements & Strategy for Inclusion Policy sets out the expectation that children with additional support needs will be educated wherever possible in their local school.

2.8. Furthermore, all children, including those with additional support needs, will be offered Early Learning and Childcare (ELC) in accordance with eligibility criteria set down by the Scottish Government under the terms of the *Children and Young People (Scotland) Act 2014.* http://www.legislation.gov.uk/asp/2014/8/part/6 The type of ELC Provision offered in East Lothian is set out in the Early Learning & Childcare Admissions Policy.

2.9. In line with the Scottish Government's intention to increase the entitlement of funded ELC from the current 600 hours per pupil per calendar year to 1140 hours by 2020 – for all 3 to 5-year olds and eligible 2-year olds - the Council plans to introduce more flexible arrangements for parents/carers. East Lothian Council's long-term vision for early learning & childcare provision in the North Berwick Cluster will be considered as part of the Draft 1140 expansion plan approved by Council on 31st October 2017.
https://www.eastlothian.gov.uk/download/meetings/id/19236/08_expansion_of_early_learning_and_childcare_to_1140_hours_-_draft_implementation_plan

2.10. A detailed but not exhaustive list of the statutory duties, national and local policies and guidance related to the School Estate can be viewed in **Appendix 1**.

3. Background to Education Provision Population Forecasts

3.1. As set out in Section 2 above, the Education (Scotland) Act 1980 places a legislative duty on the Council to plan for growth in our communities. In line with current legislation, Education Provision in East Lothian includes but is not limited to ELC provision for eligible pre-school children, Additional Support Needs (ASN) specialist provision, and primary and secondary mainstream provision. Education Provision will evolve over time to take account of changing and/or new legislation and policy in Education (e.g. maximum pupil numbers per class, the amount and flexibility of free early learning and childcare).

3.2. In order to meet its statutory obligations, to ensure there is adequate and efficient Education Provision within its area, East Lothian Council's Education Service prepares population projections to assess the impact of changing demographics on the East Lothian 0-19 population and current Education Capacity. Education Population projections include eligible pre-school children projections, ASN specialist provision projections and primary and secondary school roll projections.

3.3. Education provision forecasting is carried out in East Lothian for four main reasons:

a) To support pupil intake management for the forthcoming academic session;
b) To support school revenue budget and workforce planning (school revenue budgets and staffing complements, including nursery, are set in line with the pupil roll and calculated in accordance with the approved Scheme of Delegation for Schools and the Council's devolved school management policies);
c) To assess the impact of changing demographics and the impact of cumulative housing development on Education provision and the need for future Education estate expansion (including ELC and ASN specialist provision) to inform capital budget planning; and
d) To inform the Education Authority response to Planning Applications

3.4. A "Baseline" set of projections is prepared first to establish what the impact would be in each catchment area if no further new housing developments were built. A set of "Established Supply" projections is then prepared to assess the cumulative impact of new housing development proposals of 5 units or more with planning consent. This includes consented windfall sites and sites from the most recent Housing Land Audit where there is reasonable certainty of development coming forward in the medium term. No account is taken of future windfall housing sites that have not yet received planning consent at the time of the projection assessment. Both market and affordable housing tenure are included in the number of new houses to be built. Prospective housing is excluded from the figures where the site has less than 5 units or where it is known that the sites are to be developed exclusively for elderly populations or specialist need populations that prohibit occupation by children. A further set is then prepared to consider the cumulative impact of sites allocated in the Local Development Plan.

3.5. Additional projection sets are also prepared to inform the Education Authority response to planning applications. When a planning application for a residential development of 5 units or more is submitted, the development proposal is assessed against existing Education Provision capacity within the catchment area and/or cluster that the development proposal lies within and against the latest Education Population projections that show the impact of cumulative development proposals within that same area that are applicable at the time of the planning application.

3.6. Each population projection is then converted into the number of local authority nursery places, ASN specialist provision places, secondary classroom spaces and the number of primary classes required to accommodate the peak projected rolls applying capacity and class maxima set out in **Appendix 1**.

3.7. Responsibility for pupil roll forecasting (including ASN and ELC populations) and pupil intake management currently lies within the Education Service. Officers within the Education Service liaise with colleagues in Planning, Property & Finance who collectively use the relevant sets of projections to support school budget and workforce planning, assess the need for local authority managed ELC & school estate expansion (including ASN Specialist provision), and to inform the Education Authority response to Planning Applications.

4. Education Forecasting Methodology & Limitations of Forecasting

4.1. The current methodology for forecasting primary and secondary school rolls has been used by East Lothian Council since 1996 and was originally developed by Lothian Regional Council. The methodology for projecting eligible 2-year olds, 3 to 5-year olds and Additional Support Needs (ASN) Specialist Provision populations within each catchment area was developed by East Lothian Council during 2015 and 2016.

4.2. The projection sets are trends-based forecasts and take into consideration a wide range of evidence from the local catchment area and/or local authority Education establishment (as appropriate). This evidence includes the number of births and children (nursery, primary and secondary school age) attending East Lothian schools and ELC provision from new build housing developments in each catchment area since 2003/04. Each projection set is prepared in accordance with the methodology set out in **sections 8 to 10** of this guide.

4.3. The roll projections are net figures and capture the element of pupils that are already present within the catchment area or who may move from other parts of East Lothian in to the area as well as those from the area who may also move out with. The net level of additional pupils that will arise from new housing over time is informed by a range of assumptions including evidence from historical new housing sites which comprise both market and affordable housing tenures.

4.4. The Council acknowledges that it is difficult to accurately predict pupil populations and school rolls over a long timeframe. The projections are a best estimate of what the size of each relevant pupil population will be in the future based on current demographics, averages and trend based statistical techniques. They do not allow for future changes in local or national policy that may also influence population changes. Whilst the assumptions have proved generally reliable, the nature of the exercise means that they cannot be regarded as a prediction. They are therefore subject to annual review.

4.5. The projections are strongly influenced by the initial baseline population as well as proposed new house build. Material changes in the number and phasing of proposed new houses between different planning applications being lodged may subsequently change previously modelled projections. Similarly, changes in baseline population and occupancy levels can have an impact on whether a proposed development can be accommodated within existing capacity or not. As the baseline changes each year and house completion rates change they have an impact on the assumptions that are made about future births, migration, stay-on rates etc.

4.6. For more detail on why roll projections may change between assessments please refer to **Section 12** of this guide. The process of population change is cumulative and therefore the reliability of projections decreases over time. Projections for areas with small populations are also less reliable as baseline population changes have a bigger impact more quickly than in areas with larger populations.

5. Frequency of Education Population Forecasting in East Lothian

5.1. There are two main updates to the Education population projections each year called **Key Sets (KS)**. The **KS1** set is prepared in the summer term for internal purposes only in preparation for the annual forecasting roll forward process and provides a preliminary validation check on the projected new P1 and S1 intake for August. The **KS2** set is prepared in the autumn term, based on validated and published September Census Rolls, and is the official set of annual projections used to support school budget and Education Estate capital expenditure planning as well as in the assessment of planning applications. Pupil roll projections are generated in the main for up to 15 years although the error margin will widen the further into the future.

5.2. The pupil roll projections are used in East Lothian for, but not limited to, the following:

- **Short term Projections (1 Year)**: **KS2** projections are used by officers in the Education Service along with the latest information from new P1 and S1 enrolments from parental requests to the Education Authority to assess the number of classes required and agree the class organisation for the forthcoming academic session with the Head Teachers.

- **Medium Term Projections (up to 3 Years): KS2** projections are used by officers within the Education Service and Finance to support the three-year school revenue budget and workforce planning of the Education Authority.

- **Medium to Long Term (up to 15 Years)**: **KS2** projection sets are used by officers within the Strategic Asset & Capital Plan Management Team to undertake Education Provision Capacity Demand Assessments and support the capital budget planning of the Education Authority. They assess the impact of each set of projections against existing Build Capacity (measurement of permanent capacity based on available classrooms, size of rooms and maximum functional class size limits) and existing "schedules of accommodation" to signpost risks to capacity early on. This allows pupil intake management measures to be put in place where there is no further physical expansion possible and to support developer contribution negotiations, where expansion of the school estate is required to provide for the cumulative impact of new housing developments.

5.3. Standalone planning application roll projections are run throughout the year when a residential application of 5 units or more is submitted to the Council. This enables the Education Authority to comment on whether there is sufficient capacity within the existing catchment schools to accommodate the projected number of pupils that may arise from the new residential development over time. Relevant factors and variables influencing each population forecast are reviewed and updated, as appropriate, at this time.

5.4. Additional sets are also produced for the Main Issues Report (MIR) & Local Development Plan (LDP) to generate long term terms projections over 15 years to advise the Planning Authority where capacity still exists for future Housing Land Supply.

6. Factors Influencing the Education Population Forecasting Process

6.1. The Council takes a number of factors into account when projecting Education populations or pupil rolls, gathering information from NHS Lothian and the Council's Education Management Information System. The key factors influencing each forecast are:

- **Eligible 2 Year Olds** – Live Births data; future birth assumptions; proposed new house build completion rates, net birth to 3-year-old migration rates and Scottish Index of Multiple Deprivation (SIMD) Decile 1-3 rates within each catchment area.
- **Nursery (3 to 5 Year Olds) Forecasting –** baseline local authority nursery rolls for 3 to 5-year olds from the most recent summer term; projected 3 to 5-Year-old intake numbers based on Live Births data, future birth assumptions, projected net birth to nursery migration rates, P1 deferral rates and proposed new house build completion rates within each catchment area.
- **Primary Pupil Roll Forecasting** – baseline primary school Pupil Census roll by stage (as at most recent validated September census); projected P1 intake numbers; proposed new house build completion rates; projected primary net stage migration rate & projected initial number of P2-P7 children arising from proposed house build completions during each build year using an average Primary New Build child per house ratio (CPHR) within each catchment area.
- **Secondary Pupil Roll Forecasting** – baseline secondary school Pupil Census roll by stage; total associated P7s; P7 to S1 Transfer Rate; S4 to S5 and S5 to S6 Stay-on Rates; proposed new house build completion rates; projected secondary net stage migration rate & projected initial number of secondary aged children arising from proposed house build completions during each build year using average Secondary New Build CPHR within each catchment area.
- **ASN Specialist Provision Forecasting** – projected eligible nursery, primary and secondary pupil rolls for each cluster and average rates of pupils recorded with an additional support need as at the annual September Pupil Census.

6.2. The factors are cluster area, catchment area and/or establishment based as appropriate, except for the Primary New Build CPHR and Secondary New Build CPHR which are currently based on East Lothian averages.

6.3. There are seven key factors that require a subjective assessment in relation to the Key Set updates of the pupil roll projections and/or for assessing the impact of new housing developments on the Education Estate to inform the Education response to planning applications:

- New House Build Completion Rates
- Future Birth assumptions
- Future eligible 2-Year-Old and 3 to 5-Year-Old (Nursery) uptake assumptions
- Baseline Nursery, Primary & Secondary Census rolls
- Future New P1 Intake assumptions

- Annual Net Primary & Secondary Stage Migration Rates
- S4-S5 and S5-S6 Stay-on Rates

6.4. The Baseline Census rolls are updated as part of the KS2 Projection updates. The KS1 update is based on a provisional pre-census roll based on anticipated start of term rolls following discussions with Head Teachers and considering the outcome of placing requests. The KS1 update is used for internal purposes only as part of the Education Service's monitoring checks and annual roll forward process. The KS2 baseline census roll update is based on the validated individual stage roll breakdowns for each primary & secondary school following the completion of the September Pupil Census (ScotXed Pupil Returns). The KS2 update sets the Baseline Census Stage Rolls that are used for all further projection sets related to planning application assessments that fall within that same academic session.

6.5. The new house build completions, birth, local authority nursery uptake, P1 intake assumptions and net stage migration rates are reviewed and updated as necessary every time a roll projection is run either as part of a Key Set (KS) update or to assess the impact of a proposed new development for a planning application.

6.6. The S5 & S6 Stay-on Rates are updated as part of the KS1 and KS2 projection updates. The official KS2 update sets the stay-on rates that are applied for all further projection sets related to planning application assessments that fall within that same academic session.

6.7. The two remaining factors are driven by system-generated rates or East Lothian average child per house ratios, namely:

a) P7-S1 Transfer Rates
b) Average Primary and Secondary New Build CPHRs

6.8. The P7-S1 Transfer Rates are updated as part of the KS1 and KS2 projection updates. The official KS2 update sets the P7-S1 transfer rates that are applied for all further projection sets related to planning application assessments that fall within that same academic session.

6.9. The average New Build CPHRs are fixed and remain static throughout the year. There are four average New Build CPHRs currently used in East Lothian as follows:

- General Primary CPHR where there is no denominational primary school in the cluster = 0.356
- General Primary CPHR where there is a denominational primary school in the cluster = 0.336
- Denominational Primary School (RC) CPHR = 0.02
- Secondary School CPHR = 0.16

7. What the New Build Average CPHR means in the context of Pupil Roll Forecasting

7.1. The average New Build CPHRs are only applied to the calculations during the specific years that new houses are projected to be built in. Their purpose is to provide a starting point for the number of primary and secondary aged pupils who might initially move into the new houses during the first year that each of the new houses are built and ready for occupation between one academic session and the next.

7.2. The average New Build CPHRs do not calculate the cumulative total number of pupils that we might expect to see arising from a new housing development over the entire development period and beyond. Any additional new pupils arising each year and pupil migration in and out of the area are calculated and modelled through the annual net stage migration rates, projected new P1 intake, secondary S4-S5 and S5-S6 stay-on rates, and P7-S1 transfer rates.

7.3. Therefore, they must not be used on their own to calculate the total number of primary and secondary aged pupils projected to arise from a new development over time. Using the average New Build CPHRs in this way and applying them as a rate to the total number of houses does not accurately model how new pupils arise from a new development over time and the impact this has on the total school roll in conjunction with underlying baseline demographics in the catchment area. This approach would be based on too short a time period and would not capture all relevant variables and other factors that are taken in to account to produce robust pupil roll projections over time.

7.4. The Education Service uses monitoring checks it has in place to track the pupil outputs from new builds within each catchment area and review and make any necessary adjustments to the other contributing factors (i.e. stage migration rates, stay-on rates and P7-S1 transfer rates) to address any variances in outputs as part of the roll forecasting process. The evidence from recent new builds is particularly important for modelling the effect on the annual births and projected new P1 intake over time. The annual net primary and secondary stage migration rates for each school is used to attempt to model natural fluctuations that occur within each catchment area.

8. ELC Provision Forecasting Methodology

8.1. The methodology for forecasting eligible ELC (pre-school) populations was developed by East Lothian Council during 2015 and 2016.

8.2. When looking at service delivery and planning for growth for eligible pre-school children, the Education Authority uses a combination of data from the six Cluster Areas and the Primary Catchment Areas as operational geographical tools for forecasting future demand for ELC provision. Forecasts, by primary catchment area, provide the basis for the underlying assessment of eligible pre-school children arising from new and existing housing within each catchment area. As the Council delivers ELC provision through both Local Authority and Partnership Centres, the catchment area forecasts are added together to produce Cluster Area forecasts so that an assessment can also be made against the combined total of ELC places across the Cluster.

8.3. There are no defined catchment areas for ELC settings in East Lothian and a parent can choose whichever setting is most appropriate for their child (see **Appendix 2**). There is also a separate Early Learning & Childcare admissions policy.

8.4. The Education Authority uses evidence from the ELC placement analysis to assess what proportion of the eligible pre-school children attend the Local Authority settings within each school catchment where the new housing is being built. This enables us to determine the proportionality of additional local ELC places required in each local authority catchment area. If new housing is being built in a catchment area that does not have a local authority setting, then we would look to increase capacity

at local authority settings within the Cluster that eligible pre-school children from that catchment typically attend.

8.5. The Council takes a number of factors into account when projecting ELC rolls, gathering information from NHS Lothian and the Education Management Information System. The key factors influencing each population forecast for nursery capacity are:

- Baseline population roll for each nursery establishment
- Number of births in each primary catchment area and cluster in East Lothian
- Birth to nursery net migration rates for each catchment area and cluster
- Proportionality of nursery children attending each local authority managed ELC establishment within each catchment area and cluster
- SIMD Decile 1-3 rates - the proportion of nursery children within each primary catchment area and cluster living within the 30% most deprived areas according to SIMD 2016 in East Lothian
- Number of houses committed and planned to be built in each catchment area

8.6. The current methodology for projecting the number of eligible 2-year olds is as follows:

i. The number of proposed new housing units to be built within a school catchment area and the proposed completion phasing of these are added to existing annual housing completions from the current Housing Land Audit as well as additional known housing with planning consent (windfall sites). Both market and affordable housing tenure are included in the number of new houses to be built. Prospective housing is excluded from the figures where the site has less than 5 units or where it is known that the sites are to be developed exclusively for elderly populations or specialist need populations that prohibit occupation by children.

ii. Future birth assumptions are then made for each catchment area based on Live births data tracked for each primary school catchment area from 1996/97 through to the most recent months' worth of data available from the NHS and birth rates tracked from academic session 2003/04 to the present academic session for each new residential development (at street level) that has taken place within each primary school catchment area in East Lothian. These supporting datasets are analysed to assess the potential cumulative impact of future housing on birth rates in each catchment area over time. Births from new housing sites built since 2003/04 are separated out from births from existing properties within a catchment area to make informed judgements about the projected baseline birth for each catchment area and avoid any potential over inflating when the projected new build element is added on.

iii. Current and future 2-year-old population assumptions are then made for each catchment area by applying a birth to 2-year-old migration rate in each year based on historical evidence of tracked birth to 3-year-old population net migration rates in each area (excluding new house build element). The latest mid-year population estimates from the National Records of Scotland (NRS) are used to provide a sense check for the current academic session's 2-year-old population estimate.

iv. The SIMD Decile 1-3 rate for each catchment area (based on local calculations carried out over the three most recent academic sessions) is then applied to the projected 2-year-old population to project the number of 2-year olds within each catchment area that are eligible for funded early learning & childcare provision.

8.7. The current methodology for projecting the number of 3 to 5-year olds is as follows:

i. Future 3 to 5-year-old assumptions are made for each catchment area based on live births data from the NHS, future birth assumptions, historical birth to nursery migration rates, nursery placement analysis data, P1 deferral rates and tracked nursery rates arising from new residential developments. These supporting datasets are analysed to assess the potential cumulative impact of future housing on the ELC population and ELC places required in each catchment area over time. Nursery pupils from new housing sites built since 2003/04 are separated out from nursery pupils from existing properties within a catchment area to make informed judgements about the projected baseline nursery population for each catchment area and avoid any potential over inflating when the projected new build element is added on.

8.8. This methodology is used for all the different ELC projection sets, including those provided in the School Estate Management Plan (SEMP), Main Issues Report (MIR), Local Development Plan (LDP) and in the Education Authority response to planning applications.

9. Primary & Secondary Pupil Roll Forecasting Methodology

9.1. The methodology for forecasting primary and secondary school rolls has been in use in East Lothian Council since 1996 and was originally developed by Lothian Regional Council.

9.2. The current methodology for projecting the number of primary & secondary pupils is as follows:

i. The number of proposed new housing units to be built within a school catchment area and the proposed completion phasing of these are added to existing annual housing completions from the current Housing Land Audit as well as additional known housing with planning consent (windfall sites). Both market and affordable housing tenure are included in the number of new houses to be built. Prospective housing is excluded from the figures where the site has less than 5 units or where it is known that the sites are to be developed exclusively for elderly populations or specialist need populations that prohibit occupation by children.

ii. Future P1 intake assumptions are made for each catchment primary school based on three key sets of data: live births data from the NHS tracked for each primary school catchment area; historical net birth to P1 admission migration rates for each catchment area – this data tracks P1 deferrals as well as district/non district intake; and P1 intake rates arising from new residential developments over time. These three key supporting datasets are analysed to assess the potential cumulative impact of future housing on P1 intakes over time. Births and P1 pupils from new housing sites built since 2003/04 are separated out from births and P1 pupils from existing properties within a catchment area to make informed judgements about the projected baseline birth and P1 intake rates for each catchment school and avoid any potential over inflating when the projected new build element is added on.

iii. An analysis is then made on historical primary and secondary stage migration rates to assess the potential impact of future housing on the stage migration rates. Each school's historical stage migration rate is calculated individually within East Lothian and is the net migration in or out of a school during the academic session, excluding the contribution of children calculated from point (iv) below in that same year to avoid creating a compound effect and overinflating

the migration rate. The migration rate is averaged over the last 3 years, weighting more highly for the current year.

iv. The relevant average New Build CPHR for each catchment school is multiplied by the new build housing figures for the corresponding catchment area within each build year to obtain the potential output of primary and secondary children from the new housing who would be joining the respective schools through the academic session during each year of new build completion.

v. The school roll forecasting system then projects the number of primary pupils by taking the initial start of session roll at each primary stage for the first year of the school roll projections and adding in the children at each stage from the new housing for the respective year divided by the 7 stages. The result is then multiplied by the stage migration factor (see point iii above) to produce a start of session roll for the next stage (P2 to P7) for the following year with the projected P1 intake feeding in from point (ii) above.

vi. The system then projects the number of secondary pupils: for S1-S4 by adding the total children from new housing (using the average secondary New Build CPHR) divided by the 6 stages and then multiplying the stage migration factor to give a start of session roll at the next stage for the following year. S5 pupil forecasts require to be multiplied again by the S4:S5 stay-on rate to produce an S5 roll for the following year's start of session. For S6, the children from new housing is multiplied by the S5:S6 stay-on rate to account for there being fewer pupils in S5. This is then added to the S5 roll. The result is multiplied by the stage migration factor and then multiplied again by S5:S6 stay-on rate to produce a S6 roll for the following year's start of session. The stay-on rates are averaged over the last 3 years, weighting more highly for the current year.

vii. S1 forecasts are calculated by multiplying the feeder catchment primary schools' P7 forecasted total for the previous year by the P7-S1 transfer rate (the migration rate of the P7's from the feeder primaries to S1 of the secondary school during an academic year, excluding the contribution of children from new housing during that same year. Again, data is used for the last 3 years to produce a weighted average transfer rate, weighting more highly for the current year).

9.3. The complete formula the Council uses to project the annual cumulative impact of new housing developments on primary school rolls over time is as follows:

Baseline school census roll

+

Average new build child per house ratio x no. of new houses in each build year
(*applied to the specific build years that new houses are projected to be built within*)

+

net annual stage migration rate
(*applied at each stage P1 through to P7 to reflect fluctuations that occur in inward/outward migration during the years of house build and following completion*)

+

annual start of session projected P1 intake
(including projected P1 pupils from the new houses)

9.4. The complete formula the Council uses to project the annual cumulative impact of new housing developments on secondary school rolls over time is as follows:

Baseline school census roll

+

Average new build child per house ratio x no. of new houses in each build year
(*applied to the specific build years that new houses are projected to be built within*)

+

net annual stage migration rate
(*applied at each stage S1 through to S6 to reflect fluctuations that occur in inward/outward migration during the years of house build and following completion*)

+

annual P7-S1 transfer rate
(applied to the associated P7 cohort for the new S1 intake)

+

annual S4-S5 stay-on rate
(applied to the S4 cohort from the previous academic session)

+

annual S5-S6 stay-on rate
(applied to the S5 cohort from the previous academic session)

9.5. See **Appendices 3 and 4** for a diagram of how the various calculations feed through in the above steps for the primary and secondary sector.

9.6. This methodology is used for all the different primary and secondary school projection sets, including those provided in the School Estate Management Plan (SEMP), Main Issues Report (MIR), Local Development Plan (LDP) and in the Education Authority response to planning applications.

10. ASN Population Forecasting Methodology

10.1. The methodology for forecasting ASN populations was developed by East Lothian Council during 2015 and 2016.

10.2. The current methodology for projecting the number of primary & secondary pupils with additional support needs is as follows:

i. Total number of pupils projected to attend each primary and secondary school within each of the clusters are multiplied by the average rate of pupils who are recorded as having an additional support need as at the September Pupil Census.

ii. To calculate the impact on the number of ASN specialist provision places required to accommodate any increases in the projected ASN populations, the proportion of pupils recorded as requiring enhanced support in East Lothian is applied to the projected numbers.

11. Education Provision Capacity Demand Assessments

11.1. The Education Provision capacity demand assessments are based on the education population projections which are converted into the number of ELC places, ASN specialist provision places, secondary classroom spaces and number of primary classes required to accommodate the peak projected rolls in accordance with national regulations and guidance on capacity and class maxima set out in **Appendix 1**.

11.2. School capacities are expressed in terms of total Planning Capacity together with the number of class teaching spaces needed to accommodate the projected number of pupils from year to year. This provides the basis for the Council to plan for future changes in the school estate and to assess the need for future investment. The Planning Capacities are also used to assess the impact of new development to secure appropriate developer contributions.

11.3. The maximum capacity for nursery classes under the management of Education Authorities are restricted by Care Inspectorate requirements for the buildings (net area of classroom spaces and numbers of pupil toilets) based on *The School Premises (General Requirement and Standards) (Scotland) Regulations 1967 (as amended)* http://www.legislation.gov.uk/uksi/1967/1199/made and the *'National Care Standards – early education and childcare up to the age of 16' (revised September 2009)* - http://www.gov.scot/Resource/Doc/349451/0116828.pdf

11.4. Capacities for East Lothian Primary Schools are expressed as Planning Capacities and classroom numbers. The Planning Capacity is a measure of the total number of pupils and classes which could be accommodated in a school, based on the number and size of teaching spaces. It is also informed by the pupil distribution across class stages and the class organisation required for the projected pupil numbers. This is the capacity figure which is provided to the Scottish Government in the annual School Estate Core Facts Statistical return and together with the class organisation profile prepared by the Council is the realistic figure used in the assessment of the impact of development on the schools' infrastructure.

11.5. Primary School Planning Capacity and Working Capacity is calculated generally in accordance with the Scottish Government guidance on *Determining Primary School Capacity (October 2014)* and in accordance with Sports Scotland Guidance on Primary School Sports Facilities.

11.6. Maximum class size legislation and the physical limitations of teaching spaces are key factors in determining the number of classes that are required to accommodate the projected number of primary pupils on the school roll. The appropriate statutory maximum class size – P1 maximum of 25, P2 and P3 maximum of 30, P4 to P7 maximum of 33, and composite maximum of 25 – are applied to the class organisation for the projected primary pupils at each stage in line with current legislation and policy. Due to differences in the projected pupil numbers at each stage within a school and the maximum class size legislation, small changes in the roll projections may require an increase/decrease of one class on the projected number of classes to accommodate the projected pupil roll. Therefore, there may be instances where the projected total roll is lower in one year than another but the projected stage breakdowns cannot be configured into the same number of classes and an additional classroom is required so that class maxima legislation is not breached.

11.7. Secondary School capacity is calculated in accordance with *School Premises (General Requirements and Standards) (Scotland) Regulations 1967 (as amended)*. Relevant recognised reference documents

published by the Scottish Futures Trust, including the Schools Development Handbook, are used to inform best practice.

11.8. The overall size of nursery, primary or secondary school provision is based on the area allocation required for the projected pupil numbers using the Scottish Futures Trust standard area metrics. Nursery places are generally expected to be delivered within the same metric as the relevant primary school band. For example, a single stream primary school with a design capacity of 231 pupils would be expected to be delivered within 8.5 m^2 per pupil. If the school also had a 30/30 nursery this would be expected to be delivered within the same 8.5 m^2 pupil rate so a total of (231+30) x 8.5 = 2218.5 m^2.

11.9. Schedule of accommodations are developed from the global space allocation including, but not limited to, general classrooms, science laboratories (for secondary), and other specialist spaces, ICT, art, music, drama, and PE areas, together with general core accommodation for social, dining and staff.

11.10. The capacity assessment for each set of projections prepared is then used to determine the amount of additional capacity needed to accommodate new uncommitted housing development, over and above current committed developments from the Established Supply and baseline demographics.

11.11. As stated previously in Section 1, the *Education (Scotland) Act 1980* places a legislative duty on the Council to plan for growth in our communities. The Education Authority has a duty to ensure that the number of eligible pre-school children under the terms of the *Children and Young People (Scotland) Act 2014, Part 6*, and primary and secondary age pupils (including pupils with additional support needs) arising from the cumulative impact of proposed new residential developments can access the necessary education accommodation in their local area. It also places a legislative duty on the Council to ensure that the Education Authority can maintain standards of service provision for all eligible pre-school children and school age pupils. Where additional Education Provision capacity is required, as a consequence of the developments, developer contributions will be sought. The Council will not seek developer contributions for any existing deficiencies in either capacity or standard of accommodation.

11.12. East Lothian Council's *Supplementary Planning Guidance: Developer Contributions Framework Technical Note* sets out how the need for any additional land and/or capital costs for additional accommodation is identified, based on the Education Provision capacity demand assessments, and where relevant apportioned proportionally (if necessary between the service and infrastructure provider and developers) and pro-rata.

12. Why Pupil Roll Projections & Required Class Numbers Change Between Assessments

12.1. There are many reasons why pupil roll projections can change from one academic session to the next or even more frequently between planning applications and updates within the same academic session. The following six factors are the key drivers:

i. **New House Completion Rates** – Number and phasing – these can change from one housing land audit to the next as expected build rates and start dates slip; these can also change any number of times within each year as new planning applications are submitted and

considered, pending windfall applications are approved following successful application and/or appeals, or revised numbers / phasing are submitted for strategic sites different from the approved strategic housing land audit.

ii. **Baseline Sept Census Stage Rolls** – If the census rolls are higher or lower than initially anticipated as a result of more pupils moving into/out of the area than normal and/or a material change in S5 and S6 pupils who may have intended to stay on at school now choosing to leave school after the start of term or remain in school than initially anticipated.

iii. **Class Sizes** - Maximum class sizes and the physical limitations of teaching spaces are a key factor in determining the number of classes that are required to accommodate the projected number of pupils. Due to the differences in the pupil numbers at each stage within a school and the maximum class sizes of 25 pupils in Primary One, 30 pupils in Primary Two and Primary Three, 33 pupils in Primary Four to Seven and 25 pupils in a composite, small changes in the roll projections of even just one or two pupils may require an increase/decrease of one class on the previous projected number of classes to accommodate the new projected pupil roll.

iv. **New P1 and S1 Intake** - If this is higher or lower than initially anticipated from previously projected figures following placing request appeals, deferrals, and/or parents simply changing their mind between the end of the Placing Request process and the start of term/Sept Census date.

v. **Future P1 intakes** - Affected by latest birth numbers showing a marked change, particularly if showing either significant increase/decrease from previous years that is unexpected and may be a one-off will have an effect on the P1 intake five years down the line.

vi. **Annual Net Stage Migration** – Higher/lower number of families moving into the area than typical between one session and the next.

APPENDIX 1

1) Legislative Context:

The Local Authority has a number of statutory duties relating to the provision of education for eligible pre-school children, primary and secondary school age children (including those with additional support needs) in its area. These include but are not limited to:

i. **Section 1** of the **Education (Scotland) Act 1980** requires authorities to secure for their area adequate and efficient provision of school education: http://www.legislation.gov.uk/ukpga/1980/44/contents

ii. **Section 17** of the **Education (Scotland) Act 1980** requires authorities to provide sufficient accommodation in schools and other educational establishments under their management: http://www.legislation.gov.uk/ukpga/1980/44/section/17

iii. **Sections 22C and 22D** of the **Education (Scotland) Act 1980** deal with changes to the provision of denominational education https://www.legislation.gov.uk/ukpga/1980/44/section/22C

iv. **Section 3** of the **Standards in Scotland's Schools etc (Scotland) Act 2000** requires authorities to endeavour to raise standards and secure improvement in the quality of school education provided in their schools. **Section 2** of this Act states that it is the duty of the Education Authority to ensure that the education it provides is directed to the development of the personality, talents and the mental and physical abilities of the children and young people to their fullest potential.

v. **Section 3B** of the **Standards in Scotland's Schools etc. (Scotland) Act 2000** (as amended by section 1 of the Education (Scotland) Act 2016) places a duty on education authorities, in carrying out their school education functions, to have due regard to the need to reduce inequalities of educational outcome experienced by pupils as a result of socio-economic disadvantage. http://www.legislation.gov.uk/asp/2016/8/part/1/enacted Subsection (1)(a) requires that education authorities satisfy this duty where:

   a. "an education authority is making a decision of a strategic nature about the carrying out of its functions relating to school education, or
   b. an education authority is considering what steps to take to implement such a decision."

   This includes strategic decisions about the size and construct of the school estate and setting of education budgets, including staff planning and management arrangements where the size or geographical nature of the authority results in these aspects becoming strategic decisions.

vi. **Section 15** of the **Standards in Scotland's Schools etc. (Scotland) Act 2000** http://www.legislation.gov.uk/asp/2000/6/contents also requires education authorities to provide education for all children in mainstream schools ("a school other than a special school") unless doing so:

   (a) would not be suited to the ability or aptitude of the child;
   (b) would be incompatible with the provision of efficient education for the children with whom the child would be educated; or
   (c) would result in unreasonable public expenditure being incurred which would not ordinarily be incurred

vii. **The Education (Disability Strategies and Pupils' Educational Records) (Scotland) Act 2002** places a duty on education authorities to prepare a strategy to increase the physical accessibility of the

school environment, increase the accessibility of the curriculum and improve communication, especially in relation to the provision of school information, for those pupils who have disabilities, and to plan for prospective pupils who may have.

viii. **The Equality Act 2010** restates the previously existing duty that an education authority is required to "make reasonable adjustment" for disabled persons in schools, where an existing arrangement places a disabled person at a substantial disadvantage in comparison to persons who are not disabled, to remove that disadvantage.

ix. The Education Authority must provide the mandatory amount of Early Learning and Childcare (ELC) for eligible pre-school children, including those with additional support needs, belonging to its area in accordance with eligibility criteria set down by the Scottish Government under the terms of the **Children and Young People (Scotland) Act 2014, Part 6**. http://www.legislation.gov.uk/asp/2014/8/part/6 Section 52 also states that "an education authority must have regard to the desirability of ensuring that the method by which it makes early learning and childcare available in pursuance of this Part is flexible enough to allow parents an appropriate degree of choice when deciding how to access the service".

x. The Schools (Consultation) (Scotland) Act 2010 also sets out special safeguards for rural schools, which reflect the particular importance of schools to fragile rural and remote communities in Scotland http://www.legislation.gov.uk/asp/2010/2/crossheading/special-provision-for-rural-schools

xi. These safeguards for rural schools were substantially amended and strengthened by section 80 of the Children and Young People (Scotland) Act 2014.

xii. **Part 1** of the **Local Government in Scotland Act 2003** http://www.legislation.gov.uk/asp/2003/1/part/1 and the **2004 statutory guidance** http://www.gov.scot/Publications/2004/04/19166/35250 requires authorities to secure best value in the delivery of services, which includes agreements for the construction or maintenance of buildings or works.

xiii. The School Premises (General Requirements and Standards) (Scotland) Regulations 1967 (as amended) sets out standards in relation to the minimum requirements for school sites, playing fields and educational accommodation. They also prescribe standards for the provision of ancillary accommodation including kitchen premises, sanitary facilities, washing accommodation, storage accommodation, medical inspection accommodation, and staff accommodation.

xiv. Section 3 of the Education (Lower Primary Class Sizes) (Scotland) Regulations 1999 sets out the maximum class sizes for single stage P2 and P3 classes: http://www.legislation.gov.uk/uksi/1999/1080/regulation/3/made

xv. Regulation 2 of the Education (Lower Primary Class Sizes) (Scotland) Amendment Regulations 2010, inserted an amendment into Section 3 of the Education (Lower Primary Class Sizes) (Scotland) Regulations 1999, which set the new lower statutory class size maximum of 25 in all single stage P1 classes: http://www.legislation.gov.uk/ssi/2010/326/regulation/2/made

xvi. The SNCT Handbook Conditions of Service, Appendix 2.9 further sets out class size maxima for primary, secondary and class sizes for special schools and units: http://www.snct.org.uk/wiki/index.php?title=Appendix_2.9

xvii. The maximum capacity for nursery classes under the management of education authorities are restricted by Care Inspectorate requirements for the buildings (net area of classroom spaces and numbers of pupil toilets) based on The School Premises (General Requirement and Standards) (Scotland) Regulations 1967 (as amended) http://www.legislation.gov.uk/uksi/1967/1199/made and the 'National Care Standards – early education and childcare up to the age of 16' (revised September 2009) - http://www.gov.scot/Resource/Doc/349451/0116828.pdf

xviii. Legislation on Health and Safety, Building Control and Fire Precautions as set out in the following acts and regulations:

- *Health & Safety at Work etc. Act 1974 http://www.legislation.gov.uk/ukpga/1974/37/contents*
- *Workplace (Health, Safety and Welfare) Regulations 1992 http://www.legislation.gov.uk/uksi/1992/3004/contents/made*
- *Management of Health and Safety at Work Regulations 1999 http://www.legislation.gov.uk/uksi/1999/3242/pdfs/uksi_19993242_en.pdf*
- *The Fire (Scotland) act 2005 as amended by The fire safety (Scotland) regulations 2006 http://www.legislation.gov.uk/asp/2005/5*

2) National Policy, Strategy & Guidance Context

i. **Scottish Planning Policy** (February 2010) – paragraph 44 states that "Under section 72 of the Climate Change (Scotland) Act 2009 local development plans must require all new buildings to be designed to avoid a specified and rising proportion of the projected greenhouse gas emissions from their use through the installation and operation of low and zero carbon generating technologies": http://www.gov.scot/Publications/2010/02/03132605/7

ii. **Building Better Schools: Investing in Scotland's Future** (September 2009) - the Scottish Government and COSLA's joint school estate strategy which sets out the sets out the national and local governments shared vision, aspirations and principles for the efficient and effective management of the school estate: http://www.gov.scot/Resource/Doc/285201/0086644.pdf

iii. **Commission on the Delivery of Rural Education** (April 2013) - makes recommendations on the delivery of all aspects of education in rural areas: http://www.gov.scot/Publications/2013/04/5849

iv. **Determining Primary School Capacity** (October 2014) - Guidance for Local Authorities on the determination of the capacity of Primary Schools in Scotland: http://www.gov.scot/Publications/2014/10/6749

v. **Suitability Core Fact** (October 2008) – Guidance for local authorities on assessing the extent to which a school building and its grounds are appropriate in providing an environment which supports quality learning and teaching and those other services provided to individual children and to the school community, in terms of practicality, accessibility and convenience: http://www.gov.scot/Publications/2008/09/19123626/0

vi. **Condition Core Fact** (March 2007) - Guidance for local authorities on assessing the condition of school buildings: http://www.gov.scot/Publications/2007/03/12142801/0

vii. **School Design: Optimising the Internal Environment** (March 2007) - Guidance for local authorities on internal environmental conditions in schools: http://www.gov.scot/Publications/2007/02/28144045/0

viii. **Building The Ambition** (August 2014) **-** national practice guidance sets the context for high quality Early Learning and Childcare as set out in the Children and Young People (Scotland) Act 2014: http://www.gov.scot/Publications/2014/08/6262/0

3) Local Education Policy, Strategy & Guidance Context:

East Lothian Council has a number of local plans, policies, strategies, and guidance in place to meet its statutory duties and incorporate national guidance in parts 1 and 2 above:

i. East Lothian Council's **Education Service Local Improvement Plan** (approved 21st November 2017) sets out the priority areas for improvement and measures of success organised under key themes linked to both local and national priorities, including East Lothian Council's Plan 2017-2022 and the Scottish Government's National Improvement Framework https://www.eastlothian.gov.uk/download/meetings/id/19275/08_education_service_local_improvement_plan_2017-2018

ii. East Lothian Council's **Pupil Placement Policy** (approved 15th March 2015) clarifies the Council's commitment to enrol all pupils within its area in schools, in a fair and consistent manner, in line with Scottish Government legislation, Education (Scotland) Act 1980, Education (Additional Support for Learning) (Scotland) Act 2004 and 2009 and Scottish Government guidelines http://www.eastlothian.gov.uk/meetings/meeting/5542/education_committee

iii. East Lothian Council's **Framework for Meeting Additional Support for Learning Needs (Sept 2013)** sets out the expectation that children with additional support needs will be educated wherever possible in their local school In line with Section 15 of the Standards in Scotland's Schools, etc Act 2000 http://www.eastlothian.gov.uk/downloads/file/3944/a_framework_for_meeting_additional_support_for_learning_needs

iv. The Education Authority's **Early Learning & Childcare Strategy 2016-2021** approved at Education Committee on 20th September 2016 https://www.eastlothian.gov.uk/download/meetings/id/18085/08_early_learning_and_childcare_strategy_2016-2021

v. **Expansion of Early Learning and Childcare to 1140 hours – Draft Implementation Plan** - approved at East Lothian Council meeting on 31st October 2017. Sets out East Lothian's vision and proposed model of delivery to meet the requirements of the expansion programme. http://www.eastlothian.gov.uk/meetings/meeting/6062/east_lothian_council

vi. **East Lothian Play Policy 2017 to 2020** – approved at Education Committee on 13th June 2017 https://www.eastlothian.gov.uk/download/meetings/id/18888/04_draft_play_policy_2017-20

vii. **East Lothian Education Accessibility Strategy 2017-2020** – approved at Education Committee on 21st March 2017 https://www.eastlothian.gov.uk/download/meetings/id/18628/03_education_accessibility_strategy_2017-2020

viii. ***School Estate Management Plan*** *- May 2010* **-** as per report to Education Committee on 16th November 2010

https://www.eastlothian.gov.uk/download/meetings/id/12032/04_school_estate_management_plan

ix. **Composite Classes in Primary Schools Guidelines** (Revised April 2009)

x. **Devolved School Management Policy** (March 2009)

xi. **Home to School Transport Policy** (February 2010) - http://www.eastlothian.gov.uk/schooltransport

xii. **Road Safety – Schools Health & Safety Procedures** (Updated October 2011)

xiii. East Lothian's **Policy for the Design of General Purpose Space in Primary Schools -** approved at Education Committee on 16th March 2010 https://www.eastlothian.gov.uk/download/meetings/id/11060/06_policy_for_the_design_of_general_purpose_space_in_primary_schools

APPENDIX 2

1. Education Provision Geographies

i) **School Catchment Areas -** Each primary & secondary school in East Lothian has a defined catchment area. The following extract from **Education (Scotland) Act 1980, 28A (3D)** states "*In subsections (3A) and (3C) above, "catchment area" means the area from which pupils resident therein will be admitted to the school in terms of any priority based on residence in accordance with the guidelines formulated by the authority under section 28B(1)(c) of this Act*"
http://www.legislation.gov.uk/ukpga/1980/44/section/28A

Current defined **School Catchment Areas** for East Lothian Council are as published on the Council's website: http://www.eastlothian.gov.uk/info/878/schools/1314/school_catchments

The current list of East Lothian Feeder Primary Schools and their corresponding Secondary Schools are as published on the Council's website:
http://www.eastlothian.gov.uk/downloads/file/5295/east_lothian_feeder_primary_schools_april_2012

A school catchment area can be changed to reflect changes in population patterns or to take into account significant new housing developments but before the change can be implemented a statutory consultation must be undertaken. The **Schools (Consultation) (Scotland) Act 2010** http://www.legislation.gov.uk/asp/2010/2/contents sets out the consultation process that local authorities must follow when proposing a permanent change to any of their schools, including nursery schools, such as a closure, relocation or change of catchment area.

ii) **Cluster Areas -** refer to the six geographical areas formed from the current six secondary catchment areas and their corresponding feeder primary catchment areas to enable cluster-wide working and planning by a variety of services across the Council, including Education.

iii) **Early Learning & Childcare (ELC) Settings -** ELC provision within East Lothian Council is currently delivered through a combination of Local Authority nursery classes and private and voluntary sector Partnership Centres. In the spirit of the *Children and Young People (Scotland) Act 2014, Part 6* http://www.legislation.gov.uk/asp/2014/8/part/6 there are no defined catchment areas for ELC settings and parents in East Lothian can choose the settings most appropriate for their children, depending on availability of places.

The Education Authority aims to offer ELC provision wherever possible within local communities. Evidence from the nursery placement analysis over the last five years shows that 93% of eligible pre-school children in East Lothian attend ELC provision within the cluster area in which they reside.

2. How Are Primary & Secondary School Catchment Areas Defined in East Lothian?

2.1. There are two main sources of historical evidence for the interpretation of school catchment areas; historical catchment map drawings and a Street List Index. These are the legal documents upon which school catchment boundaries have been defined.

2.2. The catchment maps use two different formats; A-Z format for Campie Primary School, Musselburgh Burgh Primary School and Pinkie St Peter's Primary School catchment areas and Ordnance Survey (OS) for all other school catchment areas.

2.3. The Street Index is a list of streets deemed to be within each school catchment area.

2.4. The Street Index would typically be the evidence used to respond to public enquiries about school catchment areas because they are easy to use, with the maps being referred to when properties lie close to boundary lines or are newly built.

2.5. While both sources of evidence are referred to, East Lothian Council Legal Division has confirmed that one previous court case exists (Bowie, Petitioner 20/1/10) which concludes that a Catchment Map overrules a Street List Index, as it indicates a delineated area. A Street List Index can only therefore be used for clarification purposes.

2.6. In order to increase public accessibility of information about school catchment areas and to allow this data to be used in conjunction with the Corporate Address Gazetteer (CAG) in the new school Management Information System (SEEMIS) for pupil placement and mainstream transport processes, the Education service undertook an exercise between 2010 and 2011 to replicate the original historical catchment maps within ArcView GIS (a geographical information system).

2.7. These would detail the primary and secondary catchment boundary lines of the historical maps against the most recent version of the CAG and Ordnance Survey (OS) maps, taking into account any subsequent changes to boundary lines following statutory catchment area reviews. It would also provide an electronic version that could be published onto the Council website improving accessibility.

2.8. The steps that the Education Service undertook during the re-digitisation process and the reasons for this are documented within the report to the Council Committee for Education on Tuesday 31 May 2011. Following the re-digitisation process of the school catchment maps within ArcView GIS and the link to the CAG, it was possible to create an extract from the system to provide a comprehensive address index of each individual property falling within a school's catchment area, which would be available for both the relevant school and Headquarters staff to access. This was an improvement on having only a street list to help with queries, particularly in areas where a street might fall into more than one school catchment area. It would also ensure that all relevant staff were aware of all new properties built within their school catchment area.

3. How Do We Determine Which Primary Catchment Area a New Property or Site Lies Within?

3.1. In most instances, it is very clear if a property/site lies within a particular catchment area or not as the whole of the property or site will be encompassed within the boundary line. There are some cases however, where a proposed site or property may fall into more than one existing catchment area.

3.2. In East Lothian, if a new site or a new property is split by a boundary line, current policy is to take the main access point to the property as defining the catchment that the property lies within, i.e. the front door, and allocating each house to a particular catchment area on that basis.

3.3. If a boundary line runs through the main access point to a property, then the side of the boundary that the main access point is closest to defines the catchment area that the property is in.

4. School Catchment Area Reviews

4.1. A school catchment area can be changed to reflect changes in population patterns or to take into account significant new housing developments but before the change can be implemented a statutory consultation must be undertaken. The *Schools (Consultation) (Scotland) Act 2010* http://www.legislation.gov.uk/asp/2010/2/contents sets out the consultation process that local authorities must follow when proposing a permanent change to any of their schools, including nursery schools, such as a closure, relocation or change of catchment area.

4.2. When undertaking a statutory school consultation, the Council must include an Educational Benefits Statement setting out the positive benefits that would accrue for pupils of the affected school(s), children who would likely to become pupils of the school(s) within two years and other children and young people in the area should the proposal be implemented.

How Primary School Rolls Are Forecasted in East Lothian

1. Start of Session Primary School Roll by Stage (Based on latest Sept Pupil Census)

	P1	P2	P3	P4	P5	P6	P7	P1-7
2011	68	78	64	89	67	98	86	550
2012	86	70	80	66	91	69	100	562
2013	59	91	74	85	70	96	73	548
2014	61	66	98	82	92	78	103	580
2015	54	68	73	106	89	100	85	575

2. P1 for each subsequent academic session is then projected based on historical birth to P1 admission rate trends and annual pre-school/P1 catchment analysis trends. It also takes into account the potential impact of new house builds into each year's projected P1 total.

4. The Total P1-P7 roll for each projected year is calculated by rounding the sum of the projected stages within that year.

Roll forecasts are generated for up to 10 years although the error margin will widen the further into the future.

3. Projecting forward to each next academic session's **P2 to P7** roll, the following calculation is used:

i) Start of Session Stage Roll + New Housing Product (i.e. Number of Expected New Houses in Session x Child per house ratio)) / number of primary stages = End of Session Roll

ii) End of Session Roll X Stage Migration Factor = Start of session roll for next stage for the following academic session

e.g. 2012 Projected P2 = 70.2

2011 P1 Roll (**68**) **+** 2011 Housing (**50**) x CPHR (**0.356**) / **7** = **70.543 x** 2012 Stage Migration Rate (**0.9951**) **= 70.2**

e.g. 2013 Projected P3 = 74.457

2012 P2 Roll (**70.2**) **+** 2012 Housing (**55**) x CPHR (**0.356**) / **7** = **72.997 x** 2013 Stage Migration Rate (**1.02**) **= 74.457**

and so on….

How Secondary School Rolls Are Forecasted in East Lothian

1. Start of Session Secondary School Roll by Stage (Based on latest Sept Pupil Census)

	S1	S2	S3	S4	S5	S6	S1-6
2011	173	169	157	170	152	127	948
2012	150	177	172	160	158	131	948
2013	161	154	180	176	149	136	956
2014	133	164	157	183	163	128	928
2015	170	137	169	161	171	141	949

2. S1 for each subsequent academic session is then projected based on the total Associated P7s from its feeder primary from the previous session multiplied by previous session's P7-S1 Transfer Rate:

e.g. S1 2012 = **150.47**

2011 Total Associated P7s (**144**) **x** 2011 P7-S1 Transfer Rate (**1.0450**) = **150.47**

3. Projecting forward to each next academic session's **S2 to S4 roll only**, the following calculation is used:

i) Start of Session Stage Roll + New Housing Product / number of secondary stages = End of Session Roll

ii) End of Session Roll X Stage Migration Factor = Start of session roll for next stage for the following academic session

e.g. 2012 Projected S2 = 176.53

2011 S1 Roll (**173**) **+** 2011 Housing (**67**) **x** CPHR (**0.16**) / **6** = **174.79 x** 2012 Stage Migration Rate (**1.01**) **= 176.53**

e.g. 2013 Projected S3 = 179.94

2012 S2 Roll (**176.53**) **+** 2012 Housing (**61**) **x** CPHR (**0.16**) / **6** = **178.16 x** 2013 Stage Migration Rate (**1.01**) **= 179.94**

and so on….

4. Projecting forward to each next academic session's **S5 roll**, the following calculation is used:

i) Start of Session Stage Roll + New Housing Product / number of secondary stages = End of Session Roll

ii) End of Session Roll X Stage Migration Factor x S4 to S5 Stay-on Rate = Start of session S5 roll for the next academic session

e.g. 2012 Projected S5 = 157.73

2011 S4 Roll (**170**) **+** 2011 Housing (**67**) **x** CPHR (**0.16**) / **6** = **171.79 x** 2012 Stage Migration Rate (**1.01**) x 2012 S4-S5 Stay-on Rate (**0.909**) **= 157.73**

For the **S6** Roll, the S4-S5 Stay-on Rate is added to the 'child product' calculation from the new housing at S5 to allow for there being fewer pupils in S5 as follows:

e.g. 2012 Projected S6 = 130.76

2011 S5 Roll (**152**) **+** 2011 Housing (**67**) **x** CPHR (**0.16**) x 2011 S4-S5 Stay-on Rate (**0.899**) / **6** = **153.61 x** 2012 Stage Migration Rate (**1.01**) x 2012 S5-S6 Stay-on Rate (**0.843**) **= 130.76**

5. The Total S1-S6 roll for each projected year is calculated by rounding the sum of the projected stages within that year.

