NORTH LONDON WASTE AUTHORITY

NORTH LONDON HEAT AND POWER PROJECT

TRANSPORT ASSESSMENT

The Planning Act 2008 The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5 (2) (q)

AD05.11

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i.i Introduction

i.i.i This Transport Assessment (TA) has been prepared to support the North London Waste Authority's (the Applicant's) application (the Application) for a Development Consent Order (DCO) made pursuant to the Planning Act 2008 (as amended).

i.i.ii The Application is for the North London Heat and Power Project (the Project) comprising construction, operation and maintenance of an Energy Recovery Facility (ERF) capable of an electrical output of around 70 megawatts (MW_e) and associated development, including a Resource Recovery Facility (RRF) at the Edmonton EcoPark site in north London. The proposed ERF will replace the existing Energy from Waste (EfW) facility and other facilities at the Edmonton EcoPark.

i.i.iii The London Borough of Enfield (LB Enfield) and Transport for London (TfL) have been consulted as part of the pre-application process. The traffic issues pertaining to the Application Site, the scope and requirements of the TA (including the approach to the trip generation for the TA) were discussed and agreed.

i.i.iv Key transport issues addressed within the TA include:

a. the number of trips generated by the Project at all stages during construction and operation;

a. the proposed car and cycle parking provision;

b. the site accessibility by all modes of transport; and

c. the effect of the Project on the local transport network, including public transport.

i.ii Planning policy review

i.ii.i National, regional and local policy and guidance pertinent to transport has been reviewed. This includes:

a. National Planning Policy Framework (NPPF)[1];

b. The London Plan, the Spatial Development Strategy for London Consolidated with Alterations since 2015[2] (the London Plan);

c. The Mayor's Transport Strategy[3];

d. Adopted London Borough of Enfield Core Strategy[4];

[1]Department for Communities and Local Government (DCLG), National Planning Policy Framework (NPPF).
[2] Greater London Authority (GLA), The London Plan, the Spatial Development Strategy for London Consolidated with Alterations since 2015, March 2015.
[3] GLA, The Mayor's Transport Strategy, 2010.
[4] LB Enfield, Adopted LB Enfield Core Strategy, 2010.

e. LB Enfield Development Managements Document[5]; and

f. Edmonton EcoPark Planning Brief[6].

i.ii.ii This policy and guidance has informed the development of the TA.

i.iii The Application Site

i.iii.i The Application Site, as shown on the Site Location Plans (A_0001 and A_0002 in the Book of Plans (AD02.01)), extends to approximately 22 hectares and is located wholly within the London Borough of Enfield (LB Enfield). The Application Site comprises the existing waste management site known as the Edmonton EcoPark where the permanent facilities would be located, part of Ardra Road, land around the existing water pumping station at Ardra Road, Deephams Farm Road, part of Lee Park Way and land to the west of the River Lee Navigation, and land to the north of Advent Way and east of the River Lee Navigation (part of which would form the Temporary Laydown Area and new Lee Park Way access road). The post code for the Edmonton EcoPark is N18 3AG and the grid reference is TQ 35750 92860.

i.iii.ii The Application Site includes all land required to deliver the Project. This includes land that would be required temporarily to facilitate the development.

Edmonton EcoPark

i.iii.iii The Edmonton EcoPark is an existing waste management complex of around 16 hectares.

i.iii.iv Current use of the Edmonton EcoPark comprises:

a. EfW facility which treats circa 540,000 tonnes per annum (tpa) of an municipal waste and generates around 40MW_e (gross) of power;

b. an In-Vessel Compositing (IVC) facility which processes food, landscaping and other green waste from kerbside collections and RRCs as well as local parks departments. The facility has an existing capacity of 33,000tpa;

c. a Bulky Waste Recycling Facility (BWRF) and Fuel Preparation Plant (FPP) which receive bulky waste from RRCs and direct deliveries. These facilities respectively recycle wood, metal, plastic, paper, card and construction waste; and separate oversized items and shred waste suitable for combustion. These integrated facilities manage over 200,000tpa;

d. an Incinerator Bottom Ash (IBA) Recycling Facility which processes ash from the existing EfW facility;

e. a fleet management and maintenance facility which provides parking and maintenance facilities for the Edmonton EcoPark fleet of operational vehicles; and

[5] LB Enfield, LB Enfield Development Managements Document, 2014.
[6] LB Enfield, Edmonton EcoPark Planning Brief, 2013.

f. associated offices, car parking and plant required to operate the facility.

i.iii.v In order to construct the proposed ERF, the existing IVC, BWRF, FPP, and IBA recycling operations will be decommissioned and/or relocated.

Temporary Laydown Area

i.iii.vi The proposed Temporary Laydown Area is an area of open scrubland located to the east of the River Lee Navigation and north of Advent Way.

i.iii.vii In addition to the Temporary Laydown Area the Application Site includes land to the east of the existing Edmonton EcoPark which will be used for the new Lee Park Way access and for landscaping along the eastern boundary.

i.iv Existing transport conditions

i.iv.i The Application Site is in the vicinity of the A406 North Circular Road, a Transport for London Road Network (TLRN)[7] road. The Strategic Road Network (SRN)[8] can be accessed approximately 1.7km to the west of the Application Site on the A1010 Fore Street.

i.iv.ii The Application Site currently has a low level of public transport accessibility with a Public Transport Accessibility Level (PTAL) score of 1b which is rated as 'very poor'.

i.iv.iii The closest London Underground station to the Edmonton EcoPark is Tottenham Hale which is over 3km (straight line distance) to the south of the Edmonton EcoPark. Victoria line London Underground trains are accessible at this station and operate to Walthamstow Central in the northbound direction and to Brixton in the southbound direction.

i.iv.iv National Rail services are available at Angel Road station, located approximately 600m (walking distance) to the west of the Edmonton EcoPark. National Rail services from Angel Road operate to Stratford in the southbound direction. Train services to and from Angel Road are operated by National Express East Anglia. There are no direct trains to Liverpool Street station. However, services operating to and from Liverpool Street can be accessed by interchanging at Tottenham Hale station.

i.iv.v There are two London Bus routes operating in close proximity to the Edmonton EcoPark. Routes 34 and 444 are served by a bus stop on the eastbound off-slip and westbound on-slip at the junction of the A406 North Circular Road and Advent Way. These bus stops are almost 500m walking distance from the Edmonton EcoPark. Two additional routes, Routes 192 and 341, are accessible on Glover Drive, some 800m walking distance to the south of the Application Site.

i.iv.vi Footways are provided along the main routes leading to and from the Application Site and public transport stops and stations. In particular, there is a continuous footway on the north side of Advent Way although on the

[7] The highway network in London for which TfL has direct responsibility for.
[8] The Strategic Road Network is section of the London Road network for which the borough within which it is located is the local highway authority but TfL must be consulted on any work to be carried out.

approach to the roundabout where the A406 North Circular Road on/off slips meet Advent Way, the footway widths are narrow and are overgrowing with vegetation in places. There are no crossing facilities at this junction.

i.iv.vii The pedestrian environment is generally poor and the quality of the environment is reduced by noise associated with high traffic flows on the A406 North Circular Road. The A406 North Circular Road also acts as a barrier to pedestrian movements in the vicinity of the Edmonton EcoPark. A footbridge is, however, provided over the dual carriageway some 600m to the west of the Edmonton EcoPark.

i.iv.viii There are a number of cycle routes within the vicinity of the Edmonton EcoPark. The following routes are available:

a. Lee Park Way which runs between the Edmonton EcoPark and the River Lee Navigation, connecting with Advent Way via a bridge at its southern end, forming part of National Cycle Network (NCN) Route 1;

b. a north to south route along the eastern side of the River Lee Navigation which forms part of NCN Route 1 to the south of the A406 North Circular Road;

c. an east to west off-carriageway route along Lower Hall Lane, connecting with NCN Route 1 at Lee Park Way. This route connects to the Lee Valley Regional Park (LVRP) to the north; and

d. an off-carriageway route in a north to south direction along A1055 Meridian Way both to the north and south of the A406 North Circular Road.

i.v The Project

i.v.i The Project would replace the existing EfW facility at Edmonton EcoPark, which is expected to cease operations in around 2025, with a new and more efficient ERF which would produce energy from residual waste, and associated development, including temporary works required to facilitate construction, demolition and commissioning. The proposed ERF would surpass the requirement under the Waste Framework Directive (Directive 2008/98/EC) to achieve an efficiency rating in excess of the prescribed level, and would therefore be classified as a waste recovery operation rather than disposal.

i.v.ii The main features of the Project once the proposed ERF and permanent associated works are constructed and the existing EfW facility is demolished are set out in the Book of Plans (AD02.01) and comprise:

a. a northern area of the Edmonton EcoPark accommodating the proposed ERF;

b. a southern area of the Edmonton EcoPark accommodating the RRF and a visitor, community and education centre with offices and a base for the Edmonton Sea Cadets (‘EcoPark House’);

c. a central space, where the existing EfW facility is currently located, which would be available for future waste-related development;

d. a new landscape area along the edge with the River Lee Navigation; and

e. new northern and eastern Edmonton EcoPark access points.

i.v.iii During construction there is a need to accommodate a Temporary Laydown Area outside of the future operational site because of space constraints. This would be used to provide parking and accommodation for temporary staff (offices, staff welfare facilities), storage and fabrication areas, and associated access and utilities.

i.v.iv Schedule 1 of the draft DCO (AD03.01) sets out the authorised development and the works are shown in the Book of Plans (AD02.01), supplemented by Illustrative Plans (included in the Design Code Principles, AD02.02) that set out the indicative form and location of buildings, structures, plant and equipment, in line with the limits of deviation established by the draft DCO (AD03.01).

i.vi Trip generation and mode split

i.vi.i The estimated trip generation for the Project varies depending on the Project stage.

i.vi.ii It is estimated that the Project will generate 1,176 net additional two-way vehicle trips during Stage 1d, the peak construction stage when both construction and operational activities will be undertaken. This will include approximately 550 two-way daily construction employee vehicle trips which will typically be undertaken before 08:00 and after 18:00. In addition, there would be approximately 100 public transport trips per day during this stage. During all other stages of construction the additional trips generated on the local highway and public transport networks would be lower than Stage 1d.

i.vi.iii During the operational stage, Stage 4, it is estimated that the Project will generate 175 two-way net additional vehicle trips. The largest increase in trips will be experienced between 11:00 and 12:00 (52 trips) when the site activity is at its peak. However, due to the lower number of employees when compared with the existing Edmonton EcoPark, the number of vehicle trips would decrease during some periods of the day, including the PM peak hour (between 17:00 and 18:00). In addition to the above, there would be approximately 10 public transport trips per day during this stage.

i.vii Effect of the Project

i.vii.i The assessment of the effects on the local highway network involved an analysis of the construction, demolition and operational traffic flows generated by the Project. A detailed assessment of the junctions in the immediate vicinity of the Application Site, namely the Cooks Ferry Roundabout and the junction of A1055 Meridian Way, has been undertaken. However, as required by the Edmonton EcoPark Planning Brief1, consideration has also been given to the effect of the Project on the following junctions:

a. A406 North Circular junction with Montagu Road;

b. A1055 Meridian Way junction with Conduit Lane;

c. A406 North Circular Road junction with A1010 Fore Street; and

d. A406 North Circular Road junction with A10 Great Cambridge Road.

i.vii.ii The assessment has been undertaken on a future baseline that accounts for background traffic growth.

i.vii.iii The assessment shows that for all stages of the Project, the additional traffic generated by the Project will not result in any significant increases on the local highway network with only minor increases and, in some time periods, decreases in the traffic flows on the A406 North Circular Road and other key routes. On the road providing a direct connection to the Application Site, more significant increases in traffic flows would be experienced. However, these increases can be accommodated on the local highway network given that the baseline traffic flows are low.

i.vii.iv The capacity assessment shows that for all stages of the Project, the Project would have a negligible effect on capacity at the Cooks Ferry Roundabout and the junction of A1055 Meridian Way with Ardra Road.

i.vii.v The additional public transport trips generated by the Project would be accommodated without affecting capacity on public transport services. The walk and cycle trips would not have any effect on the pedestrian and cycle networks.

i.vii.vi A cumulative assessment of the Project has also been undertaken. The conclusions of this assessment are the same as that of the main assessment and the effect of the Project would be not significant.

i.viii Water transport

i.viii.i A water transport study has been undertaken by Peter Brett Associates in order to establish the viability of transporting incineration bottom ash (IBA) from and Municipal Solid Waste (MSW) to the Edmonton EcoPark. The full water transport study is provided in Appendix I.

i.viii.ii The water transport study concludes that while the transport of IBA and MSW by water would have environmental benefits, the overall cost of transporting IBA and/or MSW via the waterways would be substantially more expensive than the equivalent road transport scenario and without significant investment in the waterways, it would not be feasible. If water transport was used, it would only reduce the number of vehicle trips by between 30 and 48 per day.

i.viii.iii The water transport study concludes that the water transport option would not be feasible without significant upgrades to the existing infrastructure, regular monitoring and maintenance; and owing to the complexity of the movements (involving three barging operations) would require a significant degree of management and oversight. By comparison, road transport has a readymade infrastructure and would only require the procurement of the necessary vehicles and handling plant.

i.ix Servicing

i.ix.i The number of service vehicle trips to and from the office/administration uses has been calculated. This amounts to 12 trips per day. Trips will be managed such that the times of deliveries do not coincide with the peak times for site operations.

i.x Travel Plans

i.x.i Framework Operational and Construction Travel Plans have been prepared and will be submitted as part of the Application. Both Travel Plans aim to promote the use of sustainable modes of transport through a range of soft measures including the provision of public transport shuttle services (for construction), the provision of cycle parking and the promotion of car sharing.

i.xi Conclusion

i.xi.i In conclusion, the TA demonstrates that the construction and operation of the Project can be accommodated within the existing traffic and transport infrastructure surrounding the Application Site. In addition, during certain periods of the day including the PM peak period, there would be a reduction in the number of trips undertaken to and from the Application Site.

1 Introduction

1.1.1 This Transport Assessment (TA) has been prepared to support North London Waste Authority's (the Applicant's) application (the Application) to the Secretary of State for Energy and Climate Change for a Development Consent Order (DCO) pursuant to Section 37 of the Planning Act 2008 (as amended).

1.1.2 The Application is for the North London Heat and Power Project (the Project) comprising the construction, operation and maintenance of an Energy Recovery Facility (ERF) capable of an electrical output of around 70 megawatts (MW_e) at the Edmonton EcoPark in north London with associated development, including a Resource Recovery Facility (RRF). The proposed ERF would replace the existing Energy from Waste (EfW) facility at the Edmonton EcoPark.

1.1.3 The Project is a Nationally Significant Infrastructure Project for the purposes of Section 14(1)(a) and section 15 in Part 3 of the Planning Act 2008 (as amended) because it involves the construction of a generating station that would have a capacity of more than 50MW_e.

1.2 Purpose of this document

1.2.1 The purpose of the TA is to provide an assessment of the transportation effects of the Project and to identify mitigation measures, where required, to provide safe and effective access to the Application Site by all modes of travel. Key transport issues addressed within the TA include:

a. the number of trips generated by the Project at all stages during construction and operation;

b. the proposed car and cycle parking provision;

c. the Application Site accessibility by all modes of transport; and

d. the effect of the Project on the local transport network, including public transport.

1.2.2 This Assessment forms part of a suite of documents accompanying the Application submitted in accordance with the requirements set out in section 55 of the Planning Act and Regulations 5, 6 and 7 of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (APFP Regulations 2009), and should be read alongside those documents (see Project Navigation Document AD01.02).

1.3 Scope of the TA

1.3.1 The TA has been prepared in accordance with TfL's best practice guidance[9] and the Department for Transport's (DfT) guidance for travel plans, transport assessments and statements in decision taking[10].

1.3.2 A TA Scoping Report was produced for discussion with LB Enfield and TfL. The Scoping Report provided a description of the work to be undertaken as part of the TA. The purpose of the report was to ensure that the scope of the TA would be acceptable to LB Enfield, TfL and other key consultees to the DCO process such as the Greater London Authority (GLA). A copy of the TA Scoping Report is provided in Appendix A.

1.3.3 Subsequently, an Interim Transport Report (ITR) was prepared for the Phase Two Consultation process for the Project. The ITR provided a nominal draft of the TA for key consultees, including TfL and LB Enfield, to review. This TA has been based on the ITR. The preparation of the TA has considered comments made on the ITR during Phase Two Consultation.

1.4 Stakeholder consultation

1.4.1 During the pre-application process, the Applicant has consulted with representatives from LB Enfield, in its capacity as local highway and planning authority, and TfL, in its capacity as the highway authority for the Transport for London Road Network (TLRN), through a series of meetings.

1.4.2 A formal pre-application meeting was held with the transportation department of LB Enfield and TfL on 26 August 2014 to discuss traffic issues pertaining to the Application Site and the scope and requirements of the TA. The purpose of the pre-application meeting was to ensure that the scope of the TA was satisfactory to LB Enfield and TfL. The minutes of this meeting and the TfL's pre-application advice letter are provided in Appendix B.

1.4.3 An additional meeting was held with TfL and LB Enfield on 6 March 2015 to discuss the trip generation for the Project as well as the feasibility of moving waste and/or construction materials by water. The minutes of this meeting are also provided in Appendix B. Further meetings were held with TfL on 20 August 2015 and 25 August 2015 (at the Edmonton EcoPark) to discuss the use of water transport in detail.

1.4.4 Both LB Enfield and TfL provided comments on the ITR as part of Phase Two Consultation.

[9] Transport Assessment Guidance website: http://www.tfl.gov.uk/info-for/urban-planning-and-construction/transport-assessment-guidance (accessed 3 August 2015)
[10] Department for Transport, Travel plan, transport assessments and statements in decision-taking, 2015

1.5 Document structure

1.5.1 Following this introductory section, the format of the TA is as follows:

a. the Project is set in the context of the current and emerging transport policies in Section 2;

b. Section 3 of the TA establishes the baseline transport conditions at the Application Site and in the surrounding area, including pedestrian and cycle routes, local public transport services, the local highway network, including road safety, and on-street parking provision;

c. a description of the Project, including land use proposals and vehicle, pedestrian and cycle access and parking proposals is provided in Section 4;

d. Section 5 provides details of the likely trip generation arising from the Project during both construction and operation and the modal split;

e. Section 6 provides an assessment of the effect of the Project on the local transport network;

f. the feasibility of transporting waste by water is discussed in Section 7;

g. the servicing and waste management strategy for the Application Site is presented in Section 8;

h. the Travel Plans for the Project are outlined in Section 9; and

i. the main findings of the TA are summarised in Section 10.

1.6 The Applicant

1.6.1 Established in 1986, the Applicant is a statutory authority whose principal responsibility is the disposal of waste collected by the seven north London boroughs of Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest (the Constituent Boroughs).

1.6.2 The Applicant is the UK's second largest waste disposal authority, handling approximately 3 per cent of the total national Local Authority Collected Waste (LACW) stream. Since 1994 the Applicant has managed its waste arisings predominantly through its waste management contract with LondonWaste Limited (LWL) and the use of the EfW facility at the existing Edmonton EcoPark and landfill outside of London.

1.6.3 LWL is a private waste management company wholly owned by the Applicant, and is the freeholder of the Edmonton EcoPark and the operator of the existing EfW facility. LWL has a current contract with the Applicant for management of its waste which expires in December 2025 with flexibility for termination sooner. The contract includes:

a. the reception, treatment and disposal of residual wastes;

b. the operation of Reuse and Recycling Centres (RRC), including the recycling of wastes and the transfer of residual wastes to a disposal point;

c. the reception and treatment of separately collected organic wastes;

d. the reception and transportation of other separately collected wastes for recycling by third parties; and

e. the reception and transportation of other separately collected clinical and offensive wastes for treatment by third parties.

1.7 The Application Site

1.7.1 The Application Site, as shown on the Site Location Plans (A_0001 and A_0002) in the Book of Plans (AD02.01), extends to approximately 22 hectares and is located wholly within the London Borough of Enfield (LB Enfield). The Application Site comprises the existing waste management site known as the Edmonton EcoPark where the permanent facilities would be located, part of Ardra Road, land around the existing water pumping station at Ardra Road, Deephams Farm Road, part of Lee Park Way and land to the west of the River Lee Navigation, and land to the north of Advent Way and east of the River Lee Navigation (part of which would form the Temporary Laydown Area and new Lee Park Way access road). The post code for the Edmonton EcoPark is N18 3AG and the grid reference is TQ 35750 92860.

1.7.2 The Application Site includes all land required to deliver the Project. This includes land that would be required temporarily to facilitate the development.

1.7.3 Both the Application Site and the Edmonton EcoPark (existing and proposed) are shown on Plan A_0003 and A_0004 contained within the Book of Plans (AD02.01). Throughout this report references to the Application Site refer to the proposed extent of the Project works, and Edmonton EcoPark refers to the operational site. Upon completion of the Project the operational site would consist of the Edmonton EcoPark and additional land required to provide new access arrangements and for a water pumping station adjacent to the Deephams Sewage Treatment Works outflow channel.

Edmonton EcoPark

1.7.4 The Edmonton EcoPark is an existing waste management complex of around 16 hectares.

1.7.5 Current use of the Edmonton EcoPark comprises:

a. an EfW facility which treats circa 540,000 tonnes per annum (tpa) of residual waste and generates around 40MW_e (gross) of electricity;

b. an In-Vessel Composting (IVC) facility which processes food, landscaping and other green waste from kerbside collections and Reuse and Recycling Centres (RRCs) as well as local parks departments. The facility currently manages around 30,000tpa, and has a permitted capacity of 45,000tpa;

c. a Bulky Waste Recycling Facility (BWRF) and Fuel Preparation Plant (FPP) which receive bulky waste from RRCs and direct deliveries. These facilities respectively recycle wood, metal, plastic, paper, card and construction waste; and separate oversized items and shred waste

suitable for combustion. These integrated facilities manage over 200,000tpa;

d. an Incinerator Bottom Ash (IBA) Recycling Facility which processes ash from the existing EfW facility;

e. a fleet management and maintenance facility which provides parking and maintenance facilities for the Edmonton EcoPark fleet of operational vehicles;

f. associated offices, car parking and plant required to operate the facility; and

g. a former wharf and single storey building utilised by the Edmonton Sea Cadets under a lease.

1.7.6 In order to construct the proposed ERF, the existing BWRF and FPP activities would be relocated within the Application Site; the IVC facility would be decommissioned and the IBA recycling would take place off-site.

Temporary Laydown Area and eastern access

1.7.7 The proposed Temporary Laydown Area is an area of open scrubland located to the east of the River Lee Navigation and north of Advent Way. There is no public access to this area. The Temporary Laydown Area would be reinstated after construction and would not form part of the ongoing operational site.

1.7.8 In addition to the Temporary Laydown Area the Application Site includes land to the east of the existing Edmonton EcoPark which would be used for the new Lee Park Way entrance and landscaping along the eastern boundary.

Northern access

1.7.9 The Application Site also includes Deephams Farm Road and part of Ardra Road with land currently occupied by the EfW facility water pumping station between the junction of A1005 Meridian Way and Deephams Farm Road.

1.8 Surrounding area

1.8.1 The Application Site is located to the north of the A406 North Circular Road in an area that is predominantly industrial. The Lee Valley Regional Park (LVRP) is located to the east of the Edmonton EcoPark.

1.8.2 Land to the north and west of the Application Site is predominantly industrial in nature. Immediately to the north of the Edmonton EcoPark is an existing Materials Recovery Facility (MRF) which is operated by a commercial waste management company, alongside other industrial buildings. Further north is Deephams Sewage Treatment Works. Beyond the industrial area to the north-west is a residential area with Badma Close being the nearest residential street to the Application Site (approximately 60m from the nearest part of the boundary) and Zambezie Drive the nearest to the Edmonton EcoPark at approximately 125m west.

1.8.3 Eley Industrial Estate located to the west of the Application Site comprises a mixture of retail, industrial and warehouse units.

1.8.4 Advent Way is located to the south of the Application Site adjacent to the A406 North Circular Road. Beyond the A406 North Circular Road are retail and trading estates; this area is identified for future redevelopment to provide a housing-led mixed use development known as Meridian Water.

1.8.5 The LVRP and River Lee Navigation are immediately adjacent to the eastern boundary of the Edmonton EcoPark, and Lee Park Way, a private road which also forms National Cycle Network (NCN) Route 1, runs alongside the River Lee Navigation. To the east of the River Lee Navigation is the William Girling Reservoir along with an area currently occupied by Camden Plant Ltd. which is used for the crushing, screening and stockpiling of waste concrete, soil and other recyclable materials from construction and demolition. The nearest residential areas to the east of the Application Site and LVRP are located at Lower Hall Lane, approximately 550m from the Edmonton EcoPark and 150m from the eastern edge of the Application Site.

1.9 The Project

1.9.1 The Project would replace the existing EfW facility at Edmonton EcoPark, which is expected to cease operations in around 2025, with a new and more efficient ERF which would produce energy from residual waste, and associated development, including temporary works required to facilitate construction, demolition and commissioning. The proposed ERF would surpass the requirement under the Waste Framework Directive (Directive 2008/98/EC) to achieve an efficiency rating in excess of the prescribed level, and would therefore be classified as a waste recovery operation rather than disposal.