East Lothian Local Development Plan

Transport Appraisal – DPMTAG Final Report

On behalf of **East Lothian Council**

East Lothian Council

Project Ref: 31335 | Rev: v4.0b | Date: May 2018

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Appendix A Application of SEStran Regional Model

Appendix B Musselburgh and Tranent Traffic Model Outputs

Addendum

1 Introduction

1.1 Background

1.1.1 East Lothian Council (ELC) is preparing its Local Development Plan (LDP) following the approval of the Strategic Development Plan (SDP) for Edinburgh and South East Scotland.

1.1.2 ELC commissioned Peter Brett Associates LLP and SYSTRA (previously SIAS) to undertake a Transport Appraisal of the implications of housing and economic land allocations on the transport network to support the preparation of the Proposed LDP ready for publication and formal representation.

1.1.3 This Report describes the LDP Transport Appraisal, which has been carried out in accordance with Transport Scotland's Development Planning and Management Transport Appraisal Guidance (DPMTAG) methodology. DPMTAG follows the principles set out in Scottish Transport Appraisal Guidance (STAG) which provides relevant guidance and technical methodologies for carrying out Transport Appraisal in Scotland. There has also been liaison with Transport Scotland throughout this Appraisal to agree the approach and discuss outcomes at various stages in the process.

1.1.4 The LDP Transport Appraisal has been undertaken to assess the predicted transport impacts of the LDP and the identification of a package of infrastructure interventions and a delivery mechanism to support it. This Appraisal follows on from previous work undertaken using strategic transport modelling to assist in the preparation of the Main Issues Report (MIR).

1.1.5 Following completion and submission of the LDP for approval, Scottish Ministers undertook an examination of the proposed LDP. An outcome from the examination was a number of amendments to the plan. Commentary on the changes and resultant impacts to DPMTAG appraisal are included in the Addendum at the end of this report

1.2 Development Planning and Management Transport Appraisal Guidance (DPMTAG)

1.2.1 The DPMTAG methodology details the Transport Appraisal process and aligns it with the Development Plan (DP) stages. The DPMTAG stages are summarised as follows:

- **Stage 1** is a *baseline assessment* of current and forecast performance of the strategic transport network, which feeds into the early engagement stage of the DP;
- **Stage 2** aligns with the *preparation of the Main Issues Report*, where the first step is to set out transport planning objectives in the context of the plan vision. This is followed by the identification of existing and future transport and accessibility issues resulting from land use changes. This is followed by the generation and sifting of Transport Options for Appraisal. The final step is the Appraisal of identified interventions by considering their contribution to the stated objectives; and
- **Stage 3** aligns with the *preparation of the Proposed Plan*, where the East Lothian LDP is now defined. This provides an opportunity to reconsider the Transport Options and refresh the Transport Appraisal, following MIR consultation, as well as initial consideration of deliverability in terms of feasibility, affordability and public acceptability.

1.2.2 Figure 1.1 presents the status of the East Lothian LDP at DPMTAG Stage 3, highlighting the opportunity to revisit the generation, sifting and appraisal of the transport options following the MIR public consultation.

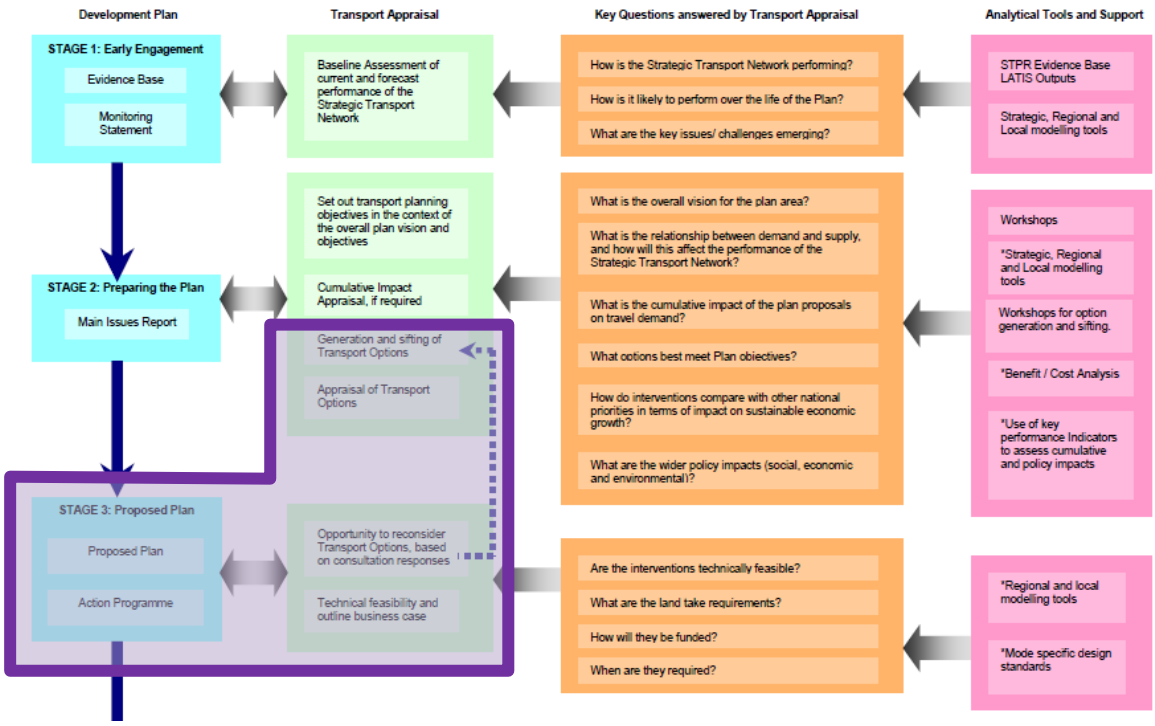


Figure 1.1: DPMTAG Stages and East Lothian LDP Appraisal Requirements

1.2.3 The level of Transport Appraisal that is required by Transport Scotland to take an informed view on the impact of proposed developments should be proportionate to the size and type of development plan and the nature of the transport options being considered.

2 Approach

2.1 Overview

2.1.1 To be compliant with DPMTAG, and reflecting that the East Lothian Local Development Plan (ELLDP) fits in with the SESplan SDP, a Level 3 Appraisal is required to support the Proposed Plan. This implies the use of modelling tools and preliminary feasibility and design work to identify an adequate technical solution and realistic alternative options necessary to support the ELLDP.

2.2 Transport Modelling Approach

2.2.1 The previous transport assessment for the Main Issues Report made use of an enhanced (with respect to network detail in the East Lothian area) version of the 2007 SEStran Regional Model (SRM) to consider transport network performance.

2.2.2 At the same time as the ELLDP Proposed Plan Appraisal was commenced, a 2012 based version of SRM (SRM12) was being finalised by Transport Scotland for use in the SESplan Cross-boundary Appraisal. SRM12 considers SESplan-wide transport impacts of the SDP land allocations. Following discussions with ELC and Transport Scotland, it was agreed that SRM12 could be made available and used for the ELLDP Appraisal.

2.2.3 The SRM12 model is a strategic model, with a focus on key transport movements (trunk road and principal public transport corridors) within its simulation area. In order to provide more robust predictions of ELLDP impact in and around the more urban areas of East Lothian (Musselburgh and Tranent), a detailed traffic microsimulation model was developed and applied to support the strategic modelling.

SEStran Regional Model

2.2.4 The SEStran Regional Model 2012 (SRM12) was used to inform the Appraisal of the implications of housing and economic land allocations on the transport network.

2.2.5 SRM12 is a multi-modal transport model, developed by Transport Scotland, which covers the SESplan area, and contains the following key modelled components:

- Trip ends – trip generation is derived from the Transport Economic Land Use Model of Scotland (TELMoS) land-use data;
- Demand model – represents key traveller choices of: mode choice, destination choice and Park & Ride;
- Road model covering route choice (assignment) for car drivers and heavy & light goods vehicles; and
- Public transport (PT) model covering route choice (assignment) for public transport passengers.

2.2.6 Appendix A provides an overview of the SRM and details the model application for the ELLDP Appraisal.

Musselburgh and Tranent Traffic Model

2.2.7 The *Musselburgh and Tranent Traffic Base Model Report* (SIAS, June 2016) describes the development of the Musselburgh and Tranent Traffic Model (MTTM).

2.2.8 The *Musselburgh and Tranent Local Development Plan Microsimulation Modelling Report* (SYSTRA, May 2017) described the application of the MTTM for the purpose of the ELLDP Appraisal.

2.2.9 The MTTM is a S-Paramics micro-simulation traffic model covering the Musselburgh and Tranent area, as illustrated in Figure 2.1.

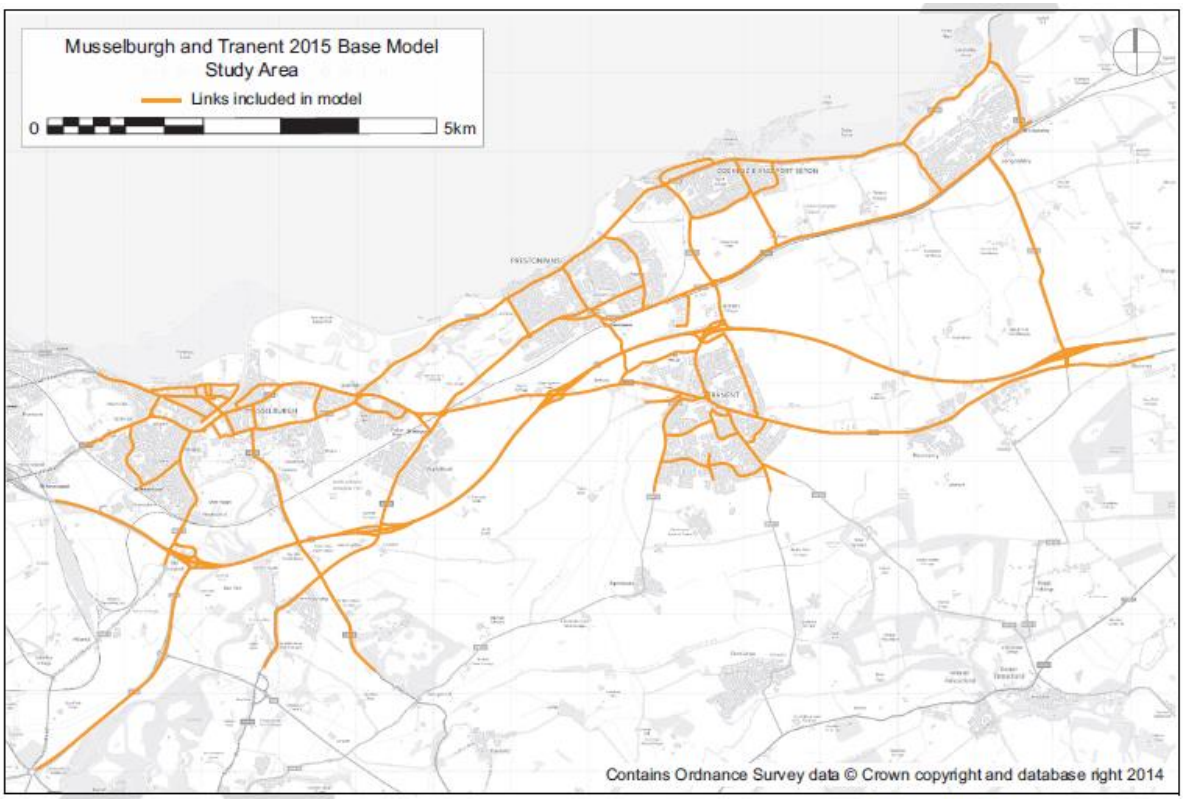


Figure 2.1 Musselburgh and Tranent Traffic Model Coverage

2.2.10 Base year traffic demand matrices were developed using a combination of:

- observed data (including readily available data and data specifically collected for model development);
- SRM12 sub-area traffic flows; and
- a process of calibration including matrix estimation based on WebTAG and DMRB guidance.

2.2.11 Following review of the model calibration and validation, the Base model was considered appropriate for the purpose of supporting the appraisal of the ELLDP.

Data and Supporting Information

2.2.12 Various data and information was used as part of the Appraisal and Assessment as follows:

Transport Survey Data

2.2.13 Data collection was undertaken as part of the traffic model development. This is described in the *Musselburgh and Tranent Traffic Base Model Report* (SIAS, June 2016). In summary, the following data was collected:

- traffic junction turning counts;

- queue length surveys;
- car journey time surveys;
- bus dwell time surveys; and
- pedestrian crossing activity.

Planning Data

2.2.14 ELC planners provided information on the land-use developments which form part of the ELLDP land-use scenarios and this is described in Section 4.

Network Data

2.2.15 Junction layout parameters were measured from CAD background mapping. Signal stages, phasing and intergreens were provided by ELC. School patrol crossing locations and their corresponding operational times were provided by ELC.

2.2.16 Traveline Scotland, the National Public Transport Access Nodes (NaPTAN) dataset and Google Maps were used to collate public transport bus data required for the traffic model development and to check against public transport representation within SRM12.

2.3 Definition of Transport Planning Objectives and Key Performance Indicators

2.3.1 The performance of transport options against the established Transport Planning Objectives (TPOs) is an important aspect of the Appraisal, with definition of corresponding Key Performance Indicators (KPIs). *Information Note 1 - Definition of Transport Planning Objectives and Key Performance Indicators* (PBA, November 2015) sets out the TPOs and Key Performance Indicators (KPIs) to be considered throughout the Transport Appraisal.

2.3.2 As described in DPMTAG, TPOs should express the transport outcomes sought for the plan and describe how potential transport problems could be alleviated. Specifically, the TPOs have been set within the context of the overall vision and objectives for the plan, which are described in the East Lothian LDP Main Issues Report.

2.3.3 In setting TPOs, consideration was also given to relevant Government, national, regional and local policies and objectives. However, the TPOs should not duplicate Government objectives, unless there is a specific aspect the LDP focusses on, as these form a criterion within DPMTAG and will be covered appropriately in the Appraisal without the definition of a separate TPO.

2.3.4 In line with DPMTAG requirements and the STAG concept of proportionality, the LDP Appraisal is largely qualitative. The requirement for specific quantitative KPI metrics will be limited and mostly relate to the application of the SRM12 and the MTTM.

2.3.5 The TPOs and corresponding KPIs for the ELLDP Transport Appraisal were agreed as follows:

- **TPO1**: to deliver development that is well-served by a range of transport modes, particularly public transport and active travel opportunities;
  - KPI: Travel Demand and Modal Share (relating to LTS Indicator 1)

    SRM12 metrics:

    - Trip productions and attractions by mode (i.e. car and public transport) for each model zone and aggregated to sectors covering key areas;
    - PT mode share;
    - Passenger boarding and alighting volumes at rail stations; and
    - Park & Ride site occupancies.

Target:

- Reduce levels of car use and increase use of PT and sustainable modes relative to defined baseline.

- **TPO2**: to locate new development to reduce the need to travel
  - KPI: Traffic Levels and Public Transport Usage (relating to LTS Indicators 3 and 9)

    SRM12 metrics:

    - Vehicle distance (kilometres), and inferred person kilometres, on key corridors in area (A1, A198, A199) and aggregated to sectors covering key areas; and
    - Passenger kilometres on key corridors in area (A1, A198, A199, East Coast Rail Main Line, North Berwick Branch Line) and aggregated to sectors covering key areas.

    Target:

    - Reduce traffic levels relative to defined baseline and not increase overall combined car and PT person kilometres on the transport network.

- **TPO3:** to mitigate the impacts of new development on transport infrastructure and maintain appropriate network performance
  - KPI: Network Performance

    SRM12 metrics:

    - Average vehicle speeds on key corridors and sectors on strategic road network;
    - Ratio of (traffic) flow to capacity (RFC) at key junctions on strategic road network;
    - Rail crowding levels; and
    - Car and bus journey times to Edinburgh city centre.

    Musselburgh and Tranent Traffic Model metrics:

    - Vehicle journey time and speeds on key routes in Musselburgh and Tranent; and
    - Queues at key junctions in Musselburgh and Tranent.

    Target:

    - maintain or increase road speeds and reduce delays relative to defined baseline;
    - maintain or reduce RFCs;
    - manage or reduce rail crowding; and
    - maintain or reduce car and bus journey times.

3 Impact Assessment and Mitigation Option Generation

3.1 Demand Forecasting and Network Assessment

3.1.1 SRM12 was used to inform the ELLDP Transport Appraisal of the implications of housing and economic land allocations on the transport network.

3.2 Land-Use Scenarios

3.2.1 *Information Note 2 – Definition of Appraisal Forecasts* (PBA, May 2016) provides a definition of a set of land-use assumptions which form the basis of the LDP Appraisal. This is summarised below.

3.2.2 The Appraisal focussed on land-use and transport interventions that are directly relevant to the supply and demand for travel to, from and within East Lothian. Following the circulation of the Information Note to ELC and Transport Scotland, agreement on the modelling approach was reached prior to assessing the traffic impacts of the ELLDP scenarios.

3.2.3 Two core model scenarios were prepared to represent the LDP in a forecast year of 2024 (the available forecast year from SRM12) as follows:

- **Without LDP** land-use development scenario. This includes completed and committed development up to 2024 only; and
- **With LDP** land-use development scenario. This 2024 scenario is representative of the 'without LDP' scenario plus the addition of a build-out of all identified ELLDP development sites (i.e. those up to and including 2038).

Overview of the Approach to Modelling Land-Use Changes

3.2.4 The SESplan Cross-boundary Appraisal forecast land-use scenarios were used as the basis of the ELLDP forecasts. This includes a recent consideration of developments across the entire SESplan area.

3.2.5 East Lothian land-use forecasts were updated with ELLDP forecast assumptions provided by ELC Planners as follows:

- Household forecasts based on housing developments in terms of residential units;
- Forecast population figures were estimated based on the Transport Economic Land Use Model of Scotland (TELMoS) household size for East Lothian at SRM12 zonal level; and
- In liaison with ELC, assumptions were applied to estimate the number of jobs based on employment sites and anticipated usage and employment densities.

3.2.6 General assumptions regarding housing development, population and employment in the rest of the SESplan area (and beyond) remain as per the SRM12 cross-boundary land-use scenario.

3.2.7 Table 3.1 provides a summary of the forecast number of households, associated population projections, and number of jobs within the ELLDP scenario for the ELC local authority area.

Table 3.1 ELLDP Summary – Modelled Land-use

Location	2012 Base Year	2024 Without LDP (versus 2012 Base)			2024 With LDP (versus 2012 Base)		
Households	42,984	49,482	+6,498	+15%	57,313	+14,329	+33%
Population	98,180	102,364	+4,185	+4%	115,454	+17,274	+18%
Jobs	23,317	29,102	+5,785	+25%	36,862	+13,545	+58%

3.2.8 The land-use figures have been allocated to SRM12 zones based on the development locations. Where developments are geographically split across more than one zone, the land-use split has been estimated based on the site boundary and consideration of the anticipated loading of trips on the transport network.

3.3 Transport Infrastructure

3.3.1 *Information Note 2 – Definition of Appraisal Forecasts* (PBA, May 2016) provides a definition of a set of transport assumptions which form the basis of the LDP Appraisal, detailing the main changes to the road and public networks which are assumed to have been introduced following the model base year, 2012.

3.3.2 The following **road schemes,** constructed after the 2012 base year**,** are included within the 2024 SRM12 road network:

- M8 Heartlands – extra junction on the M8 (opened 2013); and
- Forth Replacement Crossing – connecting to M90 and M9 Spur.

3.3.3 The following constructed (post 2012) or committed **public transport schemes** are assumed within the 2024 SRM public transport model:

- North Berwick Rail Line Capacity Enhancements – increased capacity on rail services to/from North Berwick with introduction of 6-car sets rolling stock;
- East Coast Mainline Timetable Changes – changes to service frequencies and stopping patterns (implemented 2013);
- Edinburgh Tram – new tramline between Edinburgh city centre and Edinburgh airport (opened 2014);
- Borders Railway – rail line between Tweedbank & Edinburgh. 2tph throughout the day with Park & Ride provision at each rail station (opened 2015);
- Edinburgh Gateway Station – new station at Gogar served by Fife Circles and connection with Edinburgh TRAM (opened 2016); and
- Edinburgh-Glasgow Improvement Project (EGIP) Phase 1 – increased capacity, 5 to 8-minute journey time reduction between Edinburgh and Glasgow. Journey time improvements on various services to Stirling, Aberdeen, Bathgate and Falkirk.

3.3.4 It should also be noted that East Linton Rail Halt now has a status of being a committed scheme, but was not included in the modelling undertaken. The impact of this is likely to be a transfer from bus to rail and a slight reduction of more strategic car movements from the East Linton area, with a slight increase in local car use to East Linton station

3.4 Model Forecasts

3.4.1 Appendix A details the ELLDP forecast year transport assessment and describes the forecast travel demand associated with the land-use and infrastructure forecast year scenarios. In summary, the following model scenarios have been prepared:

2024 Without LDP

- **Land-Use and Travel Demand** – 2012 base year land-use, plus constructed and committed future housing and employment land allocations.
- **Infrastructure** – validated 2012 network plus committed infrastructure.

2024 With LDP

- **Land-Use and Travel Demand** – 2012 base year land-use, plus constructed and committed, plus build-out of all identified LDP housing and employment land allocations.
- **Infrastructure** – validated 2012 network plus committed infrastructure.

2024 With LDP Including Mitigation

- **Land-Use and Travel Demand** – 2012 base year land-use, plus constructed and committed, plus build-out of all identified LDP housing and employment land allocations.
- **Infrastructure** – ELLDP transport mitigation identified as part of this assessment.

3.4.2 SRM12 outputs indicated that the number of car and public transport trips is forecast to increase in most areas within East Lothian, which is in line with the land-use forecasts, particularly the population projections which drive the travel demand forecasting procedures in SRM12.

3.4.3 Inspection of the road and public transport model networks shows a corresponding increase in vehicle movements and public transport passengers that correlates with the increase in travel demand.

3.5 Network Review and Identification of Issues

3.5.1 Appendix A describes the impact of ELLDP forecast travel demand on the transport network without mitigation and this is summarised below.

3.5.2 As expected, the predicted increase in travel demand associated with ELLDP development results in negative impacts on road and public transport in terms of network performance, increased congestion, increased delays to buses and general traffic and increased passenger crowding on the rail network.

3.5.3 As noted previously, a combination of SRM12 and MTTM were used to inform both strategic and local transport impacts (respectively).

3.5.4 The modelling highlighted that the following network locations may have capacity and performance impacts related to the additional trips generated by the introduction of LDP development:

- Road Network
  - A1 QMU Interchange;
  - A1 Old Craighall Interchange;
  - A1 Salters Road;
  - A1 Dolphingstone;
  - A1 Bankton Interchange;
  - A198 at Blindwells;
  - Musselburgh Town; and
  - Tranent Town.
- Rail Network
  - Crowding on North Berwick Line service at Musselburgh and Wallyford.

3.6 Mitigation Option Generation

3.6.1 Following the identification of anticipated network impacts, a review of potential mitigation interventions was undertaken to identify a package of measures that support the ELLDP and alleviate transport impacts. The mitigation assessment is summarised below with further detail of the supporting SRM12 transport modelling provided in Appendix A.

Long-List of Interventions

3.6.2 Prior to the availability of the transport models, a list of potential mitigation interventions was independently prepared (by ELC, PBA and SYSTRA), based on knowledge of the transport system within East Lothian and anticipated ELLDP impacts. This list was then refined following the application and analysis of SRM12 and MTTM model runs.

3.6.3 The list of potential mitigation interventions is presented in Table 3.2 below, in terms of observed network impacts. Each item is scored as follows:

- ✘ No significant impacts of concern within SRM12;
- 🔑 Impacts that required more detailed (MTTM and\or local junction) modelling beyond that of SRM12 to confirm intervention requirements
- ✓ Issue considered in SRM12 with required intervention

3.6.4 The active travel mitigation interventions were considered to have a positive mitigation impact given the forecast increase in car trips associated with the ELLDP and the potential for enhanced active travel provision to help reduce this.

Table 3.2 List of Mitigation Assessment

Mitigation Option	Inclusion in LDP
Musselburgh Town Centre Road Network	🔑
A1 QMU All-Ways Interchange	✓
A1 Wallyford (Salters Road) Interchange	🔑
A1 Dolphingstone Interchange	🔑
A1 Old Craighall Interchange (Signal Control of Roundabout)	✓
Longer Trains & Platforms at Musselburgh and Wallyford Rail Stations	✓
A1 Bankton Interchange	🔑
A198 Junction	✖ 🔑
A198 Enhance Meadowmill Roundabout	✖ 🔑
Longer Trains & Platforms at Prestonpans Rail Station, Longniddry Rail Station, and Drem Rail Station	✓
Longniddry Rail Station Car Park and Drem Rail Station Car Park	✓
New Rail Station north of Blindwells and ECML Overbridge	✓
Tranent Town Centre Road Network	🔑
Ashgrove Underpass, Dunbar*	✖
Segregated Active Travel Corridor	✓

* Ashgrove Underpass was not modelling in SRM12 or MTTM. This is an ELC led option to support improved active travel access to proposed development.

3.6.5 Table 3.2 indicates that SRM12 results did not identify a requirement for mitigation on the A198 adjacent to the Blindwells development based on the SRM12 assessment alone. The road network in this area was working at or near capacity. To better understand the network performance at a detailed level, further work was undertaken using specific junction analysis and the MTTM. This work indicated that mitigation would be required in this area, hence the derivation of mitigation solutions for the A198 between Meadowmill and Bankton Interchange and Meadowmill roundabout.

3.6.6 The Blindwells development is anticipated to include around 1,600 new dwellings within this LDP. When deriving mitigation, it is also prudent to consider the potential impact of a 'full build-out' of Blindwells which may be delivered beyond the lifespan of this plan. This would deliver a total of 6,000 new dwellings, which are being proposed as safe-guarded sites in the ELLDP. It is anticipated that this higher level of development will require further mitigation at Bankton junction with possible requirement for enhancement of the A198 and Meadowmill Roundabout as well. Therefore, ELC are including these potential interventions as part of the safeguarded Blindwells development site.

3.7 Short-List of Interventions and Mitigation Package

3.7.1 Following the assessment and sifting of the list of proposed mitigation, further modelling was undertaken to confirm and conceptually define the interventions to a stage suitable for inclusion in the ELLDP. As described above, where SRM12 does not provide sufficient information, more

detailed local traffic modelling was undertaken using the MTTM and\or local specific junction modelling.

3.7.2 For each intervention, consideration was given to the impacts on the transport network and the associated ELLDP development allocations. This defined a recommended package of interventions that aim to address the cumulative impact of the ELLDP and this is presented in Table 3.3.

Table 3.3 ELLDP Recommended Interventions

Intervention	Description
PROP T15: **Old Craighall A1(T)** Junction Improvements	Signal control of A1 off-slip and A720 approaches with local widening. See **Error! Reference source not found.** for conceptual layout.
PROP T17: **Dolphingstone\A1(T)** Interchange Improvements	Local widening and optimisation of signal control staging, phasing and timings. See **Error! Reference source not found.** for conceptual layout.
PROP T17: **Salters Road\A1(T)** Interchange Improvements	Local widening on Salters Road and optimisation of signal control staging, phasing and timings. See **Error! Reference source not found.** for conceptual layout.
PROP T17: **Bankton Interchange\A1(T)** Interchange Improvements and **A198** Junction	Signal control of northern roundabout with local widening. Redesign of southern roundabout with local widening. See **Error! Reference source not found.** and 3.5 for conceptual layout.
PROP T17: **Meadowmill Roundabout** Junction Improvements	Redesign of roundabout and local widening. See **Error! Reference source not found.** for conceptual layout.
PROP T9 + PROP T10: **Rail Station Package**	Station platform lengthening at Musselburgh, Wallyford, Prestonpans, Longniddry and Drem rail stations. This would accommodate longer, 8-car, trains. (Cost excludes ScotRail rolling stock changes). Also car park extensions at Longniddry and Drem Stations.
PROP T21: **Musselburgh Town Centre Improvements**	Local junction improvements at various locations including introduction of signal control. See **Error! Reference source not found.** for indicative proposals.
PROP T27 & T28: **Tranent Town Centre Improvements**	One-way system in town centre. See **Error! Reference source not found.** for indicative proposals.
PROP T3: **Active Travel Corridor**	Segregated walk and cycle route extending from Musselburgh to Dunbar via Blindwells and Haddington. See **Error! Reference source not found.** for indicative alignment.
A1 QMU All-Ways Interchange	Addition of westbound on and off slips. This intervention will be allocated to specific development allocations in the Proposed Plan and will not be included in the wider ELLDP package where developer contributions will be sought (see Section 4.8).
Ashgrove Underpass, Dunbar	New walk and cycle link under railway line linking community facilities & developments. This intervention will be allocated to specific development allocations in the Proposed Plan

	and will not be included in the wider ELLDP package where developer contributions will be sought (see Section 4.8).

3.7.3 Review of the SRM12 and MTTM forecast road networks indicated a very fine balance of route choice in the Wallyford area (routing between Edinburgh and Strawberry Corner via the A1 Dolphingstone Interchange or A1 Salters Interchange) between both modelling approaches. This influences the determination on whether ELLDP mitigation is required at the A1 intersections at Salters Road and/or Dolphingstone. The SRM12 modelling, presented in Appendix A, identified a requirement for mitigation at Salters Road. The MTTM modelling, presented in Appendix B, identified a requirement for mitigation at Dolphingstone. Based on increased traffic stress levels, mitigation is included at both locations to ensure the ELLDP is deliverable.

3.7.4 A new rail station was appraised within SRM12 and analysis of predicted rail passenger trips making use of the station indicated that this would predominantly be used by residents and employees of the Blindwells development site, thus helping reduce potential car-based trips; a principle objective of the Transport Appraisal. However, it should also be noted that the delivery of this intervention would be dependent on the support of Transport Scotland, Network Rail and/or ScotRail. Therefore, it has been included as aspirational within the ELLDP, with the new station intervention allocated to the Blindwells site. Given this aspirational status, this intervention has not been included in the mitigation package that is appraised in Chapter 4.

Figure 3.1 Old Craighall Junction Improvements Indicative Layout

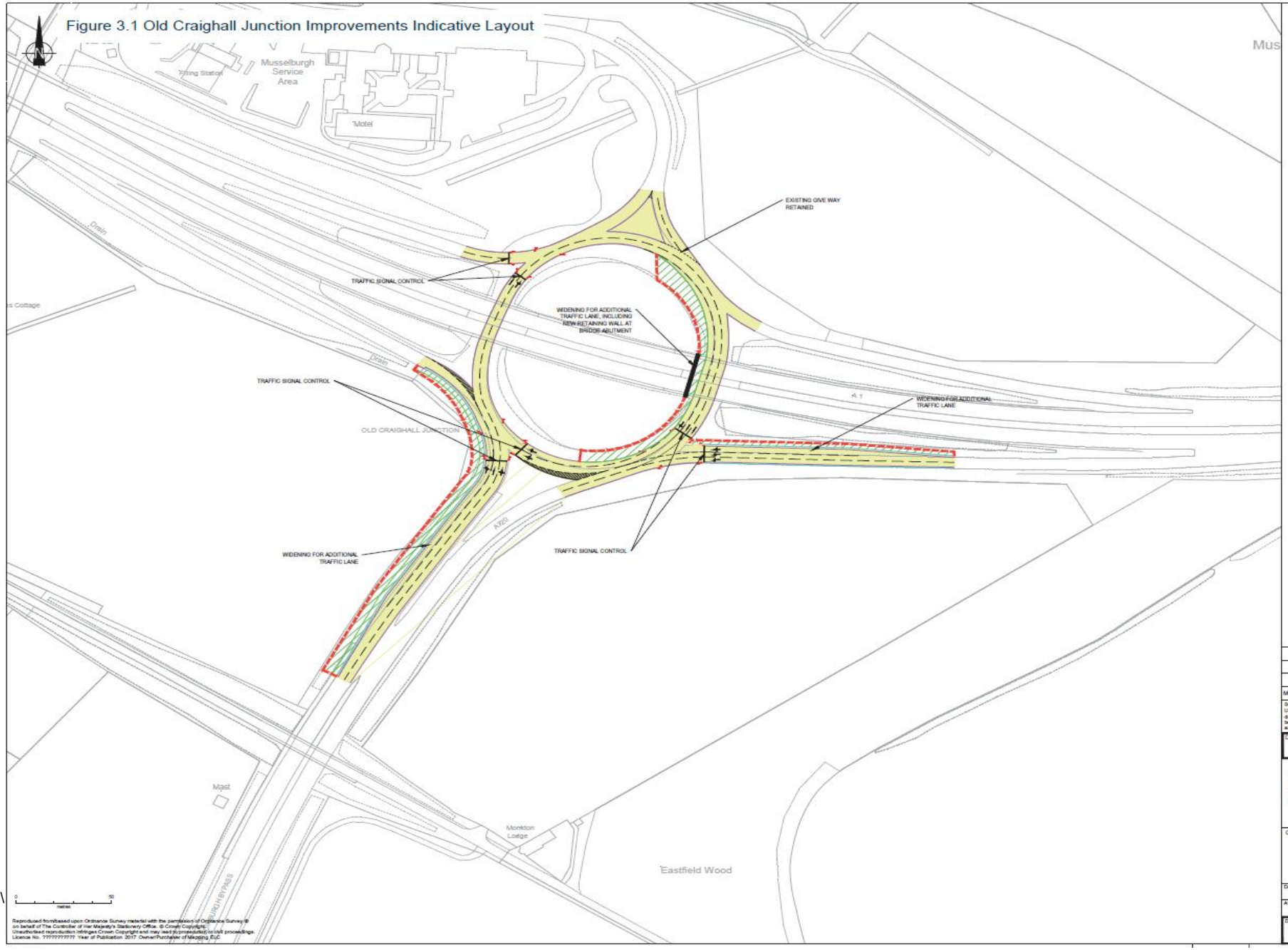


Figure 3.2 A1 Interchange Improvements (Dolphingstone Interchange) Indicative Layout

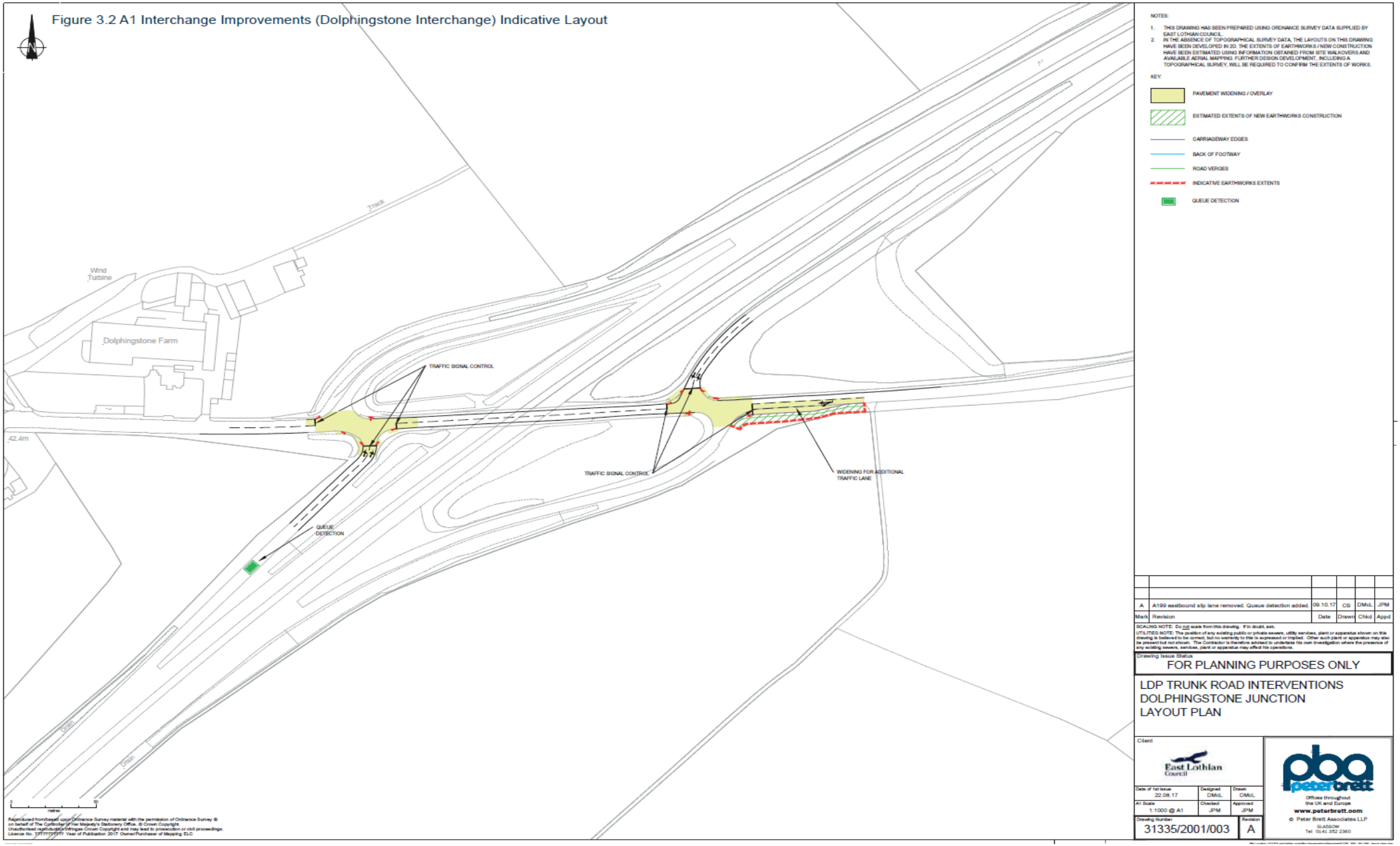


Figure 3.3 A1 Interchange Improvements (Salters Road Interchange) Indicative Layout

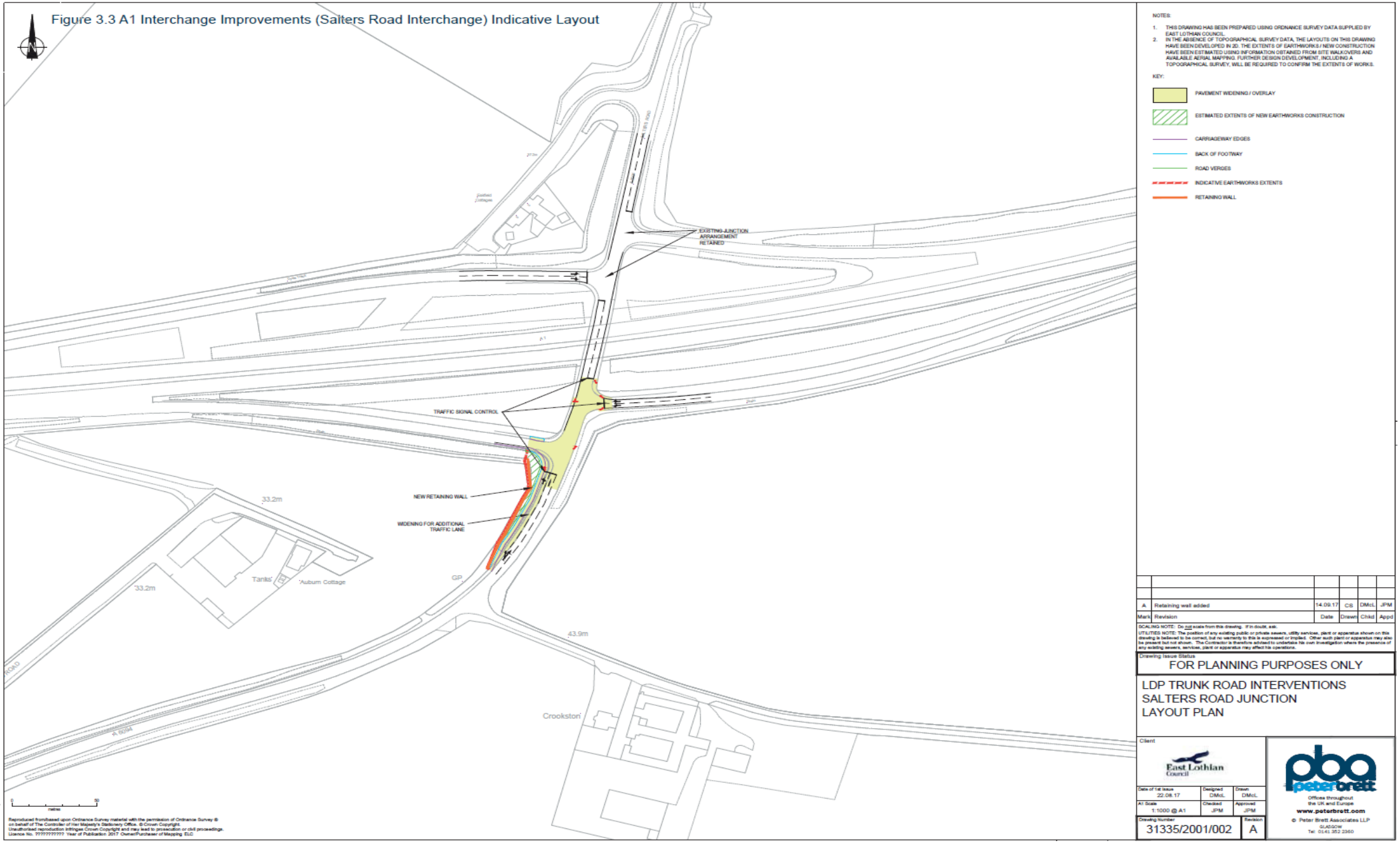
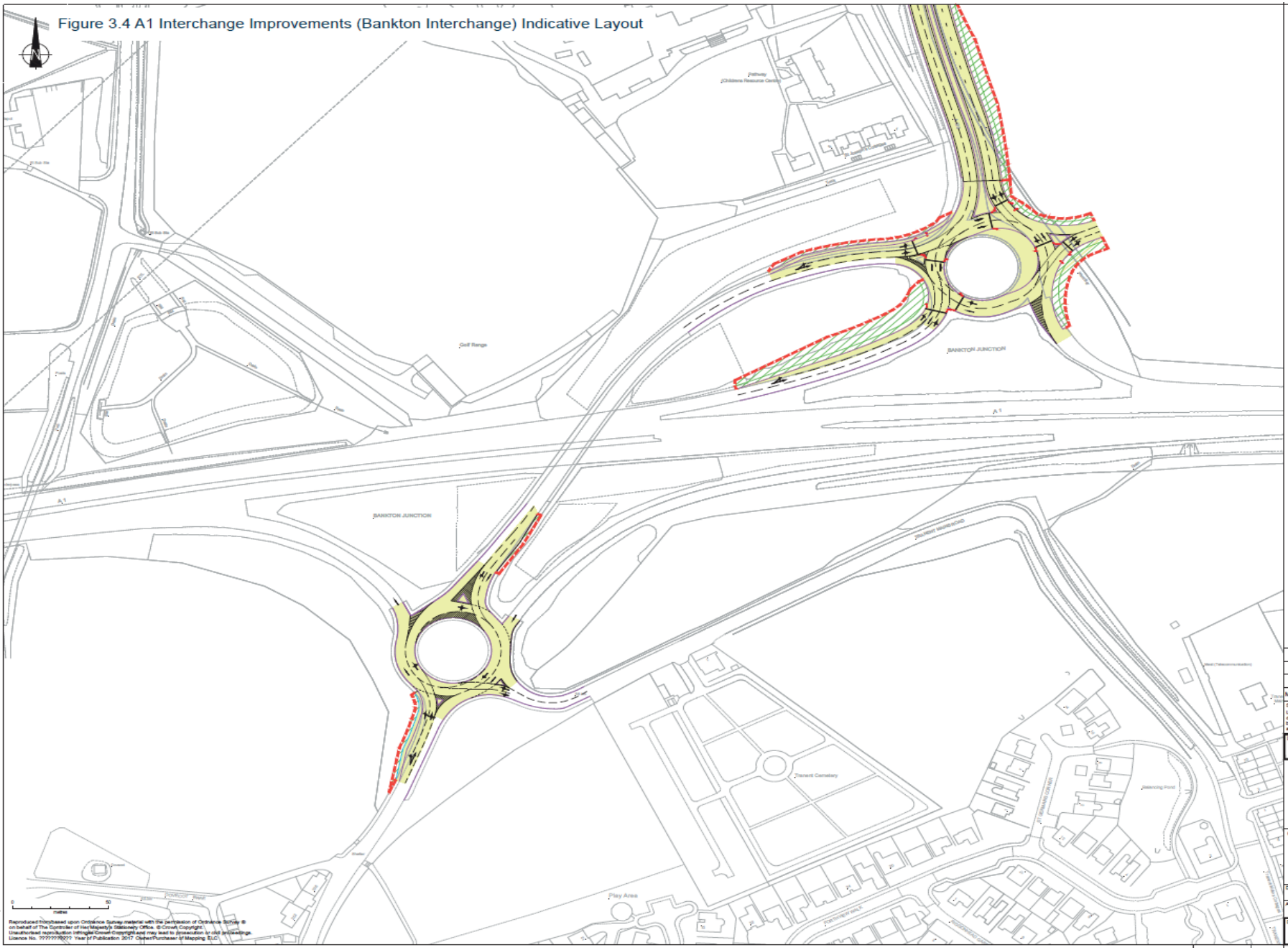


Figure 3.4 A1 Interchange Improvements (Bankton Interchange) Indicative Layout



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- ESTIMATED EXTENTS OF NEW EARTHWORKS CONSTRUCTION
- CARRIAGEWAY EDGES
- BACK OF FOOTWAY
- ROAD VERGES
- INDICATIVE EARTHWORKS EXTENTS

Mark	Revision	Date	Drawn	Chkd	Appd

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LDP TRUNK ROAD INTERVENTIONS
BANKTON JUNCTION
LAYOUT PLAN

Client: East Lothian Council

Date of 1st Issue	Designed	Drawn
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A1 Scale	Checked	Approved
1:1000 @ A1	JPM	JPM

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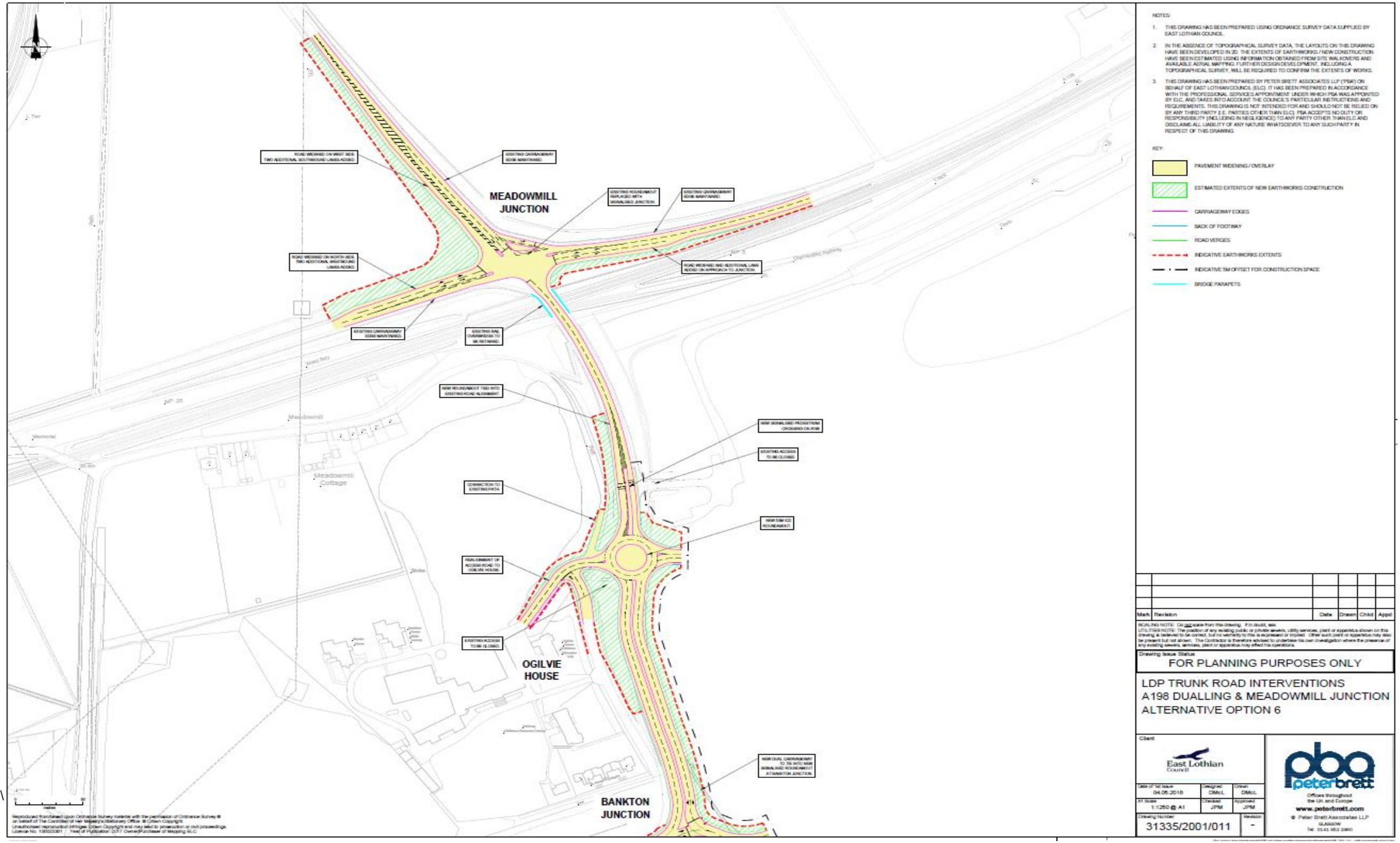
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INDICATIVE 5M OFFSET FOR CONSTRUCTION SPACE
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LDP TRUNK ROAD INTERVENTIONS
A198 DUALLING & MEADOWMILL JUNCTION
ALTERNATIVE OPTION 6
Client
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Figure 3.6 Musselburgh Town Centre – Indicative Proposals

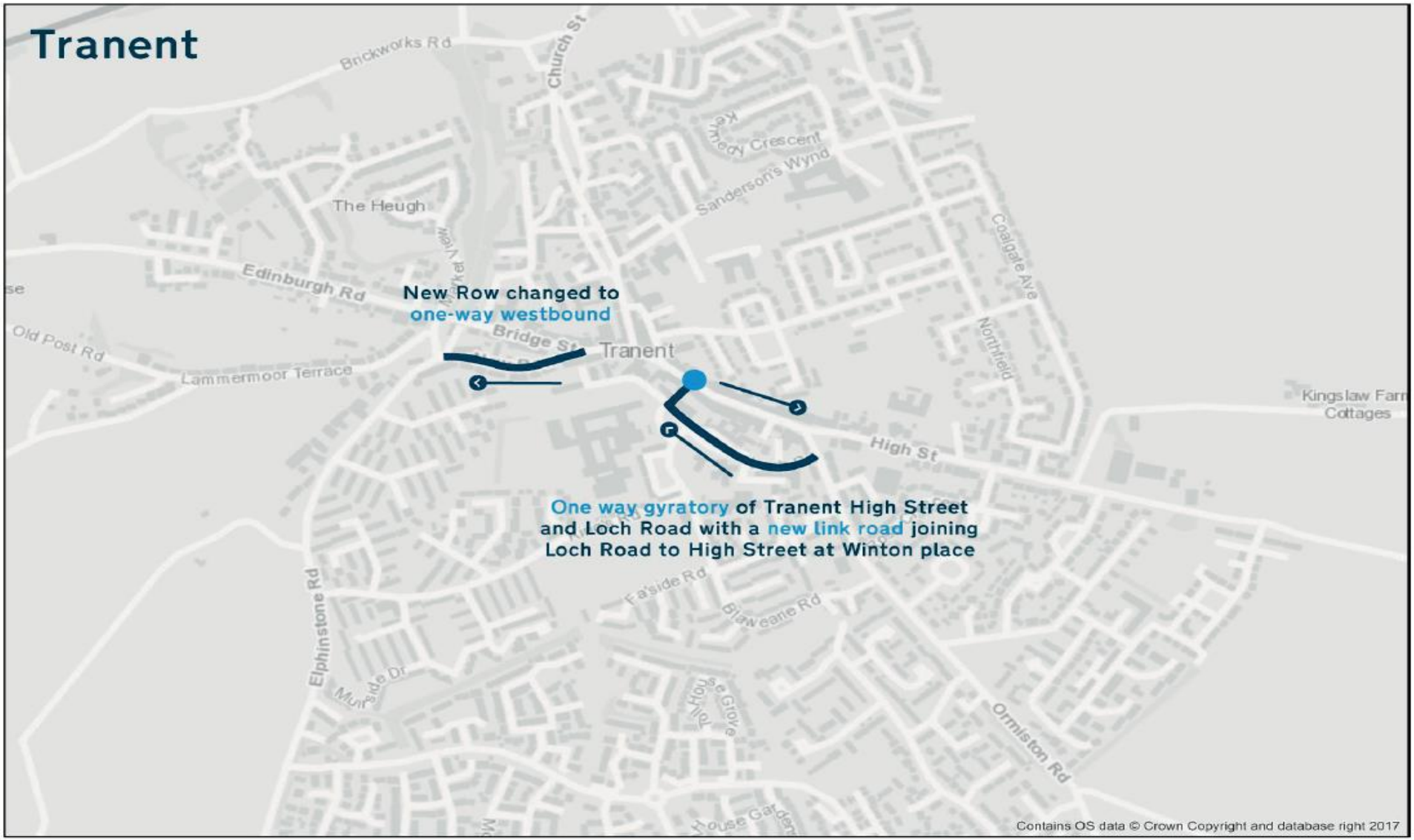

Figure 3.7 Tranent Town Centre – Indicative Proposals

Figure 3.8 **Active Travel Corridor – Indicative Alignment**

4 Appraisal of ELLDP Transport Mitigation

4.1 Appraisal Concept

4.1.1 The purpose of the appraisal is to objectively and consistently measure the potential for transport options to mitigate the impacts of the ELLDP. This Chapter provides the appraisal notes relating to the completion of a STAG Part 1 for DPMTAG assessment of the mitigation scenario options that have been identified.

4.1.2 Although the appraisal has primarily been completed on a qualitative basis, it is supported by SRM12 and MTTM modelling outputs. Appendix A describes the SRM12 modelling that was undertaken, including outputs that inform the Appraisal. Appendix B describes the modelling that was undertaken using the MTTM to inform the Appraisal.

4.1.3 In line with STAG best practice, the appraisal has concentrated on the defined Transport Planning Objectives (TPOs) and the five Government Objectives as well as considerations relating to feasibility, affordability and public acceptance. The Government Objective assessment includes appraisal against the topics of Environment, Safety, Economy, Accessibility and Social Inclusion, and Integration.

4.1.4 The appraisal of the scenario options was completed using a seven-point-scale assessment, considering the relative size and scale of impacts as outlined below:

- Major benefit (represented by ✓✓✓): these are benefits or positive impacts which, depending on the scale of cost or severity of impact, the practitioner should take into consideration when assessing an option's eligibility.
- Moderate benefit (represented by ✓✓): the option is anticipated to have a moderate benefit or positive impact. Moderate benefits and impacts are those which taken in isolation may not determine an option's eligibility, but taken together do so.
- Minor benefit (represented by ✓): the option is anticipated to have only a small benefit or positive impact. Minor benefits or impacts are those which are worth noting, but the practitioner considers are not likely to contribute materially to determining whether an option is taken forward.
- No benefit or impact (represented by =): the option is anticipated to have no or negligible benefit or negative impact.
- Minor cost or negative impact (represented by ✗): the option is anticipated to have only a minor disbenefit or negative impact. Minor disbenefits or impacts are those which are worth noting, but the practitioner considers are not likely to contribute materially to determining whether an option is taken forward.
- Moderate cost or negative impact (represented by ✗✗): the option is anticipated to have a moderate disbenefit or negative impact. Moderate disbenefits/negative impacts are those which taken in isolation may not determine an option's eligibility, but taken together could do so.
- Major cost or negative impacts (represented by ✗✗✗): these are disbenefits or negative impacts which, depending on the scale of cost or severity of impact, the practitioner should take into consideration when assessing an option's eligibility.

4.2 Transport Planning Objectives

4.2.1 This section of the document assesses how well the package of mitigation interventions meets the defined transport planning objectives for the ELLDP, which are detailed in Section 2.3.

TPO1

To deliver development that is well-served by a range of transport modes, particularly public transport and active travel opportunities

4.2.2 In order to assess TPO1, data was extracted from SRM12, and is presented in Section A.3 in Appendix A. Based on the SRM12 outputs, Table 4.1 summarises the Key Performance Indicators (KPIs) for TPO1.

Table 4.1 TPO1 – Performance against KPIs

Model	KPI	Target	Impact	Summary
SRM12	Trip productions and attractions by mode and zone, over 12-hour period	Reduce levels of car use and increase use of PT and sustainable modes relative to defined baseline.	The mitigation interventions do not significantly impact on modelled trip productions or attractions and do not reduce overall travel demand. It should be noted that the SRM12 does not include the impact of the Active Travel Corridor, which is expected to reduce the demand for local motorised trips.	=
SRM12	PT mode share, over 12-hour period		The mitigation is predicted to increase overall public transport mode share, but by a minor amount.	✓
SRM12	Passenger boarding and alighting volumes on Edinburgh North Berwick line		Moderate increase in rail boarding and alighting, with growths in the order of 15-20%. However, given the minor mode shift to PT this is mostly abstraction from bus so could only be considered a minor positive impact	✓
SRM12	Park & Ride site occupancies		No significant change	=

4.2.3 Overall, TPO1 is assessed as having an overall **minor positive** (✓) impact.

TPO2

To locate new development to reduce the need to travel

4.2.4 In order to assess TPO2, data was extracted from SRM12, and is presented in Section A.3 in Appendix A. Based on the SRM outputs, Table 4.2, summarises the Key Performance Indicators (KPIs) for TPO2.

Table 4.2 TPO2 – Performance against KPIs

Model	KPI	Target	Impact	Summary
SRM12	Vehicle distance on key corridors and sectors	Reduce traffic levels relative to defined baseline and not increase overall combined car and PT person kilometres on the transport network.	Traffic re-routes to A1 from A199 and A198, reducing traffic on urban and rural single carriageway roads. However, the modelled mitigation interventions do not reduce overall travel demand. It should be noted that the SRM12 does not include the impact of the Active Travel Corridor, which is expected to reduce the demand for local motorised trips off-setting predicted increases.	=
SRM12	Passenger distance on key corridors and sectors		SRM12 predicts an increase in rail passenger mileage with the mitigation interventions. However, this is mostly abstraction from bus.	=

4.2.5 Overall, TPO2 is assessed as having a **neutral** (=) impact.

TPO3

To mitigate the impacts of new development on transport infrastructure and maintain appropriate network performance

4.2.6 In order to assess TPO3, data was extracted from SRM12 and MTTM and is presented in Section A.3 in Appendix A and Section B.3 in Appendix B respectively. This is summarised in

4.2.7 Table 4.3, which summarises the Key Performance Indicators (KPIs) for TPO3.

Table 4.3 TPO3 – Performance against KPIs

Model	KPI	Target	Impact	Summary
SRM12	Average vehicle speeds on key corridors and sectors in area	maintain or increase road speeds and reduce delays relative to defined baseline	A small increase in 12-hour average speed is predicted as a result of introducing mitigation interventions. This indicates a minor positive impact in terms of reducing delays.	✓
SRM12	Ratio of (traffic) flow to capacity (RFC)	maintain or reduce RFCs	Moderate reduction in RFCs at Old Craighall, Salters Road and Bankton.	✓✓
SRM12	Rail crowding levels – North Berwick to Musselburgh	manage or reduce rail crowding	Minor improvements to peak rail crowding on peak services where increased demand takes up additional provided capacity.	✓

SRM12	Car and bus journey times to/from Edinburgh city centre	maintain or reduce car and bus journey times	Small increase in road journey time between East Lothian sectors and Central Edinburgh.	✗
MTTM	Vehicle journey time, and speeds on key routes	maintain or increase road speeds and reduce delays relative to defined baseline	Moderate reduction in vehicle journey time and increase in vehicle speed on A199.	✓
MTTM	Queues at key junctions		A mixture of increases and decreases in junction queues and corresponding delay.	=

A.1.1 In general, SRM12 and MTTM predict that the network is likely to operate satisfactorily in the 'With ELLDP Including Mitigation' scenario. While there are some locations predicted to experience additional congestion or delays, this is not unexpected given the general increase in travel demand associated with the level of ELLDP development. A sector analysis showing the change in average vehicle speed by sector, with the introduction of the ELLDP and the mitigation measures is presented in Table A.7 and Table A.20 in Appendix A. This indicates a reduction in average vehicle speed with the introduction of the ELLDP due to increased congestion from the increased demand on the network, particularly in the areas of Musselburgh, Wallyford, Tranent and Prestonpans. The introduction of the mitigation measures alleviates some of this congestion, however, not below the level of the vehicle speeds without the ELLDP.

4.2.8 Given the focus on sustainable travel in terms of the ELLDP objectives and the predicted acceptable network performance, it is considered that further enhancements to the road network would not be merited.

4.2.9 Overall, TPO3 is assessed as having a **minor positive** (✓) impact.

4.2.10 Table 4.4 provides a summary of the appraisal of the ELLDP Transport Mitigation against the defined Transport Planning Objectives (TPOs) based on the KPIs assessment presented above.

Table 4.4 Overview of TPOs Appraisal

TPO	Impact	Summary
TPO1: to deliver development that is well-served by a range of transport modes, particularly public transport and active travel opportunities	The mitigation is expected to overall increase public transport share, but by a minor amount. In addition, the Active Travel Corridor is expected to reduce the demand for local motorised trips.	✓
TPO2: to locate new development to reduce the need to travel	The mitigation is expected to have an overall negligible impact where the Active Travel Corridor is expected to reduce forecast increases in travel demand.	=
TPO3: to mitigate the impacts of new development on transport infrastructure and maintain appropriate network performance	In general, the SRM and local traffic modelling indicates that the network is predicted to operate satisfactorily and that the mitigation interventions have a minor positive impact.	✓

4.3 Environment

4.3.1 For the environmental appraisal, at the Part 1 Appraisal stage, a qualitative assessment is made which considers the relative size and scale of option impacts. In this Appraisal, we have provided a broad assessment using the seven-point scale assessment, considering the following environmental sub-criteria:

- Noise and vibration;
- Global air quality - carbon dioxide (CO2);
- Local air quality - particulates (PM10) and nitrogen dioxide (NO2);
- Water quality, drainage and flood defence;
- Geology;
- Biodiversity and habitats;
- Landscape;
- Visual amenity;
- Agriculture and soils; and
- Cultural heritage.

4.3.2 This represents an overview which can be used to highlight the need for more detailed investigation and appraisal in the future.

4.3.3 Total network emissions in terms of CO2, Nitrous Oxide and PM10 have been estimated using the MTTM and these are presented in Section B.6 in Appendix B.

4.3.4 Table 4.5 provides an overview of the appraisal of anticipated environmental impacts of the mitigation interventions.

Table 4.5 Environmental Appraisal

Sub-Criteria	Likely Impact of Mitigation	Summary
Noise and vibration	The mitigation results in a reduction in vehicle traffic within urban areas.	✓
Global air quality - carbon dioxide (CO2);	The SRM12 modelling indicates that the mitigation interventions are predicted to increase overall vehicle distance, which is likely to result in increased CO2 emissions.	x
Local air quality - particulates (PM10) and nitrogen dioxide (NO2);	The mitigation interventions are expected to result in a reduction in vehicle traffic within urban areas, with re-routing of traffic onto the A1. This is expected to provide a benefit in terms of improved air quality in urban areas. AIRE analysis of model outputs indicates specific benefits to the Musselburgh High St AQMA (see Table B.9 in Appendix B)	✓
Water quality, drainage and flood defence	No specific impacts anticipated	=
Geology	No specific impacts anticipated	=
Landscape	The schemes are not expected to have an effect on landscape as most of the mitigation interventions are alterations to existing infrastructure.	=

Visual Amenity	The schemes are not expected to have an effect on visual amenity, as most of the mitigation interventions are alterations to existing infrastructure. The new grade separated junction at Queen Margaret University may have a small visual impact though this would be in the context of significant development in the immediate area.	=
Agriculture and soils	Widening of roads at Old Craighall and Bankton and the new grade separated junction at Queen Margaret University would result in a small loss of agricultural land.	×
Cultural Heritage	There are some small potential cultural heritage impacts at the Old Craighall and Bankton junctions and along the route of the Active Travel Corridor, however, these are likely to be mitigated against with only minor negative impacts. The Old Craighall junction is within the site of the Battle of Pinkie Cleugh. In addition, there are several historical earthworks at the site of the Old Craighall roundabout (Historic Environment Record: MEL213). The Bankton Grade Separated junction is at the site of the Battle of Prestonpans. There is a historic colliery (Canmore ID: 101301) at the western arm of the northern Bankton roundabout, which would be expanded as part of the mitigation interventions. The Segregated Active Travel Corridor also passes a number of historical buildings, as well as passing in the vicinity of historical collieries, field boundaries and historical earthworks.	×

4.3.5 The net environmental impact of the scheme is a **minor negative** (×) impact.

4.4 Safety

4.4.1 The safety objective includes appraisal against two sub-criteria as follows:

- **Accidents** - identifying which, if any, user groups may be affected and develop projections of what will be the likely impact of each option; and
- **Security** - considering whether each option has any material impact for users.

4.4.2 For this Appraisal, only accidents occurring on the road network are considered, as per STAG guidance. SRM12 model outputs, as reported in Appendix A, were used to consider the impact of changes in vehicle flows on the road network and how this is anticipated to affect accidents.

4.4.3 SRM12 predicts that the proposed mitigation interventions result in a marginal overall increase in vehicle distance, which may indicate an increase in road accidents. However, re-routing of traffic on to the A1 dual carriageway, with anticipated lower accident rates, away from local urban and rural roads, such as the A199 and A198, is predicted to **reduce** the overall number of accidents. The signalisation of roundabouts at Bankton and Old Craighall is also expected to provide a safety benefit, as evidence suggests that fewer accidents occur at signalised roundabouts compared to non-signalised roundabouts. Overall, Safety is assessed as being overall a **minor positive benefit** (✓).

4.4.4 There are no security impacts predicted from the proposed mitigation interventions and, hence, Security is assessed as being **neutral** (=).

4.5 Economy

4.5.1 The economy objective covers three sub-criteria:

- **Transport Economic Efficiency (TEE)** - covers the benefits ordinarily captured by standard cost-benefit analysis – the transport impacts of an option
- **Wider Economic Benefits (WEBs)** – relate to the notion of potential transport impacts on agglomeration and the relationship between agglomeration and productivity. This is not included in initial Part 1 Appraisal and practitioners should note that it is likely that Appraisal of this sub-criterion should only be completed in Part 2 Appraisal;
- **Economic Activity and Location Impacts (EALIs)** - allows the impact of an option to be expressed in terms of their net effects on the local and/or national economy

4.5.2 Table 4.6 provides an overview of the appraisal of anticipated economic impacts of the mitigation interventions.

Table 4.6 TEE Appraisal

Sub-Criteria	Likely Impact of Mitigation	Summary
Travel Time Savings	The mitigation interventions are expected provide a minor overall reduction in travel times	✓
User Charges	No expected Impact	=
Vehicle Operating Costs	The small increase in overall vehicle distance predicted by SRM12, suggest a small increase in overall vehicle operating costs	×
Quality benefits to transport users:	No expected impact	=
Reliability benefits to transport users:	SRM12 predicts reductions in queuing at major junctions and in rail crowding. This is expected to improve journey time reliability	✓
Investment costs	No expected impact	=
Operating and maintenance costs	An increase in the number of carriages may increase maintenance costs for train operating companies	×
Revenues	The increase in rail passengers, predicted by SRM12, is expected to increase fare revenue for train operating companies	✓
Grant and subsidy payment	No expected impact	=

4.5.3 Overall, Transport Economic Efficiency is assessed as having a **minor positive benefit** (✓).

4.5.4 In line with a STAG Part 1 Appraisal, WEBs are not considered here.

4.5.5 In terms of Economic Activity and Location Impacts (EALI), increased road and rail capacity will improve access to sites in East Lothian. This may improve employment access and increase investment within East Lothian. In particular, expanding the grade separated junction at Queen Margaret University may improve access to jobs and education. Overall, EALI is assessed as having a minor benefit (✓)

4.6 Accessibility and Social Inclusion

4.6.1 The Accessibility and Social Inclusion Criterion covers two sub-criteria:

- **Community Accessibility** - includes consideration of the public transport network coverage and local accessibility – essentially opportunities to walk or cycle to services or facilities.
- **Comparative Accessibility** – includes consideration of people groups and the needs of any socially excluded groups, and geographic consideration of locations relative to proposed interventions

4.6.2 In terms of Community Accessibility, the proposed improvements to rail stations are expected to enhance access by public transport to jobs, education and services via alternative modes, although this is expected to be a relatively minor impact relating to the relief of crowding. The proposed Segregated Active Travel Corridor should improve travel accessibility for pedestrians and cyclists to local facilities as well as public transport services for a large number of existing communities and adjacent residential developments. Overall, Community Accessibility is overall assessed as having a **moderate positive benefit** (✓✓).

4.6.3 In terms of Comparative Accessibility, the mitigation benefits are spread across a variety of user groups including road and rail users where proposed interventions on the strategic network are expected to benefit locations across East Lothian. The Segregated Active Travel Corridor and rail station improvements are expected to benefit all users, particularly groups who do not have access to private vehicles, such as low income groups or seniors. Overall, Comparative Accessibility is overall assessed as having a **moderate positive benefit** (✓✓)

4.7 Integration

4.7.1 The Integration Criterion covers three sub-criteria:

- **Transport Integration** – relates to the degree to which the mitigation interventions fit with other transport infrastructure and services;
- **Transport and Land-Use Integration** – relates to the fit between the option and land-use plans and land-use/transport planning guidance
- **Policy Integration** – relates to the appropriateness of the option in light of wider policies including those of both Central and Local Government

4.7.2 Table 4.7 provides an overview of the appraisal of anticipated integration impacts of the mitigation interventions.

Table 4.7 Integration Appraisal

Sub-Criteria	Likely Impact of Mitigation	Summary
Transport Integration	The level of transport integration is unlikely to be impacted by the proposed mitigation interventions.	=
Transport and Land-Use Integration	The proposed mitigation interventions include schemes specifically designed to support sustainable transport access from new developments, such as the Dunbar to Musselburgh Segregated Active Travel Corridor. This is in accordance with established planning policy and should promote sustainability and reduce the overall need to travel by motorised modes.	✓✓

Policy Integration	National and local policy supports a shift from car to public transport and active travel. The mitigation interventions include improved provision for rail and active travel, but also measures which make car measures. Thus, although the mitigation facilitates the policy goal of facilitating improved accessibility and economic growth, it may have a negative effect in terms of environmental objectives for promoting greener transport and improving air quality.	=

4.8 Feasibility, Affordability and Public Acceptability

4.8.1 At a STAG Part 1 appraisal stage, feasibility, affordability, and public acceptability are considered on a qualitative basis as follows:

- Feasibility – a preliminary assessment of the feasibility of construction or implementation and operation (if relevant) of an option and the status of its technology (e.g. proven, prototype, in development, etc.) as well as any cost, timescale or deliverability risks associated with the construction or operation of the option, including consideration of the need for any departure from design standards that may be required.
- Affordability – the scale of the financing burden on the promoting authority and other possible funding organisations and the risks associated with these should be considered together with the level of risk associated with an option's ongoing operating or maintenance costs and its likely operating revenues (if applicable).
- Public Acceptability – the likely public response at this initial appraisal phase.

4.8.2 For this Appraisal, we have assessed these criteria over three levels: minor, moderate or major considerations. Scorings of moderate or major considerations should not necessarily lead to a rejection of these options, however, further analysis of these issues will need to be explored if options are taken forward.

Feasibility

4.8.3 An initial consideration of deliverability in terms of the feasibility of the interventions has been completed. This has identified where further work on the conceptual interventions is required to deliver them. However, no significant impacts were identified at this stage. Overall the ELLDP transport interventions are judged to have a **minor feasibility impact**.

Affordability

4.8.4 High-level costings have been estimated at this stage until more detailed feasibility assessment is undertaken and the potential for schemes to be taken forward has been fully investigated. Table 4.8 shows the indicative high-level cost estimates for the short-list of interventions.

Table 4.8 ELLDP Intervention Cost Estimates

Intervention	Indicative Cost
PROP T15: **Old Craighall A1(T)** Junction Improvements	£995,000
PROP T17: **Salters Road\A1(T)** Interchange Improvements	£272,000
PROP T17: **Dolphingstone\A1(T)** Interchange Improvements	£256,000

PROP T17: **Bankton Interchange\A1(T)** Interchange Improvements and **A198** Junction	£848,767
PROP T17: **Meadowmill Roundabout** Junction Improvements	£747,000
PROP T9 + PROP T10: **Rail Station Package**	£4,369,000
PROP T21: **Musselburgh Town Centre Improvements**	£283,000
PROP T27 & T28: **Tranent Town Centre Improvements**	£449,000
PROP T3: **Active Travel Corridor**	£23,400,000
Total	**£31,619,767**

Note: PROP T9 + PROP T10: Rail Station Package includes estimated costs associated with the lengthening of platforms to cater for 8-car train sets from 6-car train sets. It is considered that the increase of platforms to cater for 6-car train sets is a committed scheme and would carry an additional estimated cost (to that quoted here) of £638,000. It also includes car park extensions at Longniddry and Drem stations but excludes ScotRail rolling stock changes and schemes allocated to specific development allocations.

4.8.5 The following points should be noted in relation to the cost estimates:

- Cost estimates have been prepared to a 2016 cost base where cost rates have been obtained from 'SPON's Civil Engineering and Highway Works Price Book 2016';
- Where appropriate cost rates are not available in SPON's, they have been sourced from relevant experience that is representative of the present competitive market;
- An estimated indicative allowance has been included for future design and investigation works, which varies between 5% and 15% of total construction costs, depending on the scale and complexity of the proposals;
- The estimates do not include any costs associated with land purchase, remediation of contaminated land, unstable ground conditions, diversion of utilities, statutory and non-statutory approvals, and contract management; and
- The indicative costs exclude Optimism Bias. When proposals are taken forward to feasibility stage of scheme development, which corresponds to 'STAG Stage 1: Programme Entry' (STAG Technical Database, Section 13), an Optimism Bias of 44% would be applied.

Developer Contributions

4.8.6 A critical aspect of the Proposed Plan in terms of deliverability is the definition of a funding mechanism that links land-use development to the associated transport options. This is required to demonstrate that development related capacity constraints on the transport network can be alleviated and associated interventions funded, specifically in terms of developer contributions. For this, ELC have prepared a developer contribution mechanism with defined contribution zones and the apportionment of developer obligations based on SRM12 travel demand data. The purpose of contribution zones is to facilitate a way of addressing cumulative impact equitably across different sites and time periods.

4.8.7 Contribution zones were identified for each intervention included in the recommended package, where each intervention was identified as a requirement to address the impacts of more than one development. Any net impacts were quantified as a direct result of the development proposed and are mitigated based on nil net detriment. Such an approach is consistent with government guidance and commensurate in scale and kind with the proposed development.

4.8.8 Contribution zones were based on logical and likely travel patterns of usage of the road and public transport networks verified largely by a high-level assessment of likely travel movements identified using SRM. The zones seek to apportion obligations relative to the costs within that zone and the relative impact (location) of new development.

4.8.9 This approach ensures that strategic growth set out within the ELLDP is provided for and smaller allocations for housing and employment uses are accommodated in a proportionate manner. The principle of this methodology is accepted within transport planning in so far as the closer a development is to a 'congestion hot spot' the greater the impact and need for mitigation. Accordingly, transport contribution zones were configured to reflect infrastructure need and to reflect anticipated additional total transport pressures from new development.

'Windfall' Sites

4.8.10 It is not possible to identify all circumstances in which a developer contribution may be required to provide an intervention in the Transport Appraisal assessment process. Further assessments may be necessary to identify mitigations during the Development Management process. This will explicitly consider 'windfall' development and the availability or ability to provide additional capacity for windfall proposals in addition to that required for LDP sites. This will be assessed on a case by case basis. Such proposals will not be supported if they would undermine LDP sites. Similarly, if windfall proposals are dependent on the provision of infrastructure capacity from uncommitted projects, a lack of certainty over the timing for provision of such capacity may make windfall proposals unacceptable in planning terms.

Impact

4.8.11 Overall, the mitigation interventions are judged to have a **major affordability impact** where significant funding will be required to deliver the identified schemes. Developer contributions will provide approximately 38.3% of the funding for these schemes, approximately £12,624,130 out of the total £32,956,000 cost for ELLDP schemes (excluding schemes allocated to specific development allocations). The shortfall will require to be sourced from ELC budgets, central Government, and/or other funding sources such as the emerging City Deal for South East Scotland. This will need to be clarified in order to deliver the ELLDP. There are no significant expected on-going costs beyond the initial delivery of the interventions, and these should be affordable within existing budgets.

4.8.12 It is important to note that some aspects of the proposed mitigation will be funded and delivered by ELC as the cumulative delivery of the LDP emerges, as follows:

- PROP T17: **Dolphingstone\A1(T)** Interchange Improvements;
- PROP T17: **Bankton Interchange\A1(T)** Interchange Improvements and **A198** Junction; and
- PROP T17: **Meadowmill Roundabout** Junction Improvements; and

Public Acceptability

4.8.13 No major public acceptability issues have been highlighted for the mitigation interventions. The mitigation measures involve widening at existing junctions and improvements to an existing railway line, rather than wholly new roads and junctions. There may be minor acceptability issues for residents living nearby to the sites, as the mitigation interventions and associated development will attract increasing through traffic near to their homes. Overall the ELLDP transport interventions are judged to have a **minor public acceptability impact**.

4.9 Appraisal Overview

4.9.1 Table 4.9 provides a summary of the DPMTAG (following STAG Part 1) appraisal described above.

Table 4.9 Overview of Appraisal

Criteria	Sub-Criteria	Mitigation Impact
Transport Planning Objectives	TPO1: to deliver development that is well-served by a range of transport modes, particularly public transport and active travel opportunities	✓
	TPO2: to locate new development to reduce the need to travel	=
	TPO3: to mitigate the impacts of new development on transport infrastructure and maintain appropriate network performance	✓
Environment	Noise and vibration	✓
	Global air quality - carbon dioxide (CO2);	×
	Local air quality - particulates (PM10) and nitrogen dioxide (NO2);	✓
	Water quality, drainage and flood defence	=
	Geology	=
	Landscape	=
	Visual Amenity	=
	Agriculture and soils	×
	Cultural Heritage	×
	Noise and vibration	✓
Safety	Accidents	✓
	Security	✓
Economy	Transport Economic Efficiency	✓
	Economic Activity and Location Impacts	✓
Accessibility	Community Accessibility	✓✓
	Comparative Accessibility	✓✓
Integration	Transport	=
	Transport & Land-use	✓✓
	Policy	=
Feasibility, Affordability and Public Acceptance	Feasibility	**Minor**
	Affordability	**Major**
	Acceptability	**Minor**

4.9.2 This indicates an overall **minor to moderate positive impact** is expected from the proposed ELLDP mitigation interventions. Affordability is considered to be a major impact where clarification is required on the funding sources for the mitigation interventions where developer contribution will only make up part of the required delivery costs.

5 Conclusions

5.1 Summary

5.1.1 This Report has detailed the appraisal of the emerging ELLDP Transport Options, which has been undertaken following the steps laid out in Transport Scotland's Development Planning and Management Transport Appraisal Guidance (DPMTAG).

5.1.2 A 2024 'Do Minimum' scenario without the ELLDP land allocations was prepared and modelled. Analysis of this model run indicated that significant pressures are predicted on the transport network before the ELLDP developments are included.

5.1.3 Based on an appraisal of the ELLDP developments and various mitigation scenario options, a package of Transport Intervention has been defined which will adequately support the delivery of the ELLDP and its objectives.

Appendix A Application of SEStran Regional Model

A.1 Overview

A.1.1 The 2012 SEStran Regional Model (SRM12) was used to inform the Appraisal of the implications of housing and economic land allocations on the transport network.

A.1.2 The SRM12 version applied is that provided from the SESplan Cross Boundary Study (CBS) Team. Some amendments were made to both network representation and the representation of the development plan scenario for East Lothian Council (ELC) to ensure that the proposed plan is suitably represented.

A.1.3 The network assessment presented in this report, undertaken using the SRM12, provides sufficient information to identify an initial list of required mitigation interventions. The application of the Musselburgh and Tranent Traffic Model (MTTM) and local junction modelling was also undertaken as part of the mitigation assessment, in particular to look at the operation of the local road network in more detail, which was not possible using the more strategic SRM12.

SRM12 Model Dimensions

A.1.4 Forecast traffic demand matrices were prepared based on SRM12 traffic forecasts for defined scenarios.

A.1.5 The SRM12 version applied is that provided from the SESplan Cross Boundary Study (CBS) Team.

A.1.6 A review of SRM12 was undertaken based on initial application and model outputs to check the suitability of the model to be used to support the ELLDP Appraisal and Assessment. Reflecting the strategic nature of the model and its intended purpose, this identified some weaknesses in terms of the relative coarseness of the zone system and road network in East Lothian. In discussion with ELC and Transport Scotland, it was considered that SRM provides sufficient information for the network assessment and to identify an initial list of required mitigation interventions supplemented later by further detail in the local traffic models.

A.1.7 Some amendments were made to both network representation and the representation of the development plan scenario for East Lothian Council to ensure that the Proposed Plan is suitably represented at the strategic level. Otherwise no changes were made to SRM12 for the ELLDP modelling assessment.

A.1.8 The SRM12 is representative of average weekday travel movements within which the following time periods are modelled:

- Average weekday (AM) morning peak: 07:00-10:00;
- Average weekday (IP) inter peak: 10:00-16:00; and
- Average weekday (PM) evening peak: 16:00-19:00.

A.1.9 Individual factors are applied by mode and period to create an ‘average’ peak hour within each peak period.

A.1.10 The model has a 2012 Base year, and a single 2024 forecast year, which has been used to represent all future year scenarios.

A.1.11 The road assignment model includes five assigned vehicle types and journey purposes as follows:

- Car In-Work;
- Car Non-Work Commuter;
- Car Non-Work Other;
- LGV; and
- HGV.

A.1.12 The PT assignment model includes three assigned PT purposes as follows:

- PT In-Work;
- PT Non-Work Commute; and
- PT Non-Work Other.

Sector System

A.1.13 For the purposes of analysing the LDP scenarios, a matrix sector system was prepared as illustrated in Figure A.1 and presented in Table A.1. A sector system combines a number of zones together for the purpose of reporting. This sector system represents East Lothian via eight sectors and aggregates the other local authorities within the SRM12 modelled area. In addition to these, the external trips (all movements to\from outwith the SRM12 area) have been included in a single sector. It should be noted that, due to the scale of the development, the Blindwells development site has been defined as an individual sector.

Figure A.1 SRM12 Zone Sector System

Table A.1 Sector System

Sector	Sector Name		Sector	Sector Name
1	East Lothian Rural		10	City of Edinburgh
2	Musselburgh & Wallyford		11	Falkirk
3	Tranent		12	Fife
4	Prestonpans & Port Seton		13	Midlothian
5	Haddington		14	Perth & Kinross
6	North Berwick		15	Borders
7	Dunbar		16	Stirling
8	Blindwells		17	West Lothian
9	Clackmannanshire		18	External

Key Corridors

A.1.14 The following key *corridors* were defined in the SRM12 for the ELLDP Appraisal:

- A199: From Haddington to Portobello;
- A1: From Haddington to Queen Margaret University;
- A198: From North Berwick to Tranent; and
- Rail: From west of Musselburgh station to North Berwick and east of Dunbar.

A.1.15 The location of these key corridors is shown in Figure A.2.

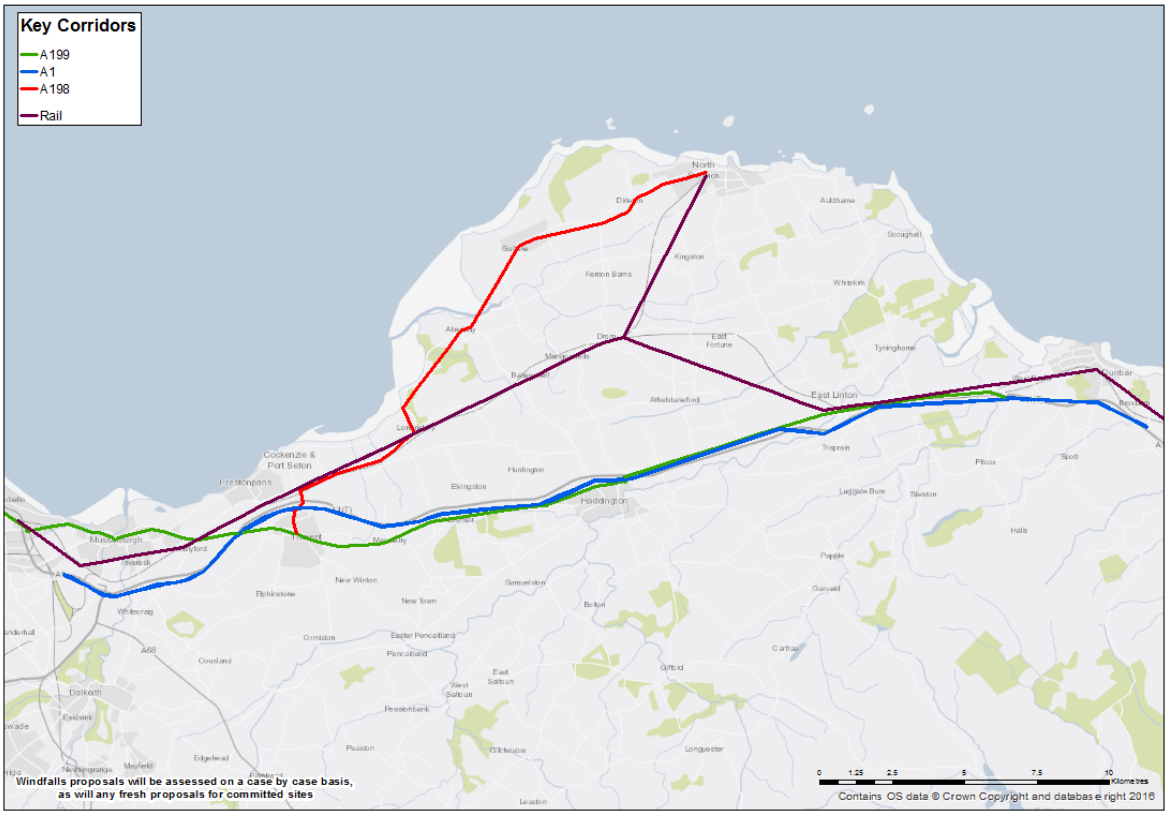

Figure A.2 SRM Key Corridors

SRM12 Observations for ELLDP

A.1.16 The initial application of SRM12 for the ELLDP demonstrated intuitive responses of acceptable degrees of magnitude at the strategic level. However, there were instances in the model outputs where delays and capacity issues were found at locations where this would not be expected. These included (for example):

- "Dummy" nodes – (Nodal points on the road network to improve the visual representation of the links) capacity constraints at dummy nodes resulting in higher V/C (volume / capacity) values than preceding and following road network segments; and
- Diverges – delays and capacity issues at dual carriageway diverges, due to shared lane capacity reductions.

A.1.17 These issues were reviewed and were not considered to impact on the key model comparisons between ELLDP scenarios.

A.2 Travel Demand Forecasts

A.2.1 This section describes the forecast travel demand and network impacts predicted from the SRM.

SRM12 Trip Rates

A.2.2 The SRM has an implied set of trip rates within all zones, and as such trip making relating to new development is broadly in line with the respective zones into which they are allocated. However, on analysing the outputs of the initial LDP scenario, it was apparent that the absolute level of trips generated and attracted was not of the order which would be expected from some of the developments. This could be partly explained by the application of future year household densities from TELMoS, which may underestimate ELLDP population growth at some locations.

A.2.3 Given these concerns with respect to the inferred trip rates, it was considered prudent to adjust the forecast travel demand to ensure greater consistency between both the MTTM and SRM12. The MTTM demonstrated a generally higher level of travel demand than that of SRM12 as development demand was based predominantly on TRICS trip rates. The adjustments resulted in SRM12 forecasts being more in-line with TRICS levels of trip making than 'default' SRM12 forecasting.

A.2.4 Adjusted forecast demand was prepared in SRM12, based on the following rules:

i. If a trip is to or from an Internal Non-Urban Zone, then the MTTM demand was used.

ii. If the trip is to or from an External Zone and neither to or from an Internal Non-Urban Zone, the SRM12 demand growth was used.

iii. If a trip is both to and from Internal Urban Zones, then an average of the SRM and MTTM demand growth is used.

A.2.5 Adjustment factors were applied to create 2024 SRM12 demand forecasts. This was considered a more likely reflection of the transport network impacts and these scenarios form the basis for the SRM12 model outputs presented in this Report.

Trip Productions and Attractions

A.2.6 The forecast number of car and public transport trips in terms of total productions and attractions by sector is presented in Table A.2 and Table A.3 respectively, presented as a 12-hour total. Inspection of these tables reveals an increase in trips in the majority of areas within East Lothian, which is in line with the land-use forecasts, particularly the population projections which drive the travel demand forecasting procedures in SRM12.

Table A.2 Summary 12-hour Trip Productions

Sector	2012 Base	2024 Without LDP (versus 2012 Base)			2024 With LDP (versus 2024 Without LDP)		
East Lothian Rural	12,000	11,700	-300	-3%	13,100	1,400	12%
Musselburgh & Wallyford	44,600	57,500	12,900	29%	71,900	14,400	25%
Tranent	16,800	18,900	2,100	13%	26,100	7,200	38%
Prestonpans	21,100	23,500	2,400	11%	27,700	4,200	18%
Haddington	14,000	14,400	400	3%	15,900	1,500	10%
North Berwick	16,300	15,200	-1,100	-7%	16,600	1,400	9%
Dunbar	10,800	13,600	2,800	26%	16,100	2,500	18%
Blindwells	100	100	0	0%	3,700	3,600	3600%
ELC Total	135,700	154,900	19,200	14%	191,100	36,200	23%

Table A.3 Summary 12-hour Trip Attractions

Sector	2012 Base	2024 Without LDP (versus 2012 Base)			2024 With LDP (versus 2024 Without LDP)		
East Lothian Rural	12,400	12,100	-300	-2%	13,600	1,500	12%
Musselburgh & Wallyford	44,400	57,000	12,600	28%	72,500	15,500	27%
Tranent	17,000	19,200	2,200	13%	26,800	7,600	40%
Prestonpans	21,600	24,000	2,400	11%	28,500	4,500	19%
Haddington	14,100	14,600	500	4%	16,300	1,700	12%
North Berwick	16,400	15,300	-1,100	-7%	16,700	1,400	9%
Dunbar	10,900	13,600	2,700	25%	16,100	2,500	18%
Blindwells	100	100	0	0%	4,300	4,200	4200%
ELC Total	136,900	155,900	19,000	14%	194,800	38,900	25%

A.2.7 Figure A.3 shows the modelled public transport mode share, expressed as a percentage for each defined sector, for each scenario. It should be noted that this excludes non-motorised modes, which are not modelled in SRM12. This shows a reduction in public transport mode share in most areas comparing the 2024 Without LDP scenario with the 2012 Base. This can be as a result of a combination of increasing car ownership, the availability of PT services at development sites and\or capacity restraint on the rail network that may limit future growth in rail travel demand, which is considered in the following Section of this Note. Comparing the 2024 With LDP scenario versus the 2024 Without LDP scenario indicates smaller differences with Musselburgh and Wallyford indicating a more notable drop in PT mode share of around 1 percentage point, which is where rail service crowding is greatest.

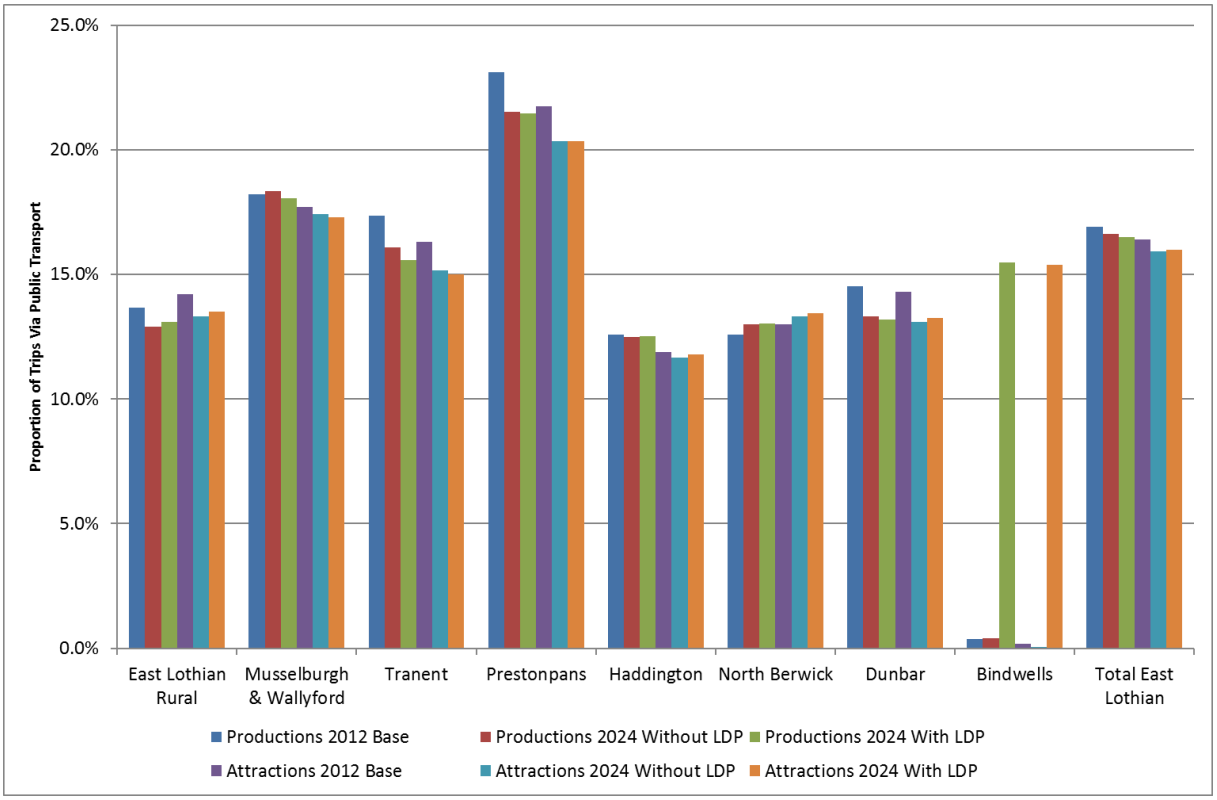

Figure A.3 Public Transport Mode Share

Travel Demand on Network

A.2.8 Total vehicle distance, in kilometres, in each sector area for each scenario is presented in Table A.4 for the AM peak hour. This shows an increase in vehicle distance that correlates with the increase in travel demand associated with ELLDP development sites.

Table A.4 Vehicle Distance (AM Peak Hour, Kilometres)

Sector	2012 Base	2024 Without LDP (versus 2012 Base)			2024 With LDP (versus 2024 Without LDP)		
Musselburgh & Wallyford	38,200	48,300	10,100	+26%	55,500	7,200	+15%
Tranent	15,900	21,200	5,300	+33%	29,000	7,800	+37%
Prestonpans	32,000	37,700	5,700	+18%	41,200	3,500	+9%
Haddington	23,800	33,000	9,200	+39%	38,700	5,700	+17%
North Berwick	8,500	9,400	900	+11%	9,900	500	+5%
Dunbar	11,200	17,900	6,700	+60%	19,500	1,600	+9%
Blindwells	5,300	5,900	600	+11%	5,900	0	0
East Lothian Rural	34,100	41,700	7,600	+22%	45,600	3,900	+9%
ELC Total	134,900	173,400	38,500	+29%	199,700	26,300	+15%

A.2.9 Total public transport based distance, in kilometres, for each scenario is shown in Table A.5 for the AM peak hour. This shows an increase in passenger distance that correlates with the increase in travel demand associated with ELLDP development sites.

Table A.5 Passenger Distance (AM Peak Hour, Kilometres)

Sector	2012 Base	2024 Without LDP (versus 2012 Base)			2024 With LDP (versus 2024 Without LDP)		
Musselburgh & Wallyford	24,600	29,800	5,200	+21%	33,300	3,500	+12%
Tranent	2,500	2,900	400	+16%	3,600	700	+24%
Prestonpans	39,700	47,300	7,600	+19%	50,600	3,300	+7%
Haddington	2,100	3,600	1,500	+71%	4,000	400	+11%
North Berwick	1,900	2,300	400	+21%	2,300	0	0
Dunbar	2,000	55,300	53,300	+2665%	55,800	500	+1%
Blindwells	200	200	0	0	200	0	0
East Lothian Rural	4,000	21,900	17,900	+448%	22,600	700	+3%
ELC Total	73,000	141,400	68,400	+94%	149,800	8,400	+6%

ELLDP Network Impacts and Mitigation Requirements

A.2.10 This Section describes the impact of the change in travel demand associated with the ELLDP on the modelled transport network and consideration of potential interventions to mitigate impacts.

A.2.11 Table A.6 presents the change in vehicle journey time by sector during the AM peak. This indicates that there is a considerable increase in total vehicle journey time with the introduction of the LDP, due to increased demand and increased congestion.

Table A.6 Total Vehicle Journey Time by Sector (AM Peak Hour, Minutes)

Sector	2012 Base	2024 Without LDP (versus 2012 Base)			2024 With LDP (versus 2024 Without LDP)		
Musselburgh & Wallyford	24,600	29,800	5,200	+21%	33,300	3,500	+12%
Tranent	2,500	2,900	400	+16%	3,600	700	+24%
Prestonpans	39,700	47,300	7,600	+19%	50,600	3,300	+7%
Haddington	2,100	3,600	1,500	+71%	4,000	400	+11%
North Berwick	1,900	2,300	400	+21%	2,300	0	0
Dunbar	88,800	104,000	15,200	+17%	104,800	800	+1%
Blindwells	200	200	0	0	200	0	0
East Lothian Rural	4,000	4,400	400	+10%	4,800	400	+9%
ELC Total	159,800	190,100	30,300	+19%	198,800	8,700	+5%

A.2.12 By dividing total vehicle distance by total vehicle journey time, the average speed can be calculated by sector. This is presented, for the AM peak, in Table A.7. This indicates that there are reductions in vehicle speed during the AM peak period with the introduction of the LDP, due to increased congestion due to increased demand on the network.

Table A.7 Average Vehicle Speed by Sector (AM Peak Hour, Kilometres per Hour)

Sector	2012 Base	2024 Without LDP (versus 2012 Base)			2024 With LDP (versus 2024 Without LDP)		
Musselburgh & Wallyford	58.5	48.5	-10.0	-17%	37.2	-11.3	-23%
Tranent	68.5	67.9	-0.6	-1%	63.2	-4.6	-7%
Prestonpans	74.1	68.8	-5.3	-7%	60.7	-8.1	-12%
Haddington	88.0	86.9	-1.1	-1%	85.7	-1.1	-1%
North Berwick	55.0	54.0	-0.9	-2%	52.3	-1.7	-3%
Dunbar	79.2	79.1	-0.1	-0%	77.5	-1.6	-2%
Blindwells	48.5	47.9	-0.6	-1%	48.5	+0.6	+1%
East Lothian Rural	75.2	76.2	+1.0	+1%	75.9	-0.4	-1%
ELC Total	67.7	62.8	-4.9	-7%	54.8	-8.0	-13%

A.2.13 Where relevant, Ratios of Flow to Capacity (RFCs), are presented graphically to highlight issues on the road network. It should be noted that the modelled RFCs provide an average, which

would be expected to vary depending on the profile of traffic demand. Therefore, the strategic model outputs should be used as an indicator of network 'hotspots' rather than absolute predictions of worst case conditions. Forecast passenger demand and equivalent capacities are considered on the rail network to highlight possible crowding issues.

A1 QMU Interchange

Relevant Development	Employment associated with the Craighall development northwest of QMU.
Impacts	Employment at this location attracts new trips during the AM peak hour, and generates additional trips in the PM peak hour.
Network Operation	The existing QMU junction is predicted to accommodate ELLDP traffic in all modelled time periods, however, there is congestion on A1 Old Craighall junction, as shown in Figure A.4. This is due to the considerable volume of ELLDP traffic where westbound trips exiting from QMU currently need to travel via Old Craighall.
Suggested Mitigation	A1 QMU All-Ways Interchange.
Mitigation Effects	The addition of westbound slips would remove a significant volume of traffic from the eastbound A1 and Old Craighall junction, alleviating congestion.
Mitigation Required	Yes.

A1 Old Craighall Interchange

Relevant Development	The strategically important location of Old Craighall junction, forming the interchange between the A1 and A720, is likely to experience traffic from the majority of ELLDP developments across East Lothian.
Impacts	The additional ELLDP trips are expected to add pressure to this key interchange, which is already congested.
Network Operation	Old Craighall junction exhibits some congestion issues in the base year, which get worse under the Without LDP scenario and are then exacerbated by the additional ELLDP traffic. All approaches to the junction are heavily congested in both the 'With LDP' and 'Without LDP' scenarios, as shown in Figure A.4 to **Error! Reference source not found.**. The Ratios of Flow to Capacity (RFCs) on the A1 western approach increase as a result of additional traffic coming from QMU.
Suggested Mitigation	A1 Old Craighall Interchange — Signal Control.
Mitigation Effects	Signalising and widening the roundabout approaches and circulatory carriageway would provide more efficient operation and increase effective capacity. Testing of this potential intervention is required to quantify the extent to which this intervention can successfully handle the additional traffic generated by the LDP. Whilst this can be assessed within SRM to an extent, the local micro-simulation model would be required for a full assessment where there are complex vehicle interactions.
Mitigation Required	Yes.