1.9.2 The main features of the Project once the proposed ERF and permanent associated works are constructed and the existing EfW facility is demolished comprise:

a. a northern area of the Edmonton EcoPark accommodating the proposed ERF;

b. a southern area of the Edmonton EcoPark accommodating the RRF and a visitor, community and education centre with offices and a base for the Edmonton Sea Cadets (‘EcoPark House’);

c. a central space, where the existing EfW facility is currently located, which would be available for future waste-related development;

d. a new landscape area along the edge with the River Lee Navigation; and

e. new northern and eastern access points to the Edmonton EcoPark.

1.9.3 During construction there is a need to accommodate a Temporary Laydown Area outside of the future operational site because of space constraints. This would be used to provide parking and accommodation for temporary staff (offices, staff welfare facilities), storage and fabrication areas, and associated access and utilities.

1.9.4 There are some aspects of the Project design that require flexibility and have therefore yet to be fixed, for example, the precise location and scale of the buildings associated with the Project. It would not be possible to fix these elements in advance of the detailed design and construction which would be undertaken following appointment of a contractor should the DCO be granted. In order to accommodate this and ensure a robust assessment of the likely significant environmental effects of the Project, the Application is based on the limits of deviation set out in the Book of Plans (AD02.01), which identifies:

a. works zones for each work or group of works (to establish the area in which the development can be located); and

b. maximum building envelopes (to establish the maximum building length, width, height and footprint).

1.9.5 The Book of Plans (AD02.01) is supplemented by Illustrative Plans (included in the Design Code Principles, AD02.02) that set out the indicative form and location of buildings, structures, plant and equipment, in line with the limits of deviation established by the draft DCO (AD03.01).

1.9.6 A separate Environmental Permit would need to be obtained from the Environment Agency (EA) for the operation of the waste facility under the Environmental Permitting (England and Wales) Regulations 2010. The existing EfW facility at the Edmonton EcoPark is subject to an Environmental Permit issued by the EA. The Applicant is currently in discussions with the EA regarding an application for the new Environmental Permit(s) associated with the proposed ERF with a view to submitting an application in parallel with the DCO process.

Principal development (Works No.1a)

1.9.7 The principal development comprises the construction of an ERF located at the Edmonton EcoPark, fuelled by residual waste and capable of an electrical output of around 70MW_e (gross) of electricity. The principal development consists of the following development, located within the limits of deviation shown on Drawing C_0002 and within the building envelopes shown on Drawing C_0003 (in the Book of Plans (AD02.01)):

(i) a main building housing:

(a) a tipping hall;

(b) waste bunker and waste handling equipment;

(c) two process lines (with each line having a capacity of 350,000 tonnes of waste per annum), consisting of a moving grate, furnace, boiler and a flue gas treatment plant;

(d) facilities for the recovery of incinerator bottom ash and air pollution control residue;

(e) steam turbine(s) for electricity generation including equipment for heat off-take; and

(f) control room containing the operational and environmental control and monitoring systems, and offices.

(ii) entry and exit ramps to the ERF;

(iii) a stack containing flues for flue gas exhaust;

(iv) cooling equipment; and

(v) an observation platform enclosure.

Associated development (Works No. 1b – 7)

1.9.8 Associated development within the meaning of section 115(2) of the Planning 2008 Act (as amended) in connection with the Nationally Significant Infrastructure Project referred to in Works No.1a, comprising:

(a) Works No.1b – works required to provide buildings, structures, plant and equipment needed for the operation of the ERF as shown on Drawing C_0002 (AD02.01) comprising:

(i) a wastewater treatment facility;

(ii) a water pre-treatment plant;

(iii) external stores and workshops;

(iv) a fuelling area and fuel storage, vehicle wash, transport offices and staff facilities, toilets, natural gas intake and management compound, and fire control water tank(s); and

(v) electrical substation(s).

(b) Works No.2 – the construction of a resource recovery facility comprising the following building, structures and plant, as shown on Drawing C_0004 and within the building envelope shown on Drawing C_0005 (AD02.01):

(i) a Recycling and Fuel Preparation Facility (RFPF);

(ii) a RRC;

(iii) offices, and staff and visitor welfare facilities;

(iv) odour abatement and dust suppression plant and equipment; and

(v) fire control water tank(s) and pump house and equipment.

(c) Works No.3 – the construction of a building to provide visitor, community and education facilities, office accommodation, and a boat canopy, as shown on Drawing C_0006 and within the building envelope shown on Drawing C_0007 (AD02.01).

(d) Works No.4 – utilities and infrastructure work, landscaping, access, security and lighting, and weighbridges, as shown on Drawing C_0008 (AD02.01), comprising:

(i) the diversion, repositioning, creation of new connections to, decommissioning, removal, replacement, modification or upgrade of existing, and the laying or installation of new, pipes, cables, systems and associated apparatus for:

(a) potable water;

(b) wastewater;

(c) surface water;

(d) foul water;

(e) raw water;

(f) electricity;

(g) gas; and

(h) CCTV, telecoms and data.

(ii) the erection of a raw water pumping station;

(iii) stabilisation works to the eastern bank of Salmon's Brook;

(iv) the construction of surface water pumps, pipework and attenuation tanks;

(v) landscaping works;

(vi) the installation of areas of green roof and/or brown roof;

(vii) the widening of the existing entrance into the Edmonton EcoPark from Advent Way, including modification or replacement of the bridge over Enfield Ditch;

(viii) construction within the Edmonton EcoPark of vehicle and cycle parking, vehicle, cycle and pedestrian routes, and weighbridges;

(ix) construction of an access into the Edmonton EcoPark from Lee Park Way, including bridging over Enfield Ditch;

(x) improvements to Lee Park Way including vehicle barriers and the creation of segregated pedestrian and cycle paths;

(xi) improvements to Deephams Farm Road and use of Deephams Farm Road as an access to the Edmonton EcoPark;

(xii) the resurfacing of Ardra Road (if required);

(xiii) security, fencing, and lighting works and equipment;

(xiv) the erection of security facilities and equipment and gatehouses within the operational site at access points from Advent Way, Ardra Road, and Lee Park Way;

(xv) the upgrade and maintenance of the existing bridge over the River Lee Navigation; and

(xvi) the installation of photovoltaic panels at roof level of the ERF and RRF.

(e) Works No.5 – works for the creation of the Temporary Laydown Area and its temporary use, as shown on Drawing C_0009 (AD02.01), as follows:

(i) areas of hardstanding;

(ii) the erection of fencing, hoarding or any other means of enclosure;

(iii) the erection of security facilities and equipment and gatehouses;

(iv) vehicle parking;

(v) office and staff welfare accommodation;

(vi) storage, fabrication, laydown area;

(vii) foul water storage and pumps and surface water attenuation storage and pumps;

(viii) utility works including electricity, water, CCTV, telecoms and data;

(ix) the creation of vehicular, cycle and pedestrian access from Lee Park Way to the Temporary Laydown Area; and

(x) restoration of the Temporary Laydown Area.

(f) Works No.6 – site preparation and demolition works within the area as shown on Drawing C_0010 (AD02.01), comprising:

(i) demolition of existing buildings, structures and plant excluding demolition of the existing EfW facility;

(ii) construction of a temporary ash storage building;

(iii) realignment of the exit ramp from the existing EfW facility; and

(iv) works to prepare the land shown on Drawing C_0008 (AD02.01) for the construction of works numbers 1a, 1b, 2, 3, 4 and 5.

1.9.9 Works No.7 – as shown on Drawing C_0011 (AD02.01), comprising decommissioning and demolition of the existing EfW facility and removal of:

(i) the existing stack;

(ii) demolition of the existing water pumping station on Ardra Road; and

(iii) making good the cleared areas.

1.9.10 The draft DCO also identifies such other works as may be necessary or expedient for the purposes of or in connection with the construction, operation and maintenance of the authorised development which do not give rise to any materially new or materially different environmental effects from those assessed and set out in the Environmental Statement (ES) (AD06.02).

2 Policy and guidance context

2.1.1 This section outlines the national, regional and local transport policy context within which the Project is assessed. Specific studies and policies relating to the Edmonton EcoPark are then reviewed in greater detail.

2.2 National policy

National Planning Policy Framework

2.2.1 The National Planning Policy Framework (NPPF) [11] states that *"The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel"* (Paragraph 29).

2.2.2 The NPPF also states that *"developments should be located and designed where practical to*

- *accommodate the efficient delivery of goods and supplies;*
- *give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;*
- *create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;*
- *incorporate facilities for charging plug-in and other ultra-low emission vehicles; and*
- *consider the needs of people with disabilities by all modes of transport"* (Paragraph 35).

2.2.3 The NPPF also states that *"a key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan"* (Paragraph 36).

2.3 Regional policy

The London Plan

2.3.1 The Mayor of London's Further Alterations to the London Plan was adopted by the Greater London Authority (GLA) in March 2015 and provides the strategic framework for the future development of London over a 20 year period.

2.3.2 In terms of transport, the London Plan sets out policies primarily intended to support delivery of the objective that London should be *"a city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling…"* (Paragraph 1.53(4)).

2.3.3 A number of policies in the London Plan are relevant to the Project.

[11] Department of Communities and Local Government, National Planning Policy Framework, 2012.

2.3.4 Policy 6.1 confirms that *"the Mayor will work with all relevant partners to encourage the closer integration of transport and development".* The relevant parts of Policy 6.1 are:

- encouraging patterns and nodes of development that reduce the need to travel, especially by car;
- seeking to increase the use of the Blue Ribbon Network, especially the Thames, for passenger and freight use;
- facilitating the efficient distribution of freight whilst minimising its impacts on the transport network;
- supporting measures that encourage shifts to more sustainable modes and appropriate demand management; and
- promoting walking by ensuring an improved urban realm.

2.3.5 Policy 6.3 states that *"development proposals should ensure that impacts on transport capacity and the transport network, at both a corridor and local level, are fully assessed".* The policy also indicates that *"transport assessments will be required in accordance with TfL's Transport Assessment Best Practice Guidelines for major planning applications. Workplace and/or Residential Travel Plans should be provided for planning applications exceeding the threshold in, and produced in accordance with, the relevant TfL guidance. Construction logistics plans and delivery and servicing plans should be secured in line with the London Freight Plan and should be co-ordinated with travel plans"*.

2.3.6 Policy 6.9 states that *"the Mayor will work with all relevant partners to bring about a significant increase in cycling in London, so that it accounts for at least 5% of the modal share by 2026…"* The policy also states that *"Developments should:*

a provide secure, integrated and accessible cycle parking facilities in line with the minimum standards set out in… and the guidance set out in the London Cycle Design Standards (or subsequent revisions)

b provide on-site changing facilities and showers for cyclists

c provide links to existing and planned cycle infrastructure projects…"

2.3.7 Policy 6.10 states that *"the Mayor will work with all relevant partners to bring about a significant increase in walking in London, by emphasising the quality of the pedestrian and street environment, including the use of shared space principles – promoting simplified streetscape, decluttering and access for all"*. In terms of planning decisions, the policy states: *"development proposals should ensure high quality pedestrian environments and emphasise the quality of the pedestrian and street space".*

2.3.8 Policy 6.12 Road Network Capacity states that *"in assessing proposals for increasing road capacity, including new roads, the following criteria should be taken into account:*

a the contribution to London's sustainable development and regeneration including improved connectivity

b *the extent that additional traffic and any effects it may have on the locality, and the extent to which congestion is reduced*

c *how net benefit to London's environment can be provided*

d *how conditions and pedestrians, cyclists, public transport users, freight and local residents can be improved*

e *how safety for all is improved."*

2.3.9 Policy 6.13 states that *"the Mayor wishes to see an appropriate balance being struck between promoting new development and preventing excessive car parking provision that can undermine cycling, walking and public transport use"*.

2.3.10 Policy 6.14 states that *"development proposals that:*

a *locate developments that generate high numbers of freight movements close to major transport routes*

b *promote the uptake of the Fleet Operators Recognition Scheme, construction logistics plans, delivery and servicing plans and more innovative freight solutions, reflecting the positive experience of the Olympics and seeking opportunities to minimise congestion impacts and improve safety. These should be secured in line with the London Freight Plan and should be co-ordinated with travel plans and the development of approaches to consolidate freight*

c *increase use of the Blue Ribbon Network for freight transport will be encouraged."*

The Mayor's Transport Strategy

2.3.11 Published by the GLA in July 2001 and updated in August 2004, July 2006 and May 2010, the Mayor's Transport Strategy (MTS) envisages *"London's transport system should excel among that of world cities, providing access to opportunities for all its people and enterprises, while achieving the highest environmental standards and leading the world in its approach to tackling urban transport challenges of the 21st century"* (Paragraph E4).

2.3.12 The MTS outlines six goals for achieving this overarching vision:

- *"Support economic development and population growth*
- *Enhance the quality of life of Londoners*
- *Improve the safety and security of all Londoners*
- *Improve transport opportunities for all Londoners*
- *Reduce transport's contribution to climate change and improve its resilience*
- Support the delivery of the London 2012 Olympic and Paralympic Games and its legacy" (Paragraph E6).

2.3.13 The MTS sets out a number of policy commitments or requirements which have implications for TfL and a range of other delivery partners including the GLA and the London boroughs. The policies that are relevant to the Project are as follows.

2.3.14 Policy 5 of the MTS states that "*the Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London boroughs and other stakeholders, will seek to ensure efficient and effective access for people and goods within central London through providing improved central London connectivity and appropriate capacity. This will include improving access to major public transport interchanges for pedestrians, cyclists and by public transport".*

2.3.15 Policy 8 refers to "*the Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London Boroughs and other transport stakeholders, will support a range of transport improvements within metropolitan town centres for people and freight that help improve connectivity and promote the vitality and viability of town centres, and that provide enhanced travel facilities for pedestrians and cyclists".*

2.3.16 Policy 9 states that *"the Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London Boroughs and other transport stakeholders, will use the local and strategic development control processes to seek to ensure that:*

a) All high trip generating developments are located in areas of high public transport accessibility, connectivity and capacity (either currently or where new transport schemes are committed)

b) The design and layout of development sites maximise access on foot, cycle and to public transport facilities, for example, via safe walking and cycling routes and provision of secure cycle parking

c) Access for deliveries and servicing, maximise the opportunities for sustainable freight distribution where possible…"

2.3.17 Policy 11 specifies that *"the Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London boroughs and other stakeholders, will seek to reduce the need to travel, encourage the use of more sustainable, less congesting modes of transport (public transport, cycling, walking and the Blue Ribbon Network), set appropriate parking standards, and through investment in infrastructure, service improvements, promotion of smarter travel initiatives and further demand management measures as appropriate, aim to increase public transport, walking and cycling mode share."*

2.3.18 Policy 16 indicates that *"the Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, freight operators, London boroughs and other stakeholders, will seek to reduce noise impacts from transport".*

2.3.19 Policy 17 states that *"the Mayor, through TfL, and working with the DfT and other government agencies, the London boroughs, health authorities and other stakeholders, will promote healthy travel options such as walking and cycling".*

2.4 Local policy

LB Enfield Core Strategy

2.4.1 The Enfield Plan Core Strategy 2010 – 2025[12] sets out the spatial planning framework for the long term development of LB Enfield for the 15 to 20 years from 2010. It is a strategic document that provides the broad strategy for the scale and distribution of development and the provision of infrastructure to support this. The Core Strategy contains policies for delivering the spatial vision, guiding patterns of development and it is supported by other development plan documents contained within the Local Plan.

2.4.2 With respect to transport, the Core Strategy sets out a number of core policies that *"aim to both address the existing deficiencies in transport in the Borough and to ensure that planned growth is supported by adequate transport infrastructure that promotes sustainable transport choices"* (Paragraph 7.45).

2.4.3 Core Policy 24 relating the road network states that *"The Council, working with partners will seek to deliver improvements to the road network to contribute to Enfield's economic regeneration and development, support businesses, improve safety and environmental quality, reduce congestion, and provide additional capacity where needed."* The A406 North Circular Road has been highlighted as a priority for improvements.

2.4.4 Core Policy 24 also states that *"the Council will encourage sustainable travel choices and reduce growing congestion levels through the promotion of Travel Demand Management Programmes, and will support the use of low carbon vehicles, including electric vehicles. Standards for the provision of off-street parking in new developments and requirements for transport assessments, travel plans, car clubs and car share schemes will be set out in the Development Management Document"*.

2.4.5 Core Policy 25 relating to pedestrians and cyclists indicates that LB Enfield *"will seek to provide safe, convenient, and accessible routes for pedestrians, cyclists and other non-motorised modes by:*

- *Developing and implementing improvements to strategic and local walking and cycle routes in the Borough;*
- *Improving the quality and safety of the public realm, implementing streetscape improvements to be outlined in the Enfield Design Guide and relevant area action plans, fostering road safety, and implementing 'Streets for People' initiatives; and*
- *Working with Department for Transport, Network Rail and Transport for London to ensure that West Anglia rail line improvements address the barrier to east-west movements for pedestrians and cyclists caused by the line in the east of the Borough, including the identification of alternative crossing points."*

[12] LB Enfield, Enfield Plan Core Strategy 2010 – 2025, 2010.

2.4.6 Core Strategy 26 relating to public transport states that *"the Council, working with its partners, will seek to secure a comprehensive, safe, accessible, welcoming and efficient public transport network, capable of supporting the development proposals for the Borough and providing attractive alternative travel options by:*

- *Working with Network Rail and other rail operators to strongly promote increasing the frequency of off peak rail services between Enfield Town and Seven Sisters in association with planned growth around Enfield Town station;*
- *Improving access to and safety of railway and underground stations, as well as associated environmental works to make these more attractive and welcoming. Accessibility improvements to Angel Road, Edmonton Green, Ponders End and Silver Street stations will be sought in conjunction with development at Central Leeside, North East Enfield and upgrades to the West Anglia rail line in the Lee Valley;*
- *Working with Transport for London to enhance bus provision to offer a realistic alternative to the private car, focusing on areas with poor public transport accessibility, particularly in the Upper Lee Valley and orbital bus services. This will include new and diverted services, improving bus stop accessibility, reducing walk access time and improving safety;*
- *Ensuring new developments demonstrate that existing or proposed public transport levels can accommodate development proposals, and where necessary, identify opportunities for public transport improvements; and*
- *Promoting and providing accessible transport options for persons with reduced mobility including community transport vehicles, Dial-a-ride and Taxicard."*

2.4.7 Core Policy 27 relating to freight states that the Council *"will seek to promote the efficient and sustainable movement of freight by road, rail and water by:*

- *Supporting freight intensive uses in areas with good access to the strategic road network and/or proposed water and rail freight facilities, particularly strategic industrial sites in the Upper Lee Valley including Brimsdown Industrial Estate;*
- *Promoting, where appropriate, the potential for freight movement by rail and water;*
- *Continuing to investigate ways to improve freight movement between the Upper Lee Valley and the Strategic Road Network; and*
- *Continuing to manage lorry movements on the Borough road network to protect residential amenity."*

LB Enfield Development Management Document

2.4.8 The LB Enfield Development Management Document (DMD)[13] provides *"detailed criteria and standard based policies by which planning applications will be determined and will be a key vehicle in delivering the vision and objectives for Enfield as set out in the Core Strategy"*.

2.4.9 Policy DMD 45 sets out the parking standards and layout under which all new development will be considered. The policy states that *"car parking proposals will be considered against the standards set out in the London Plan and:*

a. *The scale and nature of the development;*

b. The public transport accessibility (PTAL) of the site;

c. Existing parking pressures in the locality; and

d. Accessibility to local amenities, and the needs of the future occupants of the developments.

For developments where no standards exist, parking should be provided to ensure that:

e. Operational needs are adequately met, having regard to the need to maximise use of sustainable modes of transport."

2.4.10 Regarding cycles and motorcycles, Policy DMD 45 states that *"new development should make provision for active and passive electrical charging points, cyclists and Powered Two Wheelers in accordance with the standards set out in the London Plan. For developments where no standards exist, required provision will be assessed on a case by case basis. Development must provide secure parking in safe, convenient and accessible locations with good natural surveillance."*

2.4.11 The policy also states that *"all new development must be designed to be fully accessible for all mobility requirements and should maximise walkability through the provision of attractive and safe layouts with pedestrian permeability."*

2.4.12 Policy DMD 47 indicates that *"all developments should make provision for attractive, safe, clearly defined and convenient routes and accesses for pedestrians, including those with disabilities. New pedestrian accesses, routes and footpaths are encouraged and should link with the surrounding street and Public Right of Way networks where appropriate. Development will not be permitted where it compromises existing rights of way, unless alternatives of equivalent or greater attractiveness and convenience are provided."*

2.4.13 As well as this, Policy DMD 47 states that *"cycle access to new developments should be designed to ensure cycling is a realistic alternative travel choice to that of the private car. The Council will protect existing off-road routes and the alignment of proposed routes from development, unless alternatives of equivalent of greater attractiveness and convenience are proposed. Where appropriate the Council will seek the provision of*

[13] LB Enfield, Development Management Document, 2014.

segregated cycle routes to adoptable standards as part of a new development."

2.4.14 Policy DMD 47 also states that *"applications for development should give consideration to the impact of development on public transport services."*

2.4.15 With regard to vehicular access and servicing, Policy DMD 47 says that *"new development will only be permitted if the access and road junction which serves the development is appropriately sited and is of an appropriate scale and configuration and there is no adverse impact on highway safety and the free flow of traffic. New access onto roads with a speed limit above 40mph must comply with design standards within DMRB (The Design Manual for Roads and Bridges). New access onto other roads must have regard to the Manual for Streets and Manual for Streets 2 or replacement publications."*

2.4.16 In addition, Policy DMD 47 states that *"new access and servicing arrangements must ensure vehicles can reach the necessary loading, servicing, and parking areas. Layouts must achieve a safe, convenient and fully accessible environment for pedestrians and cyclists."*

2.4.17 With respect to Transport Assessments, Policy DMD 48 states that *"all major development proposals should be accompanied by a Transport Assessment."* The policy also states that *"a Travel Plan will be required where the Transport Assessment or Transport Statement identifies the need to improve modal choice, pedestrian accessibility, minimise congestion or reduce pollution."*

2.4.18 Policy DMD 48 also confirms that *"the development of Servicing and Delivery Plans and Construction Logistic Plans (CLP) will be encouraged for all major developments. The Council may stipulate the production of such plans to ensure that developments provide for safe and legal delivery, collection, construction and servicing including minimising the risk of collision with cyclists and pedestrians and set appropriate obligations to ensure compliance. The Plans may be requested alongside and in coordination with the documents outlined in this policy. The minimum safety requirements may be secured by legal agreements."*

LB Enfield Edmonton EcoPark Supplementary Planning Document

2.4.19 The Edmonton EcoPark Supplementary Planning Document (SPD)[14] has been prepared to guide the future development the Edmonton EcoPark. The Edmonton EcoPark SPD sets out the opportunities and constraints for the development of new waste management and other facilities on the site, and sets out the principles which these should follow. The Edmonton EcoPark SPD states that "the future development of the site must incorporate measures to mitigate transport impacts" (paragraph 4.2.1). It also states that "measures should also be put in place to ensure that vehicles arrive at and depart from the EcoPark using the permitted route

[14] LB Enfield, Edmonton EcoPark Planning Brief, Supplementary Planning Document to the Local Plan, 2013.

via the eastern end of Advent Way, such as signage, driver training and periodic auditing" (Paragraph 4.2.2).

2.4.20 With regard to water transport, the Edmonton EcoPark SPD states that "all development proposals should seek to make use of water transport to reduce the number of vehicle trips and therefore minimise the negative environmental impacts of road based transport" (Paragraph 4.2.6). The Edmonton EcoPark SPD also states that a study commissioned by NLWA into the feasibility of transport of waste via the River Lee *"notes that there have been various studies in the past concerning carriage of waste (and other cargoes) on the River Lee and none of the opportunities has so far come to fruition and a number of challenges have been encountered"* (Paragraph 4.2.9).

2.4.21 The Edmonton EcoPark SPD indicates that *"any future planning application should include a Travel Plan, to be periodically monitored by the Council, detailing measures to promote sustainable transport for staff, including walking and cycling. At present approximately 90% of EcoPark employees travel to work by car and future development of the site should seek to reduce this by facilitating alternative sustainable modes of transport"* (Paragraph 4.2.13).

2.4.22 The Edmonton EcoPark SPD indicates that as a minimum, the TA for the Application Site should include the following:

- *"Baseline conditions of the local and wider highway network;*
- *Expected trip generation, distribution and modal share;*
- *Analysis of the impact on the road network, cycle and pedestrian routes, and the public transport network. As a minimum this should include peak hour capacity analysis of the following junctions: Fore Street, Cook's Ferry Roundabout, Great Cambridge Junction and Montagu Street/Conduit Way;*
- *Analysis of cumulative impact arising from other committed developments in the area, having particular regard to the growth forecast at Meridian Water, and a localised assessment of the impact of these developments on the A406.*
- *Mitigation and planning obligations (S106); and*
- *Travel Plan, Delivery and Servicing Plans (DSPS), and Construction Logistics Plans (CLP)*
- *Parking and cycle provision"* (Paragraph 5.2.7).

Draft North London Waste Plan

2.4.23 In July 2015, the seven north London Boroughs of Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest published the Draft North London Waste Plan (NLWP)[15]. The two main purposes of the Draft NLWP are

[15] Draft North London Waste Plan, July 2015.

- *"to ensure there will be adequate provision of suitable land to accommodate waste management facilities of the right type, in the right place and at the right time up to 2032 to manage waste generated in North London; and*
- to provide policies against which planning applications for waste development will be assess, alongside other relevant planning policies/guidance" *(*Paragraph 1.2).