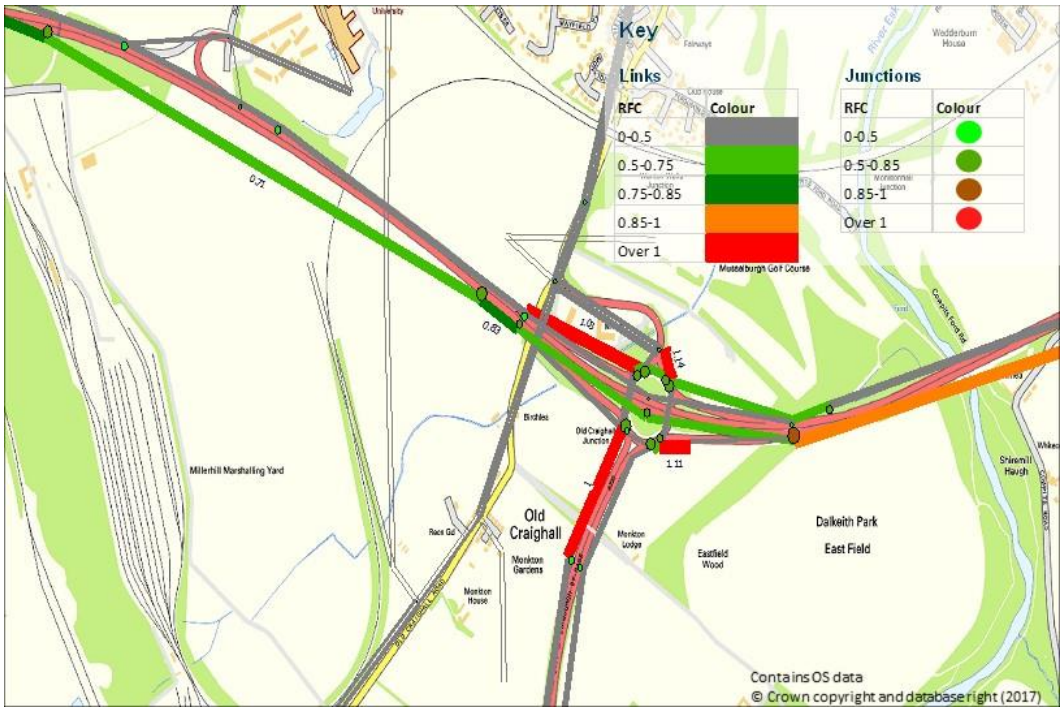

Figure A.4 RFC at A1 Old Craighall Junction – Without LDP Scenario – AM Peak Hour

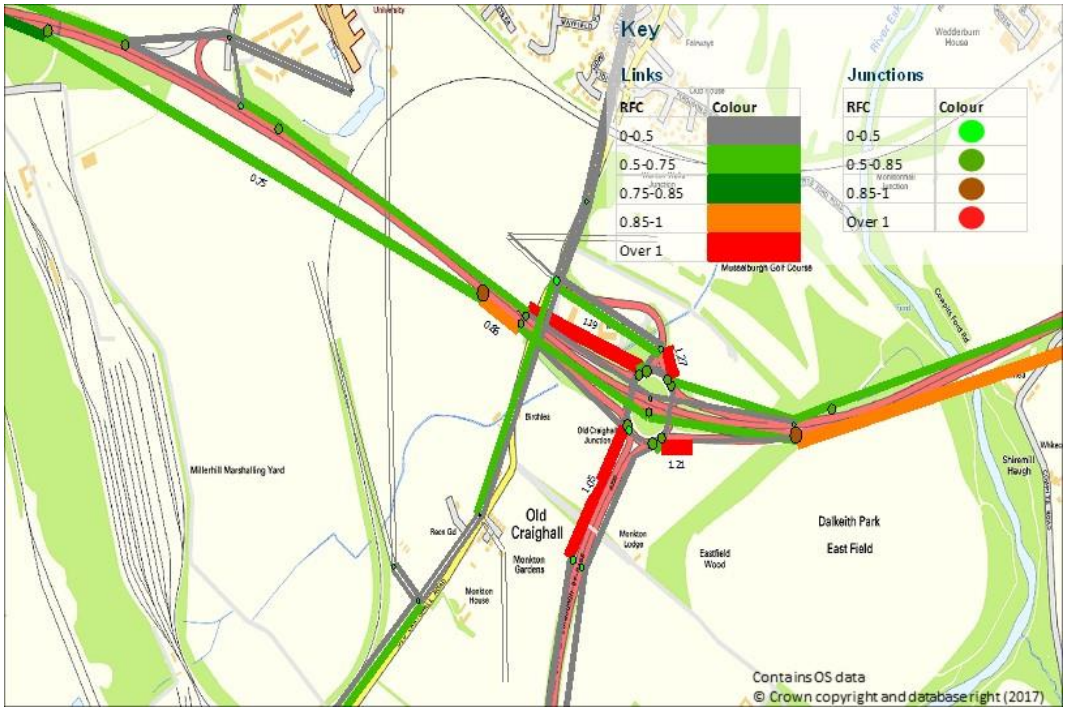

Figure A.5 RFC at Old Craighall – LDP Without Mitigation Scenario – AM Peak Hour

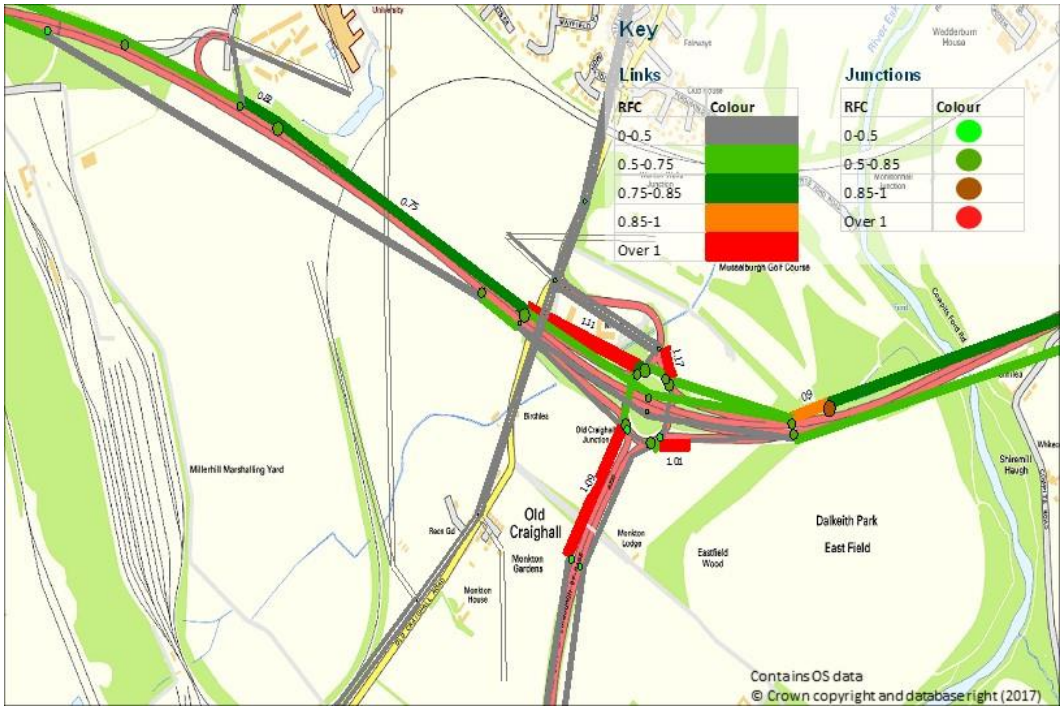

Figure A.6 RFC at A1 Old Craighall Junction – Without LDP Scenario – PM Peak Hour

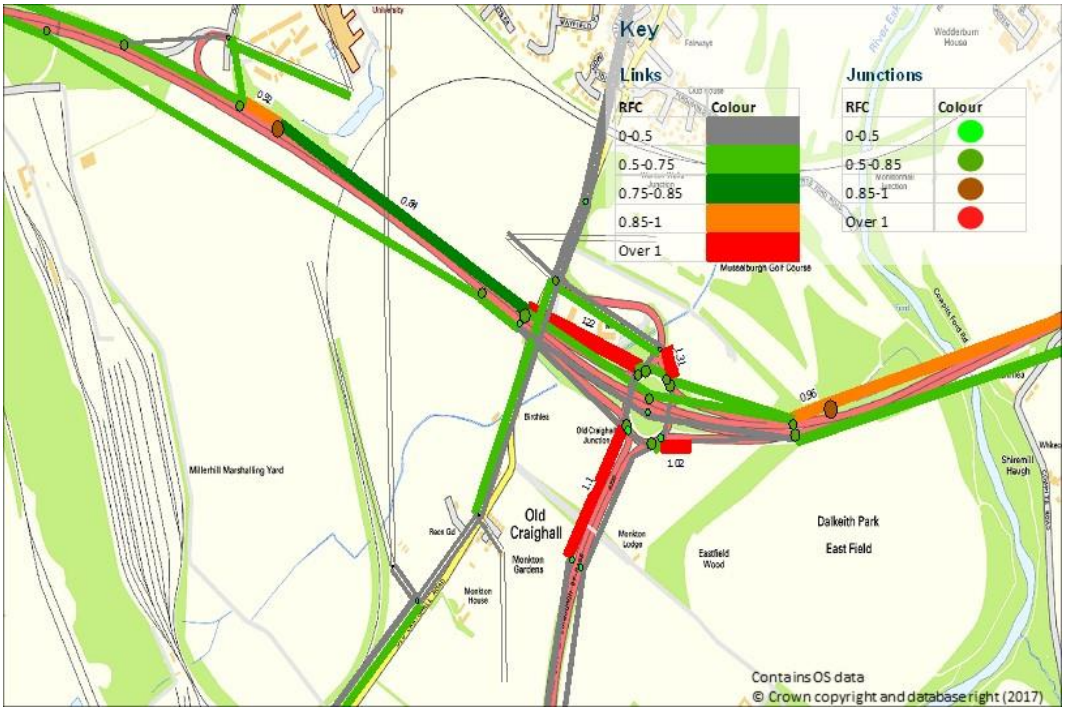

Figure A.7 RFC at Old Craighall – LDP Without Mitigation Scenario – PM Peak Hour

A1 Bankton Interchange and A198 Junction

Relevant Development	Residential and employment at Blindwells and developments around Tranent.
Impacts	The Blindwells development will generate additional trips, which will access the road network on the A198 and at Bankton northern roundabout. Developments around Tranent also result in extra traffic.
Network Operation	The existing junction shows capacity issues in the Without LDP scenario, with RFCs greater than 100% on the eastbound off slip in the PM. The addition of LDP traffic, including Blindwells, has the effect of significant increasing RFCs, as shown in Figure A.8 to Figure A.11, with particular issues in the AM peak where several links are predicted to be over capacity suggesting significant delays.
Suggested Mitigation	Introduction of signal control on northern roundabout and redesign of both roundabouts with local widening and improved lane markings.
Mitigation Effects	The mitigation intervention would increase capacity at both northern and southern dumbbells by redesigning and/or signalising the roundabouts. Whilst this can be assessed within SRM to an extent, the local micro-simulation model would also be required for a full assessment where there are complex vehicle interactions.
Mitigation Required	Detailed modelling to confirm intervention requirements.

A.2.14 There is also a requirement to consider the impact of a full build-out of Blindwells (resulting in a total of 6,000 new dwellings), which are being proposed as safe-guarded sites in the ELLDP. A

sensitivity test will be undertaken to support the ELLDP Appraisal to consider the impact on the transport network and the effectiveness of mitigation interventions with additional travel demand. It is anticipated that this will identify the need for further mitigation at Bankton junction, as a minimum, with possible requirement for enhancement of the A198 and Meadowmill Roundabout as well.

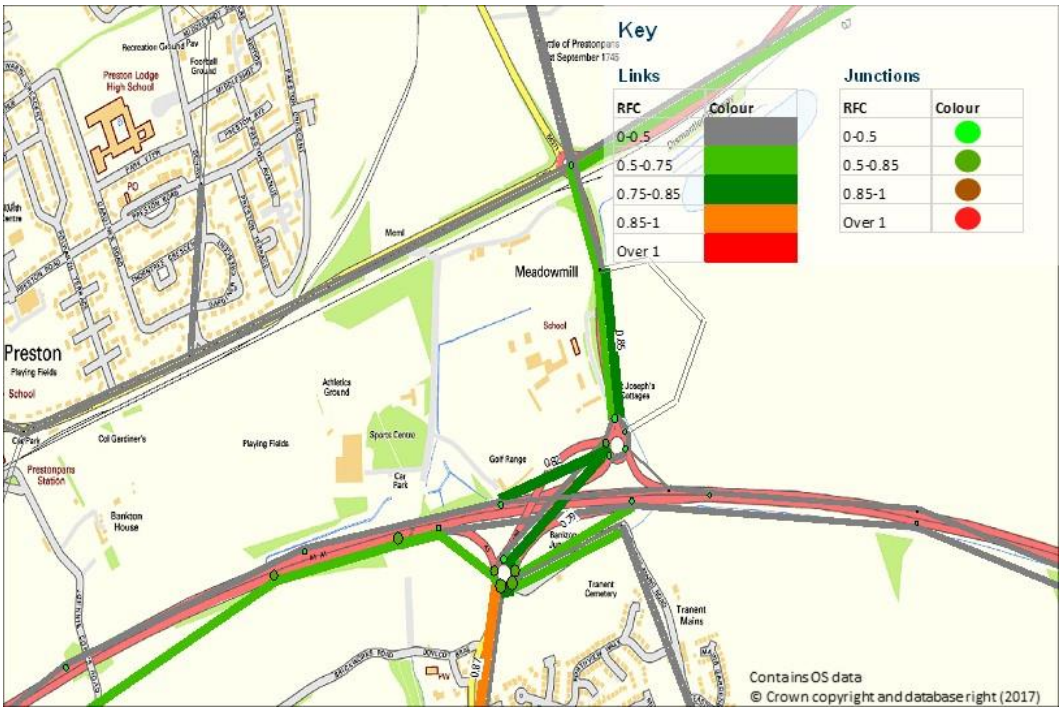

Figure A.8 RFC at A1 Bankton Junction – Without LDP Scenario – AM Peak Hour

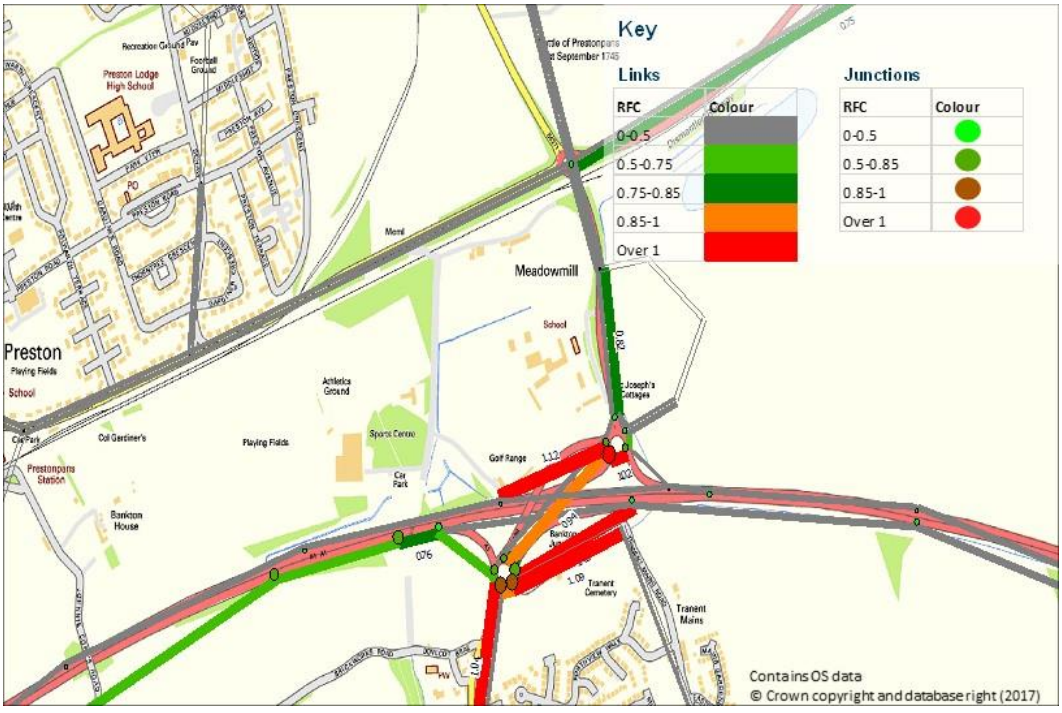

Figure A.9 RFC at A1 Bankton Junction – LDP Without Mitigation Scenario – AM Peak Hour

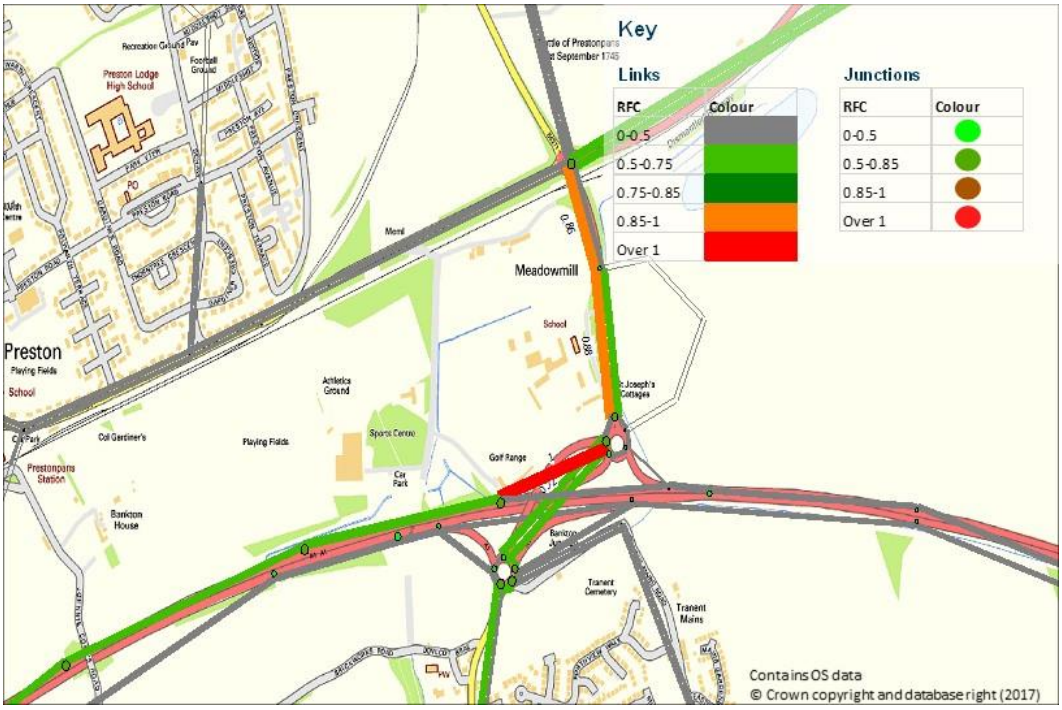

Figure A.10 RFC at A1 Bankton Junction – Without LDP Scenario – PM Peak Hour

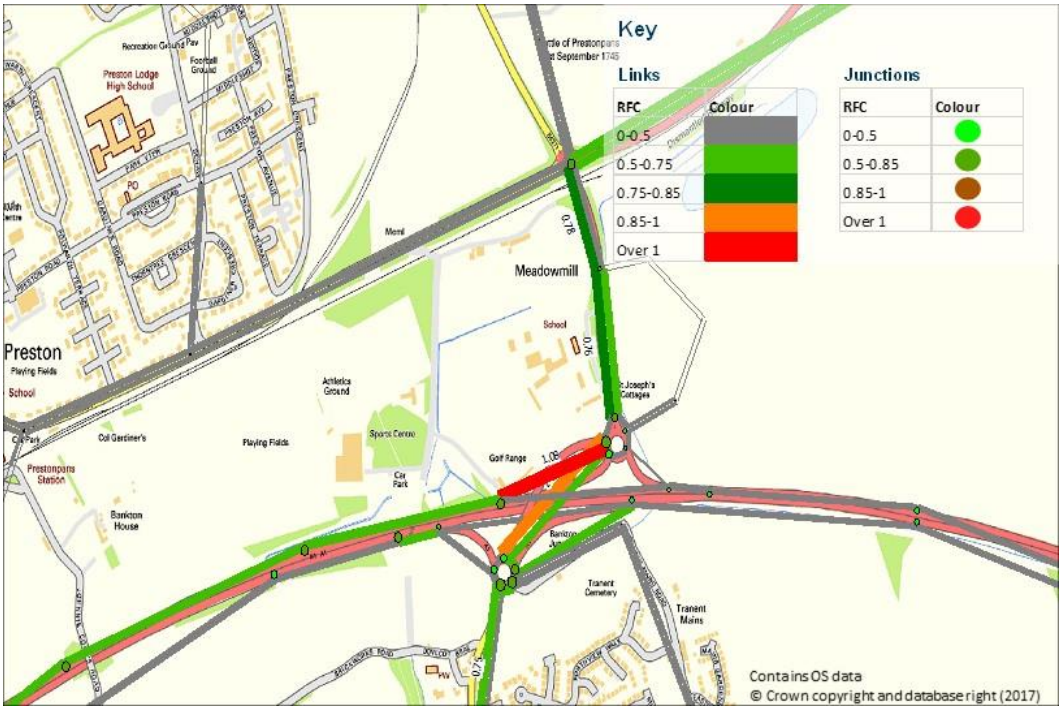

Figure A.11 RFC at A1 Bankton Junction – LDP Without Mitigation Scenario – PM Peak Hour

Musselburgh Town

Relevant Development	Residential and employment developments in and around Musselburgh and Wallyford.
Impacts	Additional traffic generated by these developments is expected add to congestion in Musselburgh town centre.
Network Operation	The network detail in the strategic SRM model is not sufficient to accurately analyse the local traffic impacts within Musselburgh; and local microsimulation traffic modelling is required. However, high level analysis in SRM suggests that there could be some congestion issues in both the AM and PM LDP scenario on Eskview Terrace, Clayknowes Road and at the High Street/Bridge Street junction, as shown in Figure A.12 and Figure A.13.
Suggested Mitigation	Introduction of signal control and/or redesign of local junctions to more efficiently manage forecast traffic flows and minimise impacts including local air quality.
Mitigation Effects	The interventions would be expected to help alleviate congestion issues in the town, with the interventions expected to create a more efficient traffic flow; however, there is insufficient local detail in SRM to fully assess this.
Mitigation Required	Detailed modelling to confirm intervention requirements.

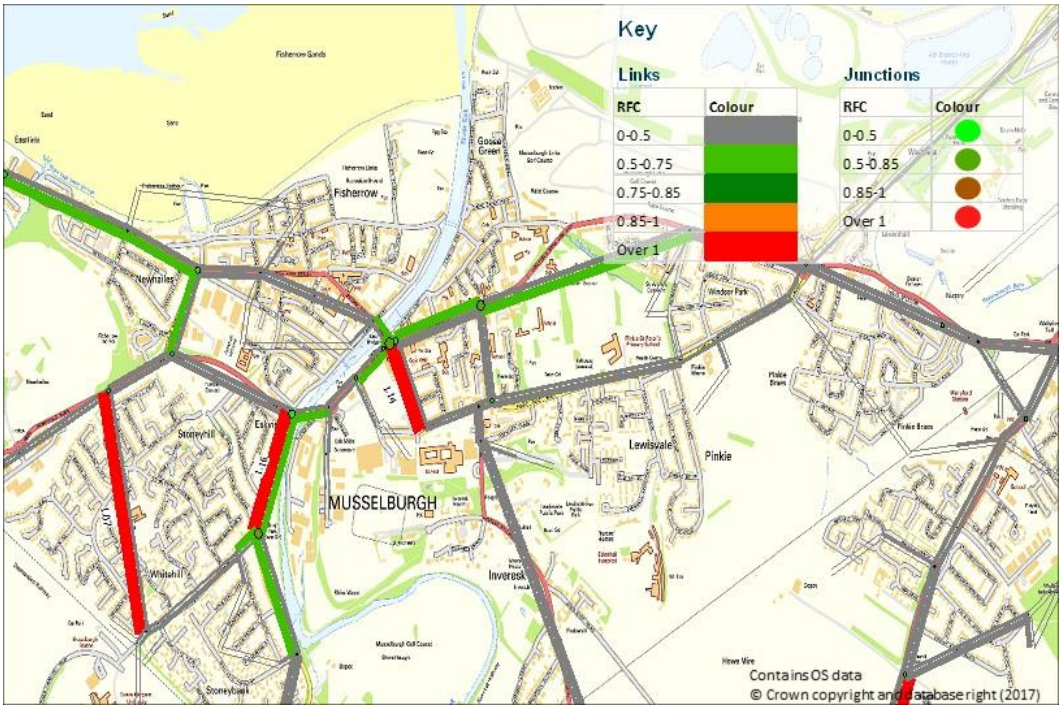

Figure A.12 RFC in Musselburgh Town Centre – LDP Without Mitigation Scenario – AM Peak Hour

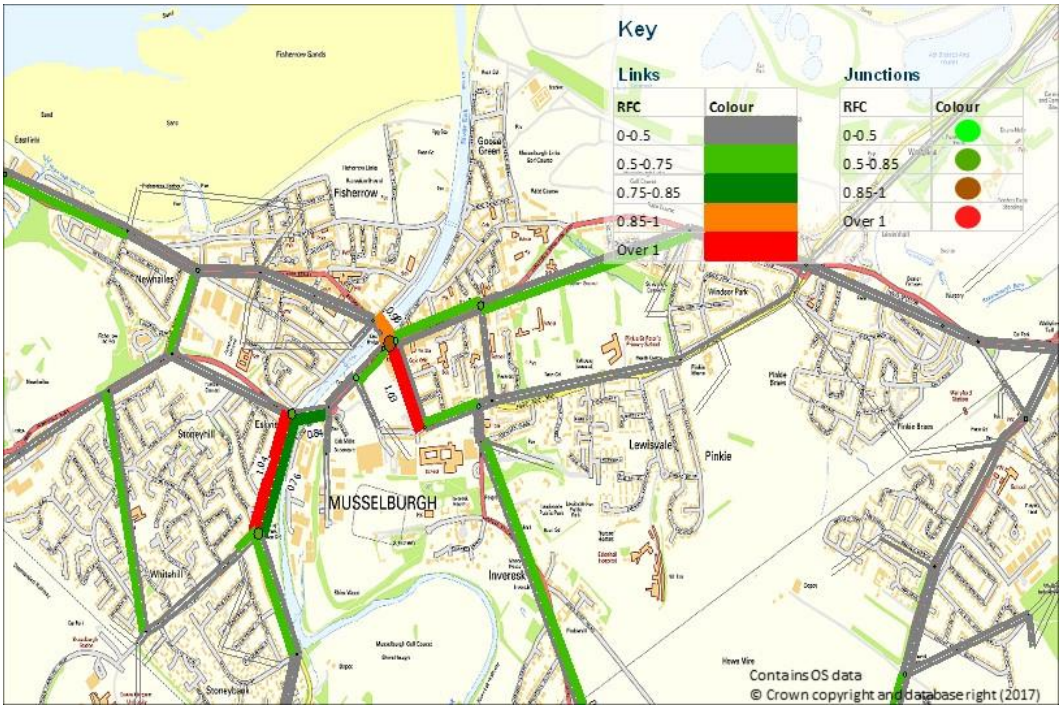

Figure A.13 RFC in Musselburgh Town Centre – LDP Without Mitigation Scenario – PM Peak Hour

Tranent Town

Relevant Development	Residential and employment developments in and around Tranent, with the Blindwells development nearby.
Impacts	Additional traffic generated by these developments is expected to add to congestion in Tranent town centre.
Network Operation	The network detail in the strategic SRM model is not sufficient to accurately analyse the local traffic impacts within Tranent; and local microsimulation traffic modelling is required. However, high level analysis in SRM suggests minor congestion at the Bridge Street/Church Street roundabout in the AM and PM Without LDP scenario is exacerbated by additional LDP traffic, as shown in Figure A.14 and Figure A.15.
Suggested Mitigation	One Way Operation in Tranent town centre.
Mitigation Effects	The interventions would be expected to help alleviate congestion issues in the town, in particular at the Bridge Street/Church Street roundabout; however, there is insufficient local detail in SRM to fully assess this.
Mitigation Required	Detailed modelling to confirm intervention requirements.

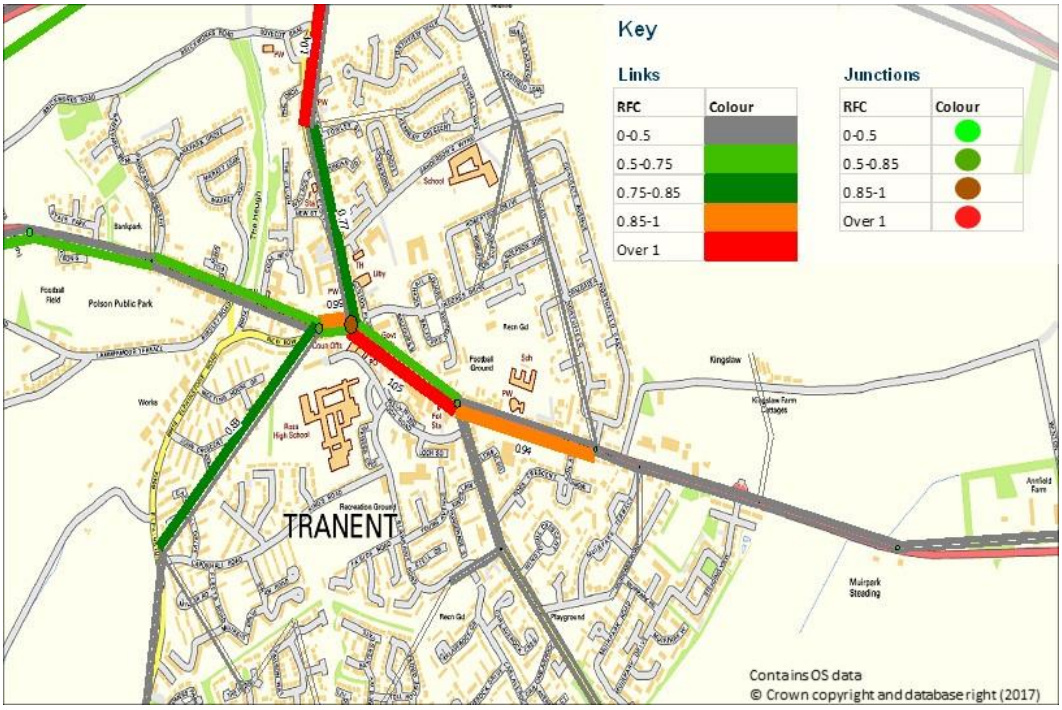

Figure A.14 RFC in Tranent Town Centre – LDP Without Mitigation Scenario – AM Peak Hour

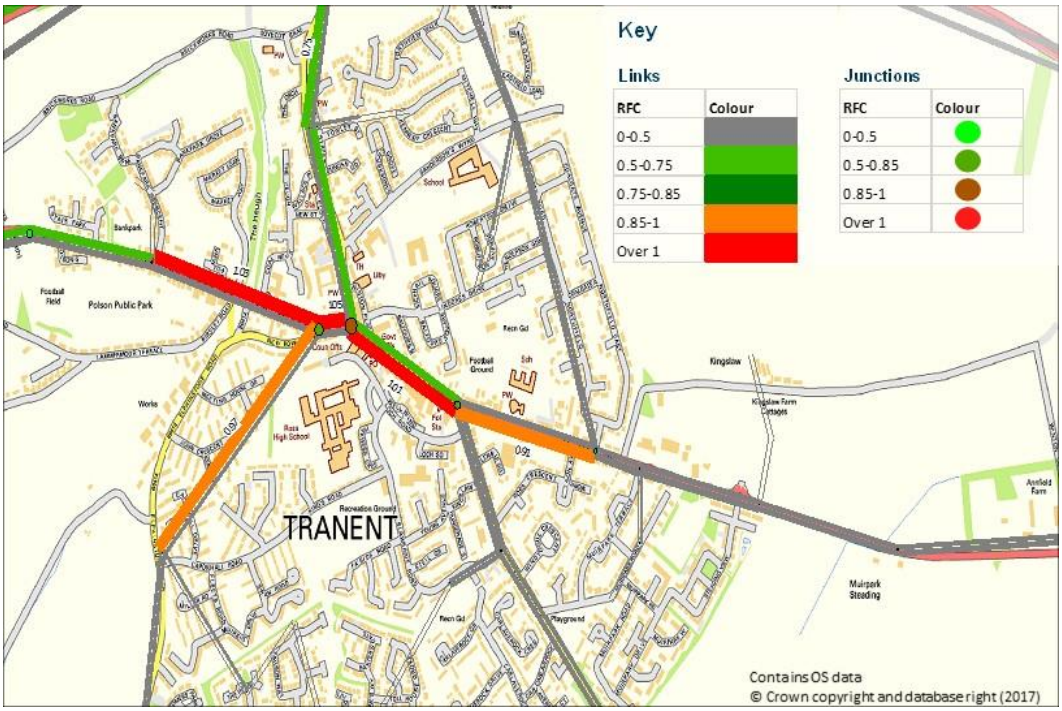

Figure A.15 RFC in Tranent Town Centre – LDP Without Mitigation Scenario – PM Peak Hour

A1 Dolphingstone Interchange

Relevant Development	Dolphingstone site directly adjacent. Plus, majority of Wallyford and Tranent sites will generate traffic that goes through these junctions.
Impacts	Additional traffic generated by these developments is expected to add to congestion to A199 arm of the junction.
Network Operation	The existing junction shows no significant issues in the Without LDP scenario, although there is some queuing on the eastbound A199 approach in the PM.
Suggested Mitigation	Signals optimisation and committed development interventions are expected to address these issues.
Mitigation Effects	Reduction in RFC and delay at the A199/A1 northbound slips junction, for the movements from the A199.
Mitigation Required	Committed.

A1 Salters Rd Interchange

Relevant Development	Wallyford and Barbachlaw sites directly adjacent. Plus, majority of sites in Wallyford will generate traffic that goes through these junctions.
Impacts	Additional traffic generated by these developments is expected to add to congestion in Salters Rd arms of the interchange.
Network Operation	The existing junction does not show major issues in the Without LDP scenario, although there are moderate RFCs on the Salters Rd arms in the AM. The addition of traffic to/from the new developments has the effect of increasing RFCs on the Salters Rd arms as shown in Figure A.17 below.
Suggested Mitigation	Signals optimisation, additional capacity on the northbound Salters Road approach.
Mitigation Effects	Reduction in RFC and delay on the Salters Road arms of the interchange.
Mitigation Required	Yes.

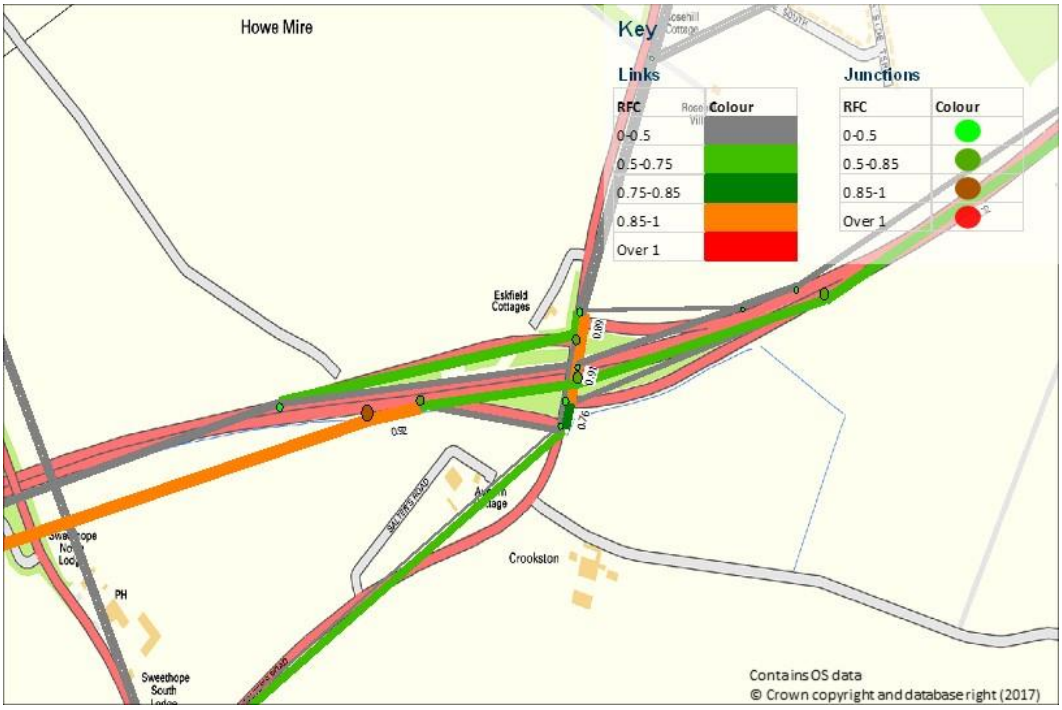

Figure A.16 RFC at A1 Salters Rd Interchange – Without LDP Scenario – AM Peak Hour

Figure A.17 RFC at A1 Salters Rd Interchange – LDP Without Mitigation Scenario – PM Peak Hour

A.2.15 Analysis of the impacts on the public transport network were undertaken, in particular the local rail services along the ECML between Edinburgh and North Berwick. It should be noted that in the forecast year scenarios, services are assumed to be operated by 6-car trains in line with current plans as per the defined Reference Case.

A.2.16 There is evidence that lack of capacity on the rail network is constraining the growth in PT travel which results in the PT mode share in East Lothian decreasing slightly between the base year and forecast years by approximately 1 percentage point. The decrease is greatest in Musselburgh, Wallyford and Tranent, suggesting that despite the additional capacity provided by 6-car trains, it is not sufficient to meet future demand on the network during peak times.

Musselburgh Rail Station and Wallyford Rail Station

Relevant Development	A number of sites are within driving distance of the stations, which have substantial P&R facilities. The largest sites within walking distance are: ▪ Employment associated with the Craighall development northwest of QMU ▪ Residential at Old Craighall ▪ Residential at Dolphingstone ▪ Residential at Wallyford
Impacts	The residential and employment developments around Musselburgh and Wallyford result in a considerable number of additional PT trips, putting pressure on train capacities.
Network Operation	The 6-car services are shown to have very high load factors between Wallyford, Musselburgh and Edinburgh in both the 'With LDP' and 'Without LDP' scenarios; this is focused on westbound services in the AM and eastbound services in the PM, reflecting commuting patterns. Some additional demand from the LDP scenario is likely supressed due to lack of capacity. Figure A.18 and Figure A.19 show loadings in the 'Without LDP' and 'With LDP' scenarios.
Suggested Mitigation	Larger Trains & Platforms at Musselburgh and Wallyford Rail Stations.
Mitigation Effects	Introducing 8-car trains, with associated platform extensions, would provide extra capacity on congested services, potentially encouraging more PT trips and as a result, reducing road traffic.
Mitigation Required	Yes.

A.2.17 Figure A.18 and Figure A.19 show train boardings and alightings at each of the stations along the North Berwick line as follows:

- Without LDP boardings (orange bar) and alightings (red bar)
- With LDP boardings (light blue bar) and alightings (dark blue bar)
- Without LDP loading on departure (red line with triangle markers)
- With LDP loading on departure (blue line with triangle markers)
- Seated capacities and crush capacities – square and circle marker series respectively

A.2.18 The graphs show the seating capacity line being exceeded between Wallyford, Musselburgh and Edinburgh.

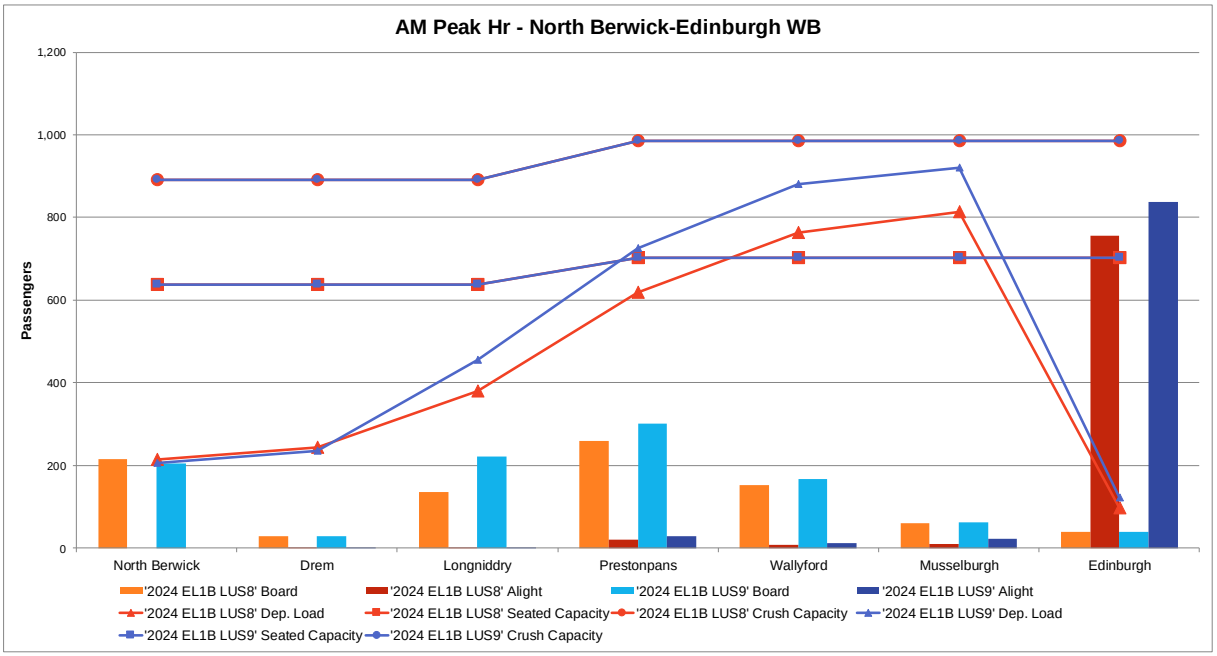

Figure A.18 AM Peak Hour Westbound Rail Loadings

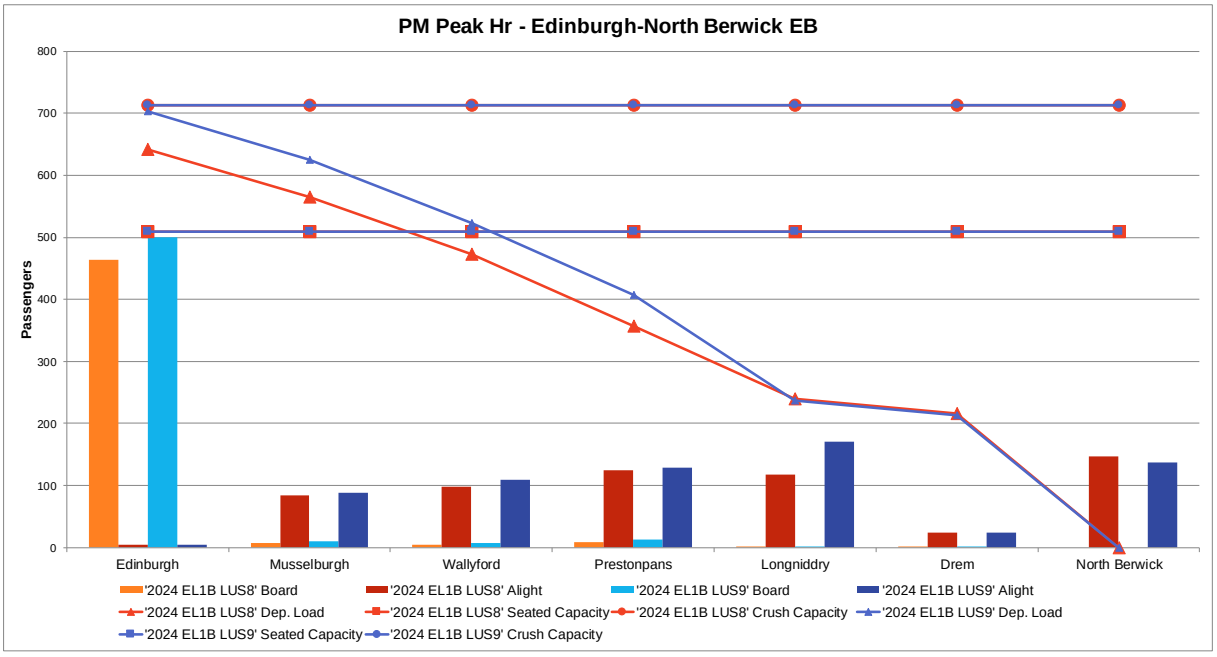

Figure A.19 PM Peak Hour Eastbound Rail Loadings

Prestonpans Rail Station, Longniddry Rail Station and Drem Rail Station

Relevant Development	A number of sites east of Wallyford are within driving distance of the stations, which have P&R facilities.
Impacts	The residential and employment developments around Musselburgh and Wallyford result in a considerable number of additional PT trips, putting pressure on train capacities.
Network Operation	The 6-car services are shown to have very high load factors between Wallyford, Musselburgh and Edinburgh in both the 'With LDP' and 'Without LDP' scenarios, although rail crowding is considerably less pronounced east of here. Examination of the modelled Park & Ride usage indicates that there is spare capacity, however, this is contrary to local anecdotal evidence and may be a function of the model validation.
Suggested Mitigation	Larger Trains & Platforms at Prestonpans Rail Station, Longniddry Rail Station, and Drem Rail Station Longniddry Rail Station Car Park and Drem Rail Station Car Park
Mitigation Effects	Introducing 8-car trains, with associated platform extensions would provide extra capacity on congested services; this would be required across the length of the line. Addition car parking could also be provided at Longniddry and Drem stations, however, this would need to be in conjunction with increase train capacities otherwise any increase in Park & Ride demand could exacerbate crowding issues potentially limiting public transport mode shift.
Mitigation required	Yes.

New Rail Station North of Blindwells

Relevant Development	Residential and employment development at Blindwells.
Impacts	The large residential and employment development at Blindwells generates a considerable number of additional trips to and from the site. The lack of a rail station means the attractiveness of PT travel is considerably less than could be achieved with direct rail access.
Network Operation	The lack of direct rail access results in a high proportion of road based trips to/from the site, putting pressure on the road network. On the rail network, the 6-car services are shown to have very high load factors between Wallyford, Musselburgh and Edinburgh in both the 'With LDP' and 'Without LDP' scenarios, although congestion is considerably less pronounced east of here; if 8-car trains were introduced, these capacity constraints would likely be relieved.
Suggested Mitigation	New Rail Station north of Blindwells and ECML Overbridge.
Mitigation Effects	Constructing a station at Blindwells would give direct rail access for residents and employees at the site, reducing dependence on road based transport and the associated pressure on the road network. Introducing 8-car trains, with associated platform extensions, would provide considerable extra capacity on a very congested service; this would be required across the length of the line, and as such a new Blindwells station would also be designed to accommodate 8-car trains.
Mitigation required	Yes, but noted that this intervention is outside the domain of ELC.

A.3 Impact of ELLDP Transport Mitigation

A.3.1 This section summarises the SRM12 outputs comparing the 2024 ELLDP scenario with and without mitigation to inform the Appraisal of the recommended intervention package.

Trip Productions and Attractions

A.3.2 The forecast number of car and public transport trips in terms of total productions and attractions by sector are shown in Table A.8, and Table A.9 respectively, presented as a 12-hour total. Inspection of these tables reveals that total modelled trip generation does not change significantly with the introduction of the mitigation interventions.

Table A.8 All Mode Trip Productions (12 hour, Persons)

Sector	Without Mitigation	With Mitigation	Difference	% Change in Trip Production
East Lothian Rural	13,100	13,100	0	0.0%
Musselburgh & Wallyford	71,900	72,200	300	0.4%
Tranent	26,100	26,000	-100	-0.4%
Prestonpans	27,700	27,600	-100	-0.4%
Haddington	15,900	15,900	0	0.0%
North Berwick	16,600	16,600	0	0.0%
Dunbar	16,100	16,100	0	0.0%
Blindwells	3,700	3,700	0	0.0%
ELC Total	191,100	191,300	200	0.1%

Table A.9 All Mode Trip Attractions (12 hour, Persons)

Sector	Without Mitigation	With Mitigation	Difference	% Change in Trip Attraction
East Lothian Rural	13,600	13,500	-100	-0.7%
Musselburgh & Wallyford	72,500	72,900	400	0.6%
Tranent	26,800	26,800	0	0.0%
Prestonpans	28,500	28,300	-200	-0.7%
Haddington	16,300	16,200	-100	-0.6%
North Berwick	16,700	16,600	-100	-0.6%
Dunbar	16,100	16,100	0	0.0%
Blindwells	4,300	4,300	0	0.0%
ELC Total	194,800	194,700	-100	-0.1%

A.3.3 The public transport trip production from East Lothian Sectors are shown in Table A.10 and Table A.11, for the with and without mitigation scenarios. The modelled outputs indicate that the mitigation interventions are expected to lead to higher public transport usage in Prestonpans, North Berwick and Musselburgh and Wallyford, but the overall impact is minor.

Table A.10 Public Transport Trip Productions (12 hour, Persons)

Sector	Without Mitigation	With Mitigation	Difference	% Change in Trip Production
East Lothian Rural	1,700	1,700	0	0.0%
Musselburgh & Wallyford	13,000	13,100	100	0.8%
Tranent	4,100	4,100	0	0.0%
Prestonpans	6,000	6,000	0	0.0%
Haddington	2,000	2,000	0	0.0%
North Berwick	2,200	2,200	0	0.0%
Dunbar	2,100	2,100	0	0.0%
Blindwells	600	600	0	0.0%
ELC Total	31,700	31,800	100	0.3%

Table A.11 Public Transport Trip Attractions (12 hour, Persons)

Sector	Without Mitigation	With Mitigation	Difference	% Change in Trip Production
East Lothian Rural	1,800	1,800	0	0.0%
Musselburgh & Wallyford	12,500	12,600	100	0.8%
Tranent	4,000	4,000	0	0.0%
Prestonpans	5,800	5,800	0	0.0%
Haddington	1,900	1,900	0	0.0%
North Berwick	2,200	2,200	0	0.0%
Dunbar	2,100	2,100	0	0.0%
Blindwells	700	700	0	0.0%
ELC Total	31,000	31,100	100	0.3%

A.3.4 The Park & Ride trip productions from East Lothian sectors are shown in Table A.12, for the with and without mitigation scenarios.

Table A.12 Park & Ride Trip Productions (12 hour, persons)

Sector	Without Mitigation	With Mitigation	Difference	% Change in Trip Production
East Lothian Rural	200	200	0	0.0%
Musselburgh & Wallyford	600	600	0	0.0%
Tranent	200	200	0	0.0%
Prestonpans	600	600	0	0.0%
Haddington	0	0	0	0.0%
North Berwick	300	300	0	0.0%
Dunbar	300	200	-100	-33.3%
Blindwells	100	100	0	0.0%
ELC Total	2,300	2,200	-100	-4.3%

A.3.5 Table A.12 indicates that the mitigation interventions are not expected to have a significant impact on Park & Ride usage. There is slight reduction predicted for some sectors, possibly due to the improved road provision attracting users away from Park & Ride.

A.3.6 Figure A.20 shows the modelled public transport mode share, expressed as a percentage for each defined sector, for each scenario. It should be noted that this excludes non-motorised modes, which are not modelled in SRM. This indicates a minor increase in PT mode share in the ELLDP 'With Mitigation' scenario compared to the 'Without Mitigation' scenario.

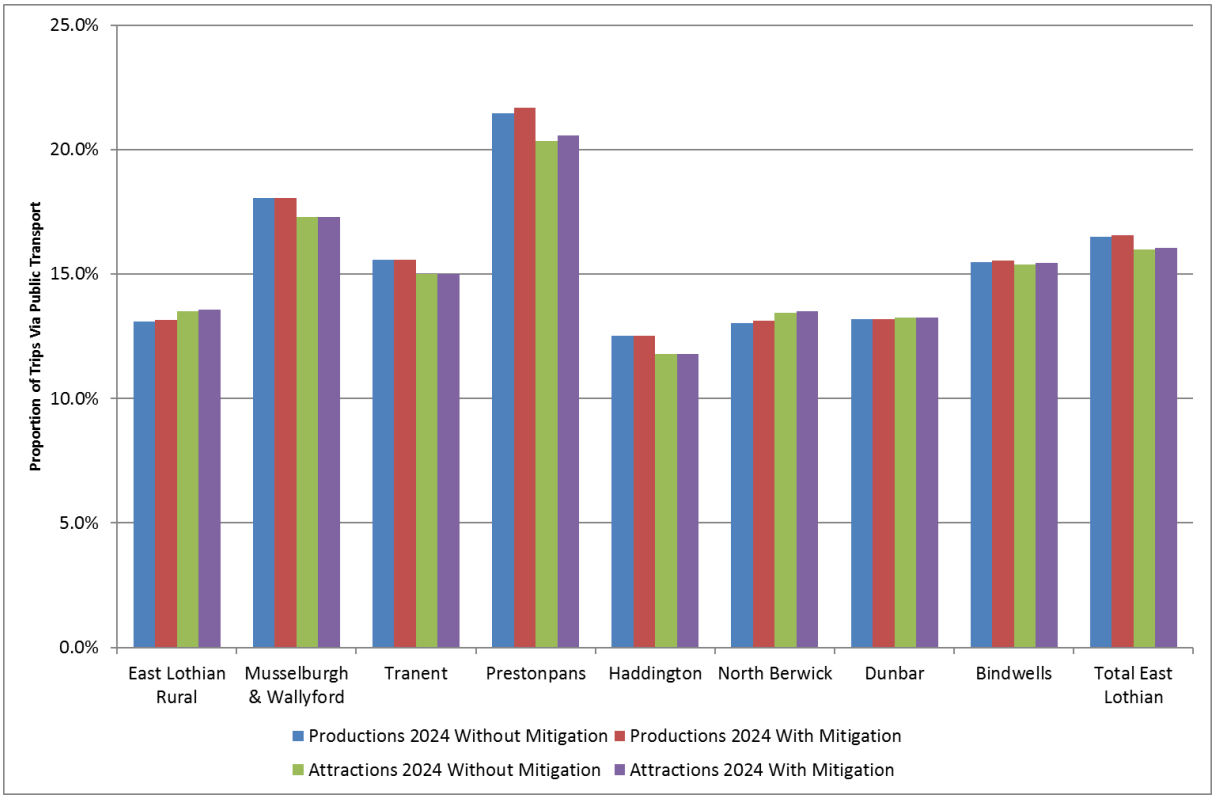

Figure A.20 Public Transport Mode Share

Travel Demand on Network

A.3.7 Table A.13 provides a comparison of the modelled vehicle distance (two-way, 12-hour) on the key corridors.

Table A.13 Two-Way Vehicle Distance on Key Corridors (12-hour, Kilometres)

Corridor	Without Mitigation	With Mitigation	Difference	% Difference
A199	68,700	59,500	-9,200	-13%
A1	396,900	402,000	5,100	1%
A198	62,200	60,700	-1,500	-2%

A.3.8 This indicates a predicted re-routing away from the A198 and A199 onto the A1 and reflects the improvements to grade separated junction on the A1, included in the mitigation interventions.

A.3.9 Table A.14 provides a comparison of the total vehicle distance (AM peak hour, in kilometres) by sector.

Table A.14 Vehicle Distance by Sector (AM Peak Hour, Kilometres)

Sector	2024 ELLDP Without Mitigation	2024 ELLDP 'With Mitigation' vs 'Without Mitigation'		
Musselburgh & Wallyford	55,500	58,700	3,200	6%
Tranent	29,000	28,500	-500	-2%
Prestonpans	41,200	42,700	1,500	4%
Haddington	38,700	38,700	0	0
North Berwick	9,900	10,000	100	1%
Dunbar	19,500	19,700	200	1%
Blindwells	5,900	6,100	200	3%
East Lothian Rural	45,600	45,900	300	1%
ELC Total	199,700	204,400	4,700	2%

A.3.10 This indicates that there is a predicted increase in overall AM peak vehicle demand, with the introduction of the mitigation interventions. This, however, partly reflects the release of suppressed demand with the improvements to the road network, particularly in Musselburgh. In addition, it reflects re-routing to take advantage of improved infrastructure.

A.3.11 Table A.15 shows a comparison of the two-way, 12-hour road public transport passenger distance (in kilometres) on the key corridors:

Table A.15 Public Transport Two-Way Passenger Distance on Key Corridors (12-hour, Kilometres)

Corridor	Without Mitigation Vehicle Distance	With Mitigation Vehicle Distance	Difference	% Difference
A199	30,500	30,100	-400	-1%
A1	26,900	26,300	-600	-2%
A198	6,000	5,800	-200	-3%
Rail	322,200	326,100	3,900	1%

A.3.12 This indicates that there is a predicted slight reduction in the use of road-based public transport on the main corridors through East Lothian with the introduction of the mitigation interventions. This is largely due to modal shift to rail, which has an increase in usage on the main rail line through East Lothian, with the introduction of the mitigation interventions (see Figure A.29 and Figure A.30).

A.3.13 Total public transport based distance, in kilometres, for each scenario is shown in Table A.16 for the AM peak hour. This shows a mixture of decreases and increases in public transport mileage, reflecting the impact of both public transport and road mitigation interventions.

Table A.16 Passenger Distance by Sector (AM Peak Hour, Kilometres)

Sector	2024 ELLDP Without Mitigation	2024 ELLDP With Mitigation (versus Without Mitigation)		
Musselburgh & Wallyford	33,300	34,900	1,600	5%
Tranent	3,600	3,600	0	0
Prestonpans	50,600	51,000	400	1%
Haddington	4,000	4,000	0	0
North Berwick	2,300	2,500	200	9%
Dunbar	104,800	104,800	0	0
Blindwells	200	200	0	0
East Lothian Rural	4,800	4,700	-100	-2%
ELC Total	198,800	201,000	2,200	1%

ELLDP Network Impacts

A.3.14 Table A.17 presents the change in vehicle journey time on the key corridors, in minutes:

Table A.17 Two-Way All Vehicle Journey Time on Key Corridors (12-hour, Minutes)

Corridor	Without Mitigation Vehicle JT	With Mitigation Vehicle JT	Difference	% Difference
A199	110,800	88,400	-22,400	-20%
A1	290,700	295,900	5,200	2%
A198	69,100	69,400	300	0%

A.3.15 Using the total vehicles, total vehicle journey time and the length of the corridors, journey times can be calculated. Table A.18 shows the average 12-hour speeds on these corridors, calculated from the total vehicle distance and total vehicle journey time above:

Table A.18 Two-Way Average Speed on Key Corridors (12-hour, Kilometres per Hour)

Corridor	Without Mitigation	With Mitigation	Difference	% Difference
A199	37.2	40.4	3.1	8%
A1	81.9	81.5	-0.4	0%
A198	53.9	52.5	-1.4	-3%

A.3.16 This indicates a moderate predicted reduction in congestion on the A199. It also indicates that there is no significant increase in congestion on the A1, despite an increase in the traffic flows. A minor decrease in speed is predicted on the A198 where traffic signal controls are introduced at Bankton.

A.3.17 Table A.19 presents the change in vehicle journey time by sector during the AM peak. This indicates that there are no major changes in overall AM vehicle time with the introduction of the mitigation interventions, despite significant increases in vehicle distance. This indicates an expected increase in average vehicle speeds.

Table A.19 Total Vehicle Journey Time by Sector (AM Peak Hour, Minutes)

Sector	2024 ELLDP Without Mitigation	2024 ELLDP With Mitigation (versus Without Mitigation)		
Musselburgh & Wallyford	89,600	83,500	-6,100	-7%
Tranent	27,500	26,500	-1,000	-4%
Prestonpans	40,800	41,900	1,100	3%
Haddington	27,100	27,100	0	0
North Berwick	11,300	11,300	0	0
Dunbar	15,100	15,200	100	1%
Blindwells	7,300	7,300	0	0
East Lothian Rural	36,000	36,200	200	1%
ELC Total	218,700	212,800	-5,900	-3%

A.3.18 By dividing total vehicle distance by total vehicle journey time, the average speed can be calculated by sector. This is presented, for the AM peak, in Table A.20. This indicates that the mitigation interventions are predicted to deliver benefits in terms of improved vehicle speeds during the AM peak period.

Table A.20 Average Vehicle Speed by Sector (AM Peak Hour, Kilometres per Hour)

Sector	2024 ELLDP Without Mitigation	2024 ELLDP With Mitigation (versus Without Mitigation)		
Musselburgh & Wallyford	37.2	42.2	5.0	13%
Tranent	63.2	64.5	1.3	2%
Prestonpans	60.7	61.1	0.5	1%
Haddington	85.7	85.8	0.1	0%
North Berwick	52.3	53.2	0.9	2%
Dunbar	77.5	77.5	0.0	0%
Blindwells	48.5	50.1	1.6	3%
East Lothian Rural	75.9	76.0	0.1	0%
ELC Total	54.8	57.6	2.8	5%

A.3.19 Table A.21 and Table A.22 show the average road AM journey time from East Lothian to Central Edinburgh, and PM peak journey time from Central Edinburgh to East Lothian, 'With' and 'Without' the mitigation interventions. This indicates that there is a slight increase in journey times to Edinburgh with the introduction of the mitigation interventions.

Table A.21 Road AM Peak Hour Journey Time to Central Edinburgh (minutes)

Sector	2024 ELLDP Without Mitigation	2024 ELLDP With Mitigation (versus Without Mitigation)		
Musselburgh & Wallyford	29.2	28.9	-0.3	-1%
Tranent	37.7	39.6	1.9	5%
Prestonpans	39.5	42.6	3.1	8%
Haddington	42.5	45.1	2.6	6%
North Berwick	57.0	60	3.0	5%
Dunbar	54.4	57	2.6	5%
Blindwells	36.3	38.9	2.6	7%
East Lothian Rural	46.7	48.5	1.8	4%

Table A.22 Road PM Peak Hour Journey Time from Central Edinburgh (in minutes)

Sector	2024 ELLDP Without Mitigation	2024 ELLDP With Mitigation (versus Without Mitigation)		
Musselburgh & Wallyford	32.4	32.2	-0.2	-1%
Tranent	38.8	39.3	0.5	1%
Prestonpans	40.8	41.7	0.9	2%
Haddington	43.8	44.8	1.0	2%
North Berwick	57.8	59	1.2	2%
Dunbar	54.6	55.7	1.1	2%
Blindwells	37.6	38.5	0.9	2%
East Lothian Rural	48.9	49.4	0.5	1%

A.3.20 Table A.23 and Table A.24 show the average public transport AM journey time from East Lothian to Central Edinburgh, and PM peak journey time from Central Edinburgh to East Lothian, with and without the mitigation interventions. This indicates that there are benefits from the mitigation interventions for public transport travel between East Lothian and Edinburgh.

Table A.23 Public Transport AM Peak Hour Journey Time to Central Edinburgh (minutes)

Sector	2024 ELLDP Without Mitigation	2024 ELLDP With Mitigation (versus Without Mitigation)		
Musselburgh & Wallyford	42.4	41	-1.4	-3%
Tranent	62.7	62.7	0	0
Prestonpans	48.3	44.3	-4.0	-8%
Haddington	73.4	73.7	0.3	0%
North Berwick	59.8	56.9	-2.9	-5%
Dunbar	44.6	44.6	0	0
Blindwells	49.5	46.3	-3.2	-6%
East Lothian Rural	76.8	75.3	-1.5	-2%

Table A.24 Public Transport PM Peak Hour Journey Time from Central Edinburgh (minutes)

Sector	2024 ELLDP Without Mitigation	2024 ELLDP With Mitigation (versus Without Mitigation)		
Musselburgh & Wallyford	34.2	31.5	-2.7	-8%
Tranent	61.2	60.6	-0.6	-1%
Prestonpans	42.5	40.3	-2.2	-5%
Haddington	73.8	74	0.2	0%
North Berwick	56.7	55.4	-1.3	-2%
Dunbar	36.9	36.9	0	0
Blindwells	44.5	42.1	-2.4	-5%
East Lothian Rural	75.2	75.0	-0.2	-0%

Operational Assessment

A.3.21 A mitigation assessment was undertaken using SRM12 for the following interventions to review their effectiveness and refine scheme details:

- A1 QMU All-Ways Interchange;
- A1 Old Craighall Interchange — Signal Control of Roundabout;
- Larger Trains & Platforms on the North Berwick Line; and
- New Rail Station north of Blindwells.

A.3.22 Analysis of the A1 QMU All-Ways Interchange intervention indicates that, while this has some positive impact on the operation of the A1 Old Craighall junction with the removal of U-turns, the significant impact is on trips to/from the QMU and Craighall development sites that would benefit directly from improved access to/from Edinburgh.

A.3.23 Signal control at the A1 Old Craighall Interchange roundabout is predicted to enhance traffic management and reduce congestion and delay, as shown in Figure A.21 to Figure A.24. This location attracts traffic from locations across East Lothian and beyond and, therefore, the majority of ELLDP development allocations would be expected to have an impact on this junction.

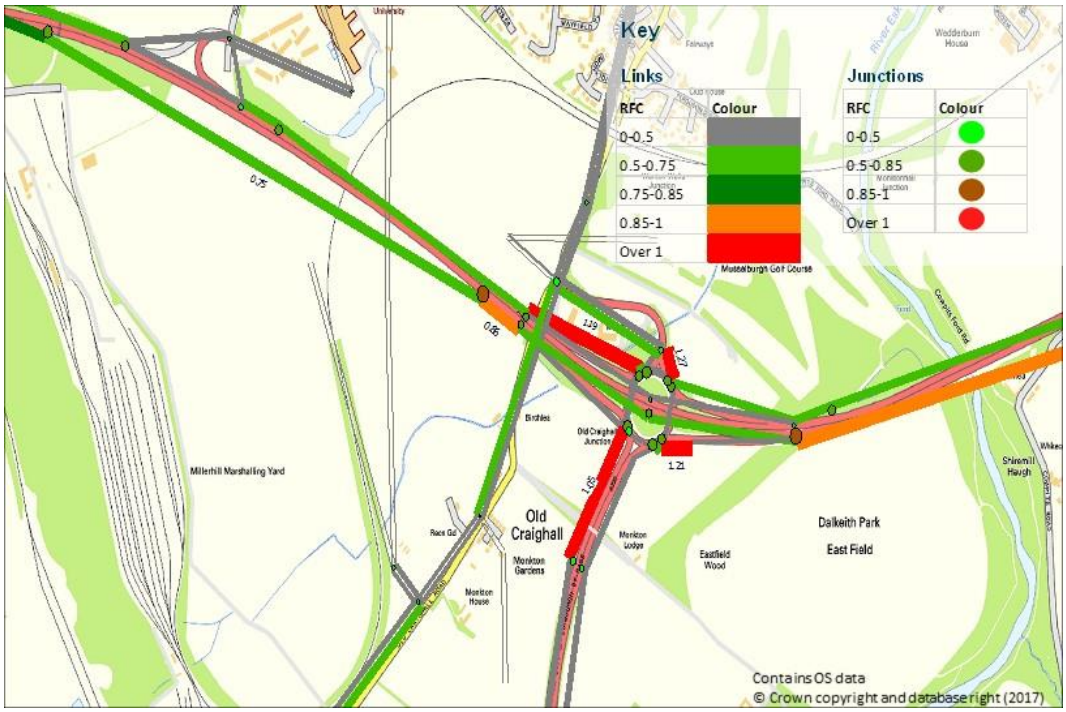

Figure A.21 RFC at Old Craighall– LDP Without Mitigation Scenario – AM Peak Hour

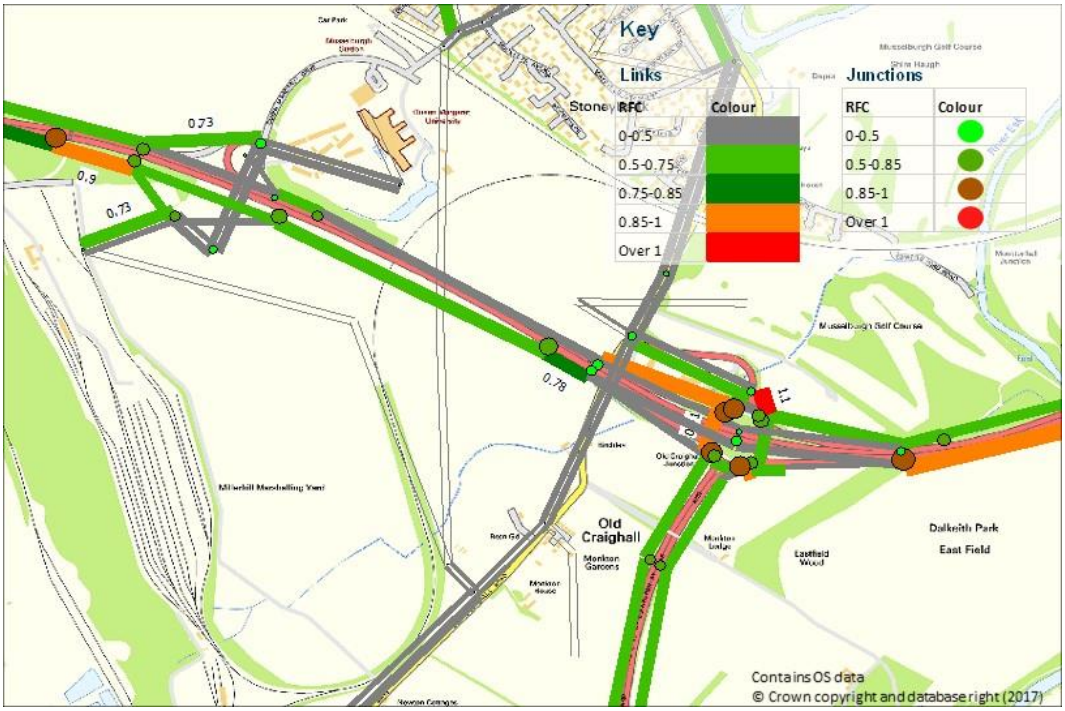

Figure A.22 RFC at Old Craighall – LDP With Mitigation Scenario – AM Peak Hour

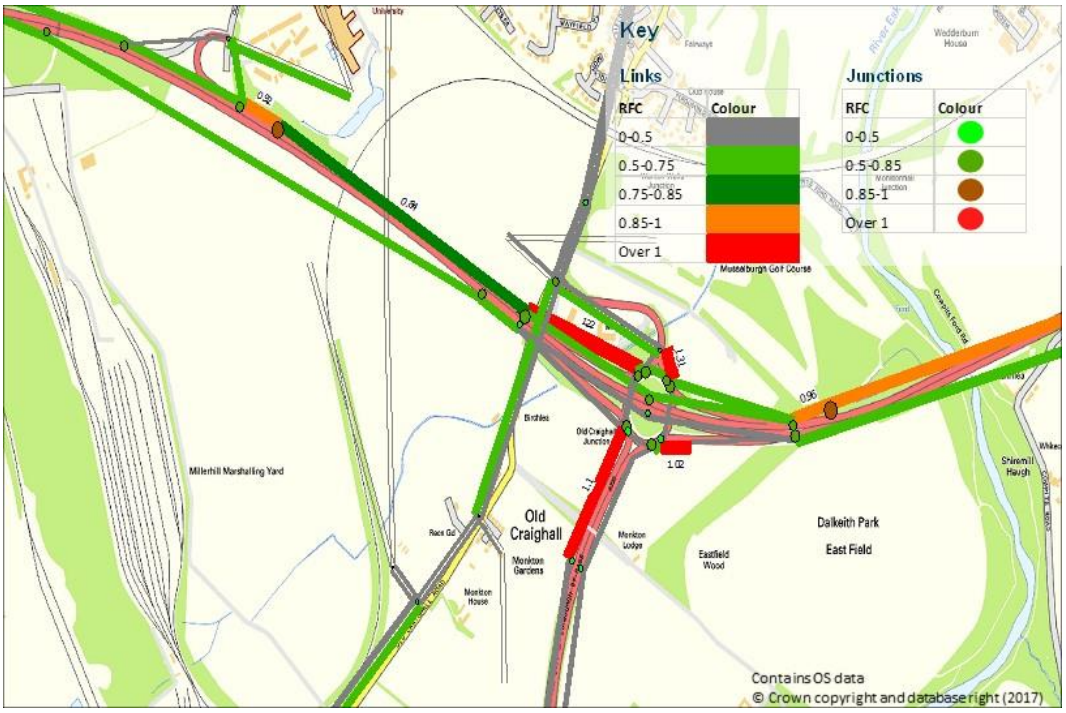

Figure A.23 RFC at Old Craighall– LDP Without Mitigation Scenario – PM Peak Hour

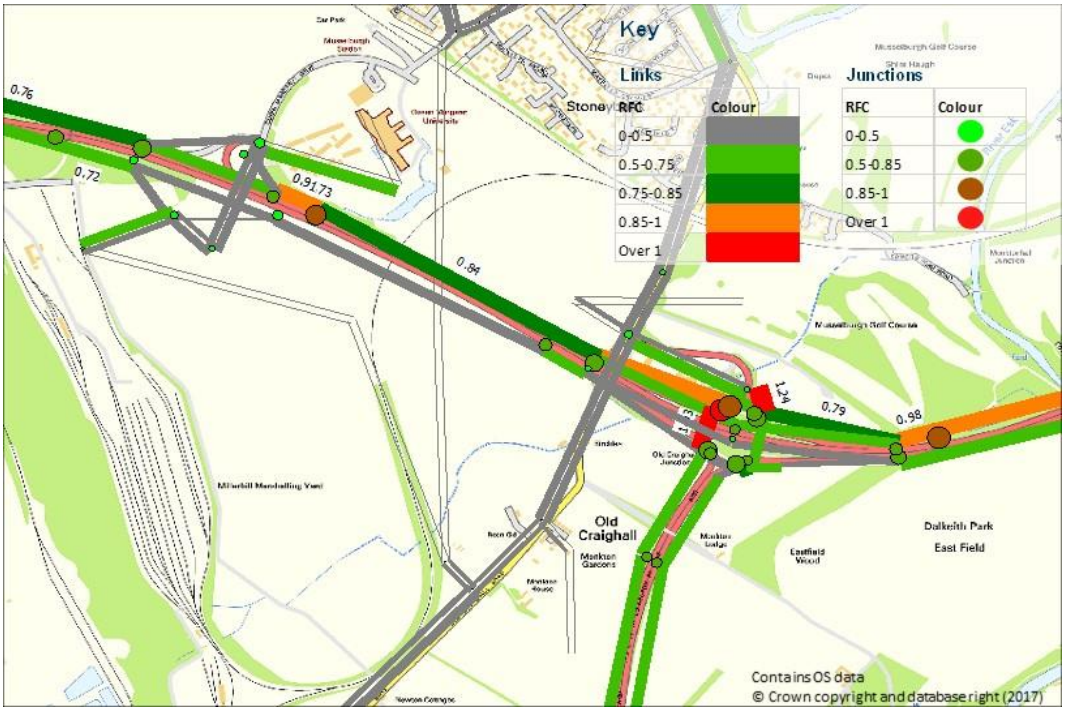

Figure A.24 RFC at Old Craighall – LDP With Mitigation Scenario – PM Peak Hour

A.3.24 Figure A.25 and Figure A.26 show the Bankton grade separated junction in the PM peak in the "without mitigation" and "with mitigation" scenarios. This indicates significant reductions in the RFCs at this interchange with the signalisation of the north roundabout and the approach widening at both roundabouts.

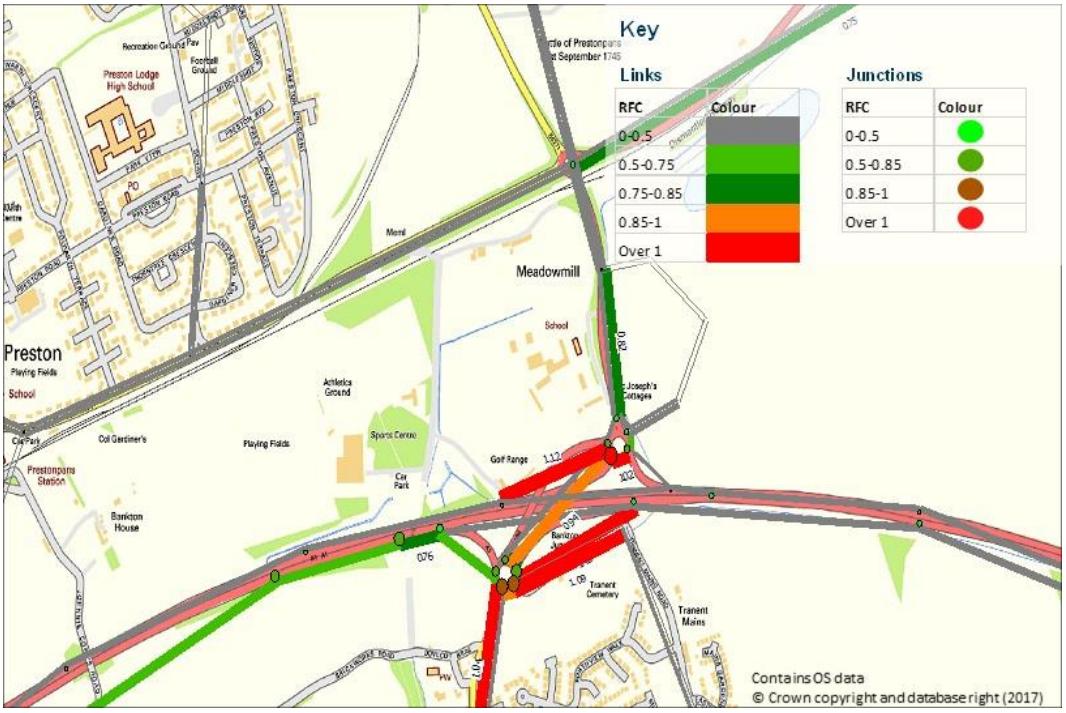

Figure A.25 RFC at A1 Bankton Interchange – LDP Without Mitigation Scenario – AM Peak Hour

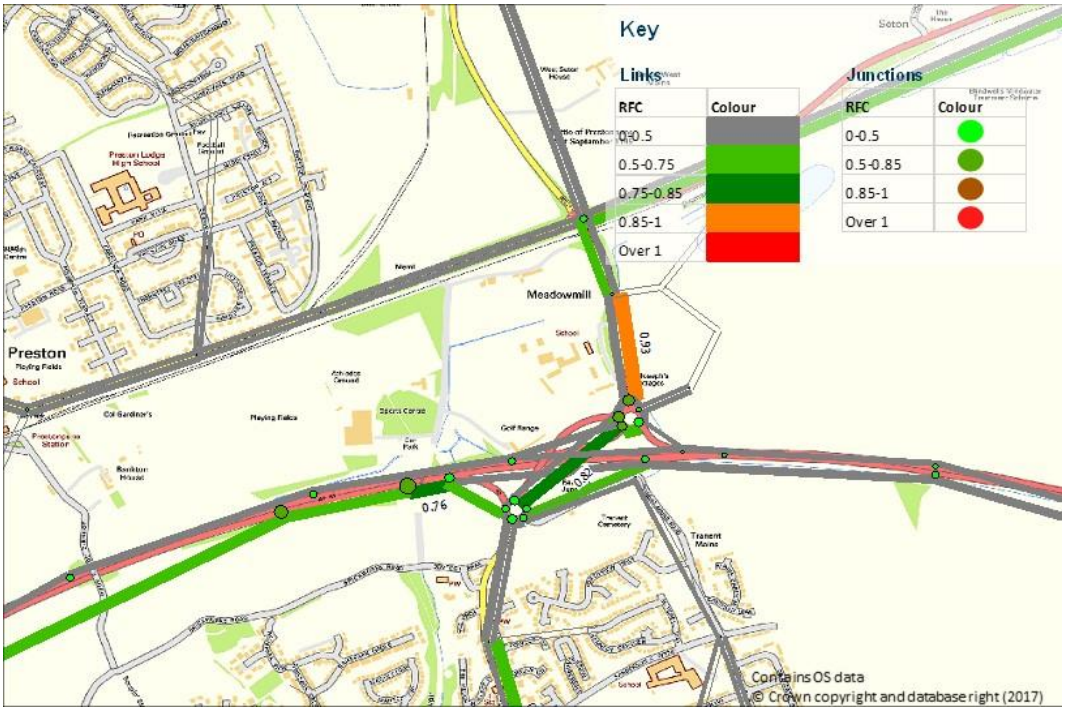

Figure A.26 RFC at A1 Bankton Interchange– LDP With Mitigation Scenario – AM Peak Hour

A.3.25 Figure A.27 and Figure A.28 show the Salters Road grade separated junction in the AM peak in the "without mitigation" and "with mitigation" scenarios. This indicates moderate reductions in RFCs on Salters Road southbound during the AM Peak, which are enabled by the enhanced layout, including the widening of the northbound approach.

Figure A.27 RFC at A1 Salters Rd Interchange – LDP Without Mitigation Scenario – AM Peak Hour

Figure A.28 RFC at A1 Salters Rd Interchange – LDP With Mitigation Scenario – AM Peak Hour

A.3.26 Analysis of the impact of providing larger trains and platforms on the Edinburgh to North Berwick rail line indicates this extra capacity reduces crowding, whilst attracting some additional demand, and mitigates ELLDP impacts.

A.3.27 Figure A.29 and Figure A.30 highlight the positive impacts on passenger volumes and crowding where the blue lines representing loadings against seated and crush capacity with 8-car trains in comparison to the without mitigation scenario (red lines).

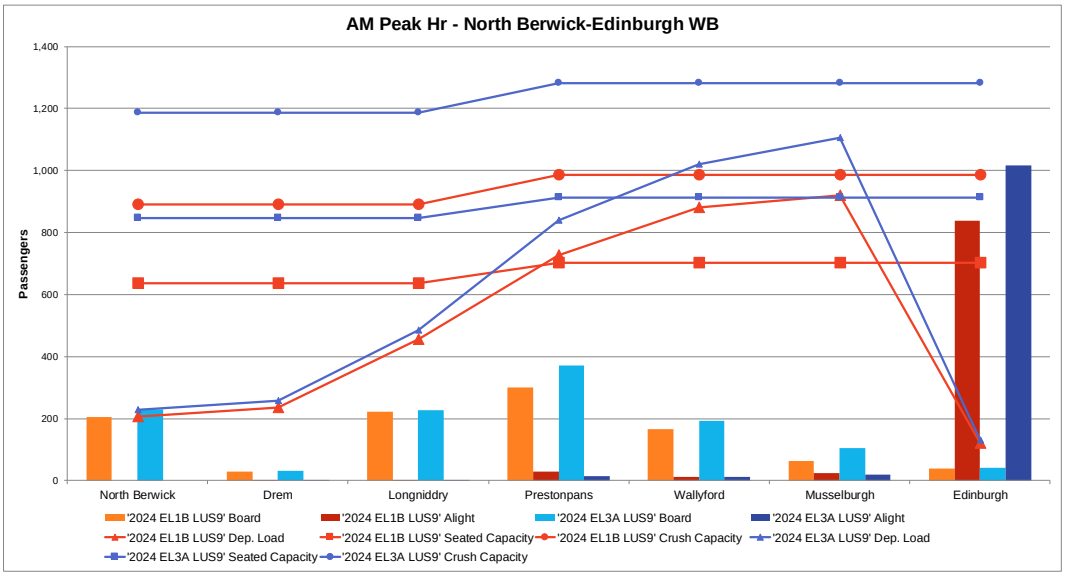

Figure A.29 North Berwick Line Westbound AM – LDP Without and With Mitigation

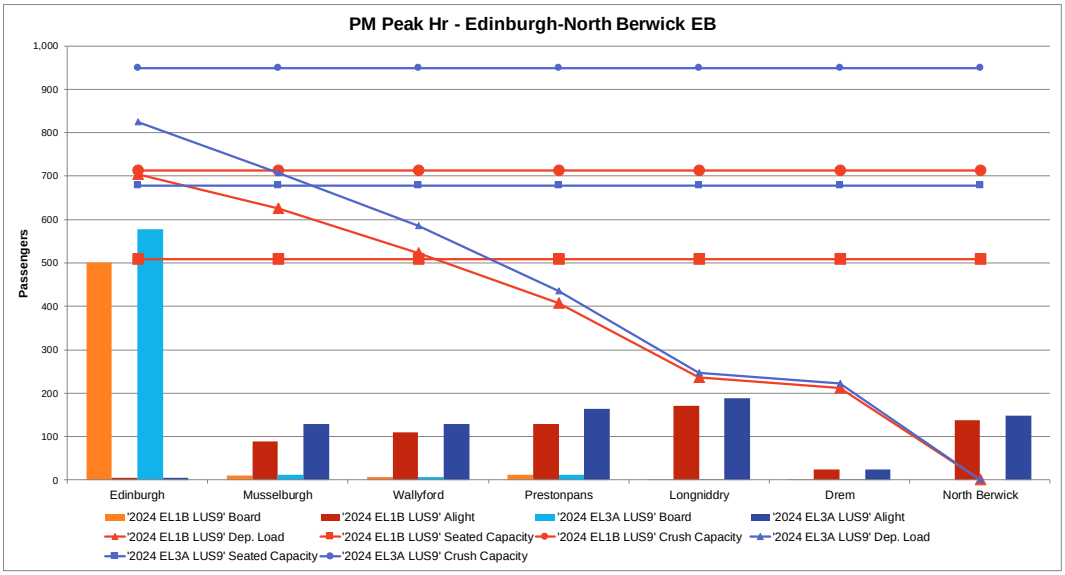

Figure A.30 North Berwick Line Westbound PM – LDP Without and With Mitigation

Appendix B Musselburgh and Tranent Traffic Model Outputs

B.1 Overview

B.1.1 The Musselburgh and Tranent Traffic Model (MTTM) was used to assess the impact of the ELLDP mitigation interventions and inform the Appraisal.

B.1.2 The scenarios presented are:

- 2024 Without LDP; and
- 2024 With LDP Including Mitigation.

B.1.3 It was not possible to extract data for the 2024 With LDP scenario without mitigation where the modelled levels of congestion were significant, preventing meaningful outputs being produced from the MTTM. Therefore, outputs are compared for the 'Without LDP' scenario versus 'With LDP' Including Mitigation scenario, to assess the impact of the ELLDP on the road network performance. It should be noted that there is considerably greater demand in the 'With LDP' scenario that, as expected, considerably impacts on the network statistics and should be considered when interpreting the model outputs.

B.1.4 Some of the numbers in the tables that follow have been rounded from those that are predicted by the transport model. While the absolute numbers have been rounded, the % differences have been retained from the actual model outputs.

B.2 Mitigation Scenario Definition

B.2.1 The following mitigation interventions are included in the 2024 'Without LDP' Model:

- Salters Road Interchange;
- Musselburgh High Street;
- Signal junction at Ashgrove/Pinkie Road;
- Signal junction at Salters Road/The Loan/Inchview Road;
- Widening of Mall Avenue eastbound lane from Inveresk Road to Bridge Street;
- Signal junction at Salters Road/Drummohr Avenue; and
- Harbour Road changed to one-way northbound.

B.2.2 In addition to this, signal optimisation was included at the following junctions:

- Newhailes Road/A199 Edinburgh Road;
- Olive Bank Road/Monktonhall Terrace;
- Monktonhall Terrace/Stoneybank Terrace; and
- Mall Avenue/Inveresk Road.

B.2.3 The following mitigation interventions were identified for inclusion in the 2024 With LDP Including Mitigation scenario:

- Old Craighall Interchange;
- Dolphingstone Interchange;
- Bankton Interchange and A198 Junction;

- Meadowmill Roundabout;
- Queen Margaret University All Ways Junction;
- Musselburgh Junction Signalisation:
  - New Street/A199 Edinburgh Road;
  - Millhill/A199 Linkfield Road; and
  - Newbigging/A6124 Inveresk Road.
- One way gyratory of Tranent High Street and Loch road with a new link road joining Loch Road to High Street at Winton place;
- New Row changed to one-way westbound; and
- Inveresk Road to Newbigging included a barred turn to Inveresk Road from north Newbigging.

B.2.4 Further details can be found in The *Musselburgh and Tranent Local Development Plan Microsimulation Modelling Report* (SYSTRA, May 2017).

B.3 Model Network Statistics

B.3.1 The total vehicle time, vehicle distance and average speed, in the AM peak, are shown in Table B.1.

Table B.1 AM Peak Period Vehicle Time, Distance and Average Speed

Model Statistic	Without ELLDP	With LDP Including Mitigation	% Difference
Total Vehicle Time (s)	12,400,000	15,100,000	22%
Distance (m)	161,300,000	194,100,000	20%
Average Speed (kph)	47	46	-1%

Note: Absolute numbers have been rounded. % Difference based on non-rounded modelled numbers

B.3.2 The total vehicle time, vehicle distance and average speed, in the PM peak, are shown in Table B.2.

Table B.2 PM Peak Period Vehicle Time, Distance and Average Speed

Model Statistic	Without ELLDP	With LDP Including Mitigation	% Difference
Total Vehicle Time (s)	15,700,000	15,800,000	0.5%
Distance (m)	163,200,000	196,600,000	20%
Average Speed (kph)	37	45	20%

Note: Absolute numbers have been rounded. % Difference based on non-rounded modelled numbers

B.3.3 The above tables indicate that the ELLDP interventions are expected to broadly mitigate predicted impacts with similar AM average speeds and higher PM average speeds compared to the 'Without LDP' scenario, even with the additional traffic demand from the LDP.

B.4 Modelled Journey Times

B.4.1 Ten journey time routes have been defined in the traffic model, as shown in Figure B.1.

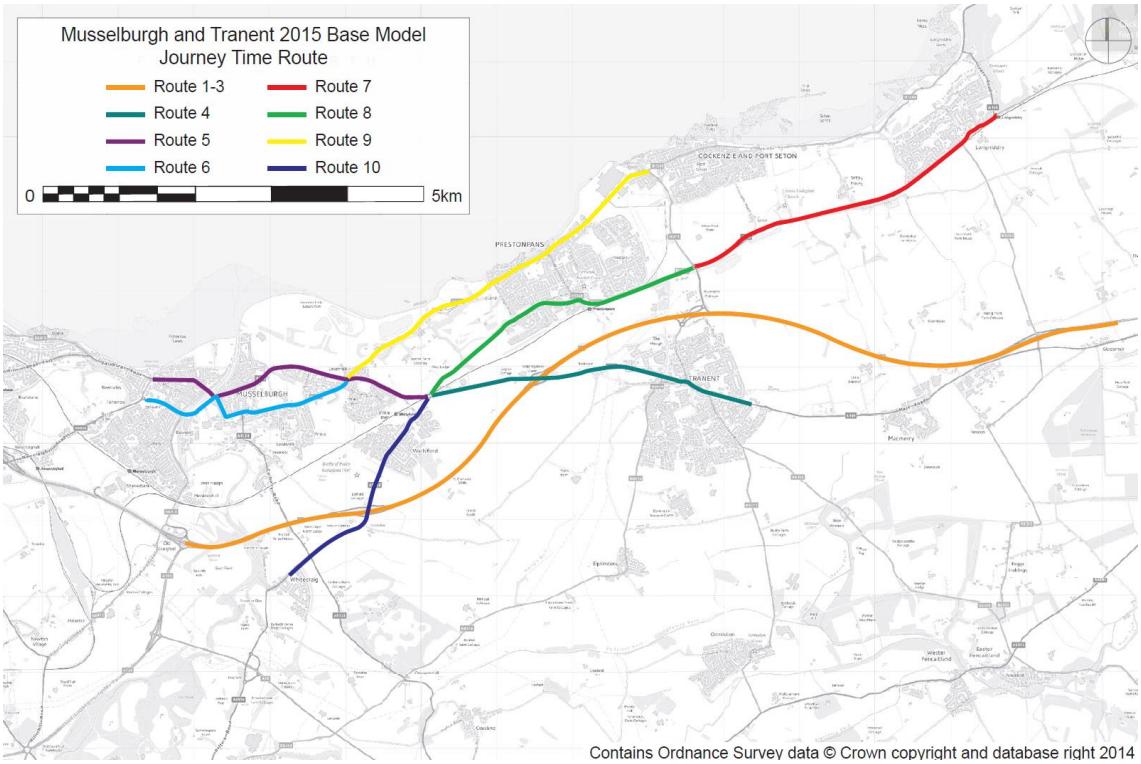

Figure B.1 Key Journey Time Routes

B.4.2 The AM Westbound car journey times for the defined routes are presented in Table B.3. This indicates a predicted reduction in journey time on the A1 westbound, despite the additional LDP demand. This is largely due to the benefits from the Old Craighall improvements. The other mitigation interventions at junctions on the A1 benefit vehicles accessing the A1 via slip roads, rather than the mainline flows.

B.4.3 Through Musselburgh, changes to local junction layouts and the introduction of signal control leads to a decrease in journey time on Route 5. However, Route 6 indicates a corresponding increase in journey time.

B.4.4 A decrease in journey time is indicated on the A6094 (Salters Road) / Route 10, where mitigation interventions include the signalisation of The Loan/Salters Road and Salters Road/Drummohr Avenue junctions, which are currently priority junctions. These interventions will facilitate access to/from The Loan and Drummohr Avenue, but disbenefit the mainline flow on Salters Road.

Table B.3 Westbound Car Journey Time (AM Peak, minutes and seconds)

Route ID	Without ELLDP	With LDP Including Mitigation	Difference	% Difference
Route 1	14:54	12:52	-02:02	-14%
Route 4	06:27	06:26	-00:00	0%
Route 5	09:08	10:38	01:30	16%
Route 6	10:38	09:41	-00:56	-9%
Route 7	03:57	03:36	-00:22	-9%
Route 8	04:03	04:08	00:05	2%
Route 9	06:09	06:11	00:02	1%
Route 10	07:07	05:41	-01:26	-20%

B.4.5 The PM Eastbound car journey times for the defined routes are shown in Table B.4. This indicates a broadly minor impact on journey times in absolute terms and in the context of typical variations, all less than 1 minute.

Table B.4 Eastbound Car Journey Time (PM Peak, minutes and seconds)

Route ID	Without ELLDP	With LDP Including Mitigation	Difference	% Difference
Route 1	08:02	08:33	00:31	7%
Route 4	08:09	08:41	00:32	7%
Route 5	06:14	06:56	00:42	11%
Route 6	06:33	07:09	00:37	9%
Route 7	03:26	03:29	00:03	2%
Route 8	04:59	04:27	-00:32	-11%
Route 9	06:29	06:21	-00:08	-2%
Route 10	06:38	06:33	-00:05	-1%

B.5 Modelled Junction Queues

B.5.1 Model queue data has been extracted for key junctions in Musselburgh and Tranent, and is presented in Table B.5 and Table B.6. The queues are presented as total average queues, across all arms, in the AM and PM peak periods. This indicates that the increase in demand, associated with the introduction in the ELLDP results in an increase in peak hour queuing on junctions, even with the introduction of mitigation measures to improve the performance of these junctions. The mitigation interventions do, however, result in a reduction in queuing relative to the Without ELLDP scenario, at certain junctions in Tranent, enabled by the new One-Way Tranent Gyratory system. In Musselburgh, there are also benefits at the Inveresk Road Junction in the AM peak period and the Newbigging/ High St Junction in the PM peak period, reflecting the impact of the of the one-way system at the junction of High Street, Bridge Street and Dalrymple Loan.

B.5.2 In general, the traffic model indicates that the network is predicted to operate satisfactorily in the 'With LDP' Including Mitigation scenario. Whilst there are some locations that are predicted to experience additional congestion, this is not unexpected given the increase in demand associated with LDP development.

Table B.5 Total Average Queue Across All Arms at Key Junctions (AM Peak, Metres)

Junction	Without ELLDP	With LDP Including Mitigation	Difference	% Difference
Newhailes Rd/A199 Junction - Musselburgh	470	450	-20	-4%
Inveresk Rd Junction - Musselburgh	287	239	-48	-17%
High Street/ Newbigging Junction - Musselburgh	841	960	119	14%
Levenhall R'bout- Musselburgh	249	259	10	4%
Wallyford Toll R'bout - Musselburgh	139	190	50	36%
Birsley Brae Tranent Junction	259	293	34	13%
New Row R'bout -Tranent	47	41	-6	-13%
Church Street / High St Junction - Tranent	77	124	47	61%
High Street/ Haddington Road Junction - Tranent	144	146	2	1%
Loch Road Junction - Tranent	122	69	-53	-43%
Meadowmill R'bout	228	142	-86	-38%

Table B.6 Total Average Queue Across All Arms at Key Junctions (PM Peak, Metres)

Junction	Without ELLDP	With LDP Including Mitigation	Difference	% Difference
Newhailes Rd/A199 Junction - Musselburgh	431	443	12	3%
Inveresk Rd Junction - Musselburgh	242	263	21	9%
High Street/ Newbigging Junction - Musselburgh	409	367	-43	-10%
Levenhall R'bout - Musselburgh	151	174	23	15%
Wallyford Toll R'bout - Musselburgh	100	119	19	19%
Birsley Brae Tranent Junction	283	392	109	38%
New Row R'bout -Tranent	74	76	2	2%
Church Street / High St Junction - Tranent	107	197	90	85%
High Street/ Haddington Road Junction - Tranent	150	156	6	4%
Loch Road Junction - Tranent	104	40	-64	-62%
Meadowmill R'bout	179	157	-22	-12%

B.5.3 Modelled queue length analysis has been undertaken comparing the maximum queue length to the slip length for the off-slips on the main A1 junctions to assess if blocking back from these junctions is predicted to interfere with the mainline traffic flow. Table B.7, Table B.8 , Table B.9 and Table B.10 present a comparison of the slip length to the average queue in the AM and PM peak hours, for the Without ELLDP and 'With LDP' Including Mitigation scenarios respectively. This queue length comparison is also presented graphically in Figures B.2 to B.5. This queue analysis does not include the A1 Queen Margaret University (QMU) intersection where nominal queueing is evident in both the SRM12 and the MTTM.

B.5.4 Inspection of the tables and figures indicates some predicted blocking back of queues at Old Craighall on the A1 off-slips in the 'Without ELLDP' scenario. This is mitigated in the 'With LDP' Including Mitigation scenario with the introduction of local widening and signalisation.

B.5.5 From further analysis of MTTM outputs at the A720 approach to Old Craighall, it is evident that there is an increase in delay at this location. Journey times from the edge of the MTTM model (on the A720 near Dalkeith Northern Bypass) to the stop line at the A720 at Old Craighall increase from 121 seconds in the base year AM Peak, to 138 seconds in the 2024 Committed scenario and then to 411 seconds in the 2024 LDP (with mitigation scenario). The equivalent values for the PM Peak are 130, 483 and 1026 seconds respectively.

B.5.6 This represents a significant journey time and consequently delay in the PM Peak in particular for this movement. Given the queuing on the other approaches at Old Craighall are not predicted to block back onto the A1, it may be possible that queuing could be managed through detailed design and operation, for example the use of variable signal-control timings.

Table B.7 Without ELLDP, Queues at Strategic Road Network Junctions (AM Peak, Metres)

Junction	Arm	Slip Length	Max Queue	% of Slip
Old Craighall	A1 Eastbound Off Slip	287	367	128%
	A1 Westbound Off Slip	293	319	109%
Bankton	A1 Westbound Off Slip	307	30	10%
	A1 Eastbound Off Slip	331	80	24%
Dolphingstone	A1 Eastbound Off Slip	226	67	30%
	A1 Westbound Off Slip	416	67	16%
Salters Road	A1 Westbound Off Slip	492	150	31%
	A1 Eastbound Off Slip	403	87	22%

- The A720 Approach has been measured as the distance between the A68 eastbound on slip to the A720 and the A720 eastbound stop line at Old Craighall.