2.4.24 The Draft NLWP sets out a number of strategic objectives. With reference to transport, the Draft NLWP states that one of the objectives is *"to support the use of sustainable forms of transport and minimise the impacts of waste movements including on climate change; Met through Policy 6"* (Paragraph 3.4, Strategic Objective 7).

2.4.25 Policy 6 of the Draft NLWP states that *"Applications for waste management facilities and related development, including those replacing or expanding existing sites, will be required to demonstrate to the satisfaction of the relevant council that:*

- *active consideration has been given to the transportation of waste by modes other than road, principally by water and rail;*
- *there are no significant adverse transport effects outside or inside the site as a result of the development."*

The Draft NLWP also states that *"Applicants will need to submit a Transport Assessment in line with the relevant borough Local Plan policy. Consideration should be given to access arrangements, safety and health hazards for other road users, the capacity of local and strategic road networks, impacts on existing highway conditions in terms of traffic congestion and parking, on-site vehicle manoeuvring, parking and loading/unloading areas, and queuing of vehicles"* (Paragraph 9.32).

2.5 Policy compliance

2.5.1 The Project has been reviewed with respect to the national, regional and local policy required. The Project complies with the aspirations and policies identified in this section for the following reasons:

a. the Project is located adjacent to the A406 North Circular Road which is a key route for the movement of freight in line with the London Plan;

f. cycle parking is proposed in line with the London Plan requirements;

g. the Project is supported by two Travel Plans (for construction and operation) which actively encourage travel by sustainable modes including walking, cycling and public transport;

h. the level of car parking proposed is appropriate for the nature of the Project and its location;

i. a TA has been prepared in accordance with LB Enfield's policy, as required by the Draft NLWP; and

j. the TA assesses the key links and junctions as set out in the Edmonton EcoPark Planning Brief SPD.

3 Existing transport conditions

3.1 Introduction

3.1.1 Existing transport conditions in the vicinity of the Application Site have been established to provide baseline data against which the potential effects arising from the Project can effectively be assessed. Baseline observations have been informed by a series of visits to the Application Site during 2014.

3.2 Local highway network

Transport for London Road Network and Strategic Road Network

3.2.1 The local highway network can be seen on Figure 3.1, provided in the Figures section immediately following Section 11. The key route in the vicinity of the Application Site is the A406 North Circular Road. This forms part of the Transport for London Route Network (TLRN)[16] and provides the main east to west connection across north London. Access to the A406 North Circular Road is provided approximately 350m to the west of the Application Site at the Cooks Ferry Roundabout. The TLRN is also accessible approximately 3.3km to the west of the Application Site on the A10 Great Cambridge Road. The A10 Great Cambridge Road runs in a north to south direction from central London to the south and towards the M25 and Hertfordshire in the north and forms a junction with the A406 North Circular Road at the Great Cambridge Junction. These junctions are shown on Figure 3.2, provided in the Figures section immediately following Section 10.

3.2.2 There is no direct access to the Strategic Road Network (SRN)[17] in the vicinity of the Application Site. However, it can be accessed approximately 1.7km to the west of the Application Site on the A1010 Fore Street and approximately 2.2km to the east of the Application Site on the A112 Chingford Mount Road. The A1010 Fore Street travels in a north to south direction, connecting with areas including Tottenham and Seven Sisters in the south and Edmonton Green and Enfield Town in the north. The A112 Chingford Mount Road travels in a north to south direction, connecting with areas including Walthamstow and Stratford in the south and Waltham Cross in the north.

Local Road Network

3.2.3 In the direct vicinity of the Application Site, Advent Way connects with the Cooks Ferry Roundabout, which is located approximately 330m to the east. To the west of the Application Site Advent Way connects with Eley Road and Nobel Road with a route through to the A1055 Meridian Way available.

3.2.4 A1055 Meridian Way runs on a north to south direction approximately 550m to the east of the Application Site. The A1055 Meridian Way is accessible from the A406 North Circular Road via Montagu Road and Conduit Lane.

[16] The highway network in London for which TfL has direct responsibility.
[17] The sections of the London Road network for which the borough within which it is located is the local highway authority but TfL must be consulted on any work to be carried out.

Access to the A1055 Meridian Way is also accessible via Nobel Road and Eley Road.

3.2.5 To the east of the Application Site and the Cooks Ferry Roundabout, Walthamstow Avenue runs in an east to west direction. Walthamstow Avenue connects with the A1009 Hall Lane approximately 370m to the east of Cooks Ferry Roundabout. To the east of the A1009 Hall Lane, Walthamstow Avenue connects with the A406 North Circular Road in the eastbound/southbound direction.

3.2.6 Directly to the east of the Application Site, Lee Park Way runs in a north to south direction and is accessible from Advent Way approximately 275m to the east of the Application Site. Vehicular access to Lee Park Way is restricted at both its northern and southern ends although emergency/maintenance access can be provided as required. Access to Lee Park Way for pedestrians and cyclists is unrestricted.

3.2.7 To the north of Application Site, Ardra Road connects with the A1055 Meridian Way with access also provided to Deephams Farm Road from Ardra Road.

Traffic surveys

3.2.8 The baseline traffic conditions on the local highway network have been informed by traffic surveys under taken in May 2013. The traffic surveys have been undertaken at the following junctions:

a. A406 North Circular Road with Advent Way, Argon Road and Walthamstow Avenue (Cooks Ferry Roundabout);
b. A406 North Circular Road with Montagu Road;
c. A1055 Meridian Way with Conduit Way;
d. A1009 Hall Lane with Walthamstow Avenue;
e. A406 North Circular Road with A1010 Fore Street;
f. A406 North Circular Road with A10 Great Cambridge Road;
g. Montagu Road with Conduit Lane;
h. Advent Way with Eley Road; and
i. Eley Road with Nobel Road.

3.2.9 Additional traffic surveys were undertaken at the junction of A1055 Meridian Way with Ardra Road in October 2014. Link flows for the A406 North Circular Road have been obtained from the DfT's traffic flow matrix for 2013.

3.2.10 The AM and PM peak hour traffic flows as derived from the traffic surveys can be seen in Figures 3.3 and 3.4, provided in the Figures section immediately following Section 10.

Junction capacity

3.2.11 The baseline junction capacity assessment at the junctions closest to the Application Site has been undertaken. These are the Cooks Ferry

Roundabout (junction of the A406 North Circular Road with Advent Way, Walthamstow Avenue and Argon Road) and the junction of A1055 Meridian Way with Ardra Road.

3.2.12 The assessment has been undertaken for the following time periods:

a. AM peak hour from 08:00 to 09:00;

b. interpeak peak hour from 11:00 to 12:00; and

c. PM peak hour from 17:00 to 18:00.

3.2.13 The interpeak hour assessment has been undertaken from 11:00 to 12:00 as this represents the time period when the Application Site generates the highest hourly traffic flow, as derived from the existing Edmonton EcoPark vehicle flows.

3.2.14 The baseline junction capacity at Cooks Ferry Roundabout can be seen in Table 3.1. The analysis has been undertaken using Junctions 8, the industry standard software for the capacity assessments of roundabouts. The results have been presented in terms of the ratio of flow to capacity[18] (RFC) and the mean maximum queue (MMQ), measured in passenger car units (PCU). The modelling output can be seen in Appendix C.

Table 3.1: Cooks Ferry Roundabout baseline capacity

Approach	AM peak hour		Interpeak hour		PM peak hour	
	RFC	MMQ	RFC	MMQ	RFC	MMQ
Advent Way	0.09	0	0.25	0	0.87	6
Walthamstow Avenue	0.28	0	0.19	0	0.17	0
A406 North Circular Road westbound off-slip	0.38	1	0.32	1	0.30	0
Argon Road	0.14	0	0.28	0	0.41	1
A406 North Circular Road eastbound off-slip	0.28	0	0.45	1	0.61	2

3.2.15 The analysis shows that during all three time periods, the roundabout operates with spare capacity (i.e. an RFC less than 1) on all approaches with an acceptable level of queuing that can be accommodated within the available link length without impacting other junctions. However, during the PM peak hour, the approach to the roundabout along Advent Way is approaching capacity with an RFC of 0.87. However, the queue of six PCU can be accommodated, extending for a length of approximately 35m from the stop line (based on an average PCU length of 5.75m).

3.2.16 The baseline junction capacity at the junction of A1055 Meridian Way and Ardra Road can be seen in Table 3.2. The analysis has been undertaken using LinSig, the industry standard software for the capacity assessments of signalised junctions. The results have been presented in terms of the

[18] Ratio of flow to capacity (RFC): ratio of flow to capacity used as an indicator of priority junction/roundabout performance.

degree of saturation[19] (DoS) and the MMQ, measured in PCU. The modelling output can be seen in Appendix C.

Table 3.2: A1055 Meridian Way junction with Ardra Road baseline capacity

Approach	AM peak hour		Interpeak hour		PM peak hour	
	DoS	MMQ	DoS	MMQ	DoS	MMQ
A1055 Meridian Way north	96.8%	38	60.7%	12	87.9%	24
Ardra Road	56.4%	2	57.2%	3	45.6%	3
A1055 Meridian Way south	60.6%	11	55.8%	9	64.2%	13

3.2.17 The analysis shows that the A1055 Meridian Way north approach operates above the practical capacity threshold of 90 per cent (for junctions in London) during the AM peak hour. The level of queuing modelled is similar to that observed during the October 2014 traffic surveys at this junction.

3.2.18 The junction operates with spare capacity on all approaches during the interpeak hour with an acceptable level of queuing. However, during the PM peak hour, the A1055 Meridian Way north approach to the junction is approaching the practical capacity of 90 per cent.

3.3 Public transport

Public Transport Accessibility Level

3.3.1 The Application Site currently has a Public Transport Accessibility Level (PTAL) of 1b[20]. This is rated as 'very poor' (with 1a being the lowest accessibility and 6b being the highest accessibility). The PTAL has been measured at the entrance to the Application Site on Advent Way. A PTAL cannot be calculated from the centre of the Application Site as all public transport services are outside the maximum distances (960m for rail and 640m for buses).

3.3.2 The location of all public transport stations in the vicinity of the Application Site can be seen on Figure 3.5 while the local bus stops and routes used by buses can be seen on Figure 3.6. Both figures are provided in the Figures section immediately following Section 10.

London Underground

3.3.3 The closest London Underground station to the Application Site is Tottenham Hale which is approximately 3.7km (walking distance) to the south of the Application Site. Victoria line London Underground trains are accessible at this station and operate to Walthamstow Central in the northbound direction and to Brixton, via Finsbury Park, Kings Cross St Pancras, Euston and Victoria in the southbound direction. Trains operate from Tottenham Hale every two to three minutes in both directions during the peak hours while southbound trains depart Walthamstow Central every two to three minutes during the peak hours.

[19] Degree of saturation (DoS): the ratio of demand to capacity used as an indicator of signalised junction performance.
[20] Source: Transport for London (TfL) Planning Information Database

National Rail

3.3.4 National Rail services are available at Angel Road station, located approximately 600m (walking distance) to the west of the Edmonton EcoPark. National Rail services from Angel Road operate to Stratford in the southbound direction and towards Bishop's Stortford in the northbound direction with one train per hour in each direction during the peak hours. Trains services to and from Angel Road are operated by National Express East Anglia. It is understood that planned improvements which are due to be implemented in 2017-2019 will provide extra services on this route, increasing the frequency of services to four trains per hour per direction.

3.3.5 National Rail services are also available from Tottenham Hale station which is located approximately 3.7km (walking distance) to the south of the Application Site. Services from Tottenham Hale operate towards Liverpool Street and Stratford in the southbound direction and towards Cambridge and Stansted Airport in the northbound direction.

3.3.6 There are no direct trains to Liverpool Street station from Angel Road. However, services operating to and from Liverpool Street can be accessed by interchanging at Tottenham Hale station or Stratford station.

Bus

3.3.7 There are two London Bus routes operating in close proximity to the Application Site. Routes 34 and 444 are served by a bus stop on the eastbound off-slip and westbound on-slip at the junction of the A406 North Circular Road and Advent Way. These bus stops are almost 500m walking distance from the southern entrance to the Application Site on Advent Way with route 34 serving the bus stop every six to 10 minutes throughout the day and route 444 serving the bus stop every 15 minutes throughout the day. Route 34 operates to Barnet in the northbound direction and to Walthamstow in the southbound direction. Route 444 operates to Chingford in the northbound direction and Turnpike Lane in the southbound direction.

3.3.8 Routes 192 and 341 are also accessible on Glover Drive (adjacent to the Angel Road Superstores) to the south of the A406 North Circular Road, some 800m walking distance from the Application Site. Buses on Route 192 serve these bus stops on every eight to 12 minutes while buses on Route 341, which operates in the southbound direction only, also serve the bus stop every eight to 12 minutes. Route 192 operates to Enfield Town in the northbound direction and to Tottenham Hale in the southbound direction. Route 341 provides a service to central London (London Waterloo) in the southbound direction. Glover Drive is the final destination in the northbound direction.

3.4 Pedestrians

3.4.1 Footways are provided along the main routes leading to and from the Application Site and public transport nodes. In particular, there is a continuous footway on the north side of Advent Way although on the approach to the Cooks Ferry Roundabout where the A406 North Circular Road on/off slips meet Advent Way, the footway widths are narrow and are

overgrown with vegetation in places. There are no crossing facilities at this junction.

3.4.2 A pedestrian route is also provided along the east side of the River Lee Navigation connecting through to the LVRP to the north and towards the Tottenham Marshes to the south. This is shown on Figure 3.7 provided in the Figures section immediately following Section 10. Access is provided to this route from Lee Park Way close to Advent Way.

3.4.3 The pedestrian environment in the vicinity of the Application Site is generally poor and the quality of the environment is reduced by noise associated with high traffic flows on the A406 North Circular Road. The A406 North Circular Road also acts as a barrier to pedestrian movements in the vicinity of the site. A footbridge is, however, provided over the dual carriageway approximately 160m to the west of the entrance to the Application Site providing a connection to the retail park that is located directly to the south of the A406 North Circular Road.

3.5 Cycling

3.5.1 The local cycle network can be seen on Figure 3.7, provided in the Figures section immediately following Section 10. There are a number of cycle routes within the vicinity of the Edmonton EcoPark, comprising:

a. Lee Park Way which runs between the Edmonton EcoPark and the River Lee Navigation, connecting with Advent Way via a bridge at its southern end, forming part of National Cycle Network (NCN) Route 1;

b. a north to south route along the eastern side of the River Lee Navigation which forms part of NCN Route 1 to the south of the A406 North Circular Road;

c. an east to west off-carriageway route along Lower Hall Lane, connecting with NCN Route 1 at Lee Park Way. This route connects to the LVRP to the north; and

d. an off-carriageway route in a north to south direction along A1055 Meridian Way both to the north and south of the A406 North Circular Road.

3.6 Parking

3.6.1 The Application Site currently has 212 car parking spaces. This is broken down as follows:

a. seven security spaces;

b. two spaces at the south weighbridge;

c. 75 spaces at the former transport car park;

d. 41 spaces at the contractors car park by the existing EfW facility down ramp;

e. 29 spaces in the main car park;

f. three spaces at the clinical waste treatment facility;

g. four spaces at the BWRF;

h. four spaces at the IVC Facility;

i. six spaces at the IBA Recycling Facility;

j. three spaces at the vehicle workshop;

k. 22 spaces in the contractor car park; and

l. 16 spaces adjacent to stores.

3.6.2 There are no public car parks provided in the immediate vicinity of the Application Site. The nearest LB Enfield operated car parks are provided close to the junction of the A406 North Circular Road and the A1010 Fore Street some 1.7km to the west of the Application Site. Car parking is provided as part of the retail facilities located to the south of the Application Site. However, this is reserved for the use of the customers of the retail facilities only.

3.6.3 There is no on-street car parking provided in the vicinity of the Application Site.

3.7 Safety

3.7.1 Personal Injury Accident (PIA) data recorded in the vicinity of the Application Site for the three year period up to 30 November 2014 has been obtained from TfL. The data covers the area in the immediate vicinity of the Application Site as well as the A406 North Circular Road as far as its junction with A10 Great Cambridge Road. The locations of these accidents can be seen on Figure 3.8, provided in the Figures section immediately following Section 10 and a summary is provided in Table 3.3.

Table 3.3: Summary of accidents by severity

	Slight	Serious	Fatal	Total
No. of accidents	397	25	3	**425**
% of Total	93%	6%	1%	**100%**

3.7.2 Of the total number of accidents, 71 per cent occurred during daylight hours. In terms of road conditions at the time of each accident, 20 per cent occurred when the road was either wet, icy or in snowy conditions.

3.7.3 Table 3.4 shows the number of accidents by vehicle type as well as the number of accidents involving pedestrians and cyclists. This shows that only 18 (4 per cent) of the total of 425 accidents in the area of interest in the three year period up to the end of November 2014 involved goods vehicles.

Table 3.4: Summary of accidents by vehicle type

Casualty type	Slight	Serious	Fatal	Total
Pedestrian	42	10	2	**54**
Pedal cycle	17	0	1	**18**
Motorcycle	50	6	0	**56**

Casualty type	Slight	Serious	Fatal	Total
Car	240	7	0	**247**
Taxi	7	0	0	**7**
Bus/coach	23	1	0	**24**
Goods vehicle	17	1	0	**18**
Other	1	0	0	**1**
Total	**397**	**25**	**3**	**425**

3.7.4 The causes of the three fatal accidents were:

a. one accident was caused when a pedestrian ran from behind a stationary bus into the path on an oncoming vehicle;

b. one accident was caused when a pedestrian ran from in front of a stationary bus into the path on an oncoming vehicle; and

c. one accident was caused when a goods vehicle overturned trapping a cyclist.

3.7.5 For all other accidents, the most common contributory factors to the accidents were as follows:

a. failure to look properly;

b. failure to judge other person's/vehicle's path;

c. poor turn or manoeuvre;

d. careless or reckless driving or driving in a hurry;

e. exceeding the speed limit or travelling too fast for the traffic conditions;

f. following too close;

g. sudden braking; and

h. swerving.

3.7.6 Where pedestrians were involved in accidents, the common contributory factors were as follows:

a. pedestrian failure to look properly;

b. pedestrian failure to judge a vehicle's path or speed;

c. incorrect use of a pedestrian crossing facility;

d. careless or reckless movement by a vehicle or pedestrian, or moving in a hurry; and

e. pedestrian crossing the road masked by a stationary or parked vehicle.

4 The Project

4.1 Introduction

4.1.1 A description of the Project is set out in Section 1. This section provides further Project information of relevance to the assessment of transport effects.

4.2 Application site layout and access

4.2.1 The proposed layout of the Project can be seen in the Book of Plans (AD02.01). The main features of the Edmonton EcoPark layout post demolition of the existing EfW facility are as follows:

a. a northern area accommodating the proposed ERF;

b. a southern area accommodating the RRF and EcoPark House which includes a visitor, community and education centre with offices and a base for the Edmonton Sea Cadets;

c. a central space, where the existing EfW facility is currently located, providing a large consolidated area for future waste treatment facilities; and

d. a new landscape area along the eastern edge with the LVRP.

4.2.2 In addition to the ERF, the RRF and EcoPark House, the Application Site will accommodate other associated development necessary for the operation of the Application Site. These comprise a number of structures, for example, weighbridges necessary to weigh incoming and outgoing loads, security, parking facilities and an effluent treatment plant. In addition, the proposed layout will result in the relocation of many existing site elements, for example, the vehicle waste and transport depot.

4.2.3 The Application Site will be served by three vehicle access points, namely:

a. the existing Edmonton EcoPark access which will be widened to ensure the safe movement of vehicles into and out of the Application Site;

b. a new access on the eastern site boundary via Lee Park Way; and

c. a new northern site access via Deephams Farm Road (and Ardra Road), connecting with the wider local highway network at the junction of the A1055 Meridian Way and Ardra Road.

4.2.4 A Stage 1 Road Safety Audit (RSA) has been undertaken for the proposed layouts at each of the three access points. The RSAs, along with the Designer's Responses, are provided in Appendix D.

4.2.5 Details of the use of each access during each stage of the Project are provided in Section 4.4. Where appropriate and relevant during the construction and operation of the Project, any necessary design approvals, traffic regulation orders and permits will be sought from TfL and/or LB Enfield.

4.2.6 The primary access for pedestrians and cyclists will be provided from Lee Park Way with a footway and dedicated cycle lane provided along Lee Park

Way between Advent Way and the Application Site entrance with both facilities continuing into the Application Site.

4.2.7 Access to the Application Site for pedestrians and cyclists will be reviewed throughout each stage of the Project to identify what, if any, changes to the existing infrastructure could be brought about as a result of other schemes in the area that may affect access to the Application Site for pedestrians and cyclists.

4.3 Stages of development

4.3.1 The proposed ERF is intended to be operational before the end of 2025, but with the precise timing of the replacement to be determined. In order to do this, the following key steps are required:

a. obtain a DCO for the new facility and associated developments;

b. obtain relevant environmental permit(s) and other licences, consents and permits needed;

c. identify a suitable technology supplier;

d. agree and arrange source(s) of funding;

e. enter into contract(s) for design, build and operation of new facility and associated development;

f. move to operation of new facility; and

g. decommission and demolish the existing EfW facility.

4.3.2 Site preparation and construction would be undertaken over a number of years and it is expected that the earliest construction would commence is 2019/20, although this may be later. Construction would be implemented in stages to ensure that essential waste management operations remain functioning throughout. This is especially relevant for the existing EfW facility and associated support facilities.

4.3.3 The stages of the Project are as follows:

a. Stage 1a: site preparation and enabling works;

b. Stage 1b: construction of RRF, EcoPark House and commencement of use of Temporary Laydown Area;

c. Stage 1c: operation of RRF, EcoPark House and demolition/clearance of northern area;

d. Stage 1d: construction of ERF;

e. Stage 2: commissioning of ERF alongside operation of EfW facility, i.e. transition period;

f. Stage 3: operation of ERF, RRF and EcoPark House, demolition of EfW facility; and

g. Stage 4: operation of ERF, RRF and EcoPark House, i.e. final operational situation.

Stage 1a

4.3.4 Stage 1a involves a series of site preparation and enabling works required for the Project. The works would include:

a. enabling works along Deephams Farm Road to create the Deephams Farm Road access;

b. demolition of clinical waste building and maintenance workshop building;

c. infill of artificial pond and clearance of landscaped area to form temporary storage and parking area;

d. layout of replacement fleet parking areas and temporary support buildings on the site of the maintenance workshop;

e. establishment of hoarded demolition work sites with safe pedestrian and vehicular access to the existing EfW facility main entrance and staff car parks. Access to the existing EfW facility would continue to be from the existing Edmonton EcoPark access;

f. relocation of Edmonton Sea Cadets to existing EfW facility meeting rooms with safe pedestrian and vehicular access via the existing Edmonton EcoPark access at Advent Way to the main entrance and staff car parks; storage of Edmonton Sea Cadets equipment in a container located at front of the existing EfW facility and relocate their boats to an off-site location provided by the Edmonton Sea Cadets;

g. diversion of utilities and services affected by demolition and clearance works including diversion of the sewer trunk main owned by Thames Water Utilities Limited (TWUL) which runs under the proposed location of the RRF;

h. demolition and clearance of EcoPark House and RRF construction zones;

i. creation of new Lee Park Way access and temporary diversion of footpaths and cycleways; and

j. establishment of the Temporary Laydown Area to the north of Advent Way and east of the River Lee Navigation to provide for site offices; storage of construction materials, plant and machinery; fabrication/sub-assembly; and construction staff/contractor vehicle parking. Temporary diversion of footpaths and cycleways at the Temporary Laydown Area access points.

4.3.5 The existing EfW facility would continue to operate at current capacity. The existing IBA recycling facility would continue to process ash from the existing EfW facility. The existing BWRF, FPP and IVC would continue to operate in this period.

4.3.6 Operational vehicles would continue to access the Edmonton EcoPark via the access at Advent Way. This accounts for approximately 1,063 one way vehicle movements per day.

4.3.7 Traffic associated with the Stage 1a demolition and enabling works would arrive at the Edmonton EcoPark via the existing access on Advent Way.

Stage 1b

4.3.8 During Stage 1b, the RRF and EcoPark House buildings would be constructed in the southern part of the Edmonton EcoPark. It would be necessary to construct these buildings prior to the construction of the proposed ERF and demolition of the operations north of the existing EfW facility. The works required during this stage of construction would include:

a. commencement of use of Temporary Laydown Area;

b. relocation of LWL vehicle fleet to the north of existing EfW facility;

c. construction of EcoPark House;

d. construction of RRF and its weighbridges;

e. erection of temporary ash storage building;

f. layout of staff and visitor parking area immediately adjacent to EcoPark House;

g. commencement of use by staff and visitor vehicles of the new Lee Park Way access;

h. construction of the attenuation tank and associated drainage of the RRF sub-catchment; and

i. existing EfW facility exit ramp arrangements aligned with RRF construction area and required RRF operational vehicles routes.

4.3.9 The existing EfW facility would continue to operate at current capacity. The Edmonton Sea Cadets would continue to occupy space in the existing EfW facility.

4.3.10 The existing BWRF, FPP and IVC would continue to operate in this period, until the RRF is completed (see Stage 1c). The IBA recycling facility would continue to process ash from the existing EfW facility.