Table B.8 With LDP Including Mitigation, Queues at Strategic Road Network Junctions (AM Peak, Metres)

Junction	Arm	Slip Length	Max Queue	% of Slip
Old Craighall	A1 Eastbound Off Slip	286	98	34%
	A1 Westbound Off Slip	292	150	51%
Bankton	A1 Westbound Off Slip	306	50	16%
	A1 Eastbound Off Slip	328	96	29%
Dolphingstone	A1 Eastbound Off Slip	226	121	54%
	A1 Westbound Off Slip	416	109	26%
Salters Road	A1 Westbound Off Slip	492	104	21%
	A1 Eastbound Off Slip	403	106	26%

Table B.9 Without ELLDP, Queues at Strategic Road Network Junctions (PM Peak, Metres)

Junction	Arm	Slip Length	Max Queue	% of Slip
Old Craighall	A1 Eastbound Off Slip	287	402	140%
	A1 Westbound Off Slip	293	145	49%
Bankton	A1 Westbound Off Slip	307	43	14%
	A1 Eastbound Off Slip	331	189	57%
Dolphingstone	A1 Eastbound Off Slip	226	108	48%
	A1 Westbound Off Slip	416	54	13%
Salters Road	A1 Westbound Off Slip	492	43	9%
	A1 Eastbound Off Slip	403	115	28%

Table B.10 With LDP Including Mitigation, Queues at Strategic Road Network Junctions (PM Peak, Metres)

Junction	Arm	Slip Length	Max Queue	% of Slip
Old Craighall	A1 Eastbound Off Slip	286	151	53%
	A1 Westbound Off Slip	292	147	50%
Bankton	A1 Westbound Off Slip	306	78	25%
	A1 Eastbound Off Slip	328	139	42%
Dolphingstone	A1 Eastbound Off Slip	226	116	52%
	A1 Westbound Off Slip	416	178	43%
Salters Road	A1 Westbound Off Slip	492	69	14%
	A1 Eastbound Off Slip	403	184	46%

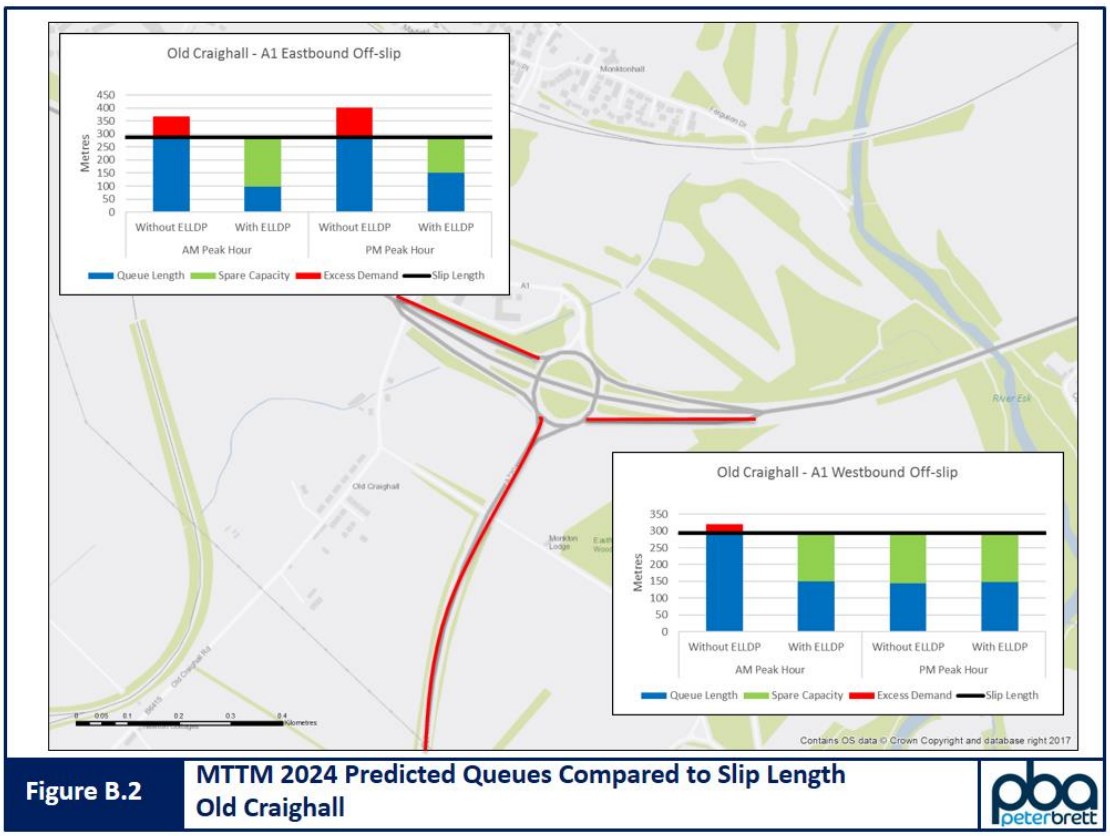

Figure B.2 MTTM 2024 Predicted Queues Compared to Slip Length - Old Craighall

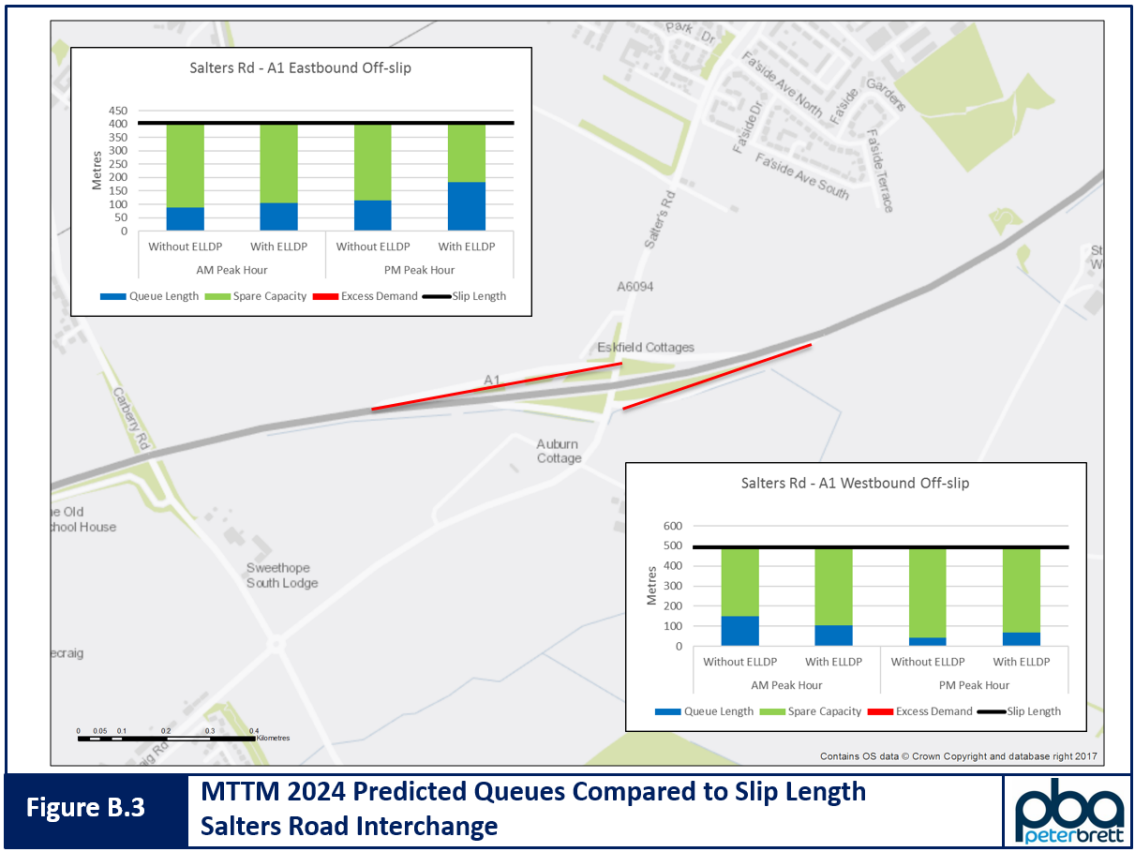

Figure B.3 **MTTM 2024 Predicted Queues Compared to Slip Length**
Salters Road Interchange

Figure B.3 MTTM 2024 Predicted Queues Compared to Slip Length – Salters Road

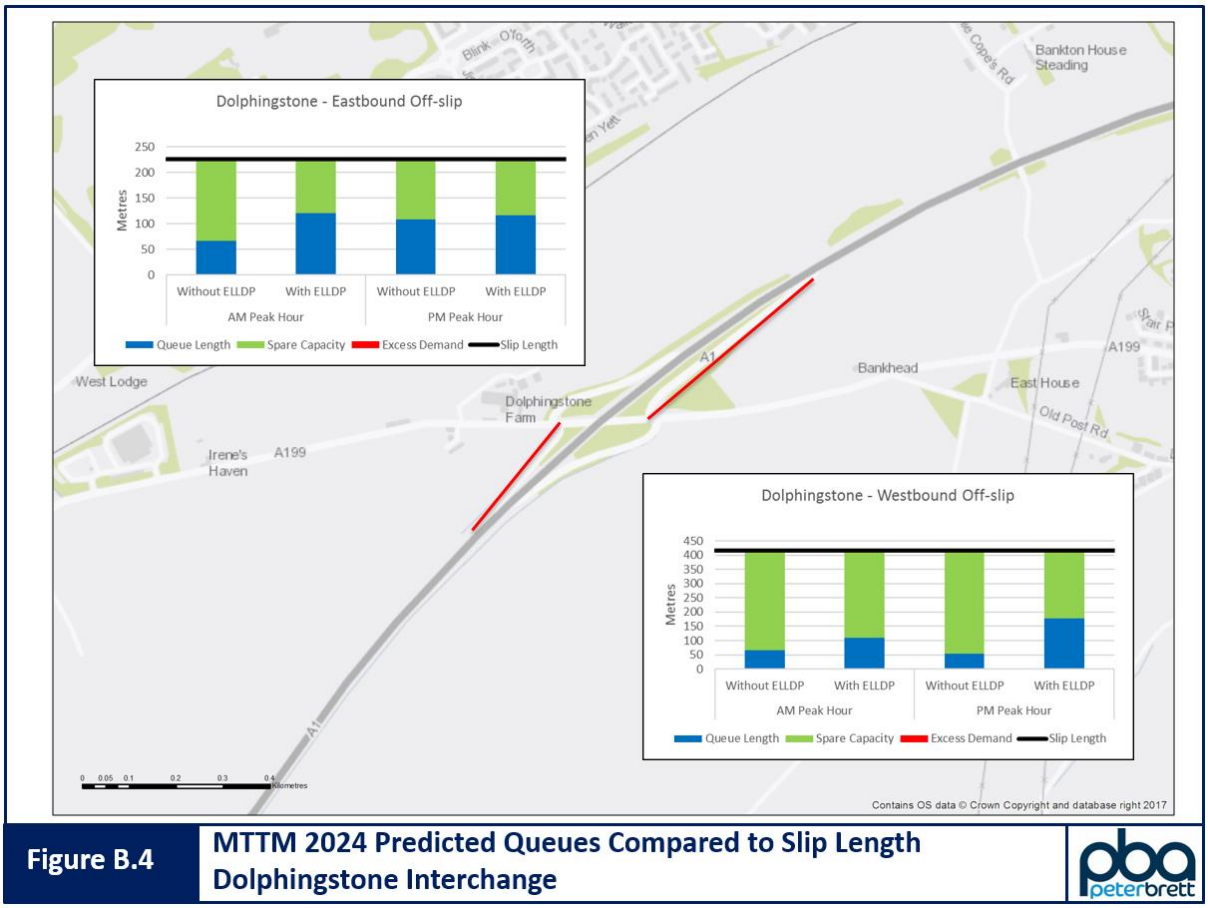

Figure B.4 **MTTM 2024 Predicted Queues Compared to Slip Length**
Dolphingstone Interchange

Figure B.4 MTTM 2024 Predicted Queues Compared to Slip Length – Dolphingstone Interchange

Figure B.5 **MTTM 2024 Predicted Queues Compared to Slip Length Bankton Interchange**

Figure B.5 MTTM 2024 Predicted Queues Compared to Slip Length - Bankton Interchange

B.6 Forecast Emissions

B.6.1 AIRE software was used to produce estimates of vehicle emissions from the forecast traffic flows. The model outputs for the Musselburgh Cordon are shown in Table B.11. This indicates that overall emissions increase in Musselburgh, due to the increase in traffic from the East Lothian Local Development Plan, despite the mitigation measures provided.

Table B.11 Musselburgh Cordon Air Quality Model Outputs

Time Period	Emission Type	Without ELLDP	With LDP Including Mitigation	Difference	% Difference
AM	NOx (kg)	139	162	23	16%
	PM10 (kg)	4	5	1	16%
	Carbon (kg)	23,100	26,600	3,500	15%
PM	NOx (kg)	121	143	22	18%
	PM10 (kg)	4	4	1	19%
	Carbon (kg)	22,900	27,000	4,100	18%

Note: Absolute numbers have been rounded. % Difference based on non-rounded modelled numbers

B.6.2 The model outputs for the Tranent Cordon are shown in Table B.12. This indicates that the emissions within the Tranent Cordon increase, due to the additional demand through Tranent, despite the mitigation measures provided.

Table B.12 Tranent Cordon Air Quality Model Outputs

Time Period	Emission Type	Without ELLDP	With LDP Including Mitigation	Difference	% Difference
AM	NOx (kg)	4	5	1	25%
	PM10 (kg)	0	0	0	23%
	Carbon (kg)	834	1,021	187	22%
PM	NOx (kg)	4	5	1	27%
	PM10 (kg)	0	0	0	24%
	Carbon (kg)	894	1,121	227	25%

Note: Absolute numbers have been rounded. % Difference based on non-rounded modelled numbers

B.6.3 The model outputs for the Musselburgh High Street AQMA are shown in Table B.13. This indicates a moderate air quality benefit to the Musselburgh High St AQMA, even with the additional ELLDP traffic demand, which is a result of the mitigation interventions.

Table B.13 Musselburgh High Street Cordon Air Quality Model Outputs

Time Period	Emission Type	Without ELLDP	With LDP Including Mitigation	Difference	% Difference
AM	NOx (kg)	1	1	-0	-2%
	PM10 (kg)	0	0	-0	-2%
	Carbon (kg)	216	208	-8	-4%
PM	NOx (kg)	1	1	-0	-2%
	PM10 (kg)	0	0	-0	-2%
	Carbon (kg)	216	210	-6	-3%

Note: Absolute numbers have been rounded. % Difference based on non-rounded modelled numbers

Addendum

Context:
Following an examination of the proposed East Lothian Council (ELC) Local Development Plan (LDP) on behalf of Scottish Ministers, a number of amendments were proposed. This Addendum has been prepared to inform the predicted transport impacts relating to a change in planning data from that which was defined and used in the cumulative LDP appraisal (and reported earlier in this Report) to that which has been proposed by the examination.

Planning Data Changes:
The proposed amendments to the LDP planning data were as follows:

- Prop MH13: Land ay Howe Mire Wallyford delete allocation of 170 homes;
- Prop TT15: Humbie North delete allocation of 20 homes;
- Prop TT16: East Saltoun deleted allocation of 75 homes; and
- Land at Newtonlees Farm add 115 homes and cemetery.

The resultant land use scenario was given the nomenclature: EDP1 for modelling and reporting purposes.

Methodology:
The above changes were made to the planning data previously used in the appraisal of the LDP (scenario LUS9). This revised planning dataset was then used within the SRM to derive travel demand and subsequently model the predicted impacts of the revised development plan (scenario EDP1).
The method of preparing and running the SRM for a 2024 forecast year was identical to that of the previous LDP modelling. A model run was undertaking using the EDP1 planning scenario along with the transport mitigation that was derived for the LDP (using scenario LUS9 and discussed in Chapter 4) to note if there were any differences

Results:
Comparisons have been drawn from a range of model outputs as follows:

Travel Demand Matrices
The differences between the travel demand matrices derived by SRM following a full multi modal run are as noted in Table 1 below.

Table 10 2024 Travel Demand Matrix Comparison

Network	Time Period	LUS9	EDP1	Dif	% Dif
"With Mitigation"	AM	212,667	212,614	-53	-0.02%
	IP	163,669	163,629	-40	-0.02%
	PM	235,314	235,246	-68	-0.03%

Notes: - LUS9: LDP travel demand used in the DPMTAG main reporting
- EDP1: the updated LDP travel demand (noted in this Addendum)

The above comparison shows a negligible difference between the travel demand matrices of the SRM for all time periods.

Link Flows
Table 2 presents a comparison of link flow analysis at a number of locations throughout East Lothian for the AM Peak.

Table 11 AM Peak 2024 Link Flow Comparison

Description	Location	Direction	LUS9	EDP1	Dif	%Dif
Bypass before Dalkeith Bypass	A720	EB	1,885	1,892	7	0%
Bypass before Dalkeith Bypass	A720	WB	2,425	2,424	-1	-0%
Bypass App Newcraighall	A720	EB	2,327	2,331	5	0%
Bypass App Newcraighall	A720	WB	2,321	2,323	2	0%
Slaters Rd S of Wallyford	Slaters Rd	NB	596	594	-2	-0%
Slaters Rd S of Wallyford	Slaters Rd	SB	1,154	1,150	-4	-0%
Salters Rd S of A1	Slaters Rd	NB	281	281	-1	-0%
Salters Rd S of A1	Slaters Rd	SB	522	522	0	0%
A1 between Wallyford and Tranent	A1	EB	1,942	1,947	5	0%
A1 between Wallyford and Tranent	A1	WB	3,379	3,372	-8	-0%
A199 West of A1	A199	EB	412	402	-9	-2%
A199 West of A1	A199	WB	357	359	2	0%
A199 East of A1	A199	EB	781	778	-3	-0%
A199 East of A1	A199	WB	837	837	-0	-0%
A1 Between Tranent Junctions	A1	EB	1,574	1,573	-1	-0%
A1 Between Tranent Junctions	A1	WB	2,899	2,893	-6	-0%
A1 East of Tranent	A1	EB	1,290	1,287	-3	-0%
A1 East of Tranent	A1	WB	1,889	1,890	1	0%
A1 North of Newcraighall	A1	EB	1,916	1,920	4	0%
A1 North of Newcraighall	A1	WB	2,935	2,935	0	0%
B6363 N of A1	B6363	NB	83	83	-0	-0%
B6363 N of A1	B6363	SB	261	256	-5	-2%
B6363 S of A1	B6363	NB	136	136	-0	-0%
B6363 S of A1	B6363	SB	292	292	-0	-0%

The differences highlighted in Table 2 are negligible. While Table 2 provides a summary of the AM Peak Total PCUs, it can be noted that similar negligible changes are prevalent in the Inter and PM Peak model results and are also negligible in the disaggregate comparisons of Car, LGV and HGV (which, when combined, create the Total PCU values).

Conclusion and Recommendations

With negligible differences in resultant travel demand matrices and link flows between the two LDP scenarios, it is concluded that the recommendations within main body of this DPMTAG report are still valid and there is no requirement to revise or change the proposed LDP mitigation as a result of this change in planning data.

East Lothian Modelling Framework

Developer Contribution Framework: Outline Methodology

Technical Note

On behalf of **East Lothian Council**

Project Ref: 31335 | Rev: 3 | Date: May 2018

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For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
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2.1	24/11/2017	Draft for external comment (Updated to reflect revised proportion of mitigation costs to be met by developers, revised rail cost)	LB	KL	KL
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3.0b	16/05/2018	Updated with EDP1 Planning Scenario	LB	KL	KL

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1 Introduction

1.1 Purpose

1.1.1 East Lothian Council (ELC) has prepared its Local Development Plan (LDP) following the approval of the Strategic Development Plan (SDP) for Edinburgh and South East Scotland. ELC commissioned Peter Brett Associates (PBA) and SYSTRA to undertake a Transport Appraisal of the implications of housing and economic land allocations on the transport network in support of the Proposed LDP. The reporting of the Transport Appraisal is documented in "180514 31335 ELLDP Transport Appraisal - DPMTAG Final Report v4.0", PBA May 2018.

1.1.2 Following examination of the proposed LDP by Scottish Ministers, the following recommended changes were proposed to the planning data:

- Prop MH13: Land at Howe Mire Wallyford deleted allocation of 170 homes;
- Prop TT15: Humbie North deleted allocation of 20 homes;
- Prop TT16: East Saltoun deleted allocation of 75 homes; and
- Land at Newtonlees Farm added 115 homes and cemetery.

1.1.3 PBA translated the resulting planning scenario into travel demand and undertook transport model runs to assess the impacts of these changes in comparison to the previous LDP model runs. These model runs have the nomenclature: EDP1 which is used in model application and referenced throughout this Report. A summary of this analysis is included in the addendum within the aforementioned DPMTAG report.

1.1.4 As part of this work, PBA were also asked to provide advice and support to Council officers in preparing the East Lothian Local Development Plan (ELLDP) Draft Supplementary Guidance (SG) Developer Contributions Framework.

1.1.5 The 2016 Draft Supplementary Guidance was informed by an earlier iteration of this methodology. Refinements were made to the modelling including; additional microsimulation work, changes to estimated costs of works and subsequent changes to the apportionment of impacts, which have resulted in changes to contribution values for development sites. ELC will wish to consider these when updating the Supplementary Guidance before adoption.

1.1.6 This Technical Note describes the methodology derived and applied to prepare analytical evidence in support of the developer contribution framework for the EDP1 model runs.

2 General Approach

2.1 Introduction

2.1.1 This chapter summarises the modelling approach adopted for both the LDP and the EDP1 assessment. It is described in more detail (and for the previous LDP model runs) in the "180514 31335 ELLDP Transport Appraisal - DPMTAG Final Report v4.0b" (PBA, May 2018).

2.2 Modelling approach

Requirements

2.2.1 The LDP Transport Appraisal was carried out in accordance with Transport Scotland's Development Planning and Management Transport Appraisal Guidance (DPMTAG) methodology. The East Lothian Proposed Plan aligns with DPMTAG Stage 3, which provides opportunity to reconsider transport options and refresh the Transport Appraisal following MIR consultation. This would further refine deliverability of Transport Options in terms of feasibility, affordability and public acceptability.

Approach

2.2.2 To be compliant with DPMTAG, and reflecting that the East Lothian Local Development Plan (ELLDP) fits in with the SESplan SDP, a Level 3 Appraisal was required to support the Proposed Plan. This suggests the use of modelling tools, preliminary feasibility and design work to identify an adequate technical solution and realistic alternative options necessary to support the ELLDP.

2.2.3 Following discussions with ELC and Transport Scotland, it was agreed that the 2012 version of the SEStran Regional Model (SRM12) should be used for the ELLDP Appraisal. SRM12 is a multi-modal transport model, developed by Transport Scotland, which covers the entire SESplan area (including all of East Lothian) and features road and public transport (PT) assignment models (which reflect traveller route choice), a travel demand model (which reflects mode, destination and time of day choice) and park and ride capability.

2.2.4 SRM12 is a 'strategic' transport model, in that it contains aggregate representations of transport links and zones throughout the East Lothian area. To supplement this, more disaggregate and detailed traffic modelling has also been undertaken. For this, the Musselburgh and Tranent Traffic Model (MTTM), a S-PARAMICS micro-simulation model was developed and applied to provide more robust predictions of ELLDP impact in and around the more urban areas of East Lothian (Musselburgh and Tranent). In addition, local specific junction assessments were also undertaken at certain locations to provide further information relating to the requirement for potential mitigation interventions.

SRM12 Zone System Definition

2.2.5 The SRM12 zoning system is based on groups of standard geographies such as census output areas and data zones and as a consequence, the model travel demand matrices are ultimately developed from data in this spatial format. In locations where there is sparse population, zones will tend to be large and cover a wide area. In East Lothian, there are several cases where the SRM12 zone system has zones of this nature.

2.2.6 The model also includes a number of empty "greenfield zones", which can be used to represent future developments within the existing zone system. In order to create the best spatial representation of new developments in East Lothian, greenfield zones were used for all of the larger scale developments, with zonal boundaries created based on the spatial extent of the site(s) that were being represented. For smaller sites, individual representation was not possible and these were therefore included within existing SRM12 model zones.

Network Assessment

2.2.7 The Appraisal focusses on land-use and transport interventions that are directly relevant to the supply and demand for travel to, from, within and through East Lothian. Two core model scenarios were defined using ELLDP forecast assumptions provided by ELC Planners as follows:

- **Without LDP** land-use development scenario. This includes completed and committed development and transport schemes up to a forecast year of 2024; and
- **With LDP** land-use development scenario. This 2024 scenario is representative of the without LDP scenario plus the addition of a build-out of all identified ELLDP development sites (i.e. those up to and including 2038). It should be noted that, in this case, the 'With LDP' scenario is referred to in modelling terms as 'EDP1'.

2.2.8 These scenarios were modelled within SRM12. Inspection of the forecast scenario road and public transport model networks demonstrated a corresponding predicted change in road vehicle movements and public transport passengers. This indicated that the change in ELLDP development has negative transport impacts on the road and public transport networks in terms of network performance, increased congestion, increased delays to buses and general traffic and increased crowding on the rail network.

Mitigation Assessment

2.2.9 Following the identification of anticipated transport network impacts, a review of potential interventions to mitigate those impacts was undertaken to identify a package of measures that could support the delivery of the ELLDP.

2.2.10 Network impacts identified in SRM12 were considered alongside a list of potential mitigation interventions that were independently prepared based on anticipated ELLDP impacts. This list of potential mitigation measures was then refined using evidence from the various modelling approaches to confirm and conceptually define the interventions to a stage suitable for inclusion in the ELLDP.

2.2.11 Where the SRM12 does not provide sufficient detail, local traffic modelling was undertaken. For each intervention, consideration has been given to the impacts on the transport network and the associated ELLDP development allocations. This has defined a recommended package of proposed interventions that will help address the predicted cumulative impacts associated with the ELLDP.

2.2.12 Where proposed interventions address impacts relating to *specific* development sites, these have been highlighted. These interventions will be allocated to *specific* development allocations in the Proposed Plan and will not be included in the wider ELLDP package where developer contribution zones will be defined.

2.2.13 It is important to note that the mitigation has been derived for a modelled scenario including the full LDP build out by 2024. Phasing and\or partial build out has not been considered in this analysis.

2.3 Recommended Package

2.3.1 Following the mitigation assessment, a list of interventions that will address cumulative impacts was recommended for inclusion in the ELLDP as described in Table 2.1 with indicative *high-level* cost estimates.

Table 2.1 LDP Recommended Interventions

Intervention	Description	Estimated Cost
PROP T15: **Old Craighall A1(T)** Junction Improvements	Signal control of A1 off-slip and A720 approaches with local widening.	£995,000
PROP T17: **Dolphingstone\A1(T)** Interchange Improvements	Local widening and optimisation of signal control staging, phasing and timings.	£256,000
PROP T17: **Salters Road\A1(T)** Interchange Improvements	Local widening on Salters Road and optimisation of signal control staging, phasing and timings.	£272,000
PROP T17: **Bankton Interchange\A1(T)** Interchange Improvements and **A198** Junction	Signal control of northern roundabout with local widening. Redesign of southern roundabout with local widening.	£848,767
PROP T17: **Meadowmill Roundabout** Junction Improvements	Redesign of roundabout and local widening.	£747,000
PROP T9 + PROP T10: **Rail Station Package**	Station platform lengthening at Musselburgh, Wallyford, Prestonpans, Longniddry and Drem rail stations. This would accommodate longer, 8-car, trains. (Cost excludes ScotRail rolling stock changes). Also car park extensions at Longniddry and Drem Stations.	£4,369,000*
PROP T21: **Musselburgh Town Centre Improvements**	Local junction improvements at various locations including introduction of signal control.	£283,000
PROP T27 & T28: **Tranent Town Centre Improvements**	One-way system in town centre.	£449,000
PROP T3: **Active Travel Corridor**	Segregated walk and cycle route extending from Musselburgh to Dunbar via Blindwells and Haddington.	£23,400,000
Total		£31,619,767

* This figure includes estimated costs associated with the lengthening of platforms to cater for 8-car train sets from 6-car train sets. It is considered that the increase of platforms to cater for 6-car train sets is a committed scheme and would carry an additional estimated cost (to that quoted here) of £638,000.

Deliverability

2.3.2 An initial consideration of deliverability in terms of feasibility and public acceptability of the interventions has been undertaken. This has identified where further work on the conceptual interventions is required to deliver them. No significant impacts were identified at this stage.

2.3.3 A critical aspect of the Proposed Plan in terms of deliverability is the definition of a funding mechanism that links land-use development to the associated transport options. This is required to demonstrate that development related capacity constraints on the transport network can be alleviated and associated interventions funded, specifically in terms of developer contributions. For this, a developer contribution mechanism has been prepared with defined contributions zones and the apportionment of developer obligations based on SRM12 travel demand data and model outputs. This is presented in chapter 3.

3 Methodology

3.1 Introduction

3.1.1 The nature of the mitigation solutions varies across the local authority by mode, location and status. As a result, three different methods of approach were developed and adopted as follows:

- **Method 1:** Select link cordon analysis for road and public transport schemes (Select link analysis is a modelling method used to understand where all vehicles (or PT Passengers) passing through a specified link (or links) on the transport network originate from and destinate to);
- **Method 2:** Population and employment catchment analysis for the active travel corridor; and
- **Method 3**: Pre-determined "minded to approve" mitigation infrastructure.

3.1.2 Each of these methods is discussed below.

3.2 Method 1

Overview

3.2.1 When applying Method 1, the key steps to the process for calculating developer contributions for a mitigation infrastructure intervention are as follows:

- Apply select link cordons to the networks and generate select link matrices. This process considers all traffic travelling through the mitigation location and can isolate traffic that has an origin or destination at an LDP development site;
- Identify the development demand scenario which triggers a need for mitigation at each network location, based on SRM capacity and delay outputs[1];
- Calculate total LDP traffic impact at the network location;
- Calculate individual contribution of each development based on net traffic; and
- Determine the proportional contribution share for each development.

Select Link Cordons

3.2.2 For each mitigation location, a set of select link matrices was extracted by creating a cordon of select link points on the SRM network. For junctions, each approach arm was included in the analysis to ensure all traffic was captured. Individual links, to calculate bi-directional flows along a railway line for example, were also used where appropriate.

3.2.3 Select link matrices were then extracted for the following four assigned networks:

- AM LDP Mitigation Network and 'Without LDP' demand;
- PM LDP Mitigation Network and 'Without LDP' demand;
- AM LDP Mitigation Network and 'With LDP' demand; and

[1] Mitigation 'triggers' have been defined for each type of mitigation measures. These can be found in Section 3.5.

- PM LDP Mitigation Network and 'With LDP' demand.

3.2.4 These scenarios were selected to give the best representation of the effects of the additional LDP traffic (over and above the committed scenario) on the proposed mitigation infrastructure.

3.2.5 An example select link cordon is shown for Old Craighall junction in Figure 3.1 below. All of the select link cordons prepared for analysis are presented in Appendix A .

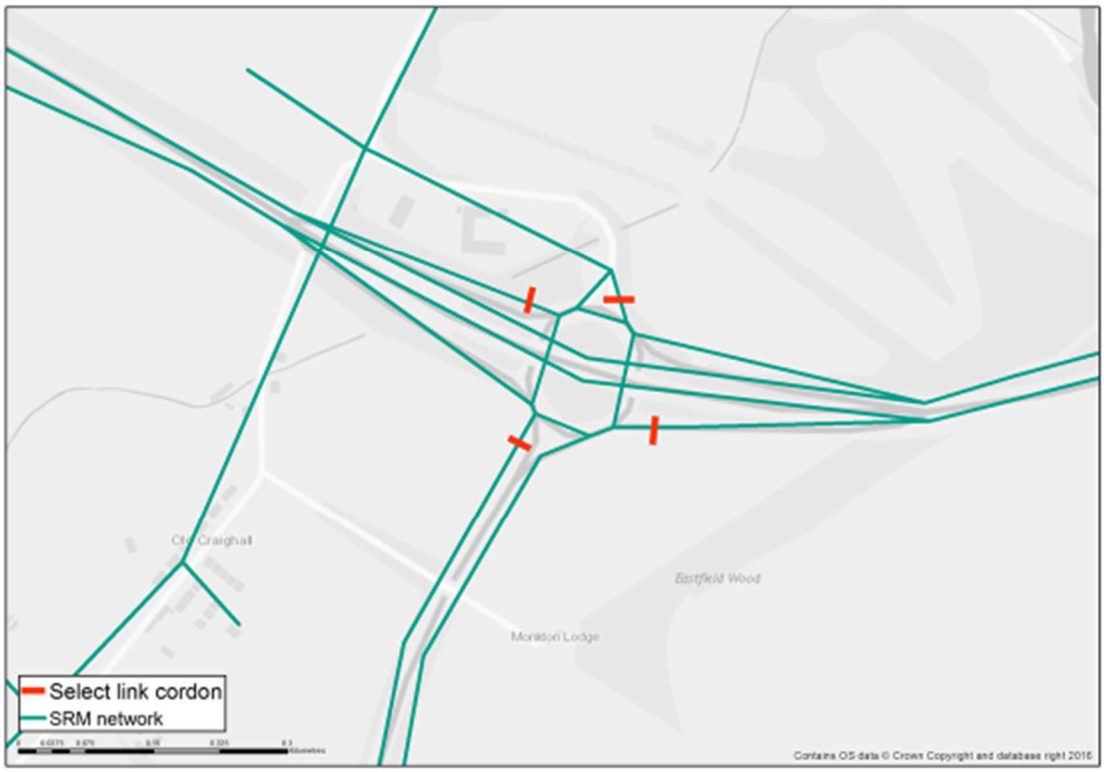

Figure 3.1 Example Select Link Cordon – Old Craighall junction

Calculating LDP Trip Impact

3.2.6 To isolate the contribution of LDP trips to total flows that travel through a mitigation scheme, the four select link matrices were used to calculate the net difference in travel demand through the mitigation location. Both the AM and PM networks were used to generate a total peak effect as follows:

Total Peak LDP Impact = (With LDP AM Trips – Without LDP AM Trips) + (With LDP PM Trips – Without LDP PM Trips)

3.2.7 The zones included in this analysis were determined by identifying only those in East Lothian which had proposed housing or commercial developments in the LDP. Zones with no LDP development were excluded from the calculation. Zones where LDP development existed, but no net new trips were generated, were excluded from the analysis.

Calculating Proportional Impact of Each Development

3.2.8 The proportional share of cost for each aspect of mitigation that would be attributed to each development is calculated using the following steps. The total net number of LDP trips for each zone is calculated using the formula presented in Section 3.2.6 above. This figure, divided by the total LDP trips, gives the percentage share to be contributed by the zone.

3.2.9 In a number of cases, there is only one LDP development within an SRM12 model zone and therefore, the development site's proportional share is equal to the zonal share.

3.2.10 There are also instances where a model zone contains more than one development site. To calculate the relative contribution required by each site within a single zone, the development size is used to determine the proportion of the zonal share. As there are both residential and commercial sites within the proposals, a common denominator was required to allow the size of these different land uses to be compared directly. To do this, the following conversion factor was used to convert residential developments into "pseudo-hectares" of land:

- 1 hectare = 30 dwellings[2]

3.2.11 With all sites now presented in a common unit system, the proportional share of the zonal contribution was then calculated as:

(Individual development hectares / total development hectares)* total zonal contribution

3.2.12 For zones with LDP development that have no select link trips associated with them (i.e. no traffic travelling through the proposed mitigation), these areas would have no calculated contributions.

3.3 Method 2

Spatial Catchment Definition

3.3.1 For mitigation infrastructure not represented in the modelling (ie either in SRM12 or MTTM), an alternative approach was derived to calculate the proportional developer contributions. The mitigation that falls into this category is the Active Travel Corridor.

3.3.2 To undertake this, a spatial catchment of 1.2km either side of the proposed route was defined to determine the area within which developments would be deemed liable for contributions. All LDP developments within this band were included in the contribution zones calculation. The catchment area used for the Active Travel Corridor is illustrated in Figure 3.2 below.

[2] Calculation equivalence in accordance with East Lothian Council Planning policy

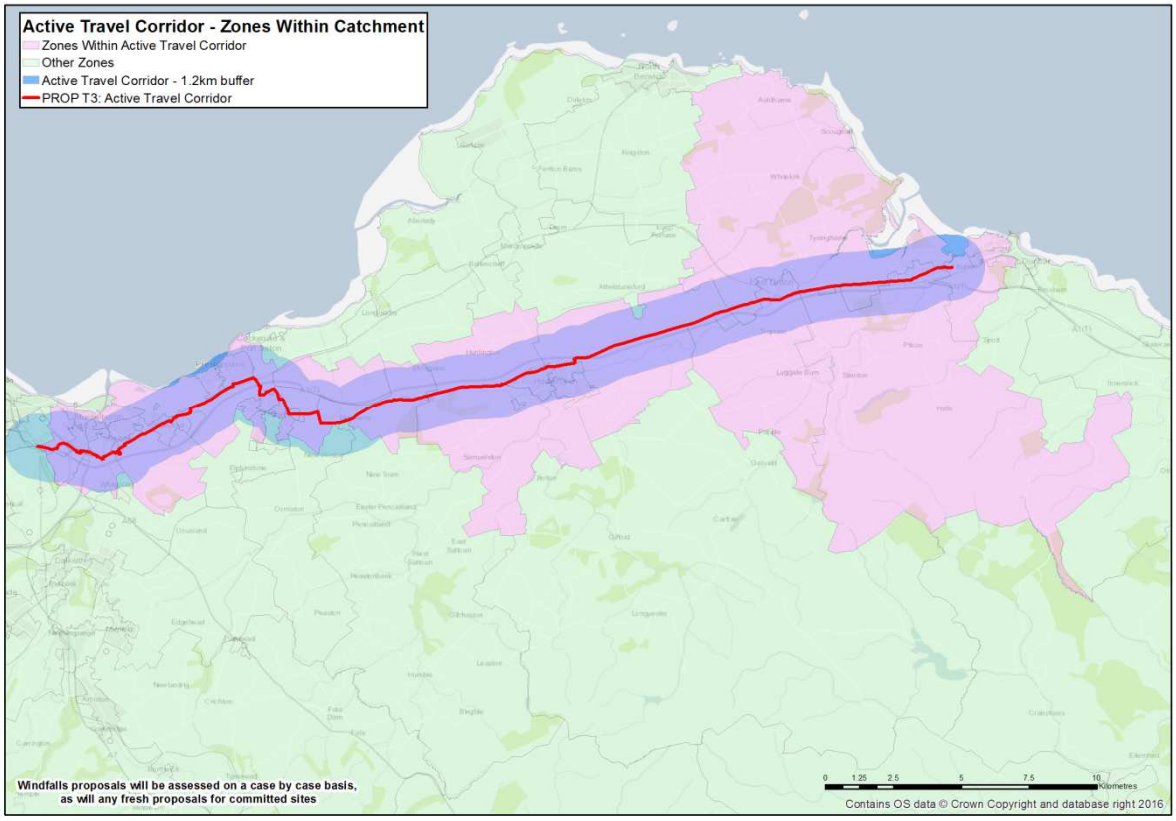

Figure 3.2 Zones Defined as Being Within the Active Travel Corridor Contribution Catchment

Calculating Total Contribution of all LDP Development Within Catchment

3.3.3 This method is based on calculating the net increase in households and jobs as a result of the LDP development. To do this, the total size of LDP development within each of the zones in the contribution catchment was summed and compared with the total household and jobs in the "committed" scenario (which includes base + committed development). To make this comparison, it was necessary to convert the LDP residential data from dwellings into hectares to correspond with the units used in the planning data files, using the same 30 dwellings per hectare factor as presented in Section 3.2.10.

3.3.4 Additionally, it was necessary to convert the base + committed planning data employment figures into pseudo-hectares, so that all development was measured using the same units. This was achieved by using the following development area to jobs factor:

- 1 hectare = 60 jobs[3]

3.3.5 The total LDP share of contributions was then calculated as:

Total Peak LDP Impact = (LDP Development pseudo-hectares within catchment) / (LDP + "Committed+Base" pseudo-hectares within catchment)

Calculating Contribution of Each Development

3.3.6 To calculate the proportional contribution of each development site, the total LDP figure is split across the individual developments based on the size in pseudo-hectares. This figure was

[3] Calculation equivalence in accordance with East Lothian Council Planning policy

calculated at a zonal and development level by using the 30 dwellings per hectare factor. Development site contribution is therefore calculated as:

Development Site Contribution = Development Site pseudo-hectares / Total LDP Development pseudo-hectares

3.4 Method 3

Pre-determined: "Minded to Approve"

3.4.1 In some instances, a mitigation intervention is linked directly to a development site and can be part of the planning approval. Depending on the nature of Section 75 agreement reached, the developer contributions to this may range from a small proportion up to meeting the full 100% of the cost.

3.4.2 For cases where infrastructure has been defined in this way, it is assumed that developer simply meets the costs agreed in Section 75. If the developer is obliged to cover 100% of the cost of the scheme, this is the value used for the contribution; all other developments are exempt from contributing. In instances where a pre-defined proportion of the infrastructure cost has been agreed, for example 20%, then the remaining 80% of the cost will be allocated to contribution zones using the process outlined in Method 1. Note that, however, traffic travelling to/from the development site will be excluded from the select link matrix result calculations, as these trips have essentially had their share covered by the specified contribution element.

3.4.3 The upgrade of Queen Margaret Union Junction on the A1 to an 'all ways' intersection and the Ashgrove Underpass (Dunbar) fall into this category where the developer is obliged to cover 100% of the cost of the scheme. As a consequence, those aspects of mitigation do not require further developer contribution analysis.

3.5 Calculating Proportion of Total Mitigation Costs to be Met by Developers

3.5.1 In the three methodologies outlined above, the calculation of how much of the mitigation costs should be met by LDP developers is calculated using slightly different approaches. A worked example of a developer contribution is provided in Appendix B.

Method 1

3.5.2 **In Method 1**, the total contribution is calculated based on the total net impact of trips (LDP-committed) produced in the select link analysis. For each mitigation measure, one of three different methodologies were used depending upon the modelled scenario in which the part of the network in question was judged to demonstrate operational or safety concerns.

- **Method 1A** is used if operational\safety concerns are present in the 2012 Base Scenario;
- **Method 1B** is used if operational\safety concerns are present in the 2024 Committed scenario; and
- **Method 1C** is used if operational\safety concerns are present in the 2024 ELLDP Without Mitigation Scenario.

3.5.3 Operational or safety concerns at each location through a combination of SRM12 (where the ratio of flow to capacity exceeded 0.85) & MTTM (through visual inspection of the MTTM) model analysis and engineering judgement from discussions between ELC, PBA and SYSTRA.

3.5.4 Table 3.1 below summarises which DCF Methodology applies at each location:

Table 3.1 DCF Methodology Applied to Each Location

Intervention	Significant Congestion by Demand Scenario			DCF Methodology
	2012 Base	2024 Committed	2024 ELLDP (without Mitigation)	
PROP T15: **Old Craighall A1(T)** Junction Improvements	Yes	Yes	Yes	1A
PROP T17: **Dolphingstone\A1(T)** Interchange Improvements			Yes	1C
PROP T17: **Salters Road\A1(T)** Interchange Improvements			Yes	1C
PROP T17: **Bankton Interchange\A1(T)** Interchange Improvements and **A198** Junction			Yes	1C
PROP T17: **Meadowmill Roundabout** Junction Improvements			Yes	1C
PROP T9 + PROP T10: **Rail Station Package**			Yes	1C
PROP T21: **Musselburgh Town Centre Improvements**		Yes	Yes	1B
PROP T27 & T28: **Tranent Town Centre Improvements**			Yes	1C
PROP T3: **Active Travel Corridor**			Yes	2

3.5.5 The proportional figure for DCF Methodology 1A is calculated as:

(LDP select link trips – committed select link trips) / Total LDP select link trips.

3.5.6 The proportional figure for DCF Methodology 1B is calculated as:

(LDP select link trips – committed select link trips) / Total (LDP select link trips – base select link trips)

3.5.7 The proportional figure for DCF Methodology 1C is calculated as:

(LDP select link trips – committed select link trips) / Total (LDP select link trips – committed select link trips)

3.5.8 This percentage of the total cost is then proportioned across all eligible developments using the methodology outlined in Section 3.2. For mitigation measures where DCF Methodology 1C is used, 100% of development costs will be met by the developer.

3.5.9 For **Method 2,** the share of total scheme costs to be met developer is the figure calculated in Section 3.3; total LDP pseudo-hectares divided by all pseudo hectares within the catchment area.

3.5.10 In **Method 3,** the proportion of total costs to be met developers will be stated in the Section 75 agreement. If this was less than 100% of the cost, the remainder is then used as the total cost input to the **Method 1** or **Method 2** calculations above.

4 Outputs

4.1 Introduction

4.1.1 The outputs of the contribution methodology outlined in Chapter 3 are presented below. The information can be presented in several ways, including:

- The proportional contribution of each development site to the costs of mitigation scheme; and
- The contribution(s) of a particular development site to several (or one) mitigation scheme.

4.1.2 The resultant proportion of costs, presented by scheme and also by development site, are included in Appendix D .

4.2 Developer Contribution Zone Plots

4.2.1 Illustrations highlighting the location of contribution zones for each mitigation scheme were prepared. An example contribution zone plot for Old Craighall is provided in Figure 4.1. Further contribution zone plots are presented in Appendix C.

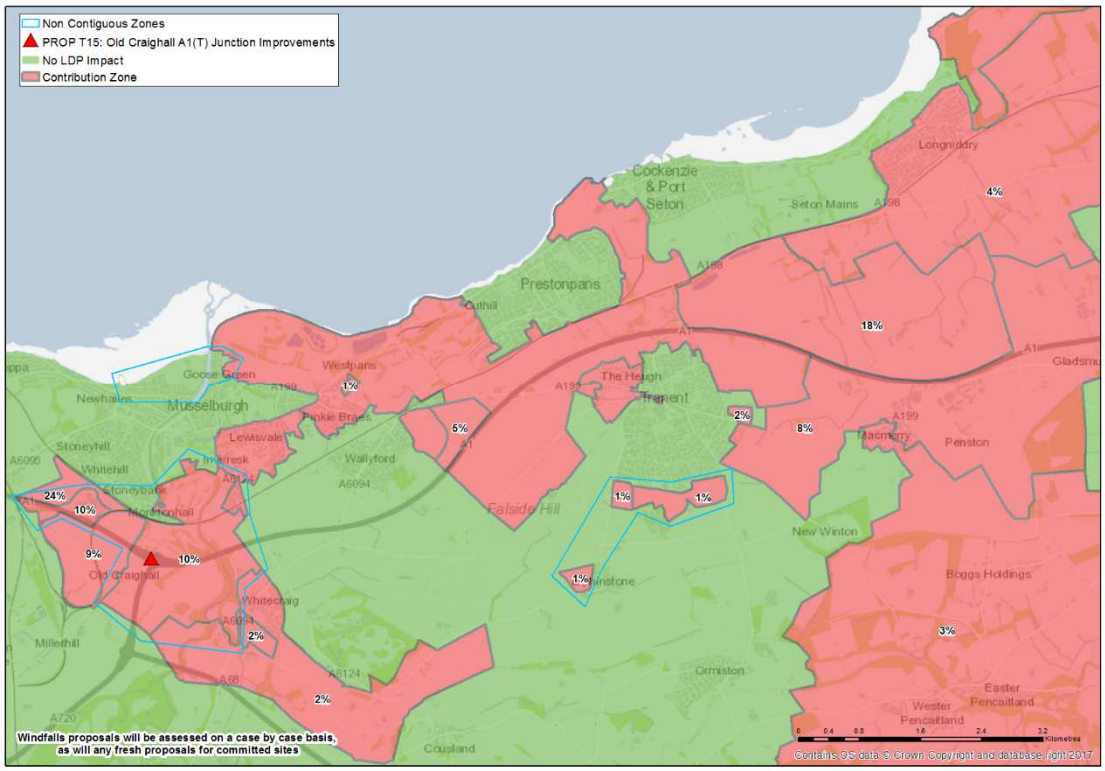

Figure 4.1 Example contribution zones plot for Old Craighall

4.2.2 Within this example graphic, the red shaded SRM12 zones are predicted to have a percentage share in traffic that will route through the mitigation location (in this case, Old Craighall).

4.3 Mitigation Costs – Total LDP Contribution

4.3.1 The proportion of total mitigation scheme costs to be met by developers was calculated as per the methodologies outlined in Chapter 3. The percentage of cost to be met by the LDP developer contributions framework is provided in Table 4.1 below.

Table 4.1 Proportion of mitigation costs to be met by LDP Developments

Intervention	Estimated Cost	% Cost to Developers
PROP T15: **Old Craighall A1(T)** Junction Improvements	£995,000	19.5%
PROP T17: **Dolphingstone\A1(T)** Interchange Improvements	£256,000	100.0%
PROP T17: **Salters Road\A1(T)** Interchange Improvements	£272,000	100.0%
PROP T17: **Bankton Interchange\A1(T)** Interchange Improvements and **A198** Junction	£848,767	100.0%
PROP T17: **Meadowmill Roundabout** Junction Improvements	£747,000	100.0%
PROP T9 + PROP T10: **Rail Station Package**	£4,369,000	100.0%
PROP T21: **Musselburgh Town Centre Improvements**	£283,000	85.9%
PROP T27 & T28: **Tranent Town Centre Improvements**	£449,000	100.0%
PROP T3: **Active Travel Corridor**	£23,400,000	16.5%
Total cost of all mitigation	**£31,619,767**	**35.5%**

Appendix A Select Link Cordons

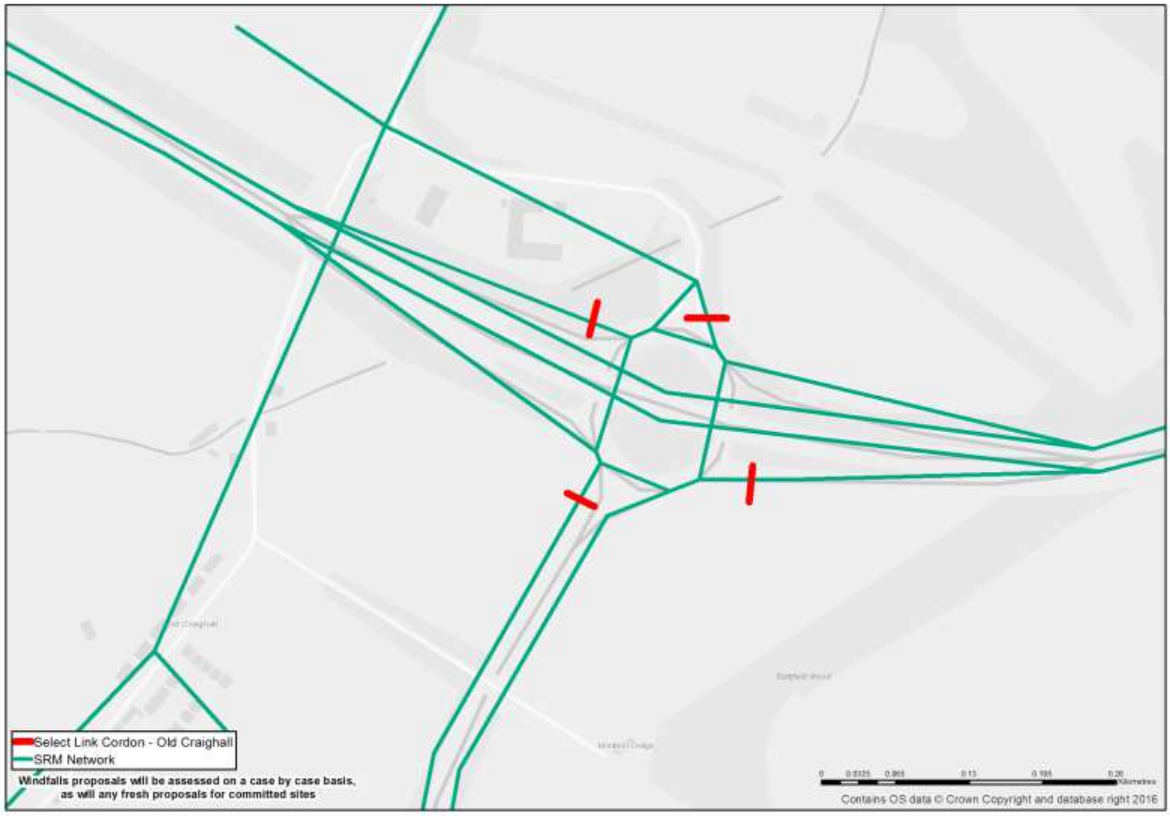

Figure A.1 Select Link Cordon – Old Craighall

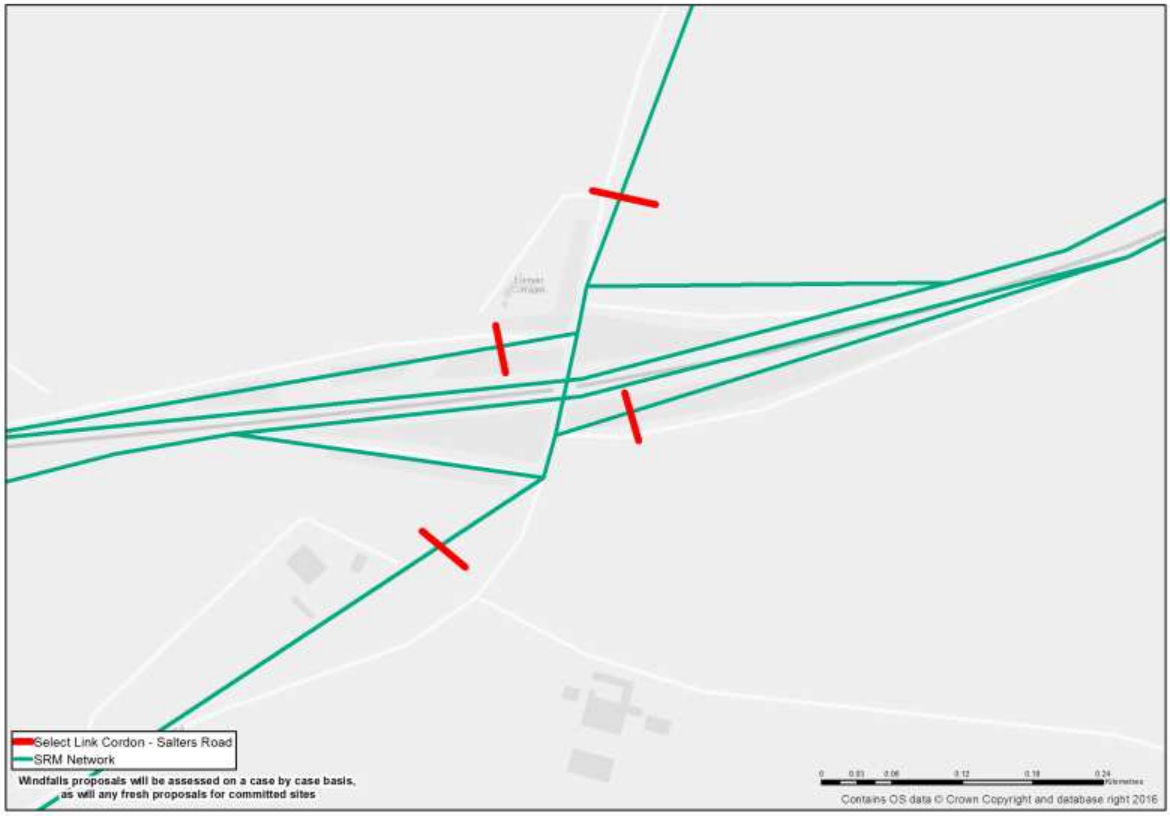

Figure A.2 Select Link Cordon – Salters Road

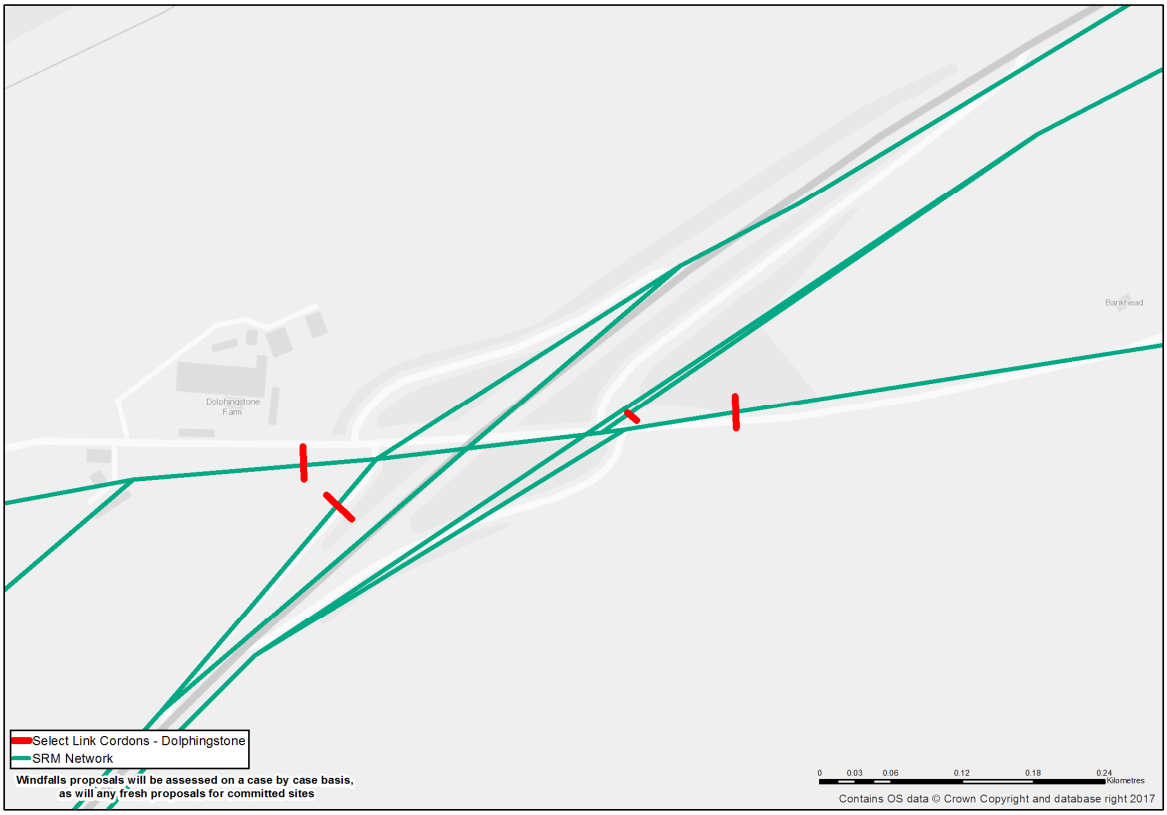

Figure A.3 Select Link Cordon – Dolphingstone

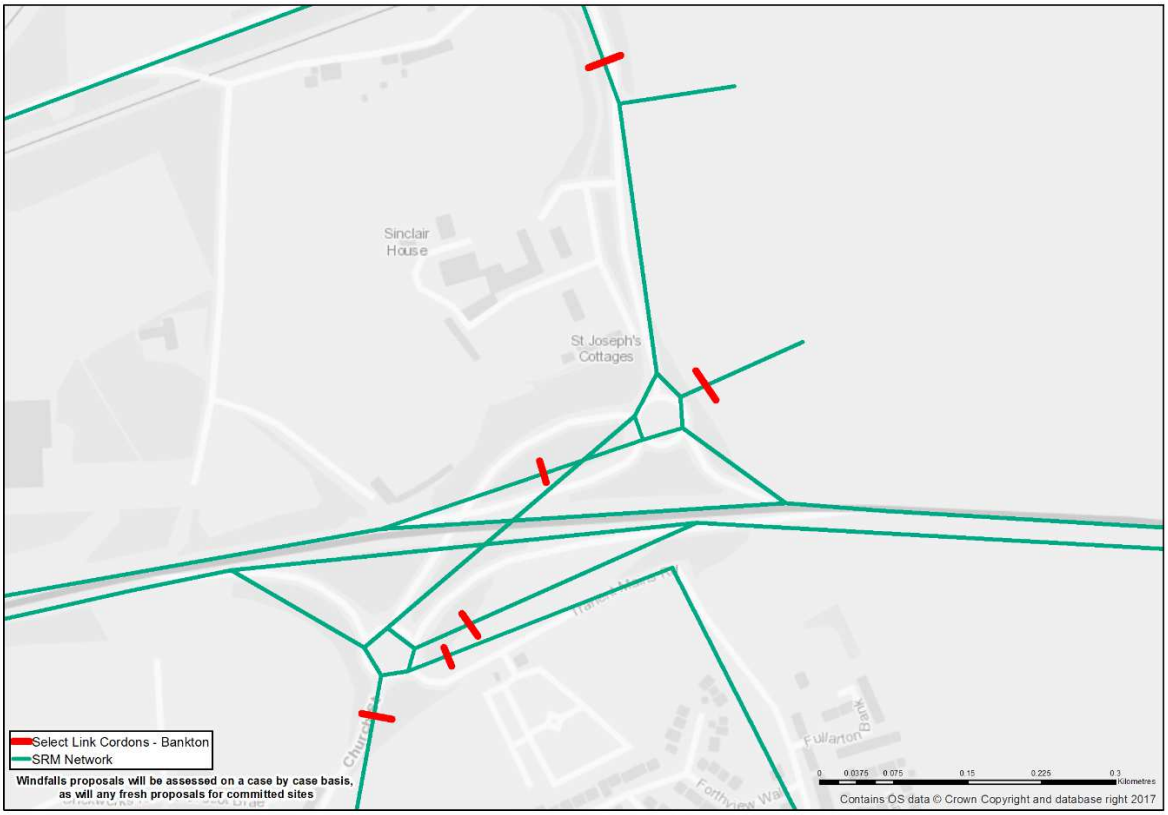

Figure A.4 Select Link Cordon – Bankton

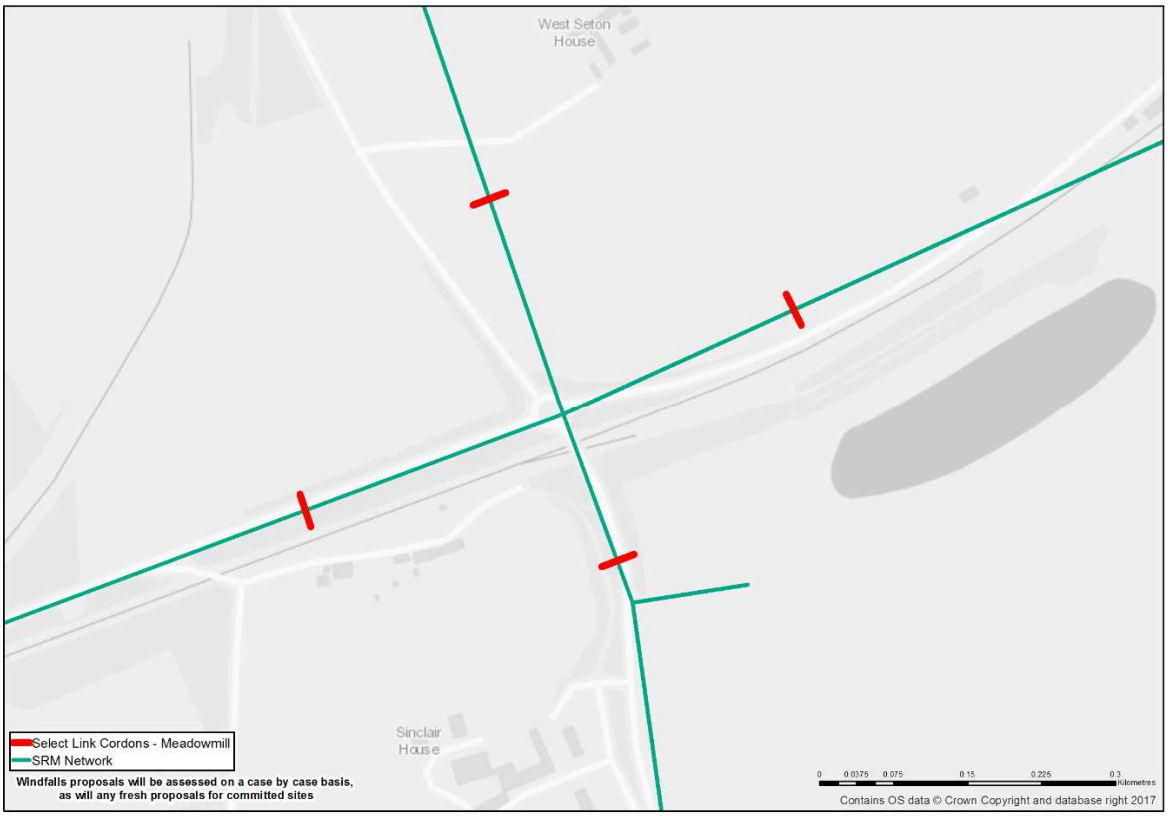

Figure A.5 Select Link Cordon – Meadowmill

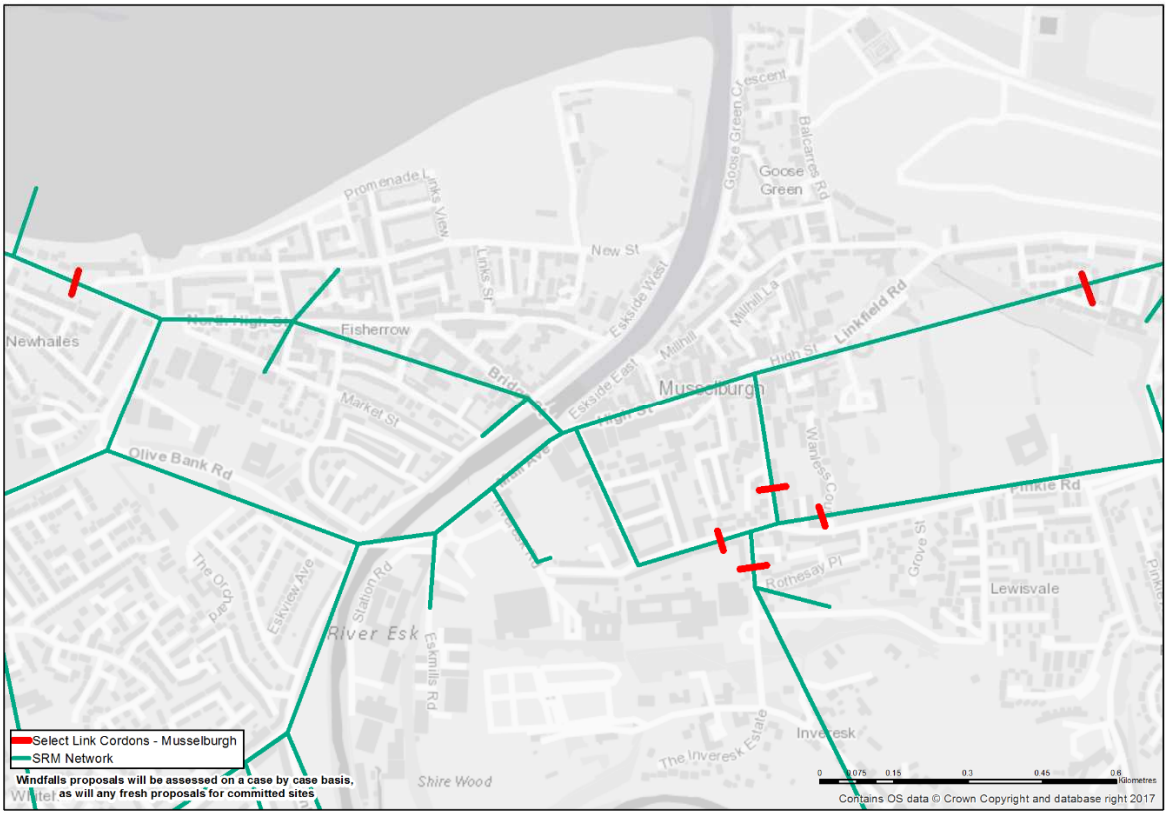

Figure A.6 Select Link Cordon – Musselburgh

Figure A.7 Select Link Cordon – Tranent

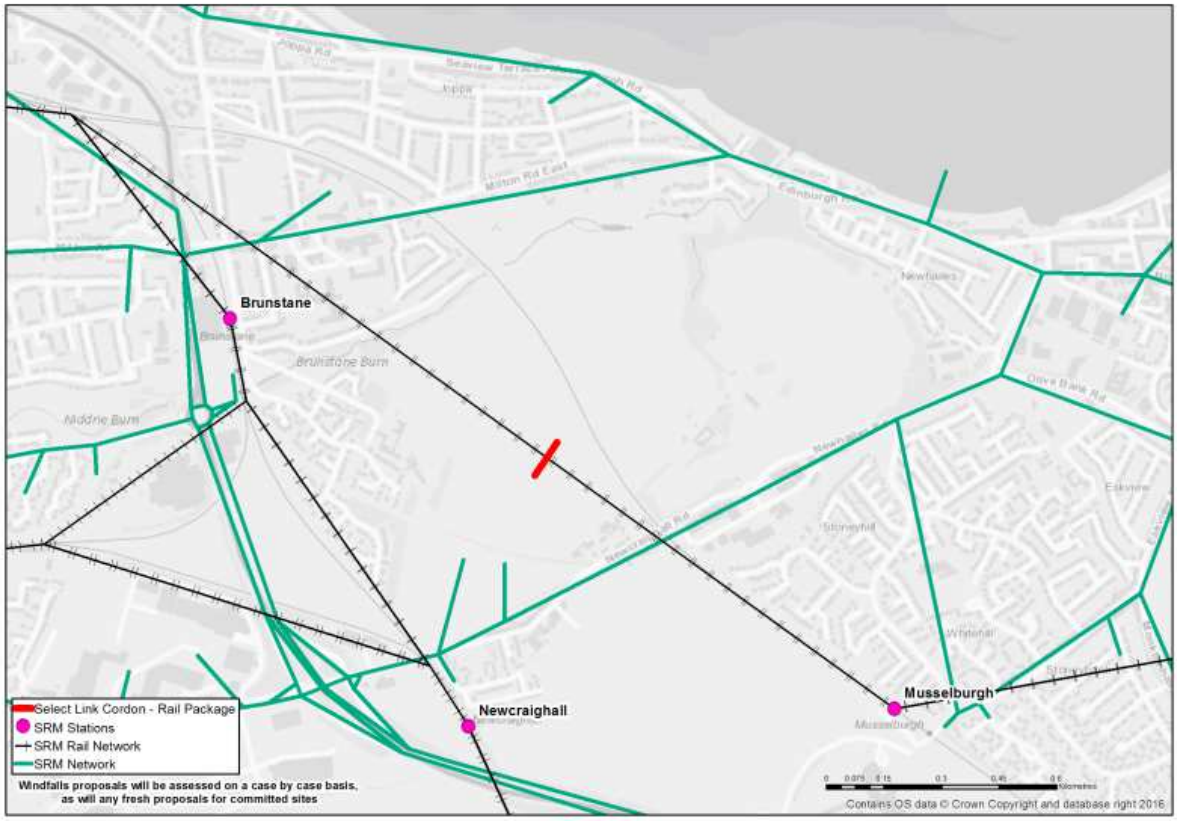

Figure A.8 Select Link Cordon – Rail Package

Appendix B DCF Worked Example

B.1 Calculation of Site Contribution

B.1.1 To demonstrate how the methodology has been applied, a theoretical worked example showing the contribution of an example development at the Blindwells developments to Old Craighall junction improvements is described below. It details the impact of a particular development on a mitigation location where mitigation is required under the base scenario. In this situation base, committed and LDP traffic contribute to the required upgrades.

B.1.2 The select links for Old Craighall were prepared, producing trip distribution patterns of all traffic using the slip roads of the junction (i.e. not including 'through traffic' on the A1), for the AM and PM time periods in both scenarios. To isolate only the trips from LDP development traffic, zone pairs which included a development site were selected; i.e. the origin or destination zone contained an ELLDP site. The distribution of LDP trips using Old Craighall is illustrated in Figure B.1 and Figure B.2 below, with trips starting or ending in the Blindwells zone illustrated in orange. A total of 2,492 net additional peak trips (AM and PM) were calculated to be using the junction.

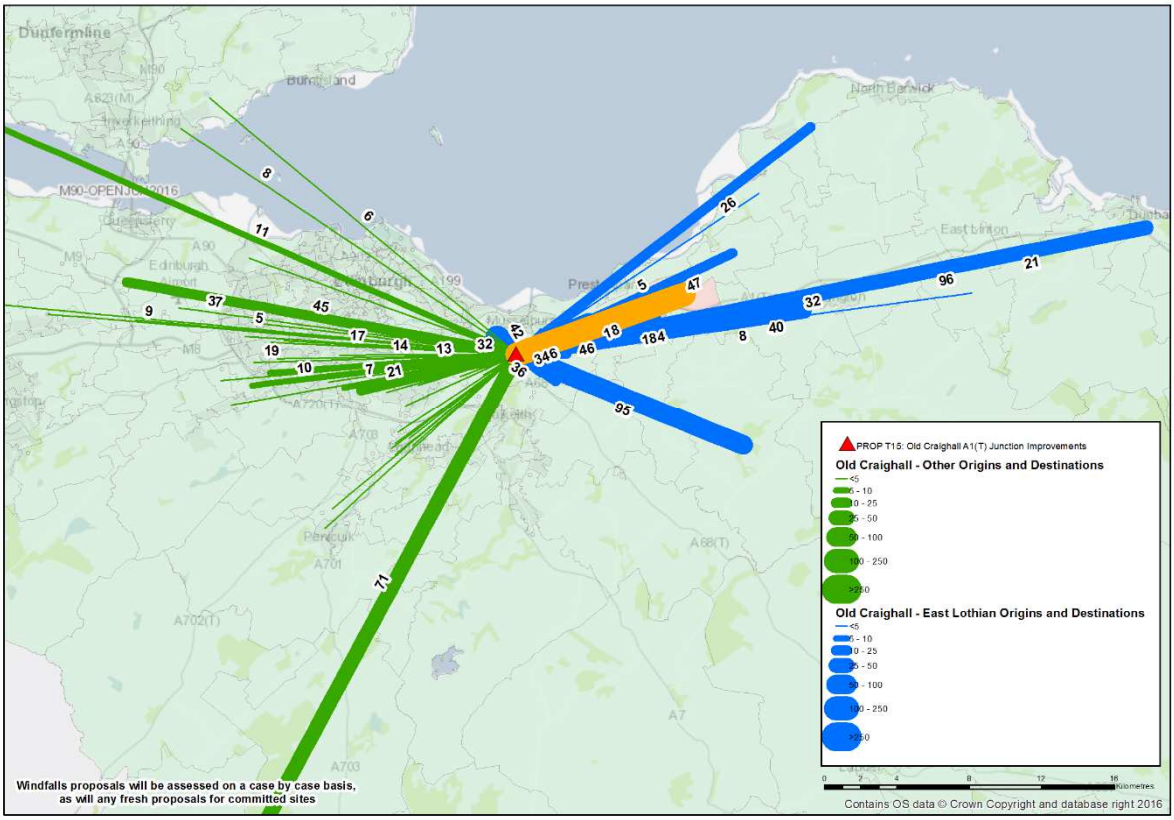

Figure B.1 Distribution of LDP Trips using Old Craighall Junction – Regional View

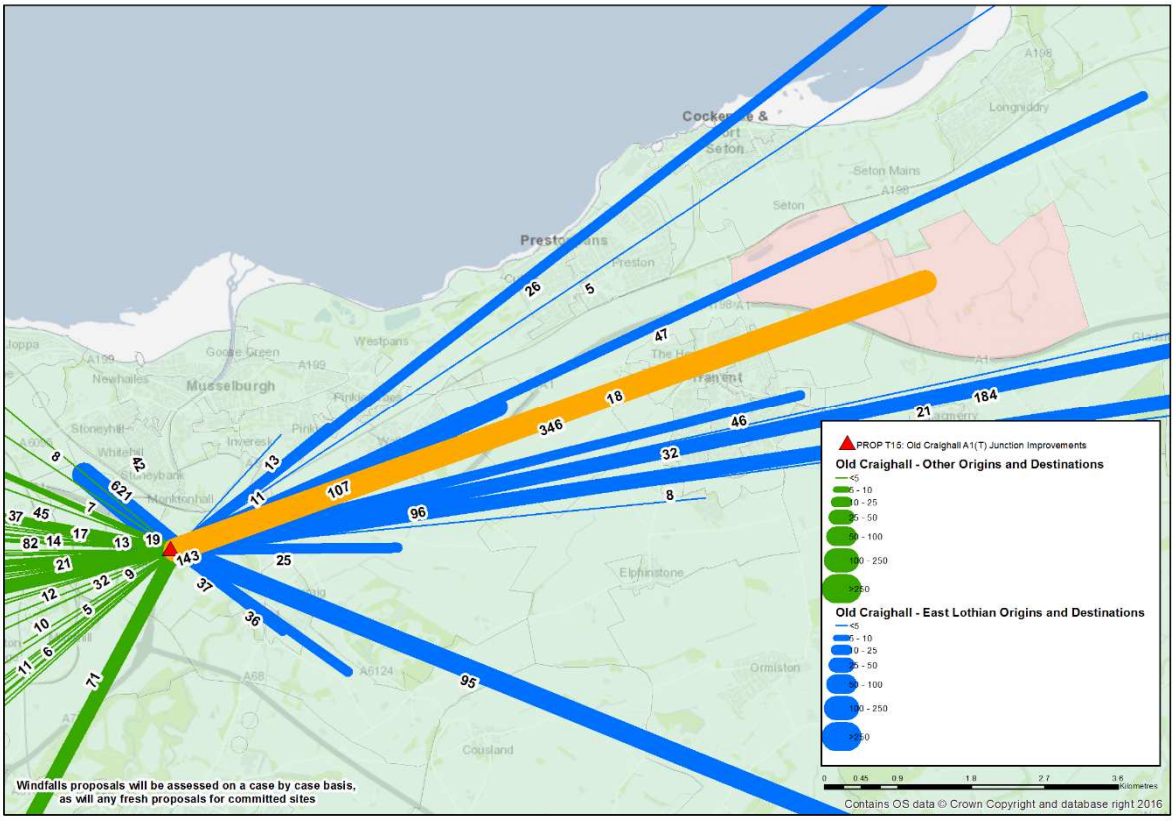

Figure B.2 Distribution of LDP Trips using Old Craighall Junction – Local View

B.1.3 The next step is to calculate the proportion of trips using Old Craighall which are associated with LDP development. Development sites often consist of several sub-developments within a single SRM12 model zone, and that is true of Blindwells. As such, the contribution of LDP sites is calculated first, then the total zonal impact, and then subsequently apportioned across the individual developments within the zone.

B.1.4 The analysis calculates that 449 of the road based trips leaving or entering the Blindwells zone in the AM and PM peaks are travelling via Old Craighall based on the defined select links. The contribution for zones that the Blindwells developments are in to Old Craighall junction is then calculated using the following formula:

Zonal contribution to Old Craighall =

449 Blindwells (Zone 670) peak trips / 2492 total LDP peak trips = 18.0%

B.1.5 Therefore, out of all the LDP development traffic using the slip roads at Old Craighall junction, 18.0% is associated with the zone containing the Blindwells developments.

B.1.6 The final step is to calculate the proportions of the zonal contribution (18.0%) which should be allocated to each of the developments within the zone. In this example, there are three LDP developments within the zone as follows:

- Res_B1: Blindwells Residential Private Housing – 1,120 dwellings;
- Res_B2: Blindwells Residential Social Housing – 480 dwellings; and
- Emp_B1: Blindwells Employment Allocation – 10 hectares.

B.1.7 In order to be able to distribute contributions pro-rata across these residential and commercial sites, a common denominator is required. To derive this, the assumption that 30 dwellings = 1 hectare of land was used, as discussed in Chapter 3. Applying this factor converts all of the developments into the same units (pseudo-hectares), and allows individual site contributions to be calculated as shown in Table B.1 below. Using this method "Res_B1" represents 59% of the zone, "Res_B2" is equal to 25% and the remaining 16% is accounted for by "Emp_B1". These proportions can then be applied to the zone share to give total Old Craighall contributions of 11.1%, 4.8% and 3.0% respectively.

Table B.1 Method for calculating development site contributions

Development Site	Units	Standardised units (hectares)	% of Total Zonal Units	% of Total
Res_B1	1,120 dwellings	37	59%	10.6%
Res_B2	480 dwellings	16	25%	4.6%
Emp_B1	10 hectares	10	16%	2.8%
Zonal Total		63	100%	18.0%

B.1.8 The percentages that appear in Appendix C are derived in this way. Therefore, a developer simply needs to lookup the relevant development site in this table and find the corresponding percentage contribution for each of the mitigation infrastructure schemes listed. However, it is important to note that these percentages are based on LDP site capacities and if these change as new or alternative proposals come forward, so will the percentage and level of contribution.

B.1.9 The above reflects the proportion of total LDP developers' contributions which the Blindwells developers are liable for. Total LDP developer contributions depend on whether a need for mitigation first arises in the base scenario, committed scenario or LDP scenario:

- If mitigation is required in the Base scenario, DCF Method 1A is applied.
- If mitigation is required in the Committed scenario, DCF Method 1B is applied.
- If mitigation is required in the LDP scenario, DCF Method 1C is applied.

B.2 Calculation of Overall Developers' Contribution

DCF Methodology 1A

As noted in Chapter 3, mitigation is required at Old Craighall in the Base Scenario, i.e. without the addition of Committed or LDP traffic, although the latter two generators will exacerbate this issue. As such, Methodology 1A applies and the LDP developers will be liable for the following proportion of total mitigation costs at this location:

(LDP select link trips – committed select link trips) / Total LDP select link trips.

= 2492 / 12586 = 19.8%

B.2.1 Therefore, LDP developers will contribute £197,032 towards Old Craighall Improvements. Blindwells specifically will be liable for 18.0% of this value, i.e. £35,514.

DCF Methodology 1B

B.2.2 Although not the case, if mitigation was found to be required at Old Craighall under the Committed Development scenario but not under the Base scenarios, DCF Methodology 1B

would apply. LDP developers would then be liable for the following proportion of total mitigation costs at Old Craighall:

(LDP select link trips – committed select link trips) / Total (LDP select link trips – base select link trips)

= 2492 / 3311 = 75.3%

B.2.3 If this were the case, LDP developers would contribute £749,036 towards Old Craighall Improvements. Blindwells specifically would been liable for 18.0% of this value, i.e. £135,008.

DCF Methodology 1C

B.2.4 If mitigation was only required at Old Craighall with the addition of LDP traffic, then any upgrades to the junction would be the sole responsibility of LDP developers. Therefore, LDP developers would contribute the full £995,000, and Blindwells specifically would be liable for 18.0% of £995,00 = £179,343.

Appendix C Developer Contributions

Name	Old Craighall	Salters Road	Dolphingstone	Bankton	Meadowmill	Mussel-burgh	Tranent	Rail Package	Active Travel Corridor
Blindwells (Private)	10.8%	5.6%	4.7%	23.4%	12.7%	4.8%	7.2%	18.0%	14.3%
Blindwells (Social)	4.6%	2.4%	2.0%	10.0%	5.5%	2.0%	3.1%	7.7%	6.1%
Blindwells Eastern Expansion (Hargreaves/Kennedy)	-	-	-	-	-	-	-	-	-
Eastern Extension of Allocated Blindwells Site (Hargreaves)	-	-	-	-	-	-	-	-	-
Blindwells East - Hoprig Mains	-	-	-	-	-	-	-	-	-
Abbeylands Dunbar (44 High Steet) (Empire)	-	-	-	0.2%	0.0%	-	0.0%	-	-
Abbeylands Dunbar (Former Hughes Garage)	-	-	-	0.1%	0.0%	-	0.0%	-	-
Hallhill North (250)	0.6%	0.4%	0.6%	0.6%	0.4%	0.3%	0.3%	-	3.2%
Newtonlees North (250)	1.0%	0.3%	0.5%	0.4%	0.5%	0.4%	0.2%	-	-
Brodie Road (50)	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	-	0.6%
Innerwick East (18)	-	-	0.0%	0.3%	0.0%	-	0.0%	-	-
East Linton Western Expansion (100)	0.2%	0.2%	0.3%	0.4%	0.2%	0.1%	0.1%	1.1%	1.3%
St John Street (Spott) (6)	-	-	-	0.8%	0.0%	-	0.1%	-	-
Newtonlees Farm - 115 homes	0.5%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	-	-
Belhaven Hospital Field	-	-	-	0.3%	0.0%	-	0.1%	-	0.5%
Coastguard Site, Dunbar	-	-	-	0.1%	0.0%	-	0.0%	-	-
Assembly Rooms Dunbar	-	-	-	0.1%	0.0%	-	0.0%	-	-
Letham South (275)	1.4%	0.7%	0.8%	0.8%	0.6%	0.3%	0.3%	0.0%	3.5%
Gifford - Gifford Garage	1.4%	0.0%	-	0.3%	0.0%	-	-	-	-
Craighall (700+800)	6.2%	5.9%	4.9%	2.3%	5.4%	2.2%	3.7%	11.9%	19.1%
Levenhall (65)	1.3%	7.8%	1.3%	0.0%	0.4%	1.9%	0.6%	1.1%	0.8%
Edenhall (100)	0.6%	1.5%	1.9%	0.1%	0.5%	27.3%	0.6%	0.0%	1.3%
Dolphingstone (MIR safeguard 400 Homes) (PLDP 600)	4.8%	32.4%	11.3%	1.6%	1.2%	1.7%	4.1%	4.3%	7.6%
Pinkie Mains (127)	-	0.0%	1.7%	0.1%	0.3%	10.2%	0.8%	0.3%	1.7%
Old Craighall East (50)	2.4%	0.8%	0.5%	0.4%	0.8%	2.2%	0.3%	0.0%	0.6%
Whitecraig North (200)	1.8%	5.7%	1.1%	0.6%	0.2%	4.6%	0.8%	0.3%	-
Whitecraig South (300)	1.5%	3.6%	0.4%	0.2%	0.3%	1.5%	0.3%	0.1%	-
Fire Service College (Gullane) (100)	0.2%	0.2%	0.1%	2.3%	0.9%	1.0%	0.4%	0.7%	-
Saltcoats (Gullane) (130)	0.3%	0.2%	0.1%	3.0%	1.2%	1.3%	0.5%	0.9%	-
Castlemains (Dirleton) (30)	0.1%	0.0%	0.0%	0.7%	0.3%	0.3%	0.1%	0.2%	-
Fentoun Gait South (Gullane) (15)	0.0%	0.0%	0.0%	0.3%	0.1%	0.1%	0.1%	0.1%	-
Fentoun Gait East (Gullane) (50)	0.1%	0.1%	0.0%	1.2%	0.5%	0.5%	0.2%	0.3%	-
Aberlady West (100)	0.1%	0.2%	0.1%	2.2%	1.0%	0.7%	0.4%	1.0%	-
Athelstaneford - Mansfield	-	-	0.0%	2.5%	0.6%	0.5%	0.2%	0.1%	-
Longniddry South (450)	3.5%	2.5%	0.7%	12.4%	25.9%	4.8%	3.0%	31.1%	-
Longniddry South Expansion Area (550)	-	-	-	-	-	-	-	-	-
Ormiston - Limeylands Road (Phase 2) (AH)	-	-	-	0.4%	0.0%	-	-	-	-
Pencaitland - Park View (Redmains)	2.6%	0.0%	-	0.9%	0.3%	0.4%	-	0.0%	-
Windygoul South (550)	0.9%	2.4%	8.0%	3.0%	4.6%	4.1%	12.5%	0.2%	-
Lammermoor Terrace (120)	0.8%	0.5%	4.8%	1.0%	0.9%	0.6%	5.0%	0.0%	1.5%
Bankpark Grove (80)	0.4%	2.3%	0.0%	3.1%	6.6%	3.2%	1.0%	0.2%	1.0%
Macmerry North (150)	1.5%	0.8%	5.8%	1.3%	1.7%	1.4%	6.0%	0.0%	1.9%
Elphinstone Road West (80)	0.1%	0.4%	1.2%	0.4%	0.7%	0.6%	1.8%	0.0%	-
Woodhall Road (Pencaitland) (16)	0.8%	0.0%	-	0.3%	0.1%	0.1%	-	0.0%	-
Gladsmuir (20 - 50)	0.2%	0.1%	0.8%	0.2%	0.2%	0.2%	0.8%	0.0%	0.3%
Ormiston - Limeylands Road (AH)	-	-	-	1.0%	0.1%	-	-	-	-

Name	Old Craighall	Salters Road	Dolphingstone	Bankton	Meadowmill	Musselburgh	Tranent	Rail Package	Active Travel Corridor
Blindwells employment allocation	2.9%	1.5%	1.3%	6.3%	3.4%	1.3%	1.9%	4.8%	3.8%
Spott Road, Dunbar	2.9%	1.0%	1.6%	1.1%	1.4%	1.0%	0.7%	-	-
Auction Mart, East Linton	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	0.4%
Gateside East	-	-	-	-	-	-	-	-	-
Gateside West	-	-	-	-	-	-	-	-	-
Gateside West	-	-	-	-	-	-	-	-	-
Peppercraig East	0.2%	0.2%	0.4%	0.2%	0.2%	0.2%	0.1%	0.0%	0.5%
Peppercraig East	0.3%	0.2%	0.4%	0.2%	0.2%	0.3%	0.1%	0.0%	0.6%
Peppercraig East	0.5%	0.5%	0.8%	0.4%	0.5%	0.5%	0.2%	0.0%	1.1%
Peppercraig East	0.2%	0.2%	0.3%	0.1%	0.2%	0.2%	0.1%	0.0%	0.4%
Craighall , North West of QMU	24.3%	9.0%	1.6%	1.7%	1.9%	-	1.1%	10.1%	8.2%
Craighall, South west of QMU	2.5%	2.4%	1.9%	0.9%	2.2%	0.9%	1.5%	4.8%	7.6%
Old Craighall Junction South West	7.3%	2.3%	1.4%	1.1%	2.3%	6.6%	1.0%	0.1%	1.9%
Tantallon Road South	-	-	-	-	-	-	-	-	-
Various employment sites at North Berwick.	-	-	-	-	-	-	-	-	-
Mid Road Industrial Estate West	0.1%	0.9%	0.0%	1.2%	2.5%	1.2%	0.4%	0.1%	0.4%
Windygoul South West	0.4%	1.1%	3.7%	1.4%	2.2%	1.9%	5.8%	0.1%	-
Kingslaw	1.9%	0.3%	8.8%	0.7%	0.9%	0.7%	7.5%	0.0%	1.7%
Macmerry Business Park East	4.4%	2.4%	17.4%	3.8%	5.2%	4.1%	17.9%	0.0%	5.7%
Macmerry Business Park, Greendykes	1.7%	0.9%	6.7%	1.5%	2.0%	1.6%	6.9%	0.0%	2.2%

Appendix D Contribution Zone Plots

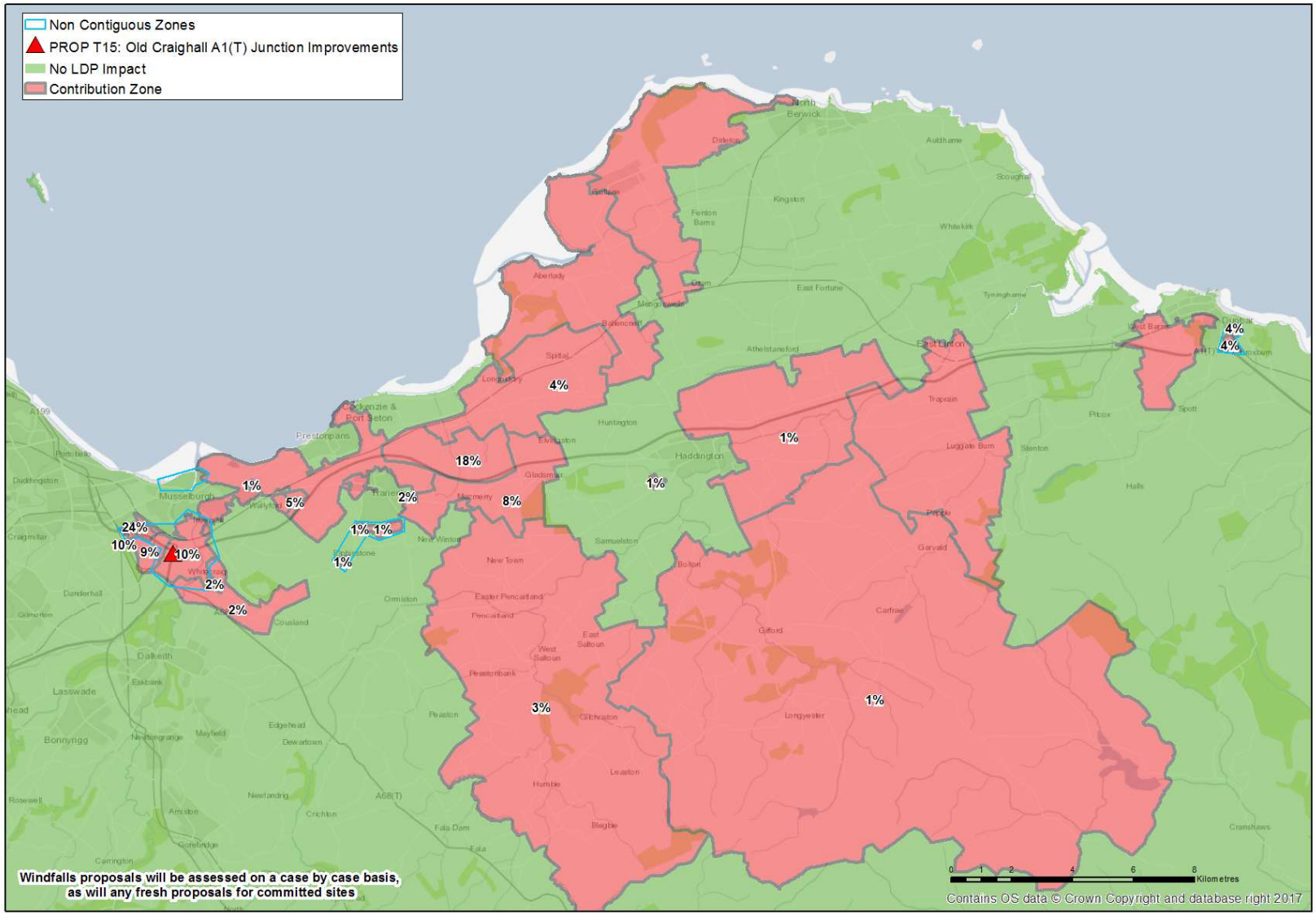

Figure D.1 Contribution Zone Plot – Old Craighall (Full)

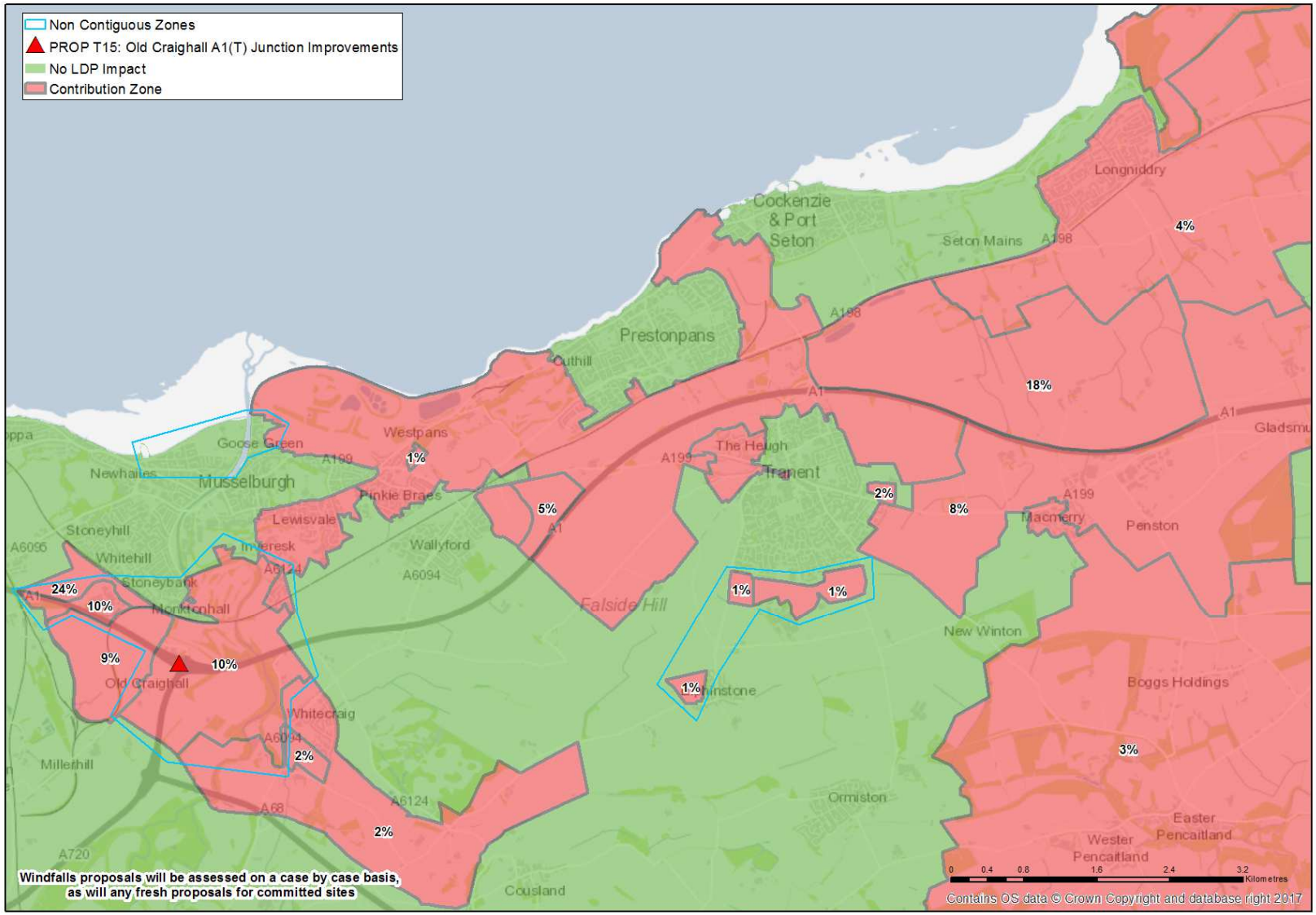

Figure D.2 Contribution Zone Plot – Old Craighall (Local)

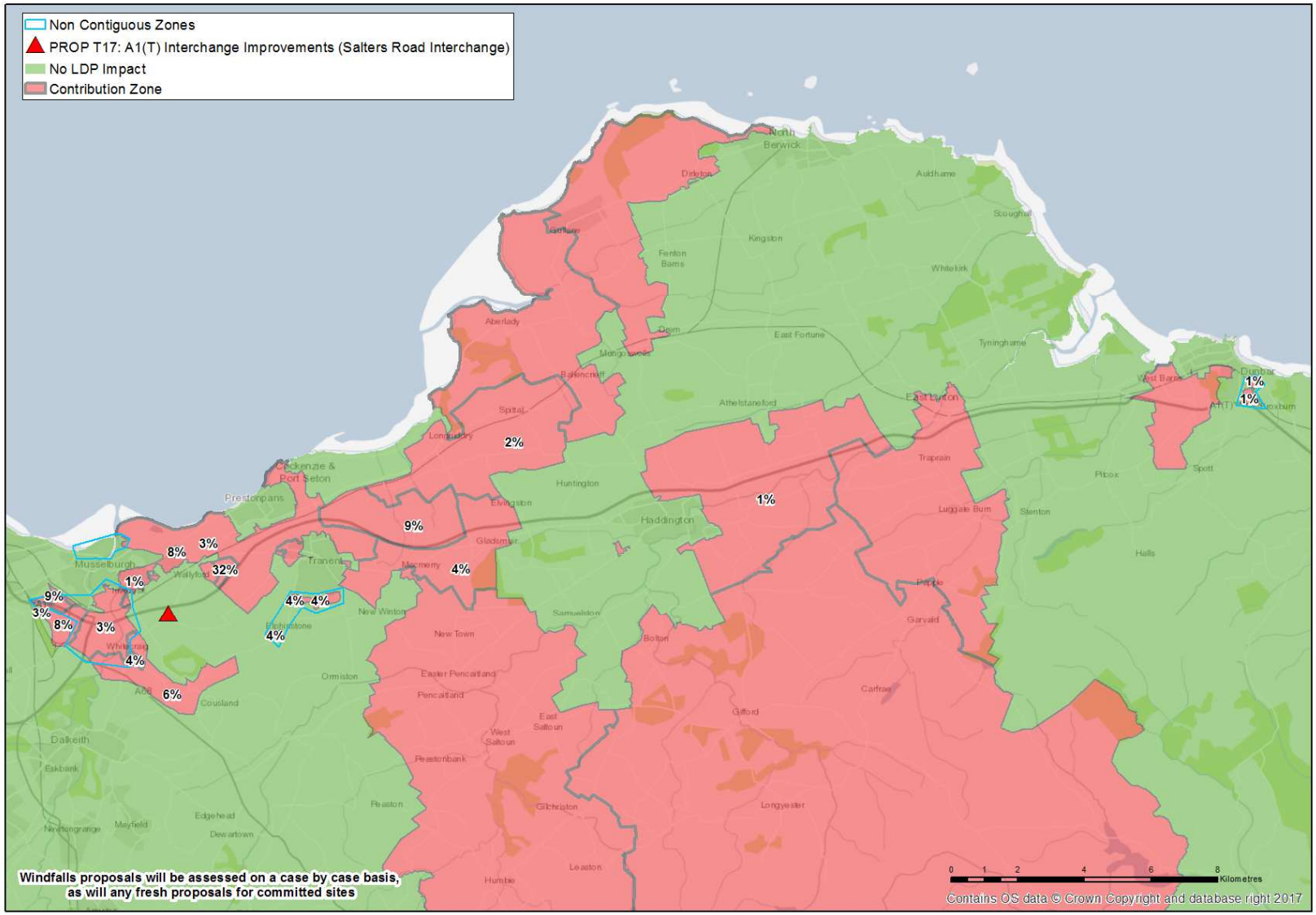

Figure D.3 Contribution Zone Plot – Salters Road (Full)

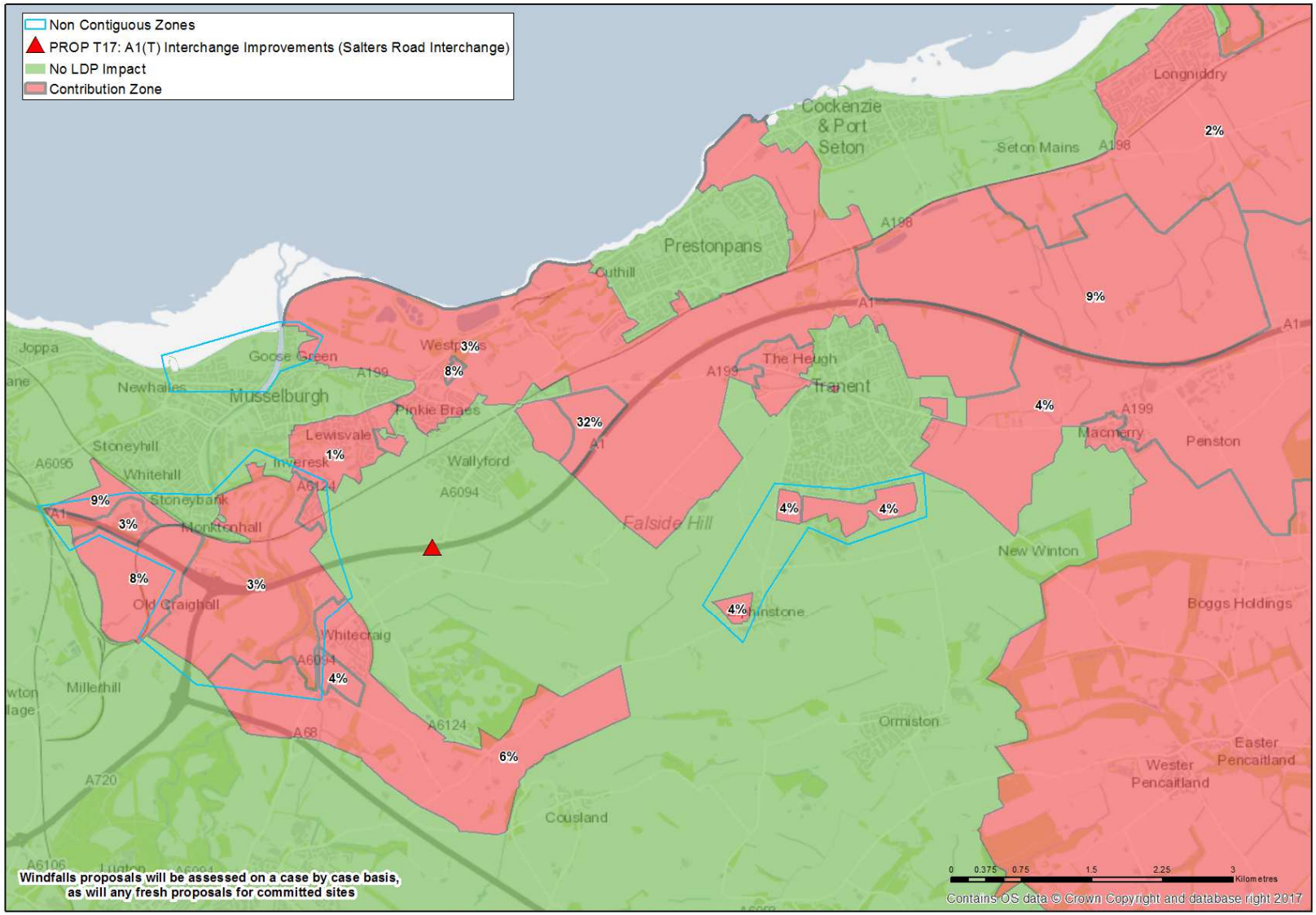

Figure D.4 Contribution Zone Plot – Salters Road (Local)