4.3.11 Operational vehicles would continue to access the Edmonton EcoPark via the existing Edmonton EcoPark access from Advent Way. The new Lee Park Way access would become available and be used by some staff and Edmonton Sea Cadets traffic.

4.3.12 Traffic associated with the construction of the RRF and EcoPark House would arrive at the Edmonton EcoPark via the existing access on Advent Way. Some traffic may arrive at the Temporary Laydown Area, travelling from the Temporary Laydown Area to the Edmonton EcoPark via Walthamstow Avenue and the existing access. Some light vehicles including construction staff shuttle buses may travel to the Edmonton EcoPark via the new Lee Park Way access.

Stage 1c

4.3.13 During this stage of construction the facilities to the north of the existing EfW facility would be demolished to make way for the proposed ERF. The works required involve:

a. completion of RRF and transfer of FPP/BWRF operations;

b. completion of EcoPark House and occupation by the Edmonton Sea Cadets;

c. relocation of Edmonton EcoPark stores;

d. disconnection of obsolete services and utilities within demolition zones;

e. demolition and clearance of existing FPP area;

f. demolition and clearance of existing BWRF area;

g. demolition and clearance of existing IBA area; and

h. demolition and clearance of existing IVC facility – composting activities to be relocated off-site and bulking facilities provided within the RRF to enable transport to third party treatment sites.

4.3.14 The existing EfW facility would continue to operate at current capacity, with a temporary ash storage building provided to replace the existing IBA area and allow the transfer of ash off-site for recycling.

4.3.15 The Recycling and Fuel Preparation Facility (RFPF) operations would commence within the RRF, with capacity to treat around 390,000 tpa. The RRC element of the RRF building would be open to members of the public and small businesses with access via the new Lee Park Way access. On completion of EcoPark House this would be available for community and education activities, the Edmonton Sea Cadets and for office accommodation associated with operation of the Edmonton EcoPark.

4.3.16 Operational vehicles would continue to access the Edmonton EcoPark via the existing access on Advent Way to serve both the existing EfW facility and proposed RRF. Members of the public and small business vehicles visiting the RRC element of the RRF, users of EcoPark House and staff would access the Edmonton EcoPark via the new Lee Park Way access.

4.3.17 Traffic associated with the northern Application Site clearance would use the new Deephams Farm Road access.

Stage 1d

4.3.18 During Stage 1d, the main build for the proposed ERF would occur within a defined work zone at the northern area of the Edmonton EcoPark. The works involve:

a. construction of ERF including piling and excavation works, civil and structural works, establishment of new utilities connections;

b. construction of the surface water attenuation tank(s) and associated drainage of the ERF sub-catchment;

c. erection of a new pumping station and associated pipework to provide raw water from Deephams Sewage Treatment Works outflow channel; and

d. partial landscaping.

4.3.19 The majority of heavy goods vehicles associated with the construction of the proposed ERF would arrive at the Edmonton EcoPark via the Deephams Farm Road access. Vehicle movements associated with the

delivery of concrete would be undertaken directly to the Edmonton EcoPark while approximately 50 per cent of all other construction vehicle movements would be to the Temporary Laydown Area, with onward movement to the Edmonton EcoPark when required. The majority of these vehicles would travel via the A406 North Circular Road and A1055 Meridian Way to the Deephams Farm Road access. However, any abnormal loads may travel between the Temporary Laydown Area and the Edmonton EcoPark via the existing access. This would be undertaken at a time that minimises any conflict with Edmonton EcoPark operational vehicles.

4.3.20 The existing EfW facility would continue to operate at current capacity and the proposed RRF and EcoPark House would be operational.

4.3.21 Operational vehicles would continue to access the Edmonton EcoPark via the existing access on Advent Way to serve both the existing EfW facility and RRF. Members of the public and small businesses visiting the RRC element of the RRF, users of EcoPark House and staff would access the Edmonton EcoPark via the new Lee Park Way access.

Stage 2

4.3.22 This stage marks the completion of the proposed ERF, commissioning of the facility and start of operations. The existing EfW facility would then be ready for decommissioning and demolition. The works required involve:

a. commissioning of proposed ERF;

b. installation of ERF weighbridges;

c. relocation of operations contractors compound from adjacent to the existing EfW facility to adjacent to the southern side of the ERF;

d. relocation of operational stores adjacent to the ERF;

e. relocation of operational fleet depot to adjacent to ERF; and

f. completion of landscaping works that are not linked to or affected by the EfW facility demolition.

4.3.23 The commissioning stage of the proposed ERF is estimated to take between six and twelve months. The commissioning stage is necessary in order to test all of the equipment and processes before the proposed ERF is fully operational. During this stage both the existing EfW facility and the proposed ERF would be operational as waste inputs are gradually transferred from the existing EfW facility to the proposed ERF.

4.3.24 Landscaping and relocation of support facilities would take place during the ERF commissioning stage with use of the Deephams Farm Road access remaining in place for the operations contractor's use, alongside staff shuttle buses from Lee Park Way as required.

4.3.25 The existing EfW facility would continue operation at a reduced capacity as incoming waste is transferred to the proposed ERF to allow its commissioning. The proposed ERF would increase the proportion of the waste that it takes as its commissioning progresses and both treatment lines are brought online.

4.3.26 The proposed RRF and EcoPark House would be operational.

4.3.27 Operational vehicles would continue to access the Edmonton EcoPark via Advent Way as before to serve both the existing EfW facility and proposed ERF and RRF. Some operational vehicles travelling to the ERF would use the Deephams Farm Road access. Members of the public and local businesses visiting the RRC element of the RRF would access the Edmonton EcoPark via the new Lee Park Way access.

Stage 3

4.3.28 Decommissioning, stripping out and demolition of the existing EfW facility would commence after the proposed ERF is fully commissioned and tests including the reliability period have been successfully completed. The works required would involve:

a. hoarding of the demolition work zone;
b. clearance of northern half of existing EfW facility site – once cleared the northern area of the EfW facility site would be used as a laydown for demolition equipment which is required before the demolition of the main EfW facility building can proceed;
c. completion of fleet parking and facilities area;
d. construction of widened southern entrance and new security gatehouse;
e. demolition and decommissioning of water pumping station;
f. demolition of main EfW facility building;
g. excavation of bunker and infilling with suitable material;
h. levelling of site and make good;
i. completion of Edmonton EcoPark landscaping works;
j. completion of staff car parks and surface water attenuation tanks on removal of EfW facility exit ramp; and
k. restoration of the Temporary Laydown Area.

4.3.29 The proposed ERF would operate at the capacity required with each process line capable of 350,000 tonnes per annum with a total capacity of the facility at 700,000 tonnes per annum. The proposed RRF and EcoPark House would also be operational.

4.3.30 Operational vehicles would continue to access the Edmonton EcoPark via the existing access on Advent Way as existing to serve both the ERF and RRF. Members of the public and small businesses visiting the RRC element of the RRF, users of EcoPark House and staff would access the Edmonton EcoPark via the new Lee Park Way access.

4.3.31 Traffic associated with the decommissioning and demolition of the existing EfW facility would travel to and from the Edmonton EcoPark via the existing Edmonton EcoPark access on Advent Way to minimise any conflicts with the operational ERF. Some vehicles associated with the removal of materials may be marshalled at the Temporary Laydown Area, waiting there until required on the Edmonton EcoPark. The new Deephams Farm Road access may also be used, if necessary.

Stage 4

4.3.32 Stage 4 would see the full operation of all new facilities. The proposed ERF would operate at full required capacity with each process line capable of processing 350,000 tonnes per annum with a total capacity of the facility at 700,000 tonnes per annum. The RRF would operate with a capacity of around 390,000tpa.

4.3.33 EcoPark House would be occupied by the site operator and the Edmonton Sea Cadets, and would also be available for other community and education activities.

4.3.34 Operational vehicles would continue to access the Edmonton EcoPark via the existing access on Advent Way to serve both the ERF and RRF while some movements would be undertaken using the Deephams Farm Road access. Members of the public and small businesses visiting the RRC element of the RRF, users of EcoPark House and staff would access the Edmonton EcoPark via the new Lee Park Way access.

4.4 Parking

Construction

4.4.1 During construction, parking for construction employees will be provided on the Temporary Laydown Area. At the peak of construction (during Stage 1d), approximately 225 parking spaces are proposed which will be for use by:

a. employee cars/vans; and

b. contractor vans.

4.4.2 Additional parking for 45 large vehicles, including employee shuttle buses, is also proposed to be provided on the Temporary Laydown Area.

4.4.3 Additional short-term parking for light goods vehicles (LGVs) and heavy goods vehicles (HGVs) is proposed on the Application Site for vehicles directly associated with the construction activity.

4.4.4 Cycle parking will also be provided for construction employees at the Temporary Laydown Area. Cycle parking will be provided for five per cent of the construction workforce. However, the level of provision will be reviewed through the Travel Plan (see Section 9) and additional spaces will be provided, if required.

4.4.5 The location of all car and cycle parking to be provided on the Temporary Laydown Area can be seen in the Book of Plans (AD02.01).

4.4.6 Car parking for employees associated with the on-going operation of the existing facilities will be provided on the Application Site close to the existing EfW facility. The existing provision of cycle parking at the EcoPark will be maintained throughout construction although its location may change during the different stages of construction.

Operation

4.4.7 It is proposed that 132 car parking spaces be provided for the completed Project. This will comprise the following:

a. four parking spaces at the security gatehouse;

b. three accessible parking spaces at EcoPark House;

c. 126 car parking spaces in the central car park, including five accessible parking spaces; and

d. ten accessible parking spaces for the ERF.

4.4.8 The parking provision has been considered with respect to the parking standards set out as part of the London Plan. Based on the Gross Internal Area (GIA) of approximately 5,250m^2 GIA and the provision of one car parking space per 50m^2 for employment uses in outer London, 105 car parking spaces should be provided. It is acknowledged that proposed provision of 132 spaces exceeds the London Plan requirements. However, the proposed provision has been calculated based on the likely requirements of the Application Site and considers the following:

a. the location of the Edmonton EcoPark and its poor PTAL rating (1b at the entrance);

b. the limited public transport services available in the vicinity of the Edmonton EcoPark and the distance (approximately 3km) to a frequent rail service (at Tottenham Hale);

c. the shift working patterns that will be associated with the 24 operation of the new facilities and the fact that public transport services will not be operating when some shifts start or finish; and

d. the limited walking and cycling routes that are available in the vicinity of the Edmonton EcoPark as well as the inhospitable environment for pedestrians and cyclists due to the presence of the A406 North Circular Road.

4.4.9 While the number of car parking spaces proposed does exceed that of the London Plan requirements, the total provision represents a reduction by 80 spaces (38 per cent) on the existing parking provision at the Edmonton EcoPark.

4.4.10 It is proposed that 14 accessible spaces be provided and 26 spaces will be equipped with electric vehicle charging points equating to 20 per cent of the total provision. Passive provision for further electric vehicle charging points will be made for a further 10 per cent of spaces.

4.4.11 The provision and utilisation of car parking on the Edmonton EcoPark will be monitored through the Operational Travel Plan. If accessibility to the Edmonton EcoPark by public transport is improved through service and/or frequency enhancements associated with other development or infrastructure schemes in the local area, consideration will be given to reducing the number of car parking spaces provided but without compromising the efficient operation of the Project or introducing any additional impacts on the wider local area.

4.4.12 Three coach/mini-bus parking spaces are also proposed for use by the Sea Cadets or for visitors.

4.4.13 Six motorcycle parking space will also be provided on the Edmonton EcoPark.

4.4.14 It is also proposed to provide 19 cycle parking spaces for employees (approximately one space for every eight employees) with seven additional spaces for visitors. This complies with the London Plan standard of one space for 90m^2 (applying the B1 office standard to ensure an appropriate provision of cycle parking). All employee and visitor cycle parking is proposed to be secure and sheltered.

4.4.15 The location of all car and cycle parking to be provided can be seen in the Book of Plans (AD02.01).

4.5 Rail access

4.5.1 There are two rail lines operating close to the Application Site, namely:

a. the East Anglia line from Liverpool Street/Stratford to Hertford East and Stansted Airport, via Angel Road, which is located approximately 470m to the west of the Application Site; and

b. the East Anglia line from Liverpool Street to Chingford, which is located approximately 3km to the east of the Application site.

4.5.2 There is no rail connection to the Application Site and there are no railway lines running directly adjacent to the Application Site. As such, the transporting of waste or construction materials via rail has not been considered as part of the Project. For a direct rail connection to be provided, a new railway spur and associated loading and unloading infrastructure would be required. The construction of any such spur would require significant investment and land take, if an appropriate alignment could be found, and would likely cause significant disruption to the operation of the existing railway, to residents and businesses and to the local highway network.

4.5.3 While waste or construction materials could be moved to a local rail transfer station, if one were available, the waste or construction materials would still need to be transferred from the rail transfer station to the Application Site via road so this would not provide any benefits for the local highway network.

4.5.4 The TA does, however, consider the effect of the employee trips associated with the Project on rail and London Underground networks and this is presented in Section 6.3.

5 Trip generation and mode split

5.1 Introduction

5.1.1 The trip generation assessment has been carried out in accordance with TfL's best practice guidance, and includes an assessment of the two-way person and vehicle trips to be generated by the Project, broken down by mode.

5.1.2 As the Edmonton EcoPark is currently used for the treatment and disposal of waste, the existing trips generated have been considered. The trip generation assessment therefore considers the trips generated by the Project against the existing trips.

5.1.3 To assess the effect on the local highway and public transport networks, it is necessary to estimate the number of person and vehicle trips likely to be generated by the Project.

5.1.4 Given the unique nature of the Project, there are no comparable sites within the Trip Rate Information Computer System (TRICS®) database and therefore anticipated vehicle movements to and from the Application Site have been derived from first principles based on available information. Individual land use elements of the Project have been examined separately and then combined to evaluate the overall trip generation for the Project. This approach has been agreed with TfL and LB Enfield.

5.2 Edmonton EcoPark existing trip generation

5.2.1 The existing daily trip generation for the Edmonton EcoPark is set out in Table 5.1. The total number of vehicles has been derived from traffic surveys undertaken in May 2013 and the number of vehicles associated with each use has been derived based on 2013/14 actual data from the existing waste facilities at the Edmonton EcoPark. This and all other supporting data is provided in Appendix E.

Table 5.1: Existing Edmonton EcoPark daily trip generation (figures subject to rounding)

Use	No. vehicles (daily)
Input waste	
Existing EfW facility	237
IVC facility	32
Bulky waste and FPP	361
Clinical waste	35
Output waste	
Ash recycling	3
Clinical waste	1
Compost	6
Bulky waste	30
Flu gas residue	4

Use	No. vehicles (daily)
Existing EfW facility rejects/output	37
Other	
Staff/visitors/other	317
Total (one-way)	***1,063***
Total (two-way)	***2,126***

5.2.2 The daily arrival and departure profile can be seen in Table 5.2.

Table 5.2: Daily arrival and departure profile at the existing Edmonton EcoPark (figures subject to rounding)

Time	Inbound		Outbound		Total	
	% Trips	Trips	% Trips	Trips	% Trips	Trips
00:00 – 01:00	0.1%	1	0.0%	0	0.0%	1
01:00 – 02:00	0.4%	4	0.5%	5	0.4%	9
02:00 – 03:00	0.7%	7	0.6%	6	0.6%	13
03:00 – 04:00	0.5%	5	0.4%	4	0.4%	9
04:00 – 05:00	2.1%	22	1.4%	15	1.8%	38
05:00 – 06:00	5.7%	61	1.3%	14	3.5%	75
06:00 – 07:00	10.4%	111	4.5%	48	7.5%	159
07:00 – 08:00	5.3%	56	3.2%	34	4.3%	90
08:00 – 09:00	6.8%	72	5.3%	57	6.1%	129
09:00 – 10:00	9.5%	101	7.7%	82	8.6%	184
10:00 – 11:00	9.4%	100	7.1%	75	8.3%	175
11:00 – 12:00	10.5%	112	11.4%	122	11.0%	233
12:00 – 13:00	9.5%	101	12.0%	128	10.8%	229
13:00 – 14:00	9.4%	99	9.7%	103	9.5%	203
14:00 – 15:00	5.6%	60	7.9%	84	6.8%	144
15:00 – 16:00	3.3%	35	5.6%	60	4.5%	95
16:00 – 17:00	2.9%	30	6.3%	67	4.6%	97
17:00 – 18:00	1.1%	12	5.5%	59	3.3%	71
18:00 – 19:00	1.9%	20	3.6%	39	2.8%	59
19:00 – 20:00	1.3%	14	1.4%	15	1.4%	29
20:00 – 21:00	1.8%	19	1.3%	14	1.6%	33
21:00 – 22:00	1.1%	12	2.3%	24	1.7%	37
22:00 – 23:00	0.3%	3	0.5%	5	0.4%	8
23:00 – 00:00	0.2%	2	0.2%	2	0.2%	4
Total	**100%**	**1,063**	**100%**	**1,063**	**100%**	**2,126**

5.2.3 The daily profile has been derived from the traffic surveys of the existing Edmonton EcoPark and has been applied to the future (operational) scenarios.

5.2.4 Table 5.3 sets out the proportion of each vehicle type for the traffic travelling to and from the existing Edmonton EcoPark, as derived from the traffic survey data.

Table 5.3: Vehicle composition at the existing Edmonton EcoPark

Vehicle type	% of total flow
Car/LGV	54%
HGV	44%
Motorcycle	1%
Cycle	1%

5.3 Operation

5.3.1 This section outlines the trip generation for the Project during operation of the completed Project. This includes employee vehicle trips. The methodology for deriving the trip generation for the completed operational Project (Stage 4) is based on that agreed with LB Enfield and TfL as part the analysis undertaken to support the preparation of the Edmonton EcoPark SPD.

Operational vehicle generation

5.3.2 The operational vehicle trip generation (excluding employee trips) for the completed Application Site includes the following assumptions:

a. Refuse Collection Vehicles (RCV) will arrive with a payload of eight tonnes;

b. the proportion of bulked waste arriving to the Application Site will be as existing (i.e. from Hornsey Street) with the addition of waste from Hendon; this will equate to approximately 42 per cent of waste being bulked;

c. bulked waste will arrive with an average payload of 22 tonnes;

d. waste deliveries for the ERF and RRF (with the exception of the RRC) are based on a five day working week and waste exports (output waste) are based on a five and a half day working week;

e. public/resident deliveries to the RRC will be undertaken on the weekend with up to 40 per cent of waste deliveries undertaken over a weekend (based on data from other existing RRC facilities); the typical daily trip generation has been adjusted to account for the higher number of RRC trips on a weekend;

f. the removal of waste output will be evenly distributed across the year;

g. the proposed trip generation is based on the maximum capacity of the facilities proposed as part of the Project and that all facilities are operational.

5.3.3 The information used to inform the operational trip generation assessment is provided in Appendix F.

5.3.4 For the ERF, the total number of daily trips has been calculated as follows:

a. the total number of external waste deliveries (i.e. not from the RRF) was determined by subtracting the volume of waste anticipated to be transferred (which accounts for approximately 250,000 ktpa or 35 per cent of the total annual ERF throughput) from the RRF from the total maximum throughput; the arrival of waste transferred to the ERF from the RRF to the Application Site has been accounted for in the RRF calculations.

b. 42 per cent of the external waste is then assumed to arrive in bulked vehicles with a payload of 22 tonnes; and

c. the remaining waste is then assumed to arrive in vehicles (e.g. RCVs) with a payload of eight tonnes.

5.3.5 For the RRF, including the RRC, the volume of each type of waste and the payload of the vehicles has been derived based on the waste throughput capacity and data on the existing arising volumes of each type of waste.

5.3.6 The daily trip generation for the completed Project is set out in Table 5.4.

Table 5.4: Operational daily vehicle trip generation

Use	No. vehicles (daily)
Input waste	
ERF	145
RRF	791
Output waste	
ERF	16
RRF	46
Total (one-way)	***998***
Total (two-way)	***1,996***

5.3.7 The daily arrival and departure profile for operational vehicles for the completed Project can be seen in Table 5.5.

Table 5.5: Operational daily arrival and departure profile (figures subject to rounding)

Time	Inbound		Outbound		Total	
	% Trips	Trips	% Trips	Trips	% Trips	Trips
00:00 – 01:00	0.1%	1	0.0%	0	0.1%	1
01:00 – 02:00	0.5%	5	0.7%	7	0.6%	12
02:00 – 03:00	1.0%	9	0.8%	8	0.9%	18
03:00 – 04:00	0.7%	7	0.5%	5	0.6%	12
04:00 – 05:00	1.5%	15	2.0%	20	1.8%	35
05:00 – 06:00	1.0%	9	1.5%	15	1.2%	24
06:00 – 07:00	4.5%	45	4.8%	47	4.6%	92
07:00 – 08:00	3.9%	39	4.5%	45	4.2%	84
08:00 – 09:00	7.5%	75	6.5%	65	7.0%	140
09:00 – 10:00	10.6%	106	9.9%	99	10.3%	205

Time	Inbound		Outbound		Total	
	% Trips	Trips	% Trips	Trips	% Trips	Trips
10:00 – 11:00	12.1%	121	9.1%	91	10.6%	211
11:00 – 12:00	13.5%	134	13.6%	135	13.5%	270
12:00 – 13:00	11.4%	114	11.3%	112	11.3%	226
13:00 – 14:00	10.1%	100	9.6%	96	9.9%	196
14:00 – 15:00	6.4%	64	7.5%	75	6.9%	138
15:00 – 16:00	4.2%	42	4.5%	45	4.3%	87
16:00 – 17:00	3.0%	30	3.5%	35	3.3%	65
17:00 – 18:00	1.1%	11	2.7%	27	1.9%	38
18:00 – 19:00	1.5%	15	1.1%	11	1.3%	26
19:00 – 20:00	1.0%	9	1.1%	11	1.0%	20
20:00 – 21:00	2.6%	26	1.6%	16	2.1%	42
21:00 – 22:00	1.6%	16	2.4%	24	2.0%	41
22:00 – 23:00	0.1%	1	0.4%	4	0.3%	5
23:00 – 00:00	0.3%	3	0.3%	3	0.3%	5
Total	**100%**	**998**	**100%**	**998**	**100%**	**1,996**

5.3.8 The arrival and departure profile is based on the existing arrival and departure profile (shown in Appendix D) for HGVs and LGVs (including cars/vans) transporting operational waste. All of the waste delivered to the ERF will be using HGVs (of eight tonnes or greater) while approximately 24 per cent of the trips to the RRF would be undertaken using HGVs. The remainder of the RRF trips would be undertaken using LGVs. Approximately 27 per cent of the total daily trips to the RRF will be to the RRC. These would be undertaken using cars and vans with very small payloads.

Operational mode share

5.3.9 Over the course of a typical day, there will be 153 employees on the Application Site when the Project is completed, comprising:

a. 49 ERF employees;

b. 15 RRF employees;

c. Seven RRC employees;

d. 28 Edmonton EcoPark administration employees;

e. 12 facilities and shared services employees;

f. two reception employees;

g. one community liaison officer;

h. one maintenance employee;

i. six security (main and satellite office) employees;

j. six weighbridge employees; and

k. 26 transport employees.

5.3.10 The mode share for the operational stage of the Project has been derived with consideration of a number of factors, namely:

a. 2011 Census data for the Enfield 030 and 033 super output areas;

b. the location of the Application Site, the very low PTAL and the resulting poor accessibility to public transport;

c. the existing number of car, motorcycle and cycle trips (as obtained from the May 2013 traffic surveys);

d. the location of the Application Site adjacent to the A406 North Circular Road and the likely low mode share for walking and cycling; and

e. the likely employee shift patterns and the likelihood that some trips would be undertaken when there are no public transport services in operation.

5.3.11 The operational employee mode share is set out in Table 5.6. This mode share is for employees only. It has been assumed that all other operational trips are from operational road vehicles with 55 per cent comprising cars/vans/LGVs and 45 per cent HGVs.

Table 5.6: Operational employee mode share

Mode	Operation
Car (as driver)	80%
Car (as passenger)	5%
Underground/rail	2%
Bus	7%
Motorcycle	1%
Walk	1%
Cycle	4%
Total	**100%**

5.3.12 The resulting number of employee trips by mode for the operational scheme are set out in Table 5.7.

Table 5.7: Operational employee trips by mode for each construction stage

Mode	Operation
Car (as driver)	122
Car (as passenger)	8
Underground/rail	3
Bus	11
Motorcycle	1
Walk	2
Cycle	6
Total	**153**

Operational employee vehicle generation

5.3.13 The daily employee vehicle trip generation for the completed Project is set out in Table 5.8. While the mode share estimates that 80 per cent of employees would drive, equating to 122 vehicle trips, the daily number of employee trips assumes that number of employee vehicle trips would equate to one vehicle trip each way per day. This ensures that visitor trips are accounted for and also allows for the fact that there will be some employee vehicle movements away from and returning to the Edmonton EcoPark over lunch time and at other points throughout the day.

Table 5.8: Completed Project daily employee vehicle trip generation

Use	No. vehicles (daily)
ERF	49
RRF and administration	53
General site operation	51
Total (one-way)	***153***
Total (two-way)	***306***

5.3.14 The daily arrival and departure profile for operational employee vehicles for the completed Project can be seen in Table 5.9. Similar to the existing Edmonton EcoPark, this allows for shift working assumptions and assumes that the main shift for operational employees is between 07:00 and 19:00. Office/administration employees would typically work between 08:00 and 17:00.

Table 5.9: Daily operational employee arrival and departure profile

Time	Inbound		Outbound		Total	
	% Trips	Trips	% Trips	Trips	% Trips	Trips
00:00 – 01:00	0%	0	0%	0	0%	0
01:00 – 02:00	0%	0	0%	0	0%	0
02:00 – 03:00	0%	0	0%	0	0%	0
03:00 – 04:00	0%	0	0%	0	0%	0
04:00 – 05:00	4%	5	0%	0	2%	5
05:00 – 06:00	17%	26	1%	1	9%	28
06:00 – 07:00	24%	37	4%	6	14%	43
07:00 – 08:00	8%	13	0%	0	4%	13
08:00 – 09:00	5%	8	3%	4	4%	12
09:00 – 10:00	7%	11	3%	4	5%	15
10:00 – 11:00	3%	5	2%	3	3%	8
11:00 – 12:00	4%	5	6%	10	5%	15
12:00 – 13:00	5%	8	14%	21	9%	29
13:00 – 14:00	8%	12	10%	15	9%	27
14:00 – 15:00	4%	6	9%	14	6%	20
15:00 – 16:00	1%	2	8%	13	5%	15
16:00 – 17:00	3%	4	13%	20	8%	24
17:00 – 18:00	1%	2	12%	19	7%	21
18:00 – 19:00	3%	4	10%	15	6%	19
19:00 – 20:00	2%	3	2%	3	2%	7
20:00 – 21:00	0%	0	1%	1	0%	1
21:00 – 22:00	0%	0	2%	3	1%	3
22:00 – 23:00	1%	1	1%	1	1%	2
23:00 – 00:00	0%	0	0%	0	0%	0
Total	**100%**	**153**	**100%**	**153**	**100%**	**306**

Total operational vehicle generation

5.3.15 The total traffic generation for the operational scheme is outlined in Table 5.10.

Table 5.10: Total operational vehicle generation

Use	No. vehicles (daily)
Input waste	
ERF	145
RRF	791
Output waste	
ERF	16
RRF	46
Other	
Staff/visitors	153
Total (one-way)	***1,151***
Total (two-way)	***2,302***

5.3.16 Employee trips would account for 13 per cent of the overall daily traffic generation. The total traffic generated by the Project would comprise 31 per cent HGVs. This is a reduction (from 44 per cent) when compared with the existing Edmonton EcoPark. The reduction in HGVs occurs for the following reasons:

a. a much lower level of bulking of waste arriving to the existing EfW facility; and

b. an increase in the number of LGVs arriving to the RRF, including cars and vans to the RRC.

5.3.17 The daily profile of trips by vehicle types, compared with the trips generated by the existing Edmonton EcoPark are shown in Table 5.11.

Table 5.11: Comparison between existing and proposed vehicle trips by vehicle type (figures subject to rounding)

Time	HGV		LGV[21]		Car	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
00:00 – 01:00	1	0	0	1	0	0
01:00 – 02:00	7	4	2	8	0	0
02:00 – 03:00	11	6	2	11	0	0
03:00 – 04:00	5	4	4	8	0	0
04:00 – 05:00	26	12	0	23	11	5
05:00 – 06:00	16	9	2	16	57	28
06:00 – 07:00	56	33	12	60	90	43
07:00 – 08:00	36	30	26	54	28	13
08:00 – 09:00	64	49	39	90	24	12
09:00 – 10:00	109	72	42	132	31	15
10:00 – 11:00	112	75	44	137	17	8

[21] The proposed LGV trips includes car and van operational trips to the RRC

Time	HGV		LGV[21]		Car	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
11:00 – 12:00	128	95	71	174	32	15
12:00 – 13:00	105	80	62	146	60	29
13:00 – 14:00	108	70	37	127	56	27
14:00 – 15:00	49	49	53	89	41	20
15:00 – 16:00	30	31	34	56	30	15
16:00 – 17:00	15	23	33	42	49	24
17:00 – 18:00	9	13	19	25	43	21
18:00 – 19:00	12	9	7	17	40	19
19:00 – 20:00	9	7	6	13	14	7
20:00 – 21:00	13	15	18	27	2	1
21:00 – 22:00	12	14	18	26	6	3
22:00 – 23:00	3	2	1	4	4	2
23:00 – 00:00	2	2	2	4	0	0
Total	**938**	**706**	**534**	**1,288**	**634**	**306**

5.3.18 The total daily profile of the total number of trips to and from the Application Site can be seen in Table 5.12.

Table 5.12: Total operational vehicle daily arrival and departure profile (figures subject to rounding)

Time	Inbound		Outbound		Total	
	% Trips	Trips	% Trips	Trips	% Trips	Trips
00:00 – 01:00	0.1%	1	0.0%	0	0.1%	1
01:00 – 02:00	0.5%	5	0.6%	7	0.5%	12
02:00 – 03:00	0.8%	9	0.7%	8	0.8%	18
03:00 – 04:00	0.6%	7	0.5%	5	0.5%	12
04:00 – 05:00	1.8%	20	1.8%	20	1.8%	41
05:00 – 06:00	3.1%	36	1.4%	16	2.3%	52
06:00 – 07:00	7.1%	82	4.6%	53	5.9%	136
07:00 – 08:00	4.5%	52	3.9%	45	4.2%	97
08:00 – 09:00	7.2%	82	6.0%	69	6.6%	151
09:00 – 10:00	10.1%	117	8.9%	103	9.5%	219
10:00 – 11:00	10.9%	125	8.2%	94	9.5%	220
11:00 – 12:00	12.1%	140	12.6%	145	12.4%	285
12:00 – 13:00	10.6%	122	11.6%	134	11.1%	255
13:00 – 14:00	9.7%	112	9.7%	111	9.7%	223
14:00 – 15:00	6.0%	70	7.7%	88	6.9%	158
15:00 – 16:00	3.8%	44	5.0%	57	4.4%	101

Time	Inbound		Outbound		Total	
	% Trips	Trips	% Trips	Trips	% Trips	Trips
16:00 – 17:00	2.9%	34	4.8%	55	3.9%	89
17:00 – 18:00	1.1%	13	4.0%	46	2.5%	59
18:00 – 19:00	1.7%	19	2.2%	26	2.0%	45
19:00 – 20:00	1.1%	13	1.2%	14	1.2%	27
20:00 – 21:00	2.2%	26	1.5%	17	1.9%	43
21:00 – 22:00	1.4%	16	2.4%	27	1.9%	44
22:00 – 23:00	0.2%	2	0.4%	5	0.3%	7
23:00 – 00:00	0.2%	3	0.2%	3	0.2%	5
Total	**100%**	**1,151**	**100%**	**1,151**	**100%**	**2,302**

5.3.19 The total change in trips between the existing operation of the Edmonton EcoPark (Table 5.2) and completed Project (Table 5.12) is set out in Table 5.13. This difference in trips is also shown on Figure 5.1.

Table 5.13: Change in trips between existing operation at the Edmonton EcoPark and completed Project (figures subject to rounding)

Time	Inbound	Outbound	Two-way
00:00 – 01:00	0	0	0
01:00 – 02:00	1	2	3
02:00 – 03:00	2	2	4
03:00 – 04:00	2	1	3
04:00 – 05:00	-2	5	3
05:00 – 06:00	-25	2	-23
06:00 – 07:00	-29	6	-23
07:00 – 08:00	-4	11	7
08:00 – 09:00	10	12	23
09:00 – 10:00	15	21	36
10:00 – 11:00	25	19	44
11:00 – 12:00	28	24	52
12:00 – 13:00	20	6	26
13:00 – 14:00	13	8	21
14:00 – 15:00	10	4	14
15:00 – 16:00	8	-2	6
16:00 – 17:00	3	-12	-9
17:00 – 18:00	1	-13	-12
18:00 – 19:00	-1	-13	-14
19:00 – 20:00	-1	-1	-2
20:00 – 21:00	6	3	10
21:00 – 22:00	4	3	7

Time	Inbound	Outbound	Two-way
22:00 – 23:00	-1	0	-1
23:00 – 00:00	1	1	1
Total	87	87	175

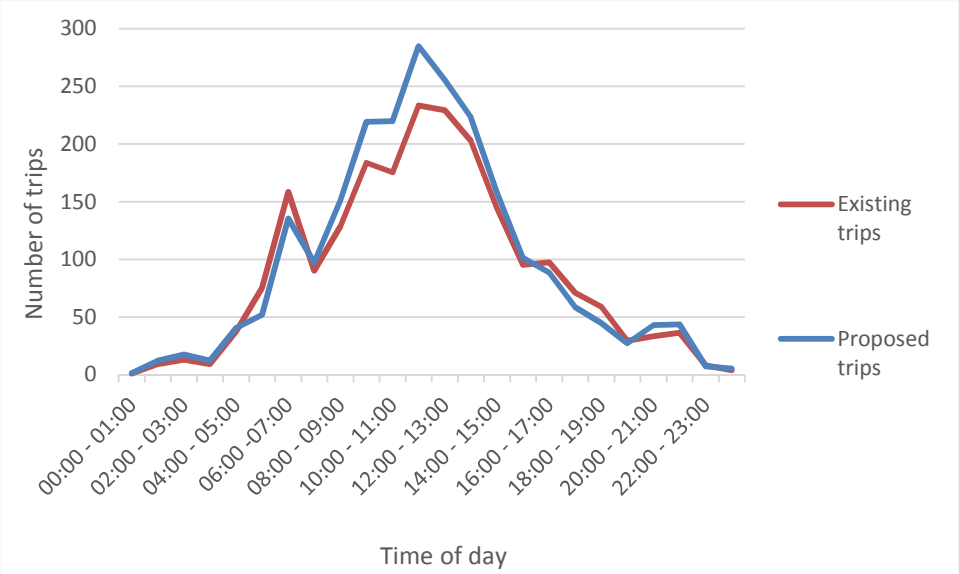

Figure 5.1 Hourly difference in vehicle trips between the existing operation at the Edmonton EcoPark and completed Project

The increase in trips between 07:00 and 16:00 will occur largely as a result of the higher level of activity associated with the RRF, predominantly associated with introduction of public access to the RRC, that results in more vehicles arriving at the Edmonton EcoPark. The decrease in trips expected between 05:00 and 07:00 and again between 17:00 and 20:00 are as a result of the reduction in the number of employees for the Project when compared with the existing operations. The times of the decrease in trips coincide with the shift change times of operational and office based employees.

5.3.20 The distribution of all additional trips generated by the Project construction and the effect of these trips on the local highway network are discussed in Section 7.

5.4 Construction

5.4.1 This section sets out the trip generation associated with the construction of the Project. The construction information used to inform this section is provided in Appendix G.

Construction vehicle generation

5.4.2 Table 5.14 sets out the anticipated construction and demolition vehicle generation for each stage of construction. The vehicles associated with the continued operation of the existing EfW facility and the operation of the RRF and EcoPark House, when completed, are also provided to show the

combined vehicle generation during the construction stages. For each stage of construction, the trips presented are for the period within that stage when construction-related trips would be at their greatest. This includes the demolition of the existing EfW facility during Stage 3.

5.4.3 Construction vehicle information has not been provided for Stage 1a but the number of daily trips is expected to be very low as construction activity will be limited to enabling works and the construction of the new site access on Lee Park Way.

5.4.4 Construction vehicle generation includes trips by construction vehicles (i.e. vehicles carrying construction materials or construction operational vehicles) only. Construction employee vehicle trip generation is set out separately.

Table 5.14: Daily vehicle generation during the construction period

Stage	Construction (materials) vehicle trips and operational vehicles during the construction period (one-way)				
	Construction trips	Existing trips	RRF/EcoPark House trips	ERF trips	Total trips
Stage 1b	83	710	0	0	793
Stage 1c	71	280	836	0	1,187
Stage 1d	9	280	836	0	1,125
Stage 2	0	140	836	80	1,056
Stage 3	80	0	836	161	1,077

5.4.5 For construction vehicle trips, vehicles will typically be spread evenly across the day between the hours of 08:00 and 18:00. A very small number of trips associated with start-up and close-down activities may occur between 07:00 and 08:00 or between 18:00 and 19:00. On occasions, trips may be undertaken outside of the core working hours to ensure that any conflict with the on-going operation of the Edmonton EcoPark is minimised. Any abnormal loads would be scheduled so that any conflicts with the peak times for operational vehicles and to avoid the highway network peak hours. This would be agreed with TfL and LB Enfield in advance and in compliance with the Code of Construction Practice (CoCP) (AD05.12).

5.4.6 The typical daily profile for construction related trips can be seen in Table 5.15 for each stage of construction.

Table 5.15: Construction (materials) traffic daily profile (figures subject to rounding)

Time	Stage 1b		Stage 1c		Stage 1d		Stage 2		Stage 3	
	In	Out	In	Out	In	Out	In	Out	In	Out
00:00 – 01:00	0	0	0	0	0	0	0	0	0	0
01:00 – 02:00	0	0	0	0	0	0	0	0	0	0
02:00 – 03:00	0	0	0	0	0	0	0	0	0	0
03:00 – 04:00	0	0	0	0	0	0	0	0	0	0
04:00 – 05:00	0	0	0	0	0	0	0	0	0	0
05:00 – 06:00	0	0	0	0	0	0	0	0	0	0
06:00 – 07:00	0	0	0	0	0	0	0	0	0	0
07:00 – 08:00	0	0	0	0	0	0	0	0	0	0
08:00 – 09:00	8	8	7	7	1	1	0	0	8	8
09:00 – 10:00	8	8	7	7	1	1	0	0	8	8
10:00 – 11:00	8	8	7	7	1	1	0	0	8	8
11:00 – 12:00	8	8	7	7	1	1	0	0	8	8
12:00 – 13:00	8	8	7	7	1	1	0	0	8	8
13:00 – 14:00	8	8	7	7	1	1	0	0	8	8
14:00 – 15:00	8	8	7	7	1	1	0	0	8	8
15:00 – 16:00	8	8	7	7	1	1	0	0	8	8
16:00 – 17:00	8	8	7	7	1	1	0	0	8	8
17:00 – 18:00	8	8	7	7	1	1	0	0	8	8
18:00 – 19:00	0	0	0	0	0	0	0	0	0	0
19:00 – 20:00	0	0	0	0	0	0	0	0	0	0
20:00 – 21:00	0	0	0	0	0	0	0	0	0	0
21:00 – 22:00	0	0	0	0	0	0	0	0	0	0
22:00 – 23:00	0	0	0	0	0	0	0	0	0	0
23:00 – 00:00	0	0	0	0	0	0	0	0	0	0
Total	**83**	**83**	**71**	**71**	**9**	**9**	**0**	**0**	**80**	**80**

5.4.7 Table 5.16 shows the typical total daily profile of trips during the construction period including other activities (both on-going and introduced as part of earlier stages of the Project) on the Application Site.

Table 5.16: Construction (materials) and operational traffic (excluding employees) daily profile during the construction period (figures subject to rounding)

Time	Stage 1b		Stage 1c		Stage 1d		Stage 2		Stage 3	
	In	Out	In	Out	In	Out	In	Out	In	Out
00:00 – 01:00	1	0	2	0	2	0	1	0	1	0
01:00 – 02:00	4	5	6	8	6	8	6	7	5	7
02:00 – 03:00	7	6	11	9	11	9	10	9	9	8
03:00 – 04:00	5	4	8	6	8	6	7	6	7	5
04:00 – 05:00	11	14	17	23	17	23	16	22	15	20
05:00 – 06:00	7	11	11	17	11	17	10	16	9	15
06:00 – 07:00	32	34	50	53	50	53	47	50	45	47
07:00 – 08:00	28	32	44	50	44	50	42	47	39	45
08:00 – 09:00	61	55	91	80	84	74	79	69	83	73
09:00 – 10:00	84	79	125	118	119	112	112	105	114	107
10:00 – 11:00	94	73	142	109	136	103	128	96	129	99
11:00 – 12:00	104	105	157	159	151	153	142	144	142	143
12:00 – 13:00	89	88	135	133	128	127	121	119	122	120
13:00 – 14:00	80	77	119	115	113	109	106	102	108	104
14:00 – 15:00	54	61	78	91	72	84	67	79	72	83
15:00 – 16:00	38	40	54	57	48	51	45	47	50	53
16:00 – 17:00	30	33	40	47	34	40	32	37	38	43
17:00 – 18:00	16	28	19	37	13	31	11	29	19	35
18:00 – 19:00	11	8	17	12	17	12	16	11	15	11
19:00 – 20:00	7	8	11	12	11	12	10	11	9	11
20:00 – 21:00	18	12	29	18	29	18	27	17	26	16
21:00 – 22:00	12	17	18	27	18	27	17	26	16	24
22:00 – 23:00	1	3	2	5	2	5	1	4	1	4
23:00 – 00:00	2	2	3	3	3	3	3	3	3	3
Total	**794**	**794**	**1,187**	**1,187**	**1,125**	**1,125**	**1,057**	**1,057**	**1,077**	**1,077**

Construction mode share

5.4.8 The anticipated construction workforce during each stage of construction is set out in Table 5.17. This sets out the number of employees expected during the period of maximum vehicular activity for each stage of construction.

Table 5.17: Construction workforce

Stage	Construction employees
Stage 1b	21
Stage 1c	17
Stage 1d	550
Stage 2	0
Stage 3	16

5.4.9 As described in Table 5.14, the construction workforce will vary depending on the stage of construction. While the workforce will also vary within each stage, the maximum workforce will be during Stage 1d and will peak at approximately 550 people for a period of between 12 and 14 months.

5.4.10 The mode share for each stage of construction has been derived with consideration of a number of factors, namely:

a. 2011 Census data for the Enfield 030 and 033 super output areas;

b. the location of the Application Site, the very low PTAL and the resulting poor accessibility to public transport;

c. the existing number of car, motorcycle and cycle trips (as obtained from the May 2013 traffic surveys);

d. the location of the Application Site adjacent to the A406 North Circular Road and the likely low mode share for walking and cycling;

e. the quantum of car parking that can be accommodated on the Application Site; and

f. the number of construction employees anticipated to be on-site during each stage of construction and the effect of this on the ability to achieve an increase in the proportion of car sharing as well as the provision of a public transport shuttle service.

5.4.11 Given the location of the Application Site and its poor accessibility to public transport, the mode share by car for construction employees is expected to be relatively high. During Stage 1b, Stage 1c and Stage 3 of construction, it is expected that up to 75 per cent of construction employees would drive to the Application Site as car sharing and public transport use would be more difficult to encourage among the smaller workforce. However, during Stage 1d when the construction workforce is much larger, it is expected that opportunities for car sharing would be much higher and that the use of shuttle buses between the Application Site and a local public transport station (e.g. Tottenham Hale) would result in a lower mode share of approximately 50 per cent by car (driver).

5.4.12 The construction employee mode share for each of the construction stages is set out in Table 5.18. As there will be very limited construction activity during Stage 2, the majority of employee trips will be operational employee trips. As such, the mode share for Stage 2 is as for the completed operational site as provided in Table 5.6.

Table 5.18: Construction employee mode share

Mode	Stage 1b, 1c and 3	Stage 1d	Stage 2
Car (as driver)	75%	50%	80%
Car (as passenger)	10%	25%	5%
Underground/rail	2%	8%	2%
Bus	7%	10%	7%
Motorcycle	1%	1%	1%
Walk	1%	1%	1%
Cycle	4%	5%	4%
Total	**100%**	**100%**	**100%**

5.4.13 The resulting number of construction employee trips by mode for each stage of construction are sets out in Table 5.19.

Table 5.19: Construction employee trips by mode for each construction stage

Mode	Stage 1b	Stage 1c	Stage 1d	Stage 2	Stage 3
Car (as driver)	16	13	275	0	12
Car (as passenger)	2	2	137	0	2
Underground/rail	0	0	44	0	0
Bus	2	1	55	0	1
Motorcycle	0	0	6	0	0
Walk	0	0	6	0	0
Cycle	1	1	27	0	1
Total	**21**	**17**	**550**	**0**	**16**

5.4.14 The total employee trips by mode for each of the construction stages, considering the trips undertaken by employees of the existing and new facilities is set out in Table 5.20.The total trips by mode provided in Table 5.20 include the construction employee trips by mode set out in Table 5.19 as well as the employee vehicle trips by mode for each of existing and proposed facilities that are operational during each stage.

Table 5.20: Employee (construction and operation) trips by mode for each construction stage

Mode	Stage 1b	Stage 1c	Stage 1d	Stage 2	Stage 3
Car (as driver)	216	186	448	148	134
Car (as passenger)	15	13	148	9	9
Underground/rail	6	4	48	4	4
Bus	19	16	70	12	11
Motorcycle	3	2	8	2	2
Walk	3	2	8	2	2
Cycle	11	9	36	7	7
Total	**273**	**232**	**766**	**160**	**136**

Construction employee vehicle trips

5.4.15 The typical daily profile for two-way vehicle trips for construction employees can be seen in Table 5.21 for each stage of construction.

Table 5.21: Construction employee traffic daily profile during the construction period (figures subject to rounding)

Time	Stage 1b		Stage 1c		Stage 1d		Stage 2		Stage 3	
	In	Out	In	Out	In	Out	In	Out	In	Out
00:00 – 01:00	0	0	0	0	0	0	0	0	0	0
01:00 – 02:00	0	0	0	0	0	0	0	0	0	0
02:00 – 03:00	0	0	0	0	0	0	0	0	0	0
03:00 – 04:00	0	0	0	0	0	0	0	0	0	0
04:00 – 05:00	0	0	0	0	0	0	0	0	0	0
05:00 – 06:00	0	0	0	0	0	0	0	0	0	0
06:00 – 07:00	2	0	1	0	28	0	0	0	1	0
07:00 – 08:00	14	0	10	0	220	0	0	0	10	0
08:00 – 09:00	2	0	1	0	28	0	0	0	1	0
09:00 – 10:00	0	0	0	0	0	0	0	0	0	0
10:00 – 11:00	0	0	0	0	0	0	0	0	0	0
11:00 – 12:00	0	0	0	0	0	0	0	0	0	0
12:00 – 13:00	0	0	0	0	0	0	0	0	0	0
13:00 – 14:00	0	0	0	0	0	0	0	0	0	0
14:00 – 15:00	0	0	0	0	0	0	0	0	0	0
15:00 – 16:00	0	0	0	0	0	0	0	0	0	0
16:00 – 17:00	0	0	0	0	0	0	0	0	0	0
17:00 – 18:00	0	2	0	1	0	28	0	0	0	1
18:00 – 19:00	0	14	0	10	0	220	0	0	0	10
19:00 – 20:00	0	2	0	1	0	28	0	0	0	1

Time	Stage 1b		Stage 1c		Stage 1d		Stage 2		Stage 3	
	In	Out	In	Out	In	Out	In	Out	In	Out
20:00 – 21:00	0	0	0	0	0	0	0	0	0	0
21:00 – 22:00	0	0	0	0	0	0	0	0	0	0
22:00 – 23:00	0	0	0	0	0	0	0	0	0	0
23:00 – 00:00	0	0	0	0	0	0	0	0	0	0
Total	**17**	**17**	**13**	**13**	**275**	**275**	**0**	**0**	**12**	**12**

5.4.16 Table 5.22 sets out the expected construction employee vehicle generation during the five stages of construction. As for the construction vehicle generation, the employee vehicle generation associated with the on-going and new waste facilities on the Application Site has also been provided.

Table 5.22: Daily construction employee vehicle trip generation during the construction period (figures subject to rounding)

Stage	Employee vehicle trips during construction (one-way)				
	Construction trips	Existing EfW facility trips	RRF/EcoPark House trips	ERF trips	Total trips
Stage 1b	16	317[22]	0	0	334
Stage 1c	13	158	91	0	263
Stage 1d	275	158	91	0	525
Stage 2	0	79	91	31	171
Stage 3	12	0	91	62	103

5.4.17 As construction will start at 08:00 and finish at 18:00 each day, construction employee trips will typically be undertaken before and after these times. While there may be some trips undertaken between 08:00 and 18:00, these are expected to be very limited and employees are not expected to leave the Application Site during the working day.

5.4.18 Table 5.23 shows the typical total employee daily vehicle trips when considering along with the other activities (both on-going and new) on the Application Site.

Table 5.23: Construction and operational employee traffic daily two-way profile (figures subject to rounding)

Time	Stage 1b		Stage 1c		Stage 1d		Stage 2		Stage 3	
	In	Out	In	Out	In	Out	In	Out	In	Out
00:00 – 01:00	0	0	0	0	0	0	0	0	0	0
01:00 – 02:00	0	0	0	0	0	0	0	0	0	0
02:00 – 03:00	0	0	0	0	0	0	0	0	0	0
03:00 – 04:00	0	0	0	0	0	0	0	0	0	0

[22] This accounts for employee and visitor trips to and from the Edmonton EcoPark and movements to and from the Application Site throughout the day (e.g. at lunch time).