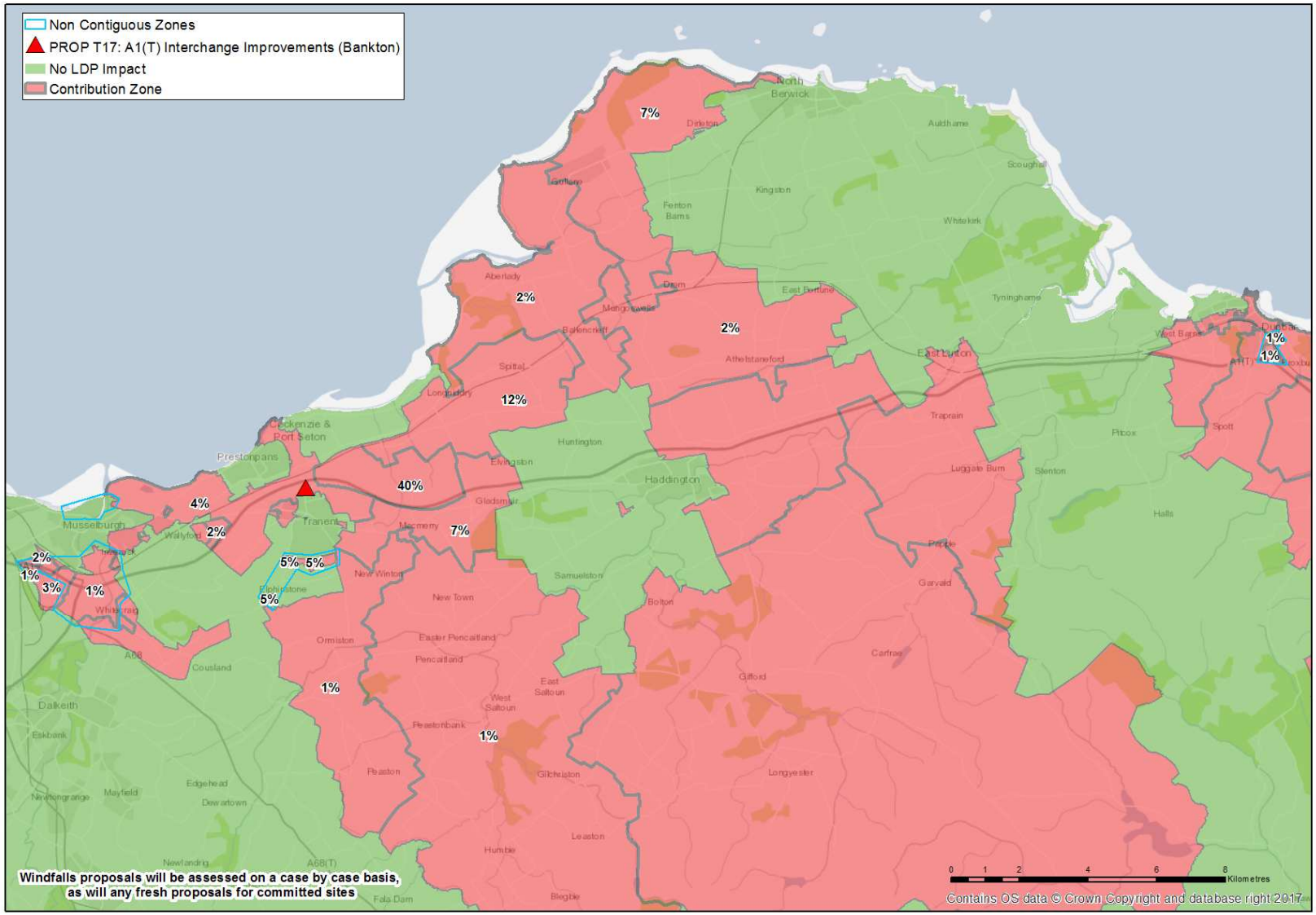

Figure D.5 Contribution Zone Plot – Bankton (Full)

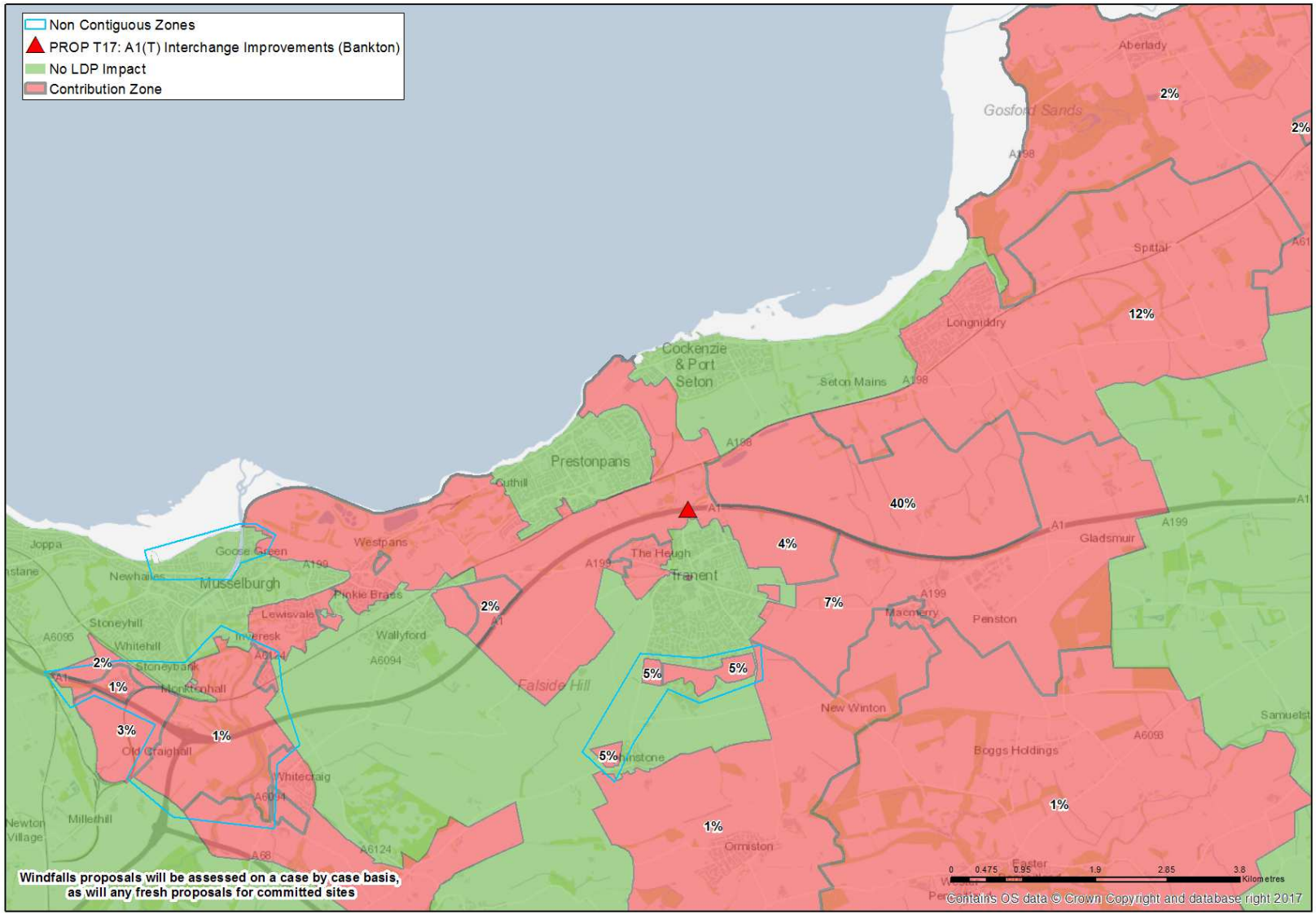

Figure D.6 Contribution Zone Plot – Bankton (Local)

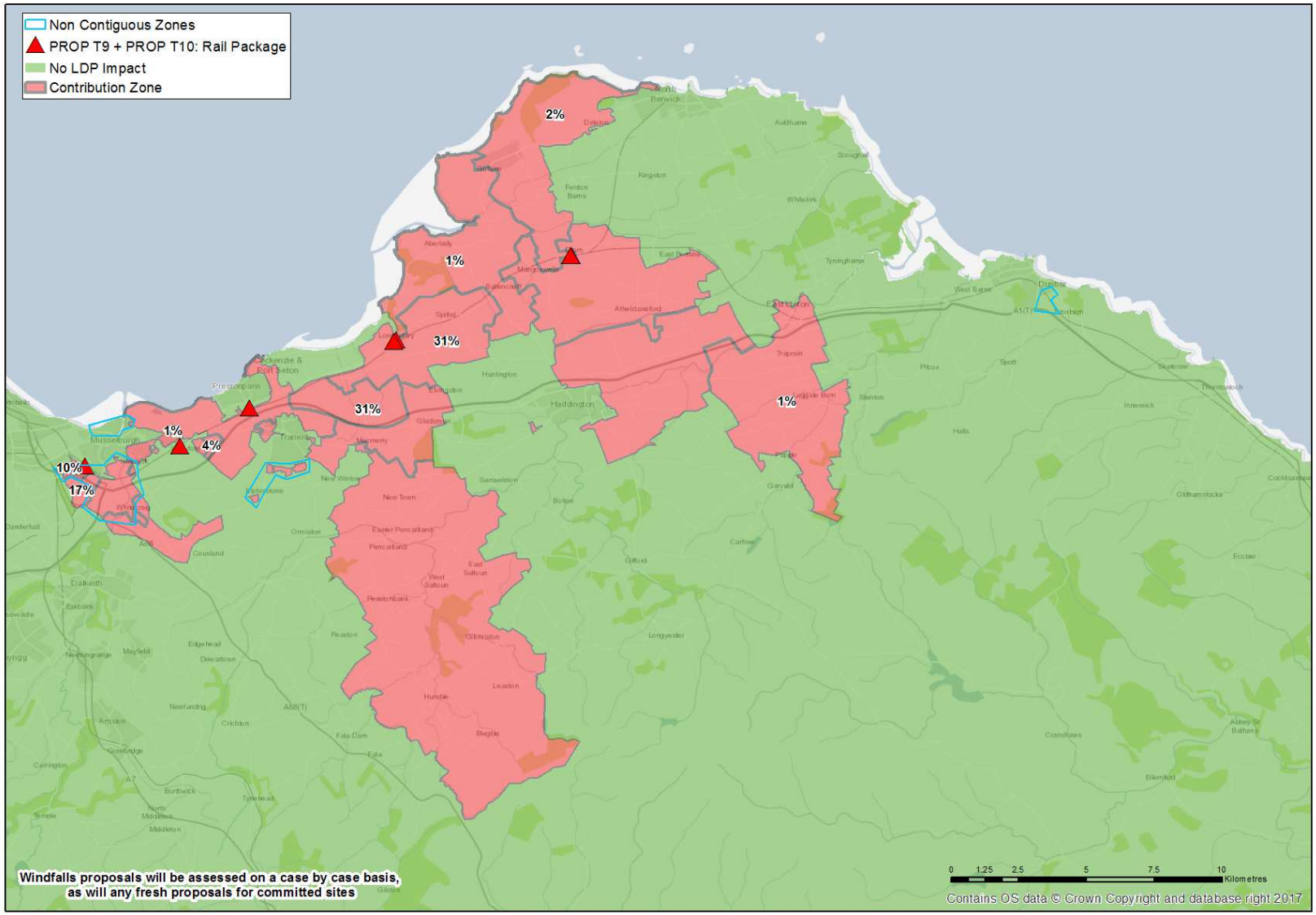

Figure D.7 Contribution Zone Plot – Rail Package (Full)

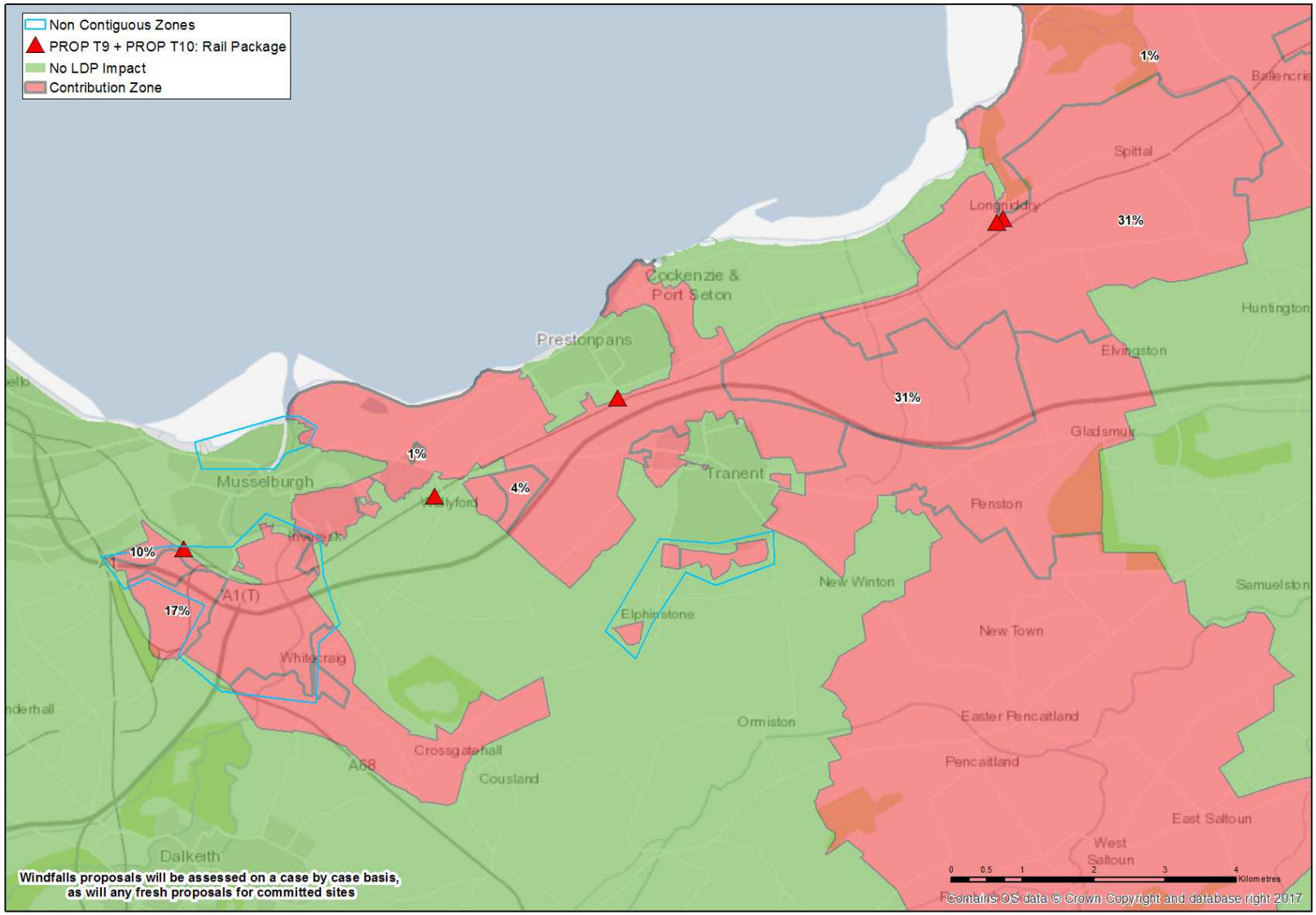

Figure D.8 Contribution Zone Plot – Rail Package (Local)

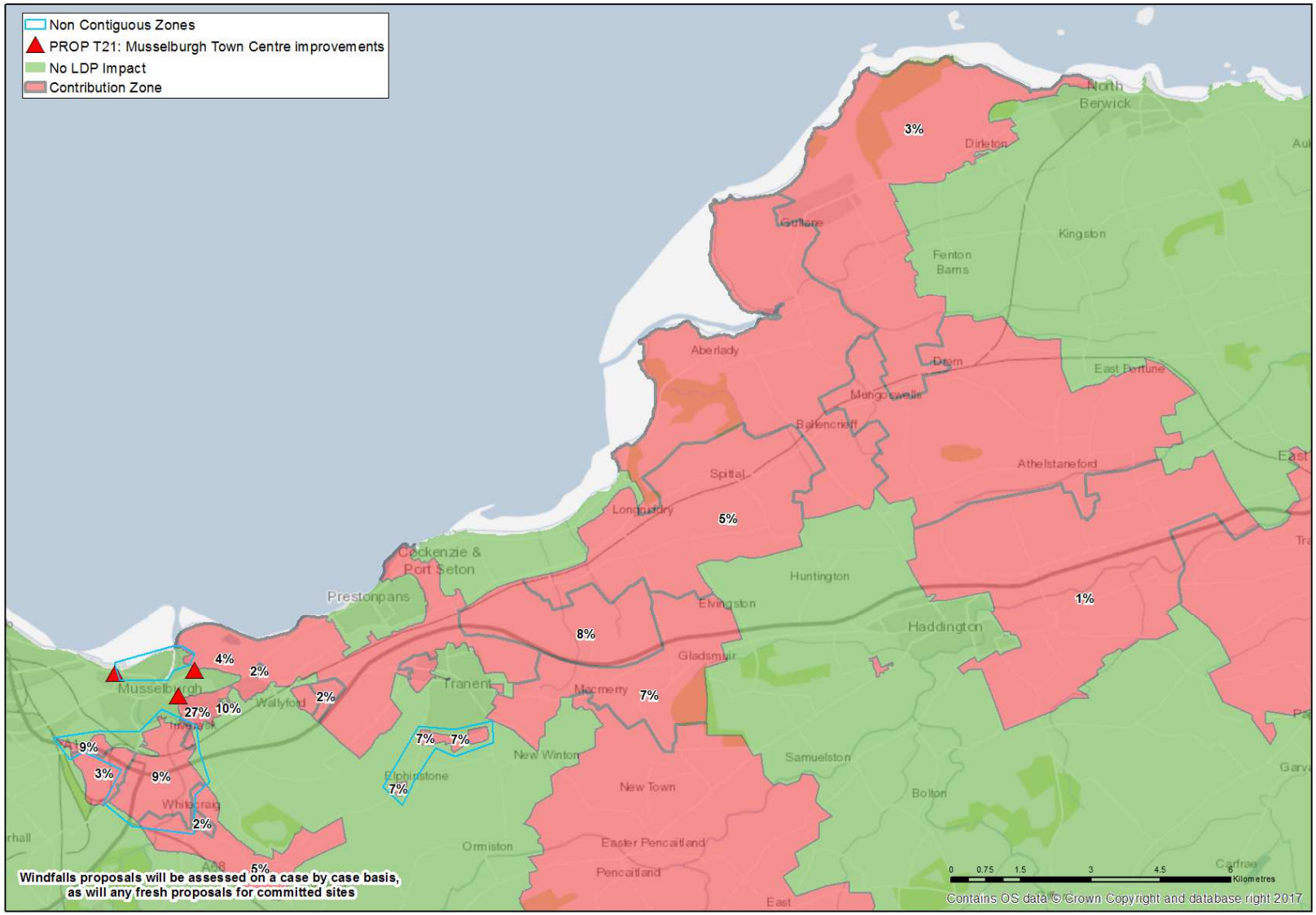

Figure D.9 Contribution Zone Plot – Musselburgh (Full)

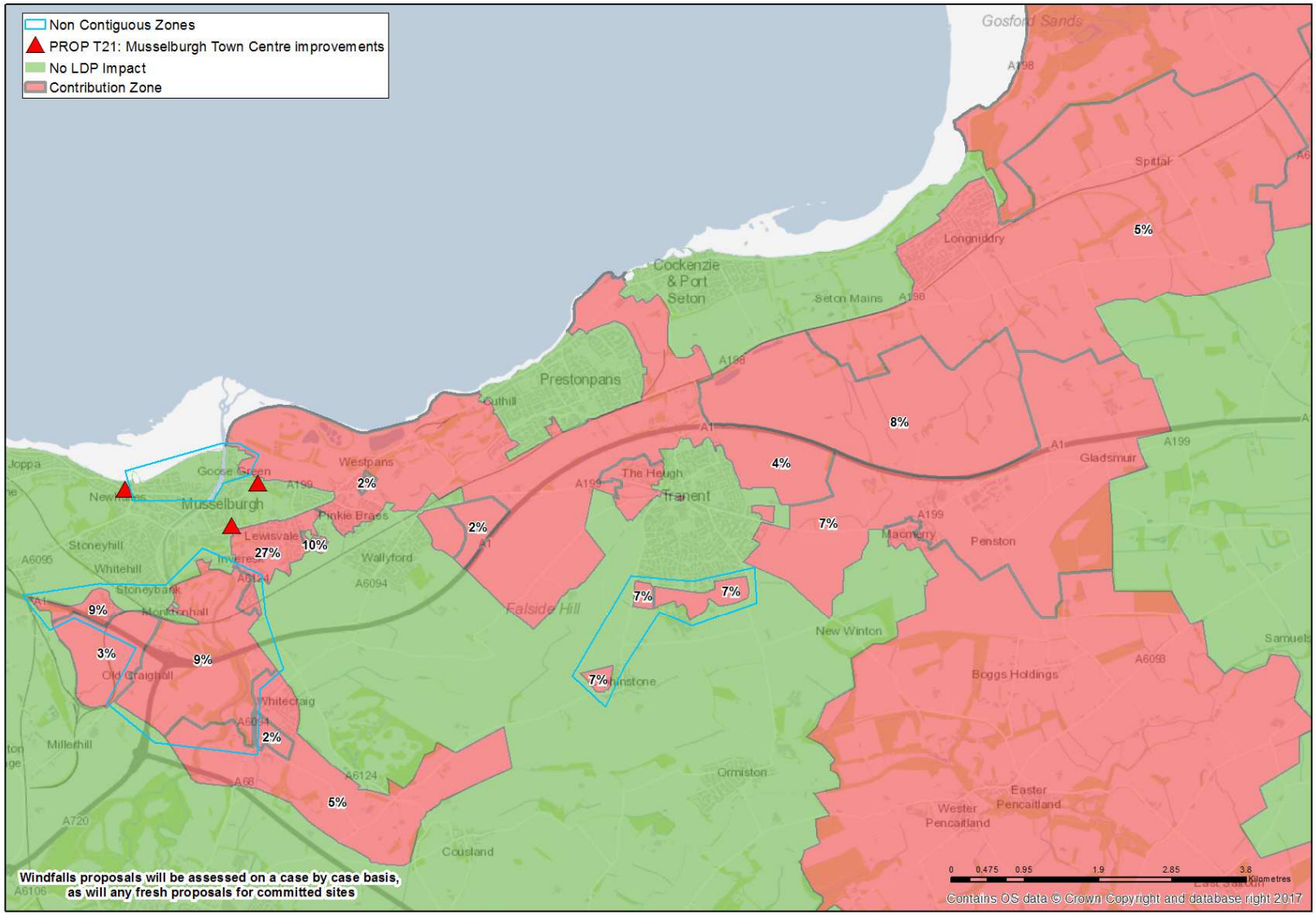

Figure D.10 Contribution Zone Plot – Musselburgh (Local)

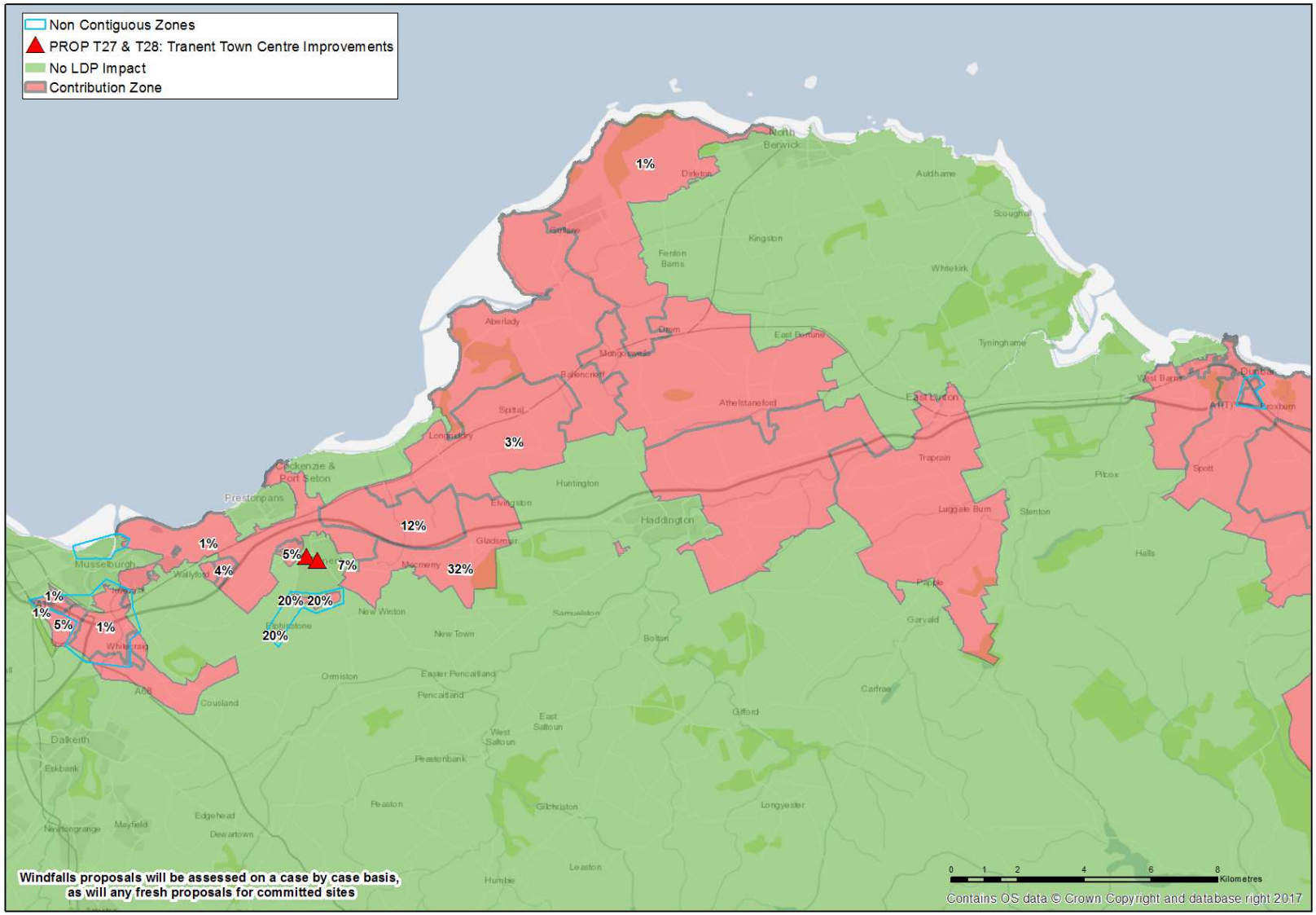

Figure D.11 Contribution Zone Plot – Tranent (Full)

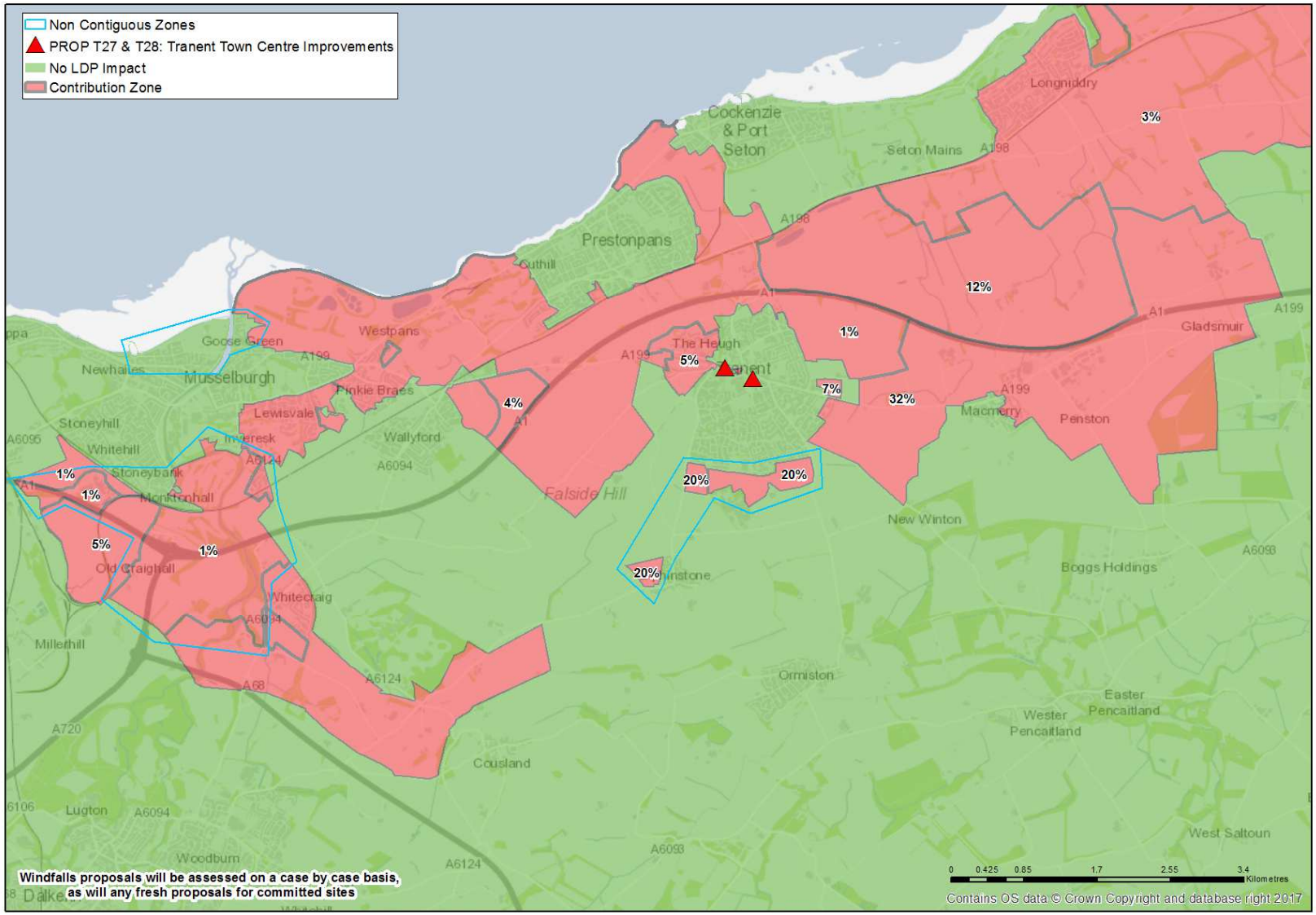

Figure D.12 Contribution Zone Plot – Tranent (Local)

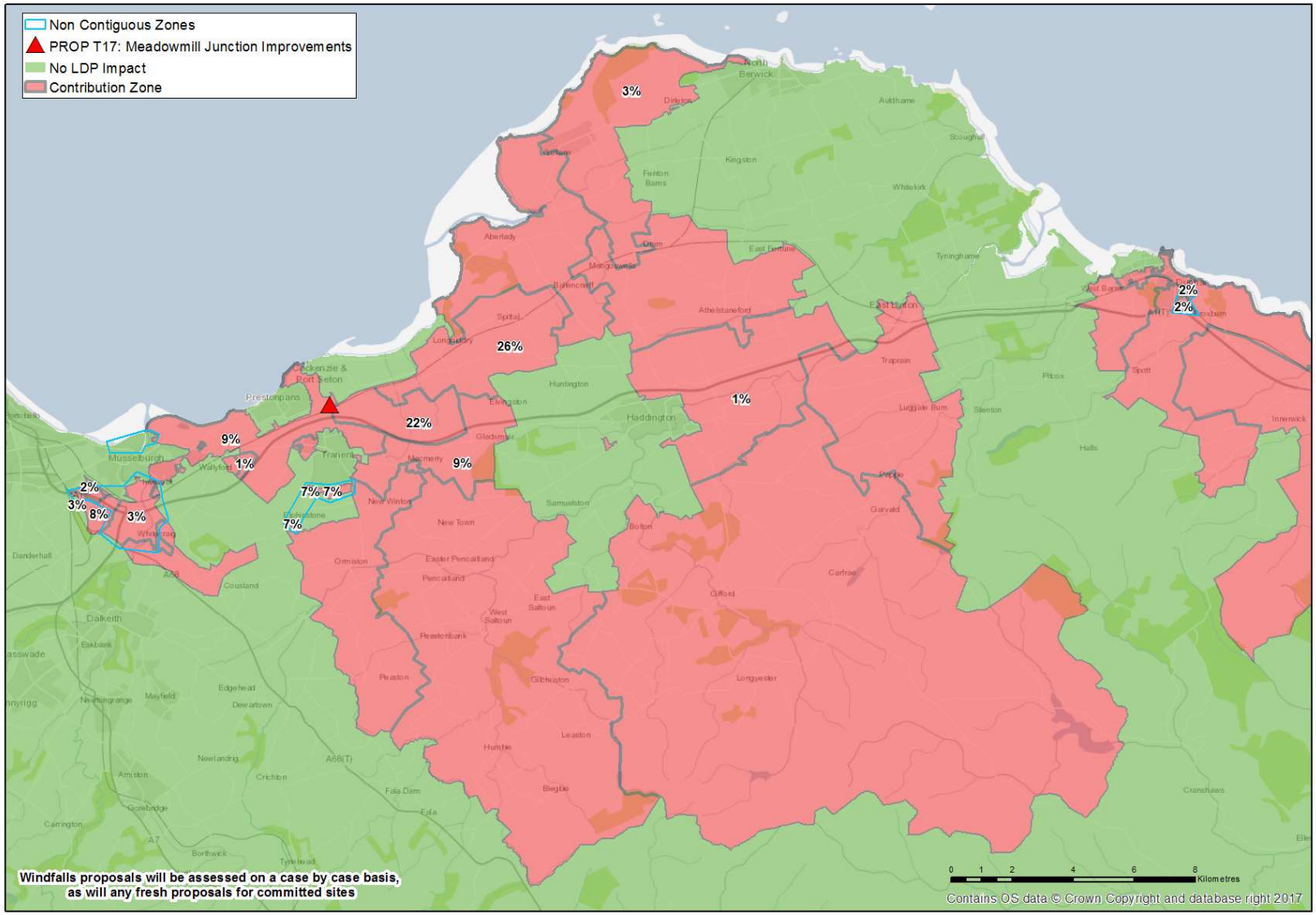

Figure D.13 Contribution Zone Plot – Meadowmill (Full)

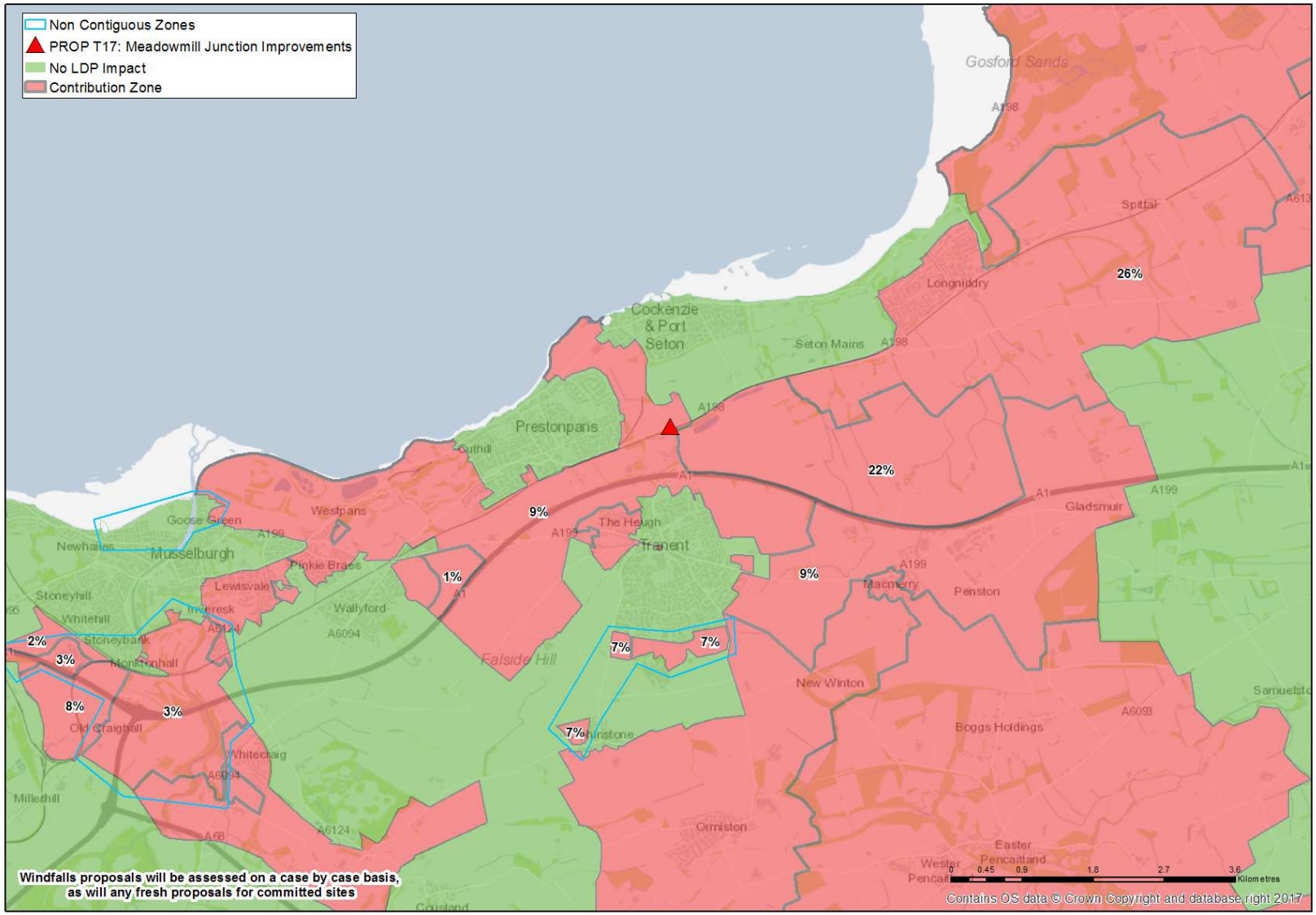

Figure D.14 Contribution Zone Plot – Meadowmill (Local)

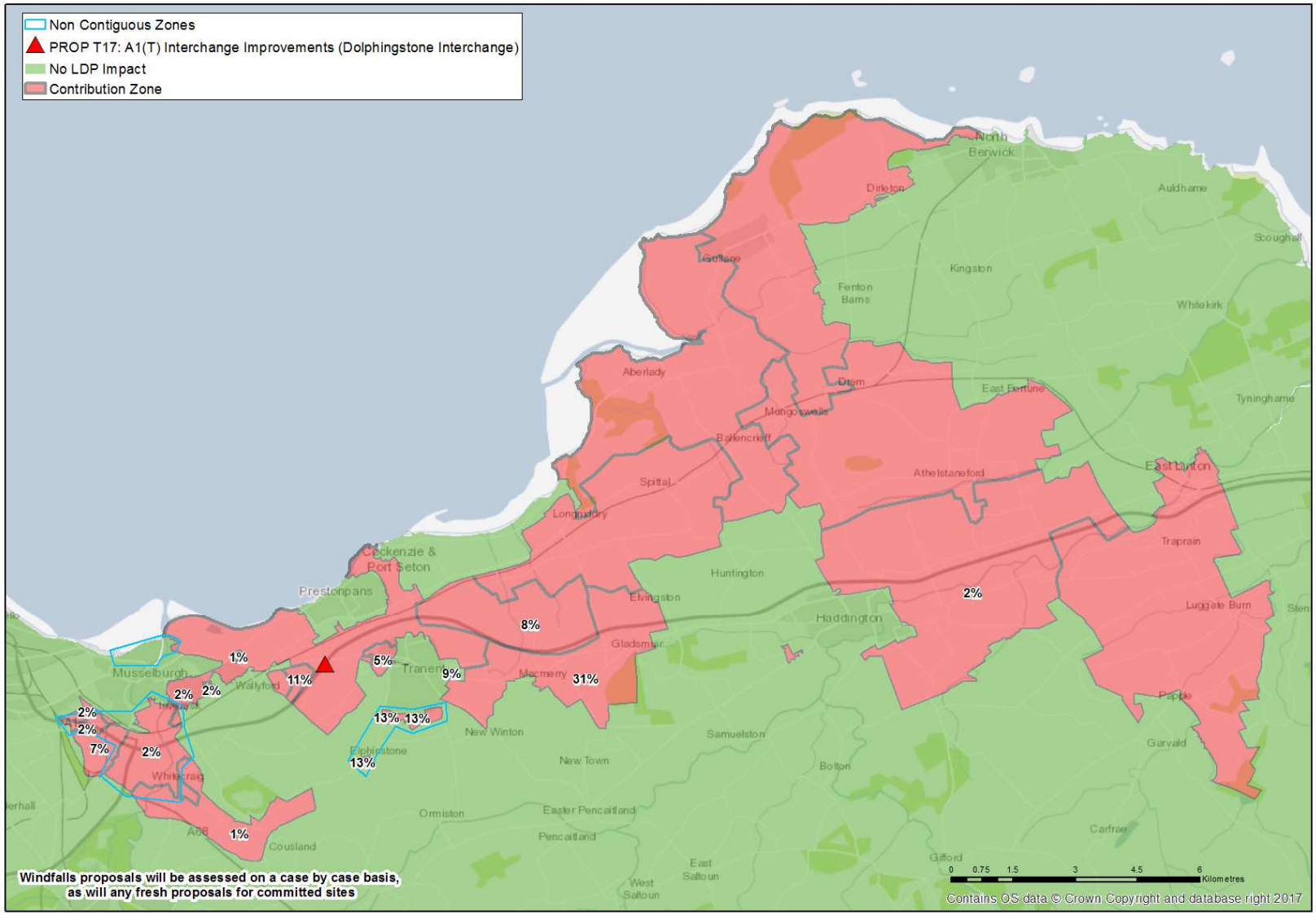

Figure D.15 Contribution Zone Plot – Dolphingstone (Full)

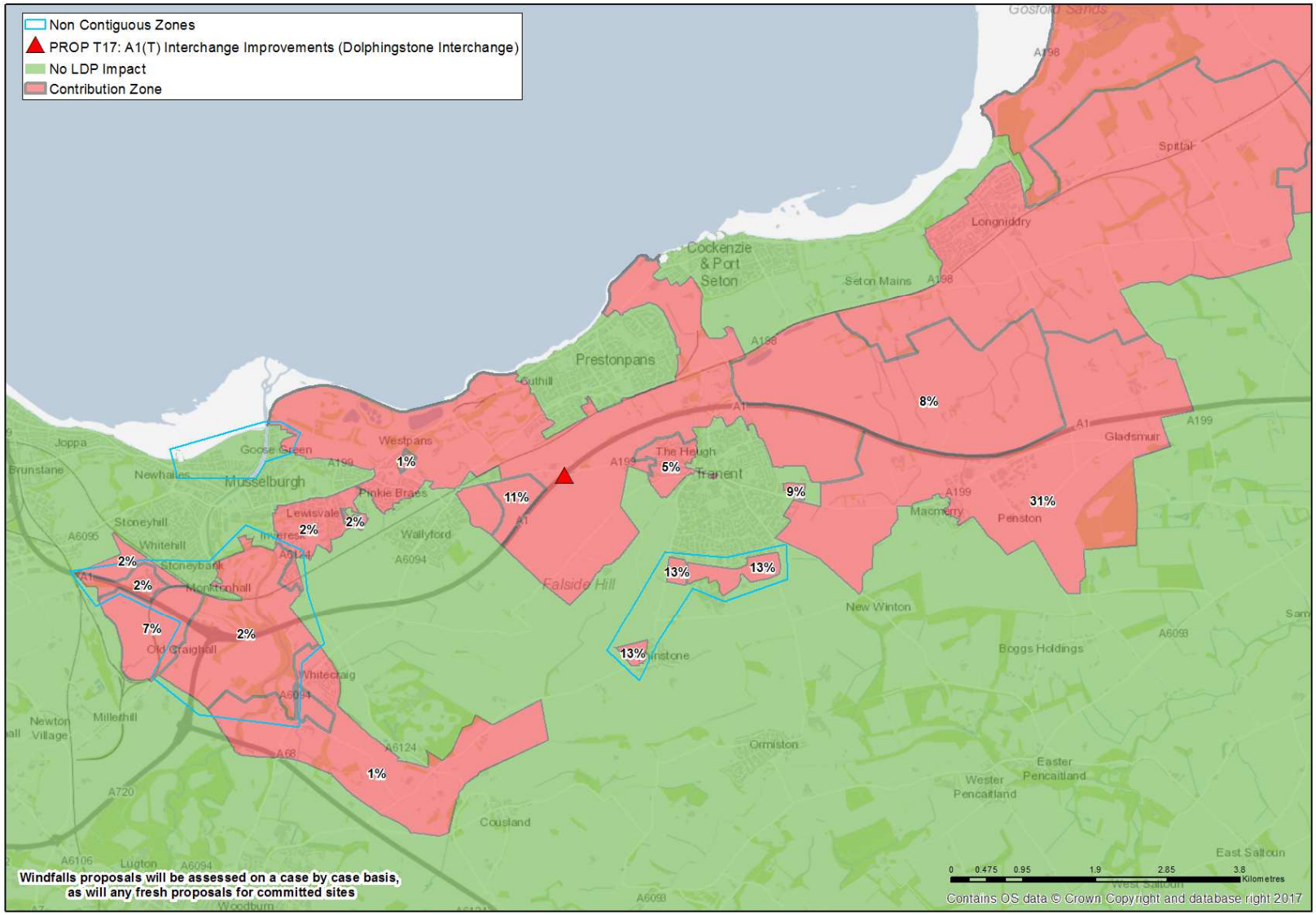

Figure D.16 Contribution Zone Plot – Dolphingstone (Local)

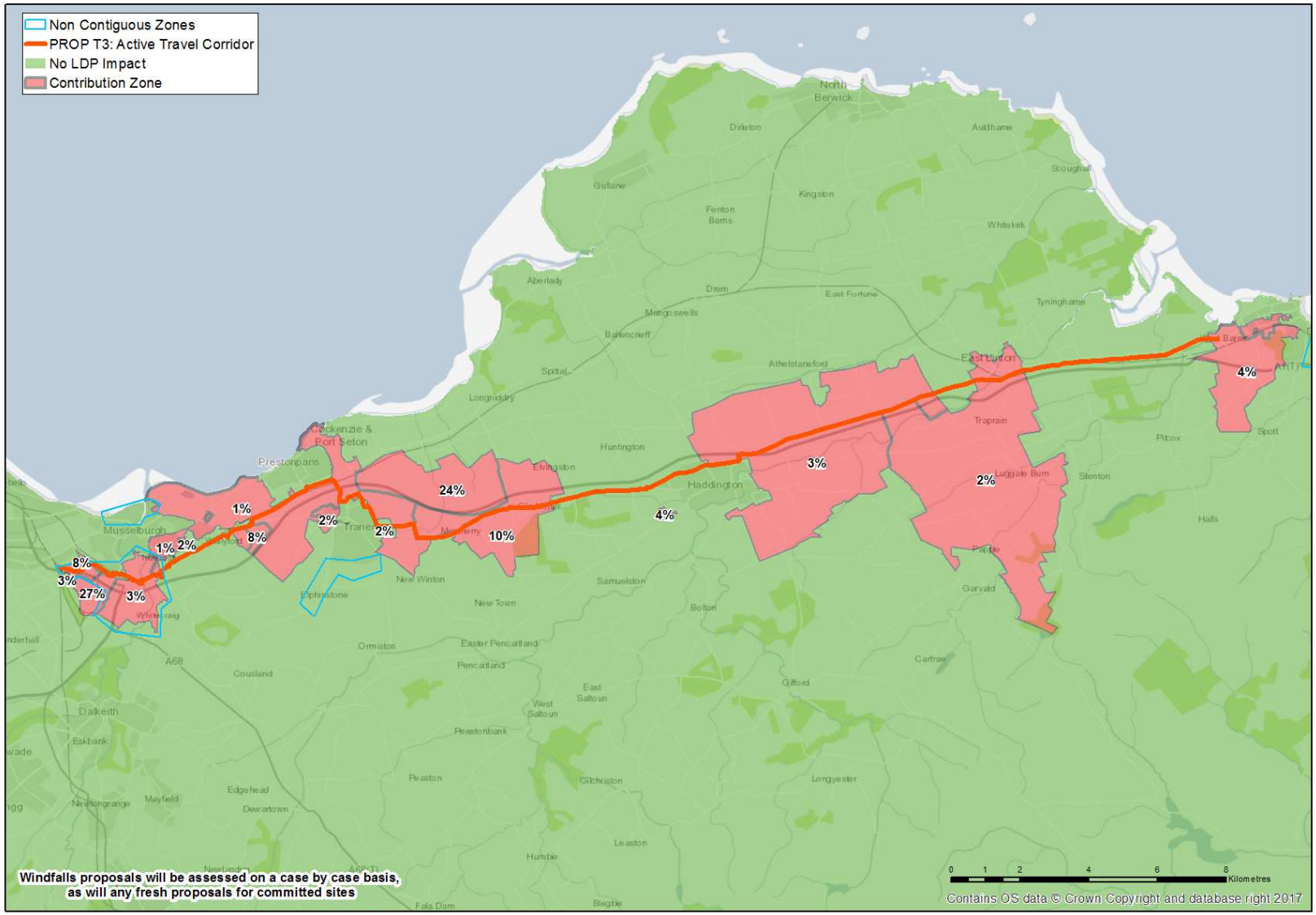

Figure D.17 Contribution Zone Plot – Active Travel Corridor (Full)

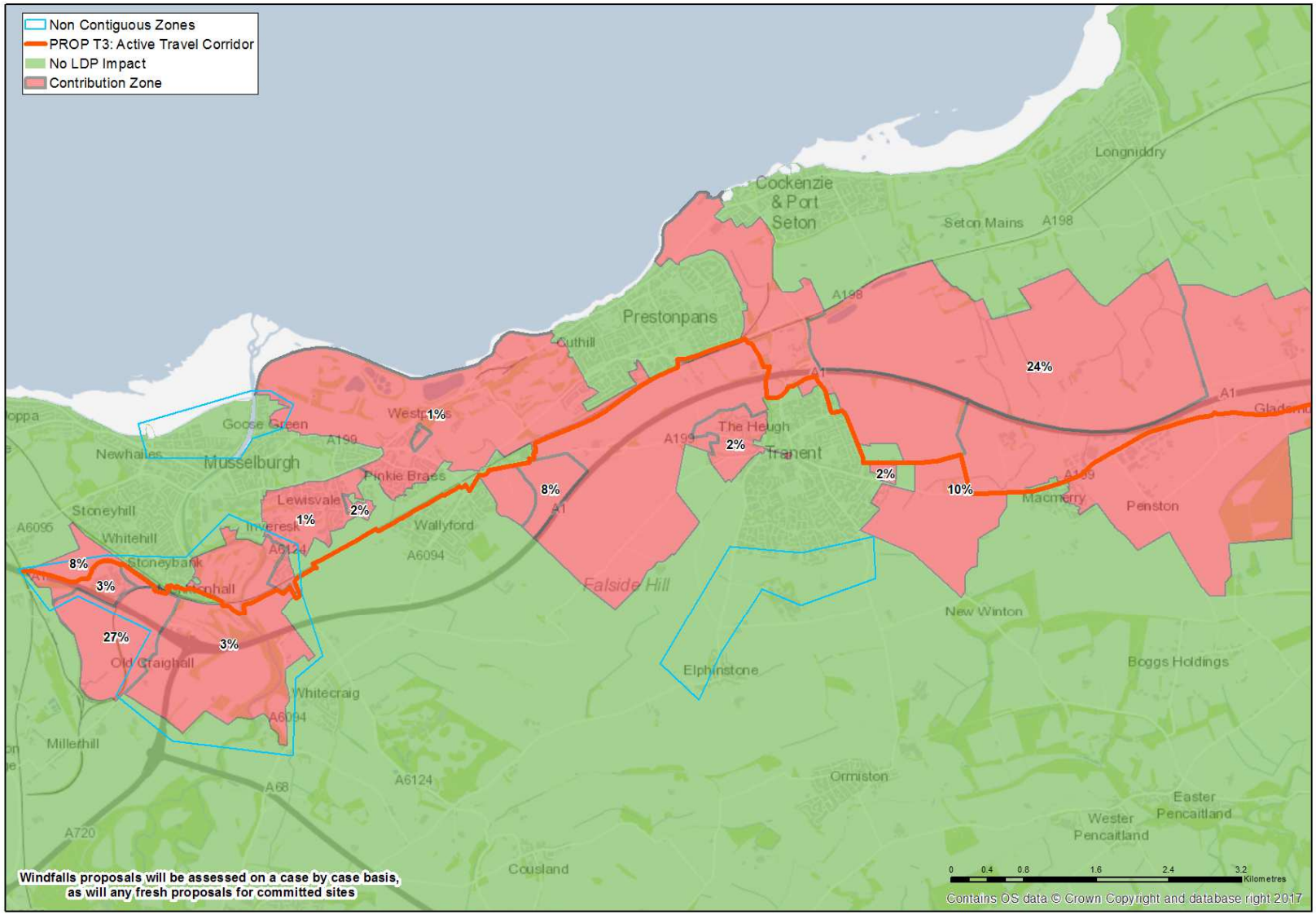

Figure D.18 Contribution Zone Plot – Active Travel Corridor (Local)