Time	Stage 1b		Stage 1c		Stage 1d		Stage 2		Stage 3	
	In	Out	In	Out	In	Out	In	Out	In	Out
04:00 – 05:00	11	0	9	0	9	0	7	0	5	0
05:00 – 06:00	54	3	43	2	43	2	34	2	26	1
06:00 – 07:00	79	12	62	10	89	10	49	8	39	6
07:00 – 08:00	40	1	31	1	241	1	17	1	22	0
08:00 – 09:00	18	8	14	6	40	6	10	5	9	4
09:00 – 10:00	22	8	18	6	18	6	14	5	11	4
10:00 – 11:00	10	7	8	6	8	6	6	5	5	3
11:00 – 12:00	11	20	9	16	9	16	7	13	5	10
12:00 – 13:00	16	44	13	34	13	34	10	28	8	21
13:00 – 14:00	24	31	19	25	19	25	16	20	12	15
14:00 – 15:00	12	28	10	22	10	22	8	18	6	14
15:00 – 16:00	4	26	3	21	3	21	3	17	2	13
16:00 – 17:00	8	41	6	32	6	32	5	26	4	20
17:00 – 18:00	4	40	3	32	3	58	3	25	2	20
18:00 – 19:00	9	44	7	34	7	244	6	19	4	24
19:00 – 20:00	7	9	6	7	6	33	5	5	3	5
20:00 – 21:00	0	2	0	2	0	2	0	1	0	1
21:00 – 22:00	0	6	0	5	0	5	0	4	0	3
22:00 – 23:00	2	2	2	2	2	2	1	1	1	1
23:00 – 00:00	0	0	0	0	0	0	0	0	0	0
Total	**334**	**334**	**263**	**263**	**525**	**525**	**202**	**202**	**165**	**165**

Total construction vehicle trip generation

5.4.19 The total traffic generation during the five construction stages is outlined in Table 5.24 while the daily profile of trips can be seen in Table 5.25. This total traffic includes the construction traffic as well as the traffic associated with the existing and proposed facilities that will be operational during each stage. Table 5.25 provides the existing daily trips for comparison purposes while this is also shown on Figure 5.2.

Table 5.24: Daily total construction employee and operational vehicle trip generation (figures subject to rounding)

Stage	Total vehicle (materials, operational vehicles and employees) trips during the construction period (one-way)				
	Construction trips	Existing EfW facility trips	RRF/EcoPark House trips	ERF trips	Total trips
Stage 1b	101	1,027	0	0	1,128
Stage 1c	84	439	928	0	1,451
Stage 1d	284	439	928	0	1,651
Stage 2	0	219	928	111	1,258
Stage 3	92	0	928	223	1,242

Table 5.25: Total construction employee and operational traffic daily profile during the construction period (figures subject to rounding)

Time	Existing		Stage 1b		Stage 1c		Stage 1d		Stage 2		Stage 3	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
00:00 – 01:00	1	0	1	0	2	0	2	0	1	0	1	0
01:00 – 02:00	4	5	4	5	6	8	6	8	6	7	5	7
02:00 – 03:00	7	6	7	6	11	9	11	9	10	9	9	8
03:00 – 04:00	5	4	5	4	8	6	8	6	7	6	7	5
04:00 – 05:00	22	15	22	14	26	23	26	23	23	22	20	20
05:00 – 06:00	61	14	61	14	53	19	53	19	44	18	36	16
06:00 – 07:00	111	48	111	46	112	63	139	63	97	58	83	53
07:00 – 08:00	56	34	68	33	75	51	285	51	58	48	62	45
08:00 – 09:00	72	57	79	63	105	86	125	80	89	74	92	77
09:00 – 10:00	101	82	106	87	143	124	137	118	126	110	125	111
10:00 – 11:00	100	75	104	80	150	114	144	108	134	101	133	102
11:00 – 12:00	112	122	115	125	166	175	160	169	149	156	148	153
12:00 – 13:00	101	128	106	132	147	167	141	161	131	147	130	142
13:00 – 14:00	99	103	104	108	139	140	132	133	122	122	120	119
14:00 – 15:00	60	84	66	90	88	113	82	107	75	97	78	96
15:00 – 16:00	35	60	42	67	57	78	51	72	47	64	52	65
16:00 – 17:00	30	67	38	74	47	79	41	72	37	63	42	63
17:00 – 18:00	12	59	20	68	22	69	16	89	14	53	21	55
18:00 – 19:00	20	39	20	52	24	46	24	256	22	31	19	35
19:00 – 20:00	14	15	14	17	16	19	16	45	15	16	13	15
20:00 – 21:00	19	14	18	14	29	20	29	20	27	19	26	17
21:00 – 22:00	12	24	12	23	18	32	18	32	17	30	16	27

Time	Existing		Stage 1b		Stage 1c		Stage 1d		Stage 2		Stage 3	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
22:00 – 23:00	3	5	3	5	3	6	3	6	3	6	2	5
23:00 – 00:00	2	2	2	2	3	3	3	3	3	3	3	3
Total	**1,063**	**1,063**	**1,128**	**1,128**	**1,451**	**1,451**	**1,651**	**1,651**	**1,258**	**1,258**	**1,242**	**1,242**

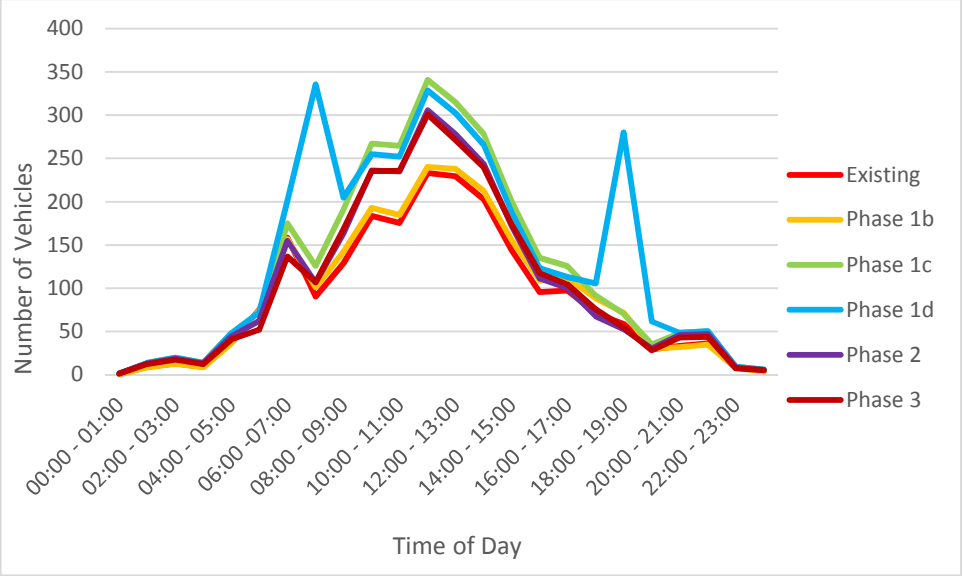

Figure 5.2 Hourly difference in vehicle trips between the existing site and the Application Site during the construction period

5.4.20 For each of the construction stages, the increases in traffic, when compared with the trips to and from the Application Site, occur for the following reasons:

a. Stage 1b: construction traffic associated with the construction of the RRF and EcoPark House along with the continued operation of the existing facilities;

b. Stage 1c: construction traffic associated with the clearance of the northern site facilities and the commencement of operation of the RRF and EcoPark House along with the continued operation of the existing EfW facility;

c. Stage 1d: construction traffic associated with the construction of the ERF along with the continued operation of the RRF and EcoPark House as well as the existing EfW facility. The peaks occurring at between 07:00 and 08:00 and between 18:00 and 19:00 are associated with construction employee trips to and from the Temporary Laydown Area. These trips will be car trips;

d. Stage 2: Limited construction traffic and the commencement of operation of the ERF along with the continued operation of the RRF and EcoPark House as well as the existing EfW facility. The use of the ERF will be gradually increased during this stage while the use of the existing EfW facility will be gradually decreased;

e. Stage 3: Construction traffic associated with the decommissioning and demolition of the existing EfW facility along with the operational traffic associated with the ERF, RRF and EcoPark House.

5.4.21 For Stages 2 and 3 between 05:00 and 07:00 and again between 16:00 and 19:00, the slight decreases in the traffic flows, when compared to the trips to and from the existing Edmonton EcoPark, are experienced due to the reduction in the number of operational employees on the Application Site.

5.4.22 The distribution of the additional trips generated by the Project during each of the construction stages as well as the effect of these trips on the local highway network are discussed in Section 7.

5.5 Cumulative schemes

Introduction

5.5.1 As well as traffic generated by the Project, trips associated with the cumulative (committed and planned) schemes have been considered. A map of cumulative schemes considered is provided in Appendix H. Trips associated with the following schemes have been considered:

a. 1 & 2 Derby Road;

b. Pegamoid Works;

c. Kedco Waste Wood Biomass Plant;

d. 1A Towpath Road;

e. FR Shadbolt & Sons; and

f. Pumping Station House.

5.5.2 The Meridian Water Masterplan has not been considered as part of the main cumulative assessment given that no detailed scheme or transport assessment has been prepared. However, a sensitivity analysis has been undertaken using a high level trip generation analysis to determine the cumulative effect of the Project when Meridian Water is considered. The programme and phasing for the construction of Meridian Water is unknown. However, it is assumed that the traffic generated by the completed scheme would be greater than that of the construction period and therefore, construction traffic associated with Meridian Water has not been considered.

5.5.3 Other developments, such as the North London (Electricity Line) Reinforcement which will not generate any operational traffic and for which construction will be completed prior to commencement of the Project have not been considered as part of the cumulative assessment. The change of use for 5 Picketts Lock from a storage/distribution facility to a waste electrical and electronic equipment de-manufacturing facility would not result in a change in the vehicle trips and therefore, it has also not been included in the cumulative assessment.

5.5.4 In addition, the transport assessments prepared for the schemes at 2, 3A and 3B Stonehill Estate, Stonehill Estate, The Triangle Site (Stonehill Estate) and 8 Eley Road indicate that there would either be no net increase

or a net decrease in traffic generation when completed. Therefore, these schemes have not been considered as part of the cumulative assessment to provide a busiest case assessment.

Cumulative scheme vehicle trip generation

Without Meridian Water

5.5.5 The trips generated by the cumulative schemes have been derived in one of two ways, namely:

a. obtaining the vehicle trip generation from a transport assessment for the relevant scheme, if one is available; or

b. undertaking a high-level trip generation analysis using TRICS® where no transport assessment has been prepared or where the transport assessment does not set out a detailed trip generation study.

The details of the trip generation are provided in Appendix G while a summary of the vehicle trips generated by the cumulative schemes is provided in Table 5.26.

Table 5.26: Cumulative scheme vehicle trip generation (without Meridian Water)

Time	In	Out	Total
07:00 - 08:00	116	54	163
08:00 - 09:00	66	58	119
09:00 - 10:00	45	47	89
10:00 - 11:00	54	45	96
11:00 - 12:00	61	74	129
12:00 - 13:00	52	57	106
13:00 - 14:00	36	48	82
14:00 - 15:00	50	55	101
15:00 - 16:00	55	56	108
16:00 - 17:00	54	49	101
17:00 - 18:00	95	60	150
18:00 - 19:00	49	113	154
Total	**731**	**714**	**1399**

With Meridian Water

5.5.6 The Meridian Water development will result in the largest increase in vehicle traffic on the local highway network. As no detailed transport assessment or transport study has been undertaken at this time, a high-level trip generation analysis has been undertaken using data obtained from the TRICS database.

5.5.7 The analysis that has been undertaken accounts for the aspirations of the Meridian Water Masterplan [23] to provide limited parking (while acknowledging PTAL of the Application Site), improvements to public

[23] LB Enfield and LDA Design, Meridian Water Masterplan, July 2013.

transport (Angel Road station and bus services) and the aim of ensuring that the Meridian Water Masterplan provide facilities that would reduce the need to travel.

5.5.8 The analysis concludes that there would be approximately 14,500 two-way vehicle trips per day (24 hours) associated with the Meridian Water Masterplan. This assumes the following:

a. a 25 per cent reduction in the residential vehicle trips made beyond the Meridian Water site to account for internal site trips;

b. a 20 per cent reduction in the commercial vehicle trips made beyond the Meridian Water site to account for internal site trips;

c. a 75 per cent reduction in the retail vehicle trips made beyond the Meridian Water site to account for internal site trips. Trips to the existing retail uses at the Angel Road Superstores, which would be included as part of the Masterplan area are included in the baseline analysis; and

d. a 50 per cent reduction in the school vehicle trips made beyond the Meridian Water site to account for internal site trips.

5.5.9 The vehicle trips generated by Meridian Water have been distributed to the local highway network using the existing distributions on the local highway network.

5.5.10 A summary of the vehicle trips generated by the cumulative schemes including Meridian Water is provided in Table 5.27.

Table 5.27: Cumulative scheme vehicle trip generation (with Meridian Water)

Time	In	Out	Total
07:00 - 08:00	441	227	687
08:00 - 09:00	569	315	879
09:00 - 10:00	627	526	1,150
10:00 - 11:00	795	588	1,381
11:00 - 12:00	678	740	1,412
12:00 - 13:00	761	738	1,496
13:00 - 14:00	682	699	1,380
14:00 - 15:00	716	678	1,391
15:00 - 16:00	828	731	1,557
16:00 - 17:00	721	917	1,637
17:00 - 18:00	861	1,035	1,892
18:00 - 19:00	317	641	950
Total	7,997	7,835	15,810

Cumulative scheme non-vehicular trip generation

Without Meridian Water

5.5.11 The two-way non-vehicular trips by mode for the cumulative schemes without Meridian Water are set out in Table 5.28.

Table 5.28: Cumulative scheme non-vehicular trips by mode (without Meridian Water)

Time	Underground/rail	Bus	Walk	Cycle
07:00 - 08:00	5	6	6	9
08:00 - 09:00	7	3	10	10
09:00 - 10:00	30	5	9	6
10:00 - 11:00	11	2	4	2
11:00 - 12:00	4	5	9	11
12:00 - 13:00	7	3	9	0
13:00 - 14:00	3	4	7	2
14:00 - 15:00	3	6	6	3
15:00 - 16:00	7	4	5	15
16:00 - 17:00	9	3	19	5
17:00 - 18:00	16	5	12	9
18:00 - 19:00	10	2	5	0
Total	**111**	**49**	**100**	**72**

With Meridian Water

5.5.12 The two-way non-vehicular trips by mode for the cumulative schemes with Meridian Water are set out in Table 5.29. The non-vehicular trips for Meridian Water have been adjusted to account for internal development trips similarly to the vehicular trips (as described in paragraph 5.5.8).

Table 5.29: Cumulative scheme non-vehicular trips by mode (with Meridian Water)

Time	Underground/rail	Bus	Walk	Cycle
07:00 - 08:00	183	80	504	46
08:00 - 09:00	365	829	1196	362
09:00 - 10:00	411	561	828	226
10:00 - 11:00	109	235	512	51
11:00 - 12:00	45	192	482	43
12:00 - 13:00	65	196	1323	32
13:00 - 14:00	38	257	1441	18
14:00 - 15:00	50	290	692	42
15:00 - 16:00	92	970	1593	497
16:00 - 17:00	247	437	586	73
17:00 - 18:00	408	138	582	108
18:00 - 19:00	118	83	503	49
Total	**2,130**	**4,267**	**10,245**	**1,545**

6 Effect of the Project

6.1 Introduction

6.1.1 This Section outlines the effect of the Project on the local transport network including local highways and the public transport network. The effect of the Project has also been considered in conjunction with the cumulative (committed and planned) schemes.

6.2 Local highway network

Scope of assessment

6.2.1 The assessment of the effects on the local highway network involved an analysis of the construction and operational traffic flows generated by the Project. A detailed assessment of the junctions in the immediate vicinity, of the Application Site, namely the Cooks Ferry Roundabout and the junction of the A1055 Meridian Way, has been undertaken. However, as required by the Edmonton EcoPark SPD, consideration has also been given to the effect of the Project on the following junctions:

a. A406 North Circular Road junction with Montagu Road;

b. A1055 Meridian Way junction with Conduit Lane;

c. A406 North Circular Road junction with A1010 Fore Street; and

d. A406 North Circular Road junction with A10 Great Cambridge Road.

Assessment scenarios

6.2.2 The assessment of the local highway network has been carried out for the following scenarios:

a. Stage 1d, which represents the busiest case scenario (as a result of the number of construction employee trips) for Stage 1 of the construction period, on a future baseline of 2024;

b. Stage 2 on a future baseline of 2025;

c. Stage 3 on a future baseline of 2027; and

d. Stage 4 (the completed and operational Project) on a future baseline of 2028.

Traffic Growth

6.2.3 Future year traffic growth has been applied to the baseline traffic flows to develop the future baseline scenario. The growth factors have been derived from TEMPRO (Trip End Model Presentation Program), an industry standard programme for the prediction of growth factors. The growth factors for each of the future baseline years outlined in Paragraph 6.2.22 are provided in Table 6.1.

Table 6.1: Future year growth factors from a 2013 base year

Year	Growth Factor
2024	1.093
2025	1.102
2027	1.116
2028	1.123

Traffic distribution

6.2.4 The following assumptions have been made in order to distribute the traffic generated by the Project to the local highway network:

a. waste deliveries to the new ERF and RRF have been distributed to the local highway network using the existing distribution of waste trips;

b. any rejects for which an outlet cannot be found will go to landfill in Buckinghamshire or Bedfordshire and travel west along the A406 North Circular Road;

c. IBA and air pollution control residue trips will be distributed evenly in an east and west direction along the A406 North Circular Road;

d. all employees will arrive with an even east/west distribution with trips distributed from the A406 North Circular Road according to the likely destinations within and outside London; and

e. construction trips will be undertaken with an even east/west distribution.

6.2.5 The methodology for distributing traffic to the local highway network is the same as that agreed with LB Enfield and TfL as part of the traffic analysis undertaken to support the Edmonton EcoPark SPD.

Traffic flows

6.2.6 This section sets out the increases in traffic flows for each relevant link on the local highway network. In general, increases of less than 10 per cent on an individual link are deemed to have a negligible effect on the operation of that link and on the local highway network in general. For links where there is spare capacity, increases greater than 10 per cent may also be considered negligible.

Stage 1d

6.2.7 The additional traffic flows on the local highway network are shown in Table 6.2, Table 6.3 and Table 6.4 for Stage 1d. The percentage increases has been calculated against the future baseline. The total flow has been adjusted to account for the fact that the baseline flows include the trips generated by the existing uses at the Edmonton EcoPark.

Table 6.2: Stage 1d two-way traffic flow changes – AM peak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	539	104	643	19.4%
Walthamstow Avenue	1,598	1,747	19	1,766	1.1%
A406 east of Cooks Ferry Roundabout	5,066	5,537	38	5,575	0.7%
A406 WB off-slip at Cooks Ferry Roundabout	849	928	19	947	2.1%
Argon Road at Cooks Ferry Roundabout	293	320	0	320	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	549	33	582	6.1%
A406 EB off-slip at Cooks Ferry Roundabout	453	495	33	528	6.7%
A406 west of Cooks Ferry Roundabout	6,260	6,842	67	6,909	1.0%
Montagu Road/Conduit Lane	1,528	1,670	6	1,676	0.4%
A1055 Meridian Way north of A406	1,792	1,959	3	1,962	0.2%
Ardra Road	1,814	1,983	1	1984	0.1%
A1055 Meridian Way south of A406	2,203	2,408	3	2,411	0.1%
A406 WB off-slip at A1010 Fore Street	782	855	5	860	0.6%
A406 WB on-slip at A1010 Fore Street	442	483	0	483	0.0%
A406 EB off-slip at A1010 Fore Street	740	809	0	809	0.0%
A406 EB on-slip at A1010 Fore Street	521	569	6	575	0.9%
A1010 Fore Street north of A406	1,459	1,595	3	1,598	0.2%
A1010 Fore Street south of A406	1,320	1,443	7	1,450	0.5%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,339	15	1,354	1.1%
A406 WB on-slip at A10 Great Cambridge Road	775	847	0	847	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,440	0	1,440	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,319	8	2,327	0.3%
A10 Great Cambridge Road north of A406	4,056	4,433	7	4,440	0.1%
A10 Great Cambridge Road south of A406	3,056	3,340	9	3,349	0.3%

Table 6.3: Stage 1d two-way traffic flow changes – interpeak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
Interpeak hour (11:00 – 12:00)					
Advent Way	603	659	92	751	13.9%
Walthamstow Avenue	1,753	1,916	11	1,927	0.6%
A406 east of Cooks Ferry Roundabout	5,300	5,793	21	5,814	0.4%
A406 WB off-slip at Cooks Ferry Roundabout	818	894	11	905	1.2%
Argon Road at Cooks Ferry Roundabout	688	752	0	752	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	410	35	445	8.6%
A406 EB off-slip at Cooks Ferry Roundabout	598	654	35	689	5.4%

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
A406 west of Cooks Ferry Roundabout	4,164	4,551	71	4,622	1.6%
Montagu Road/Conduit Lane	1,264	1,382	1	1,383	0.1%
A1055 Meridian Way north of A406	1,634	1,786	1	1,787	0.0%
Ardra Road	1,454	1,589	1	1,590	0.1%
A1055 Meridian Way south of A406	2,073	2,266	1	2,267	0.0%
A406 WB off-slip at A1010 Fore Street	526	575	4	579	0.8%
A406 WB on-slip at A1010 Fore Street	511	559	0	559	0.0%
A406 EB off-slip at A1010 Fore Street	774	846	0	846	0.0%
A406 EB on-slip at A1010 Fore Street	614	671	4	675	0.6%
A1010 Fore Street north of A406	1,212	1,325	0	1,325	0.1%
A1010 Fore Street south of A406	1,171	1,280	8	1,288	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,017	12	1,029	1.3%
A406 WB on-slip at A10 Great Cambridge Road	476	520	0	520	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	980	0	980	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	1,960	6	1,966	0.3%
A10 Great Cambridge Road north of A406	3,250	3,552	3	3,555	0.1%
A10 Great Cambridge Road south of A406	2,509	2,742	11	2,753	0.4%

Table 6.4: Stage 1d two-way traffic flow changes – PM peak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	845	47	892	5.6%
Walthamstow Avenue	2,439	2,666	11	2,677	0.4%
A406 east of Cooks Ferry Roundabout	7,088	7,747	23	7,770	0.3%
A406 WB off-slip at Cooks Ferry Roundabout	872	953	11	964	1.2%
Argon Road at Cooks Ferry Roundabout	842	920	0	920	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	496	13	509	2.5%
A406 EB off-slip at Cooks Ferry Roundabout	558	610	12	622	2.0%
A406 west of Cooks Ferry Roundabout	5,568	6,086	25	6,111	0.4%
Montagu Road/Conduit Lane	1,379	1,507	5	1,512	0.3%
A1055 Meridian Way north of A406	1,717	1,877	2	1,879	0.1%
Ardra Road	1,692	1,849	1	1,850	0.1%
A1055 Meridian Way south of A406	2,655	2,902	3	2,905	0.1%
A406 WB off-slip at A1010 Fore Street	762	833	3	836	0.3%
A406 WB on-slip at A1010 Fore Street	478	522	0	552	0.0%
A406 EB off-slip at A1010 Fore Street	684	748	0	748	0.0%
A406 EB on-slip at A1010 Fore Street	677	740	3	743	0.4%

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
A1010 Fore Street north of A406	1,281	1,400	3	1,403	0.2%
A1010 Fore Street south of A406	1,097	1,199	3	1,202	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,643	7	1,650	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	565	0	565	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,196	0	1,196	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,836	4	2,840	0.1%
A10 Great Cambridge Road north of A406	4,041	4,417	4	4,421	0.1%
A10 Great Cambridge Road south of A406	2,792	3,052	3	3,055	0.1%

6.2.8 The traffic flow assessment for Stage 1d shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access on Advent Way as well as for public/employee traffic using Lee Park Way. The increases for the AM peak hour and interpeak hour would be 19.4 per cent and 13.9 per cent respectively. While this is above the 10 per cent negligible effect threshold, as the traffic flows are already low on Advent Way, there will be adequate spare capacity on the link to accommodate this increase without a significant impact.

6.2.9 The increases in traffic on the other links during Stage 1d would each be less than 10 per cent and have a negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

6.2.10 The increases in traffic have also be considered against the existing baseline to determine the effect of the Project should no background growth occur. When compared with the existing baseline, the traffic flow increases on Advent Way during Stage 1d would be 21.1 per cent and 15 per cent for the AM peak hour and interpeak hours respectively. Again while this is above the 10 per cent negligible effect threshold this is not a significant increase when compared to the future baseline increase. The increase for the other links would individually be less than 10 per cent and therefore have a negligible effect when compared with the existing baseline.

6.2.11 In order to ensure that the effect of the traffic flows generated during Stage 1d is kept to a minimum, a Construction Logistics Plan (CLP) will be prepared prior to commencement of construction. This will set out details of the routes to be used and the timings of construction deliveries.

6.2.12 Together with the CLP, the Construction Travel Plan and CoCP (AD05.12) will work to ensure that the effect of construction employees and construction materials traffic travelling to and from the Application Site is minimised.

Stage 2

6.2.13 The additional traffic flows on the local highway network are shown in Table 6.5, Table 6.6 and Table 6.7 for Stage 2. The percentage increase has been calculated against the future baseline. The total flow has been adjusted to

account for the fact that the baseline flows include the trips generated by the existing uses on the Application Site.

Table 6.5: Stage 2 two-way traffic flow changes – AM peak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
AM peak hour (08:00 – 09:00)					
Advent Way	493	543	28	570	5.1%
Walthamstow Avenue	1,598	1,759	0	1,760	0.0%
A406 east of Cooks Ferry Roundabout	5,066	5,578	2	5,579	0.0%
A406 WB off-slip at Cooks Ferry Roundabout	849	935	1	935	0.1%
Argon Road at Cooks Ferry Roundabout	293	323	0	323	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	553	13	566	2.4%
A406 EB off-slip at Cooks Ferry Roundabout	453	499	13	512	2.6%
A406 west of Cooks Ferry Roundabout	6,260	6,892	26	6,918	0.4%
Montagu Road/Conduit Lane	1,528	1,682	6	1,688	0.4%
A1055 Meridian Way north of A406	1,792	1,973	-1	1,973	0.0%
Ardra Road	1,814	1,997	1	1,998	0.1%
A1055 Meridian Way south of A406	2,203	2,426	0	2,426	0.0%
A406 WB off-slip at A1010 Fore Street	782	861	17	878	2.0%
A406 WB on-slip at A1010 Fore Street	442	487	0	487	0.0%
A406 EB off-slip at A1010 Fore Street	740	815	0	815	0.0%
A406 EB on-slip at A1010 Fore Street	521	574	17	591	3.0%
A1010 Fore Street north of A406	1,459	1,606	-1	1,606	0.0%
A1010 Fore Street south of A406	1,320	1,453	3	1,456	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,349	19	1,368	1.4%
A406 WB on-slip at A10 Great Cambridge Road	775	853	0	853	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,450	0	1,450	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,336	25	2,361	1.0%
A10 Great Cambridge Road north of A406	4,056	4,466	-1	4,464	0.0%
A10 Great Cambridge Road south of A406	3,056	3,365	4	3,369	0.1%

Table 6.6: Stage 2 two-way traffic flow changes – interpeak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	609	58	667	9.6%
Walthamstow Avenue	1,753	1,916	4	1,920	0.2%
A406 east of Cooks Ferry Roundabout	5,300	5,793	51	5,844	0.9%
A406 WB off-slip at Cooks Ferry Roundabout	818	894	4	898	0.4%
Argon Road at Cooks Ferry Roundabout	688	752	0	752	0.0%

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
A406 WB on-slip at Cooks Ferry Roundabout	375	410	25	435	6.2%
A406 EB off-slip at Cooks Ferry Roundabout	598	654	25	679	3.9%
A406 west of Cooks Ferry Roundabout	4,164	4,551	21	4,572	0.4%
Montagu Road/Conduit Lane	1,264	1,382	1	1,383	0.1%
A1055 Meridian Way north of A406	1,634	1,786	0	1,786	0.0%
Ardra Road	1,454	1,589	1	1,590	0.1%
A1055 Meridian Way south of A406	2,073	2,266	0	2,266	0.0%
A406 WB off-slip at A1010 Fore Street	526	575	16	591	2.7%
A406 WB on-slip at A1010 Fore Street	511	559	0	559	0.0%
A406 EB off-slip at A1010 Fore Street	774	846	0	846	0.0%
A406 EB on-slip at A1010 Fore Street	614	671	16	687	2.3%
A1010 Fore Street north of A406	1,212	1,325	-1	1,324	0.0%
A1010 Fore Street south of A406	1,171	1,280	6	1,286	0.4%
A406 WB off-slip at A10 Great Cambridge Road	930	1,017	22	1,039	2.2%
A406 WB on-slip at A10 Great Cambridge Road	476	520	0	520	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	980	0	980	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	1,960	22	1,982	1.1%
A10 Great Cambridge Road north of A406	3,250	3,552	-1	3,551	0.0%
A10 Great Cambridge Road south of A406	2,509	2,742	8	2,750	0.3%

Table 6.7: Stage 2 two-way traffic flow changes – PM peak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	851	-25	827	-2.9%
Walthamstow Avenue	2,439	2,687	-7	2,680	-0.3%
A406 east of Cooks Ferry Roundabout	7,088	7,807	-13	7,795	-0.2%
A406 WB off-slip at Cooks Ferry Roundabout	872	961	-7	954	-0.7%
Argon Road at Cooks Ferry Roundabout	842	927	0	927	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	500	-6	494	-1.1%
A406 EB off-slip at Cooks Ferry Roundabout	558	615	-6	609	-0.9%
A406 west of Cooks Ferry Roundabout	5,568	6,133	-11	6,122	-0.2%
Montagu Road/Conduit Lane	1,379	1,519	3	1,522	0.2%
A1055 Meridian Way north of A406	1,717	1,891	-1	1,891	0.0%
Ardra Road	1,692	1,864	1	1,865	0.1%
A1055 Meridian Way south of A406	2,655	2,924	0	2,924	0.0%
A406 WB off-slip at A1010 Fore Street	762	839	8	847	1.0%
A406 WB on-slip at A1010 Fore Street	478	527	0	527	0.0%

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
A406 EB off-slip at A1010 Fore Street	684	753	0	753	0.0%
A406 EB on-slip at A1010 Fore Street	677	746	8	754	1.1%
A1010 Fore Street north of A406	1,281	1,411	-1	1,410	-0.1%
A1010 Fore Street south of A406	1,097	1,208	0	1,208	0.0%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,656	1	1,657	0.1%
A406 WB on-slip at A10 Great Cambridge Road	517	569	0	569	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,205	0	1,205	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,858	8	2,867	0.3%
A10 Great Cambridge Road north of A406	4,041	4,451	-4	4,447	-0.1%
A10 Great Cambridge Road south of A406	2,792	3,075	0	3,075	0.0%

6.2.14 The traffic flow assessment for Stage 2 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. However, as the highest increase for Stage 2 would be 9.6 per cent during the interpeak hour, i.e. less than 10 per cent, the increase would have a negligible effect on the operation of Advent Way.

6.2.15 The increases in traffic on the other links during Stage 2 would each be less than 10 per cent and therefore of negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

6.2.16 The increases in traffic have also be considered against the existing baseline to determine the effect of the Project should no background growth occur. When compared with the existing baseline, the traffic flow increases on all links, including Advent Way, would remain below 10 per cent. The increase on Advent Way during the interpeak hour would remain at 9.6 per cent during the interpeak hour.

Stage 3

6.2.17 The additional traffic flows on the local highway network are shown in Table 6.8, Table 6.9 and Table 6.10 for Stage 3. The percentage increase has been calculated against the future baseline. The total flow has been adjusted to account for the fact that the baseline flows include the trips generated by the existing uses on the Application Site.

Table 6.8: Stage 3 two-way traffic flow changes – AM peak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
AM peak hour (08:00 – 09:00)					
Advent Way	493	550	28	578	5.0%
Walthamstow Avenue	1,598	1,784	3	1,787	0.1%
A406 east of Cooks Ferry Roundabout	5,066	5,656	5	5,661	0.1%

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
A406 WB off-slip at Cooks Ferry Roundabout	849	948	2	950	0.3%
Argon Road at Cooks Ferry Roundabout	293	327	0	327	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	560	13	573	2.3%
A406 EB off-slip at Cooks Ferry Roundabout	453	506	13	519	2.5%
A406 west of Cooks Ferry Roundabout	6,260	6,989	26	7,015	0.4%
Montagu Road/Conduit Lane	1,528	1,706	1	1,707	0.1%
A1055 Meridian Way north of A406	1,792	2,001	-1	2,000	0.0%
Ardra Road	1,814	2,025	1	2,026	0.0%
A1055 Meridian Way south of A406	2,203	2,460	0	2,460	0.0%
A406 WB off-slip at A1010 Fore Street	782	873	21	894	2.4%
A406 WB on-slip at A1010 Fore Street	442	493	0	493	0.0%
A406 EB off-slip at A1010 Fore Street	740	826	0	826	0.0%
A406 EB on-slip at A1010 Fore Street	521	582	21	603	3.7%
A1010 Fore Street north of A406	1,459	1,629	0	1,629	0.0%
A1010 Fore Street south of A406	1,320	1,474	3	1,477	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,368	5	1,373	0.4%
A406 WB on-slip at A10 Great Cambridge Road	775	865	0	865	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,470	0	1,470	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,369	28	2,397	1.2%
A10 Great Cambridge Road north of A406	4,056	4,528	-1	4,527	0.0%
A10 Great Cambridge Road south of A406	3,056	3,412	4	3,416	0.1%

Table 6.9: Stage 3 two-way traffic flow changes – interpeak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
Interpeak hour (11:00 – 12:00)					
Advent Way	603	673	59	732	8.7%
Walthamstow Avenue	1,753	1,957	3	1,960	0.1%
A406 east of Cooks Ferry Roundabout	5,300	5,917	5	5,922	0.1%
A406 WB off-slip at Cooks Ferry Roundabout	818	913	3	916	0.3%
Argon Road at Cooks Ferry Roundabout	688	768	0	768	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	419	20	439	4.9%
A406 EB off-slip at Cooks Ferry Roundabout	598	668	20	688	3.0%
A406 west of Cooks Ferry Roundabout	4,164	4,649	41	4,690	0.9%
Montagu Road/Conduit Lane	1,264	1,411	1	1,412	0.0%
A1055 Meridian Way north of A406	1,634	1,824	0	1,824	0.0%
Ardra Road	1,454	1,623	1	1,624	0.1%
A1055 Meridian Way south of A406	2,073	2,314	1	2,315	0.0%

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
A406 WB off-slip at A1010 Fore Street	526	587	23	610	3.9%
A406 WB on-slip at A1010 Fore Street	511	571	0	571	0.0%
A406 EB off-slip at A1010 Fore Street	774	864	0	864	0.0%
A406 EB on-slip at A1010 Fore Street	614	686	23	709	3.4%
A1010 Fore Street north of A406	1,212	1,353	0	1,353	0.0%
A1010 Fore Street south of A406	1,171	1,307	6	1,313	0.4%
A406 WB off-slip at A10 Great Cambridge Road	930	1,038	10	1,048	0.9%
A406 WB on-slip at A10 Great Cambridge Road	476	531	0	531	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	1,001	0	1,001	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	2,002	30	2,032	1.5%
A10 Great Cambridge Road north of A406	3,250	3,628	-1	3,627	0.0%
A10 Great Cambridge Road south of A406	2,509	2,801	8	2,809	0.3%

Table 6.10: Stage 3 two-way traffic flow changes – PM peak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	863	-25	838	-2.9%
Walthamstow Avenue	2,439	2,723	-6	2,717	-0.2%
A406 east of Cooks Ferry Roundabout	7,088	7,913	-11	7,902	-0.1%
A406 WB off-slip at Cooks Ferry Roundabout	872	974	-7	967	-0.6%
Argon Road at Cooks Ferry Roundabout	842	940	0	940	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	507	-6	501	-1.1%
A406 EB off-slip at Cooks Ferry Roundabout	558	623	-6	617	-0.9%
A406 west of Cooks Ferry Roundabout	5,568	6,216	-12	6,204	-0.2%
Montagu Road/Conduit Lane	1,379	1,540	-2	1,538	-0.1%
A1055 Meridian Way north of A406	1,717	1,917	-1	1,916	0.0%
Ardra Road	1,692	1,889	1	1,890	0.1%
A1055 Meridian Way south of A406	2,655	2,964	0	2,964	0.0%
A406 WB off-slip at A1010 Fore Street	762	851	7	858	0.9%
A406 WB on-slip at A1010 Fore Street	478	534	0	534	0.0%
A406 EB off-slip at A1010 Fore Street	684	764	0	764	0.0%
A406 EB on-slip at A1010 Fore Street	677	756	7	763	1.0%
A1010 Fore Street north of A406	1,281	1,430	-1	1,429	-0.1%
A1010 Fore Street south of A406	1,097	1,225	0	1,225	0.0%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,678	-10	1,668	-0.6%
A406 WB on-slip at A10 Great Cambridge Road	517	577	0	577	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,221	0	1221	0.0%

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,897	3	2,900	0.1%
A10 Great Cambridge Road north of A406	4,041	4,512	-4	4,508	-0.1%
A10 Great Cambridge Road south of A406	2,792	3,117	0	3,117	0.0%

6.2.18 The traffic flow assessment for Stage 3 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. However, as the highest increase on Advent Way would be 8.7 per cent during the interpeak hour, i.e. less than 10 per cent this would have a negligible effect on the operation of Advent Way.

6.2.19 The increase in traffic on the other links would each be less than 10 per cent and of negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

6.2.20 During the PM peak hour, some of the traffic flows show a decrease on the future baseline traffic flows. This is due to the fact that the number of employees associated with future operations at the Edmonton EcoPark is less than the number of employees associated with the existing operations.

6.2.21 The increases in traffic have also be considered against the existing baseline to determine the effect of the Project should no background growth occur. When compared with the existing baseline, the increase in the traffic flows on Advent Way during the AM peak hour would be 9.8 per cent during the interpeak hour, which is still below 10 per cent and therefore of negligible effect on the operation of Advent Way. The traffic flow increases on all other links would also be negligible and remain below 10 per cent.

Stage 4

6.2.22 The additional traffic flows on the local highway network are shown in Table 6.11, Table 6.12 and Table 6.13 for Stage 4. The percentage increase has been calculated against the future baseline. The total flow has been adjusted to account for the fact that the baseline flows include the trips generated by the existing uses on the Application Site.

Table 6.11: Stage 4 two-way traffic flow changes – AM peak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	554	27	581	5.0%
Walthamstow Avenue	1,598	1,794	-2	1,792	-0.2%
A406 east of Cooks Ferry Roundabout	5,066	5,689	-6	5,683	-0.1%
A406 WB off-slip at Cooks Ferry Roundabout	849	953	-2	951	-0.3%
Argon Road at Cooks Ferry Roundabout	293	329	0	329	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	564	7	571	1.4%
A406 EB off-slip at Cooks Ferry Roundabout	453	509	7	516	1.5%

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
A406 west of Cooks Ferry Roundabout	6,260	7,030	15	7,045	0.2%
Montagu Road/Conduit Lane	1,528	1,716	0	1,716	0.0%
A1055 Meridian Way north of A406	1,792	2,012	0	2,012	0.0%
Ardra Road	1,814	2,025	1	2,026	0.0%
A1055 Meridian Way south of A406	2,203	2,474	0	2,474	0.0%
A406 WB off-slip at A1010 Fore Street	782	878	25	903	2.9%
A406 WB on-slip at A1010 Fore Street	442	496	0	496	0.0%
A406 EB off-slip at A1010 Fore Street	740	831	0	831	0.0%
A406 EB on-slip at A1010 Fore Street	521	585	25	610	4.3%
A1010 Fore Street north of A406	1,459	1,638	0	1,638	0.0%
A1010 Fore Street south of A406	1,320	1,482	3	1,485	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,376	4	1,380	0.3%
A406 WB on-slip at A10 Great Cambridge Road	775	870	0	870	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,479	0	1479	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,383	29	2,412	1.2%
A10 Great Cambridge Road north of A406	4,056	4,528	-1	4,527	0.0%
A10 Great Cambridge Road south of A406	3,056	3,432	4	3,436	0.1%

Table 6.12: Stage 4 two-way traffic flow changes – interpeak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	677	58	735	8.6%
Walthamstow Avenue	1,753	1,968	-1	1,967	0.1%
A406 east of Cooks Ferry Roundabout	5,300	5,952	-3	5,949	0.1%
A406 WB off-slip at Cooks Ferry Roundabout	818	919	-1	917	0.3%
Argon Road at Cooks Ferry Roundabout	688	773	0	773	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	421	16	437	4.9%
A406 EB off-slip at Cooks Ferry Roundabout	598	672	16	688	3.0%
A406 west of Cooks Ferry Roundabout	4,164	4,676	33	4,709	0.9%
Montagu Road/Conduit Lane	1,264	1,419	-1	1,418	0.0%
A1055 Meridian Way north of A406	1,634	1,835	0	1,835	0.0%
Ardra Road	1,454	1,623	1	1,624	0.1%
A1055 Meridian Way south of A406	2,073	2,328	0	2,328	0.0%
A406 WB off-slip at A1010 Fore Street	526	591	28	619	3.9%
A406 WB on-slip at A1010 Fore Street	511	574	0	574	0.0%
A406 EB off-slip at A1010 Fore Street	774	869	0	869	0.0%
A406 EB on-slip at A1010 Fore Street	614	689	28	718	3.4%

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
A1010 Fore Street north of A406	1,212	1,361	0	1,361	0.0%
A1010 Fore Street south of A406	1,171	1,315	6	1,321	0.4%
A406 WB off-slip at A10 Great Cambridge Road	930	1,044	10	1,054	0.9%
A406 WB on-slip at A10 Great Cambridge Road	476	535	0	535	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	1,007	0	1,007	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	2,013	32	2,046	1.5%
A10 Great Cambridge Road north of A406	3,250	3,650	-1	3,648	0.0%
A10 Great Cambridge Road south of A406	2,509	2,817	8	2,825	0.3%

Table 6.13: Stage 4 two-way traffic flow changes – PM peak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	868	-25	843	-2.8%
Walthamstow Avenue	2,439	2,739	-10	2,729	-0.4%
A406 east of Cooks Ferry Roundabout	7,088	7,959	-20	7,939	-0.3%
A406 WB off-slip at Cooks Ferry Roundabout	872	979	-10	969	-1.1%
Argon Road at Cooks Ferry Roundabout	842	946	0	946	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	510	-10	500	-1.9%
A406 EB off-slip at Cooks Ferry Roundabout	558	627	-10	617	-1.5%
A406 west of Cooks Ferry Roundabout	5,568	6,252	-19	6,233	-0.3%
Montagu Road/Conduit Lane	1,379	1,549	-4	1,545	-0.2%
A1055 Meridian Way north of A406	1,717	1,928	-1	1,927	0.0%
Ardra Road	1,692	1,889	1	1,890	0.1%
A1055 Meridian Way south of A406	2,655	2,981	0	2,981	0.0%
A406 WB off-slip at A1010 Fore Street	762	856	7	863	0.8%
A406 WB on-slip at A1010 Fore Street	478	537	0	537	0.0%
A406 EB off-slip at A1010 Fore Street	684	768	0	768	0.0%
A406 EB on-slip at A1010 Fore Street	677	760	7	767	0.9%
A1010 Fore Street north of A406	1,281	1,438	0	1,438	-0.1%
A1010 Fore Street south of A406	1,097	1,232	0	1,232	0.0%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,688	-19	1,669	-1.1%
A406 WB on-slip at A10 Great Cambridge Road	517	581	0	581	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,228	0	1228	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,914	-4	2,910	-0.2%
A10 Great Cambridge Road north of A406	4,041	4,538	-4	4,534	-0.1%
A10 Great Cambridge Road south of A406	2,792	3,135	0	3,135	0.0%

6.2.23 The traffic flow assessment for Stage 4 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. The highest increase in traffic for Stage 4 would be 8.6 per cent on Advent Way during the AM peak hour, i.e. less than 10 per cent and therefore have a negligible effect on the operation of Advent Way.

6.2.24 The increase in traffic during Stage 4 on the other links would each be less than 10 per cent and of negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

6.2.25 During the PM peak hour, some of the traffic flows show a decrease on the future baseline traffic flows. This is due to the fact that the number of employees associated with future operations at the Edmonton EcoPark is less than the number of employees associated with the existing operations.

6.2.26 The increases in traffic have also been considered against the existing baseline to determine the effect of the Project should no background growth occur. When compared with the existing baseline, the increase in the traffic flows on Advent Way during the AM peak hour would be 9.6 per cent during the interpeak hour, which is still below 10 per cent. The traffic flow increases on all links would also remain below 10 per cent.

Cooks Ferry Roundabout and A1055 Meridian Way/Ardra Road signalised junction capacity assessment

Stage 1d

Cooks Ferry Roundabout capacity assessment

6.2.27 The capacity assessment for Stage 1d has been undertaken for the Cooks Ferry Roundabout and for the signalised junction of the A1055 Meridian Way with Ardra Road. The analysis has been undertaken and compared with the future baseline traffic flows to determine any effect of the Project on capacity at the two junctions.

6.2.28 The results of the assessment of the Cooks Ferry Roundabout are presented in Table 6.14. The MMQ results are presented in PCUs.

Table 6.14: Stage 1d capacity analysis of Cooks Ferry Roundabout

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		RFC	MMQ	RFC	MMQ	RFC	MMQ
Future baseline	Advent Way	0.10	0	0.35	1	0.90	6
	Walthamstow Avenue	0.31	0	0.22	0	0.19	0
	A406 westbound off-slip	0.46	1	0.38	1	0.32	0
	Argon Road	0.17	0	0.33	1	0.48	1
	A406 eastbound off-slip	0.33	1	0.58	2	0.77	3
Stage 1d	Advent Way	0.13	0	0.41	1	0.91	6
	Walthamstow Avenue	0.33	1	0.23	0	0.19	0
	A406 westbound off-slip	0.49	1	0.40	1	0.32	1

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		RFC	MMQ	RFC	MMQ	RFC	MMQ
	Argon Road	0.18	0	0.34	1	0.49	1
	A406 eastbound off-slip	0.36	1	0.63	2	0.80	4

6.2.29 The results of the capacity analysis show that at the junction the additional traffic flows would have a very minor effect on the operation of the Cooks Ferry Roundabout with some very slight increase in the RFC and MMQs when compared with the future baseline which includes background traffic growth. This is deemed to be not significant.

6.2.30 The capacity assessment has also been undertaken against the existing baseline to determine the effect of the Project should no background growth occur. For the PM peak hour, the additional traffic flows generated by the Project have been added to the existing baseline traffic flows and modelled to determine the effect of the Project if no background traffic growth were to occur. The results of this analysis show that the RFC on the Advent Way approach to the junction would be 0.90 which would be an increase from 0.87 (provided in Table 3.1). This increase of 0.03 in the RFC is deemed to be not significant.

6.2.31 As there is adequate spare capacity on all approaches to the junction during the AM and interpeak hours for the future baseline (with background traffic growth) and Stage 1d scenarios, it is concluded that the junction would operate with spare capacity if the additional traffic flows generated by the Project were modelled on the existing baseline flows with no background traffic growth applied.

A1055 Meridian Way/Ardra Road signalised junction capacity assessment

6.2.32 The results of the assessment of the signalised junction of A1055 Meridian Way with Ardra Road are presented in Table 6.15. The MMQ results are presented in PCUs.

Table 6.15: Stage 1d capacity analysis of the signalised junction of A1055 Meridian Way with Ardra Road

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		DoS	MMQ	DoS	MMQ	DoS	MMQ
Future baseline	A1055 Meridian Way north	106.0%	79	66.3%	14	83.9%	24
	Ardra Road	62.0%	3	62.8%	3	74.7%	3
	A1055 Meridian Way south	66.3%	13	61.0%	11	66.0%	13
Stage 2	A1055 Meridian Way north	106.2%	39	66.8%	15	84.5%	24
	Ardra Road	62.0%	2	62.8%	3	74.7%	4
	A1055 Meridian Way south	66.6%	11	61.2%	11	66.1%	13

6.2.33 The results of the capacity analysis show that at this junction the additional traffic flows would have a very minor effect on the operation of the junction with some very slight increase in the DoS and MMQs when compared with the future baseline which includes background traffic growth. This is deemed to be not significant.

6.2.34 The capacity assessment has also been undertaken against the existing baseline to determine the effect of the Project should no background growth occur. For the AM peak hour, the additional traffic flows generated by the Project have been added to the existing baseline traffic flows and modelled to determine the effect of the Project if no background traffic growth were to occur. This shows that on the Meridian Way north approach to the junction, the DoS would be 97 per cent, an increase of 0.2 per cent when compared with the existing baseline (provided in Table 3.2). The MMQ would increase by one PCU from 38 PCUs to 39 PCUs. This increase in the DoS and MMQ is deemed to be not significant. All other approaches to the junction would continue to operate similar to the existing baseline.

6.2.35 As there is adequate spare capacity on all approaches to the junction during the interpeak and PM hours for the future baseline (with background traffic growth) and Stage 1d scenarios, it is concluded that the junction would operate with spare capacity if the additional traffic flows generated by the Project were modelled on the existing baseline flows with no background traffic growth applied.

Stage 2

6.2.36 The capacity assessment for Stage 2 has been undertaken for the Cooks Ferry Roundabout and for the signalised junction of the A1055 Meridian Way with Ardra Road. The analysis has been undertaken and compared with the future baseline traffic flows to determine any effect of the Project on capacity at the two junctions.

Cooks Ferry Roundabout capacity assessment

6.2.37 The results of the assessment of the Cooks Ferry Roundabout for Stage 2 are presented in Table 6.16. The MMQ results are presented in PCUs.

Table 6.16: Stage 2 capacity analysis of Cooks Ferry Roundabout

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		RFC	MMQ	RFC	MMQ	RFC	MMQ
Future baseline	Advent Way	0.11	0	0.37	1	1.17	14
	Walthamstow Avenue	0.31	0	0.22	0	0.19	1
	A406 westbound off-slip	0.47	1	0.38	1	0.34	1
	Argon Road	0.18	0	0.33	1	0.51	1
	A406 eastbound off-slip	0.33	1	0.60	2	0.88	7
Stage 2	Advent Way	0.11	0	0.41	1	1.14	13
	Walthamstow Avenue	0.31	0	0.22	0	0.19	0
	A406 westbound off-slip	0.47	1	0.40	0	0.34	1
	Argon Road	0.18	0	0.34	0	0.51	1
	A406 eastbound off-slip	0.33	1	0.63	1	0.86	6

6.2.38 The results of the capacity analysis show that at the roundabout the additional traffic flows would have a very minor effect on the operation of the roundabout with some very slight increase in the RFC and MMQs during the AM and interpeak hours when compared with the future baseline which

includes background traffic growth. This is deemed to be not significant. However, during the PM peak hour, the reduction in flows arising from the Project would see a slight improvement in operation at the Cooks Ferry Roundabout.

6.2.39 The capacity assessment has also been undertaken against the existing baseline to determine the effect of the Project should no background growth occur. For the PM peak hour, the additional traffic flows generated by the Project have been added to the existing baseline traffic flows and modelled to determine the effect of the Project if no background traffic growth were to occur. The results of this analysis show that the RFC on the Advent Way approach to the junction would be 0.85 which would be an improvement from 0.87 when compared with the existing baseline modelling (provided in Table 3.1). The MMQ would decrease from 6 PCU to 5 PCU.

6.2.40 As there is adequate spare capacity on all approaches to the junction during the AM and interpeak hours for the future baseline (with background traffic growth) and Stage 1d scenarios, it is concluded that the junction would operate with spare capacity if the additional traffic flows generated by the Project were modelled on the existing baseline flows with no background traffic growth applied.

A1055 Meridian Way/Ardra Road signalised junction capacity assessment

6.2.41 The results of the assessment of the signalised junction of A1055 Meridian Way with Ardra Road for Stage 2 are presented in Table 6.17. The MMQ results are presented in PCUs.

Table 6.17: Stage 2 capacity analysis of the signalised junction of A1055 Meridian Way with Ardra Road

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		DoS	MMQ	DoS	MMQ	DoS	MMQ
Future baseline	Meridian Way north	106.6%	83	66.9%	15	84.6%	24
	Ardra Road	62.0%	3	62.8%	3	75.5%	4
	Meridian Way south	66.8%	14	61.5%	11	66.5%	14
Stage 2	Meridian Way north	106.8%	84	67.0%	15	84.9%	24
	Ardra Road	62.0%	3	62.8%	3	75.5%	4
	Meridian Way south	66.8%	14	61.5%	11	66.5%	14

6.2.42 The results of the capacity analysis show that at this junction the additional traffic flows would have a very minor effect on the operation of the junction with some very slight increase in the DoS and MMQs when compared with the future baseline which includes background traffic growth. Given that the additional traffic flows (net increase) through the junction during the AM peak hour are small, this is deemed to be not significant.

6.2.43 The capacity assessment has also been undertaken against the existing baseline to determine the effect of the Project should no background growth occur. For the AM peak hour, the additional traffic flows generated by the Project have been added to the existing baseline traffic flows and modelled to determine the effect of the Project if no background traffic growth were

to occur. This shows that on the A1055 Meridian Way north approach to the junction, the DoS would be 97 per cent, an increase of 0.2 per cent when compared with the existing baseline (provided in Table 3.2). The MMQ would increase by 1 PCU from 38 PCUs to 39 PCUs. This increase in the DoS and MMQ is deemed to be not significant. All other approaches to the junction would continue to operate similar to the existing baseline.

6.2.44 As there is adequate spare capacity on all approaches to the junction during the interpeak and PM hours for the future baseline (with background traffic growth) and Stage 1d scenarios, it is concluded that the junction would operate with spare capacity if the additional traffic flows generated by the Project were modelled on the existing baseline flows with no background traffic growth applied.

Stage 3

6.2.45 The capacity assessment for Stage 3 has been undertaken for the Cooks Ferry Roundabout and the signalised junction of the A1055 Meridian Way with Ardra Road. The analysis has been undertaken and compared with the future baseline traffic flows to determine any effect of the Project on capacity at the two junctions.

Cooks Ferry Roundabout capacity assessment

6.2.46 The results of the assessment of the Cooks Ferry Roundabout for Stage 3 are presented in Table 6.18. The MMQ results are presented in PCUs.

Table 6.18: Stage 3 capacity analysis of Cooks Ferry Roundabout

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		RFC	MMQ	RFC	MMQ	RFC	MMQ
Future baseline	Advent Way	0.11	0	0.39	1	1.66	30
	Walthamstow Avenue	0.32	0	0.22	0	0.19	0
	A406 westbound off-slip	0.48	1	0.40	1	0.35	1
	Argon Road	0.16	0	0.34	1	0.52	1
	A406 eastbound off-slip	0.33	1	0.62	2	0.94	10
Stage 3	Advent Way	0.12	0	0.42	1	1.69	31
	Walthamstow Avenue	0.33	0	0.22	0	0.19	0
	A406 westbound off-slip	0.49	1	0.41	1	0.34	1
	Argon Road	0.17	0	0.35	1	0.51	1
	A406 eastbound off-slip	0.34	111	0.65	2	0.91	8

6.2.47 The results of the capacity analysis show that at the Cooks Ferry Roundabout the additional traffic flows would have a very minor effect on its operation with some very slight increase in the RFC and MMQs during the AM and interpeak hours when compared with the future baseline which includes background traffic growth. As the additional traffic due to the Project approaching this roundabout from Advent Way is small (14 PCU), this is deemed to be not significant. However, during the PM peak hour, the reduction in flows arising from the Project would see a slight improvement in the operation of this roundabout.

6.2.48 The capacity assessment has also been undertaken against the existing baseline to determine the effect of the Project should no background growth occur. For the PM peak hour, the additional traffic flows generated by the Project have been added to the existing baseline traffic flows and modelled to determine the effect of the Project if no background traffic growth were to occur. The results of this analysis show that the RFC on the Advent Way approach to the junction would be 0.85 which would be an improvement from 0.87 when compared with the existing baseline modelling (provided in Table 3.1). The MMQ would decrease from six PCU to five PCU.

6.2.49 As there is adequate spare capacity on all approaches to the junction during the AM and interpeak hours for the future baseline (with background traffic growth) and Stage 1d scenarios, it is concluded that the junction would operate with spare capacity if the additional traffic flows generated by the Project were modelled on the existing baseline flows with no background traffic growth applied.

A1055 Meridian Way/Ardra Road signalised junction capacity assessment

6.2.50 The results of the assessment of the junction of the signalised A1055 Meridian Way with Ardra Road for Stage 3 are presented in Table 6.19.

Table 6.19: Stage 3 capacity analysis of the signalised junction of the A1055 Meridian Way with Ardra Road

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		DoS	MMQ	DoS	MMQ	DoS	MMQ
Future baseline	A1055 Meridian Way north	108.1%	91	68.1%	15	85.8%	25
	Ardra Road	62.8%	3	64.4%	3	76.3%	4
	A1055 Meridian Way south	67.7%	14	62.7%	12	67.4%	14
Stage 3	A1055 Meridian Way north	108.3%	92	68.3%	15	86.0%	25
	Ardra Road	62.8%	3	64.4%	3	76.3%	4
	A1055 Meridian Way south	67.7%	14	62.7%	12	67.4%	14

6.2.51 The results of the capacity analysis show that at this junction the additional traffic flows would have a very minor effect on the operation of the junction with some very slight increases in the DoS and MMQs when compared with the future baseline which includes background traffic growth. Given that the additional traffic flows (net increase) through the junction during the AM peak hour are small, this is deemed to be not significant.

6.2.52 The capacity assessment has also been undertaken against the existing baseline to determine the effect of the Project should no background growth occur. For the AM peak hour, the additional traffic flows generated by the Project have been added to the existing baseline traffic flows and modelled to determine the effect of the Project if no background traffic growth were to occur. This shows that on the A1055 Meridian Way north approach to the junction, the DoS would be 97 per cent, an increase of 0.2 per cent when compared with the existing baseline (provided in Table 3.2). The MMQ would increase by one PCU from 38 PCUs to 39 PCUs. This increase in the DoS and MMQ is deemed to be not significant. All other approaches to the junction would continue to operate similar to the existing baseline.

6.2.53 As there is adequate spare capacity on all approaches to the junction during the interpeak and PM hours for the future baseline (with background traffic growth) and Stage 1d scenarios, it is concluded that the junction would operate with spare capacity if the additional traffic flows generated by the Project were modelled on the existing baseline flows with no background traffic growth applied.

Stage 4

6.2.54 The capacity assessment for Stage 4 has been undertaken for the Cooks Ferry Roundabout and the junction of the A1055 Meridian Way with Ardra Road. The analysis has been undertaken and compared with the future baseline traffic flows to determine any effect of the Project on capacity at the two junctions.

Cooks Ferry Roundabout capacity assessment

6.2.55 The results of the assessment of the Cooks Ferry Roundabout for Stage 4 are presented in Table 6.20. The MMQ results are presented in PCUs.

Table 6.20: Stage 4 capacity analysis of Cooks Ferry Roundabout

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		RFC	MMQ	RFC	MMQ	RFC	MMQ
Future baseline	Advent Way	0.11	0	0.40	1	1.93	37
	Walthamstow Avenue	0.32	0	0.22	0	0.19	0
	A406 westbound off-slip	0.49	1	0.40	1	0.35	1
	Argon Road	0.19	0	0.34	1	0.52	1
	A406 eastbound off-slip	0.35	1	0.64	2	0.93	13
Stage 4	Advent Way	0.12	0	0.43	1	1.88	31
	Walthamstow Avenue	0.32	0	0.23	0	0.19	0
	A406 westbound off-slip	0.49	1	0.41	1	0.34	1
	Argon Road	0.19	0	0.35	1	0.51	1
	A406 eastbound off-slip	0.35	1	0.66	2	0.92	3

6.2.56 The results of the capacity analysis show that at the roundabout the additional traffic flows would have a very minor effect on the operation of this roundabout with some very slight increase in the RFC and MMQs during the AM and interpeak hours when compared with the future baseline which includes background traffic growth. This is deemed to be not significant. However, during the PM peak hour, the reduction in flows arising from the Project would see a slight improvement in the operation of the roundabout.

6.2.57 The capacity assessment has also been undertaken against the existing baseline to determine the effect of the Project should no background growth were to occur. For the PM peak hour, the additional traffic flows generated by the Project have been added to the existing baseline traffic flows and modelled to determine the effect of the Project if no background traffic growth were to occur. The results of this analysis show that the RFC on the Advent Way approach to the junction would be 0.81 which would be an

improvement from 0.87 when compared with the existing baseline modelling (provided in Table 3.1). The MMQ would decrease from six PCU to four PCU.

6.2.58 As there is adequate spare capacity on all approaches to the junction during the AM and interpeak hours for the future baseline (with background traffic growth) and Stage 1d scenarios, it is concluded that the junction would operate with spare capacity if the additional traffic flows generated by the Project were modelled on the existing baseline flows with no background traffic growth applied.

A1055 Meridian Way/Ardra Road signalised junction capacity assessment

6.2.59 The results of the assessment of the signalised junction of A1055 Meridian Way with Ardra Road for Stage 4 are presented in Table 6.21. The MMQ results are presented in PCUs.

Table 6.21: Stage 4 capacity analysis of the signalised junction of A1055 Meridian Way with Ardra Road

Scenario	Approach	AM peak hour		Interpeak hour		PM peak hour	
		DoS	MMQ	DoS	MMQ	DoS	MMQ
Future baseline	A1055 Meridian Way north	108.8%	95	68.1%	15	86.2%	25
	Ardra Road	63.6%	3	64.4%	3	77.1%	4
	A1055 Meridian Way south	68.1%	14	62.7%	12	67.8%	14
Stage 4	A1055 Meridian Way north	108.9%	96	68.3%	15	86.4%	25
	Ardra Road	63.6%	3	64.4%	3	77.1%	4
	A1055 Meridian Way south	68.1%	14	62.7%	12	67.8%	14

6.2.60 The results of the capacity analysis show that at this junction the additional traffic flows would have a very minor effect on the operation of the junction with some very slight increase in the DoS and MMQs when compared with the future baseline which includes traffic growth. This is deemed to be not significant.

6.2.61 The capacity assessment has also been undertaken against the existing baseline to determine the effect of the Project should no background growth occur. For the AM peak hour, the additional traffic flows generated by the Project have been added to the existing baseline traffic flows and modelled to determine the effect of the Project if no background traffic growth were to occur. This shows that on the A1055 Meridian Way north approach to the junction, the DoS would be 97 per cent, an increase of 0.2 per cent when compared with the existing baseline (provided in Table 3.2). The MMQ would increase by one PCU from 38 PCUs to 39 PCUs. This increase in the DoS and MMQ is deemed to be not significant. All other approaches to the junction would continue to operate similar to the existing baseline.

6.2.62 As there is adequate spare capacity on all approaches to the junction during the interpeak and PM hours for the future baseline (with background traffic growth) and Stage 1d scenarios, it is concluded that the junction would operate with spare capacity if the additional traffic flows generated by the

Project were modelled on the existing baseline flows with no background traffic growth applied.

6.3 Public transport

6.3.1 The additional trips generated on the public transport network for each stage of the Project are set out in Table 6.22.

Table 6.22: Daily public transport trips per direction

Mode	Stage 1b	Stage 1c	Stage 1d	Stage 2	Stage 3	Stage 4
Underground/rail	6	4	48	4	2	4
Bus	19	16	70	13	12	10
Total	**25**	**20**	**118**	**17**	**14**	**10**

6.3.2 The highest number of trips would be experienced during Stage 1d with a total of 118 additional public transport trips per day. For the purposes of this assessment for Stage 1d, it is assumed that all trips would be undertaken during the AM peak hour to assume a busiest case assessment.

6.3.3 The additional bus trips would result in an additional five passengers per bus during Stage 1d (based on an approximate service frequency on Routes 34 and 444 which operate closest to the Application Site). This level of demand could be accommodated on the bus network. However, it is also likely that some bus trips would be undertaken on Routes 192 and 341, which are accessible at the Angel Road superstores. This would create a more even distribution of bus trips across the four routes that are accessible to the Application Site.

6.3.4 During Stage 1d, an additional 48 trips would be undertaken on Underground and National Rail services. These trips would be undertaken to Angel Road (National Rail services) and Tottenham Hale (National Rail and London Underground services), with a shuttle service provided to the Application Site if demand requires. With 16 National Rail services available between Angel Road (one service) and Tottenham Hale (15 services) during the peak hour and approximately 44 London Underground services available at Tottenham Hale, the additional trips on the National Rail and London Underground services will be accommodated within the existing capacity on the Underground and National Rail network (i.e. the additional number of people per train is negligible). It has been assumed that all public transport trips would be undertaken in one hour for Stage 1d to assume a busiest case assessment.

6.3.5 For all other stages of the Project, the trips on public transport will typically be undertaken between 07:00 and 10:00 and between 16:00 and 19:00. Although this is the peak time for public transport usage, the small number of trips will be accommodated within the capacity of the existing public transport services. In addition, the reduction in employees on the completed operational site will result in an overall reduction in the number of public transport trips.

6.4 Walking and cycling

6.4.1 The additional walking and cycling trips generated by the Project are set out in Table 6.23.

Table 6.23: Daily walk and cycle trips per direction

Mode	Stage 1b	Stage 1c	Stage 1d	Stage 2	Stage 3	Stage 4
Walk	3	2	8	2	2	2
Cycle	11	9	36	7	7	6
Total	**14**	**11**	**44**	**9**	**9**	**8**

6.4.2 These trips would be accommodated on the pedestrian and cycle network without affecting capacity as the number of trips are very low.

6.5 Cumulative assessment

6.5.1 This section sets out the assessment of the Project with respect to the cumulative schemes. As discussed in Section 5.5, the cumulative assessment has been considered both with and without Meridian Water.

6.5.2 In general, increases of less than 10 per cent on an individual link are deemed to have a negligible effect on the operation of that link and on the local highway network in general. For links where there is spare capacity, increases greater than 10 per cent may also be considered negligible.

Local highway network

Stage 1d without Meridian Water

6.5.3 The traffic flows generation by the Project have been considered against a future baseline that includes the cumulative schemes but not including Meridian Water. The resulting increases in traffic on the local highway network as a result of the Project are shown in Table 6.24, Table 6.25 and Table 6.26.

Table 6.24: Stage 1d traffic flow increases considering cumulative schemes (without Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	556	105	661	18.8%
Walthamstow Avenue	1,598	1,761	19	1,780	1.1%
A406 east of Cooks Ferry Roundabout	5,066	5,546	38	5,584	0.7%
A406 WB off-slip at Cooks Ferry Roundabout	849	937	19	956	2.1%
Argon Road at Cooks Ferry Roundabout	293	327	0	327	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	553	33	586	6.1%
A406 EB off-slip at Cooks Ferry Roundabout	453	500	33	533	6.7%
A406 west of Cooks Ferry Roundabout	6,260	6,869	66	6,935	1.0%
Montagu Road/Conduit Lane	1,528	1,695	6	1,701	0.4%

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
A1055 Meridian Way north of A406	1,792	1,981	3	1,984	0.2%
Ardra Road	1814	1,983	1	1,984	0.1%
A1055 Meridian Way south of A406	2,203	2,430	4	2,434	0.1%
A406 WB off-slip at A1010 Fore Street	782	855	5	860	0.6%
A406 WB on-slip at A1010 Fore Street	442	483	0	483	0.0%
A406 EB off-slip at A1010 Fore Street	740	809	0	809	0.0%
A406 EB on-slip at A1010 Fore Street	521	569	6	575	0.9%
A1010 Fore Street north of A406	1,459	1,595	3	1,598	0.2%
A1010 Fore Street south of A406	1,320	1,443	7	1,450	0.5%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,339	15	1,354	1.1%
A406 WB on-slip at A10 Great Cambridge Road	775	847	0	847	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,440	0	1,440	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,319	8	2,327	0.3%
A10 Great Cambridge Road north of A406	4,056	4,433	7	4,440	0.1%
A10 Great Cambridge Road south of A406	3,056	3,340	9	3,349	0.3%

Table 6.25: Stage 1d two-way traffic flow increases considering cumulative schemes (without Meridian Water) – interpeak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	672	92	764	13.7%
Walthamstow Avenue	1,753	1,927	10	1,937	0.6%
A406 east of Cooks Ferry Roundabout	5,300	5,803	21	5,824	0.4%
A406 WB off-slip at Cooks Ferry Roundabout	818	900	10	910	1.2%
Argon Road at Cooks Ferry Roundabout	688	757	0	757	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	413	35	448	8.6%
A406 EB off-slip at Cooks Ferry Roundabout	598	657	35	692	5.4%
A406 west of Cooks Ferry Roundabout	4,164	4,577	70	4,647	1.6%
Montagu Road/Conduit Lane	1,264	1,405	1	1,406	0.1%
A1055 Meridian Way north of A406	1,634	1,807	1	1,808	0.0%
Ardra Road	1454	1,589	1	1,590	0.1%
A1055 Meridian Way south of A406	2,073	2,288	1	2,289	0.0%
A406 WB off-slip at A1010 Fore Street	526	575	4	579	0.8%
A406 WB on-slip at A1010 Fore Street	511	559	0	559	0.0%
A406 EB off-slip at A1010 Fore Street	774	846	0	846	0.0%
A406 EB on-slip at A1010 Fore Street	614	671	4	675	0.6%
A1010 Fore Street north of A406	1,212	1,325	0	1,325	0.1%

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
A1010 Fore Street south of A406	1,171	1,280	8	1,288	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,017	12	1,029	1.3%
A406 WB on-slip at A10 Great Cambridge Road	476	520	0	520	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	980	0	980	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	1,960	6	1,966	0.3%
A10 Great Cambridge Road north of A406	3,250	3,552	3	3,555	0.1%
A10 Great Cambridge Road south of A406	2,509	2,742	11	2,753	0.4%

Table 6.26: Stage 1d two-way traffic flow increases considering cumulative schemes (without Meridian Water) – PM peak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	864	47	911	5.5%
Walthamstow Avenue	2,439	2,684	11	2,695	0.4%
A406 east of Cooks Ferry Roundabout	7,088	7,754	22	7,776	0.3%
A406 WB off-slip at Cooks Ferry Roundabout	872	971	11	982	1.2%
Argon Road at Cooks Ferry Roundabout	842	930	0	930	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	500	13	513	2.5%
A406 EB off-slip at Cooks Ferry Roundabout	558	619	13	632	2.0%
A406 west of Cooks Ferry Roundabout	5,568	6,117	25	6,142	0.4%
Montagu Road/Conduit Lane	1,379	1,540	5	1,545	0.3%
A1055 Meridian Way north of A406	1,717	1,904	2	1,906	0.1%
Ardra Road	1692	1,849	1	1,850	0.1%
A1055 Meridian Way south of A406	2,655	2,929	3	2,932	0.1%
A406 WB off-slip at A1010 Fore Street	762	833	3	836	0.3%
A406 WB on-slip at A1010 Fore Street	478	522	0	522	0.0%
A406 EB off-slip at A1010 Fore Street	684	748	0	748	0.0%
A406 EB on-slip at A1010 Fore Street	677	740	3	743	0.4%
A1010 Fore Street north of A406	1,281	1,400	3	1,403	0.2%
A1010 Fore Street south of A406	1,097	1,199	3	1,202	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,643	7	1,650	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	565	0	565	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,196	0	1,196	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,836	4	2,840	0.1%
A10 Great Cambridge Road north of A406	4,041	4,417	4	4,421	0.1%
A10 Great Cambridge Road south of A406	2,792	3,052	3	3,055	0.1%

6.5.4 The cumulative traffic flow assessment (not including Meridian Water) for Stage 1d shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. However, as the traffic flows are already low on Advent Way, there would be adequate spare capacity on the link to accommodate the additional traffic flows.

6.5.5 The increases in traffic on the other links would each be less than 10 per cent which is of negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

Stage 1d with Meridian Water

6.5.6 The traffic flows generated by the Project have been considered against a future baseline that includes the cumulative schemes including Meridian Water. The resulting increases in traffic on the local highway network as a result of the Project are shown in Table 6.27, Table 6.28 and Table 6.29.

Table 6.27: Stage 1d two-way traffic flow increases considering cumulative schemes (with Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	570	105	675	18.3%
Walthamstow Avenue	1,598	1,980	19	1,999	1.1%
A406 east of Cooks Ferry Roundabout	5,066	5,669	38	5,707	0.7%
A406 WB off-slip at Cooks Ferry Roundabout	849	1,061	19	1,080	2.1%
Argon Road at Cooks Ferry Roundabout	293	778	0	778	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	570	34	604	6.1%
A406 EB off-slip at Cooks Ferry Roundabout	453	569	34	603	6.7%
A406 west of Cooks Ferry Roundabout	6,260	6,983	67	7,050	1.0%
Montagu Road/Conduit Lane	1,528	1,838	6	1,844	0.4%
A1055 Meridian Way north of A406	1,792	2,139	3	2,142	0.2%
Ardra Road	1814	1,983	1	1,984	0.1%
A1055 Meridian Way south of A406	2,203	2,663	3	2,666	0.1%
A406 WB off-slip at A1010 Fore Street	782	855	5	860	0.6%
A406 WB on-slip at A1010 Fore Street	442	483	0	483	0.0%
A406 EB off-slip at A1010 Fore Street	740	809	0	809	0.0%
A406 EB on-slip at A1010 Fore Street	521	569	6	575	0.9%
A1010 Fore Street north of A406	1,459	1,595	3	1,598	0.2%
A1010 Fore Street south of A406	1,320	1,443	7	1,450	0.5%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,339	15	1,354	1.1%
A406 WB on-slip at A10 Great Cambridge Road	775	847	0	847	0.0%

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,440	0	1,440	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,319	8	2,327	0.3%
A10 Great Cambridge Road north of A406	4,056	4,433	7	4,440	0.1%
A10 Great Cambridge Road south of A406	3,056	3,340	9	3,349	0.3%

Table 6.28: Stage 1d two-way traffic flow increases considering cumulative schemes (with Meridian Water) – interpeak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	689	92	781	13.3%
Walthamstow Avenue	1,753	2,221	11	2,232	0.6%
A406 east of Cooks Ferry Roundabout	5,300	5,954	21	5,975	0.4%
A406 WB off-slip at Cooks Ferry Roundabout	818	1,050	11	1,061	1.2%
Argon Road at Cooks Ferry Roundabout	688	1,339	0	1,339	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	438	35	473	8.6%
A406 EB off-slip at Cooks Ferry Roundabout	598	741	36	777	5.4%
A406 west of Cooks Ferry Roundabout	4,164	4,726	70	4,796	1.6%
Montagu Road/Conduit Lane	1,264	1,590	1	1,591	0.1%
A1055 Meridian Way north of A406	1,634	2,009	0	2,009	0.0%
Ardra Road	1454	1,589	1	1,590	0.1%
A1055 Meridian Way south of A406	2,073	2,588	1	2,589	0.0%
A406 WB off-slip at A1010 Fore Street	526	575	4	579	0.8%
A406 WB on-slip at A1010 Fore Street	511	559	0	559	0.0%
A406 EB off-slip at A1010 Fore Street	774	846	0	846	0.0%
A406 EB on-slip at A1010 Fore Street	614	671	4	675	0.6%
A1010 Fore Street north of A406	1,212	1,325	0	1,325	0.1%
A1010 Fore Street south of A406	1,171	1,280	8	1,288	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,017	12	1,029	1.3%
A406 WB on-slip at A10 Great Cambridge Road	476	520	0	520	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	980	0	980	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	1,960	6	1,966	0.3%
A10 Great Cambridge Road north of A406	3,250	3,552	3	3,555	0.1%
A10 Great Cambridge Road south of A406	2,509	2,742	11	2,753	0.4%

Table 6.29: Stage 1d two-way traffic flow increases considering cumulative schemes (with Meridian Water) – PM peak hour

Link/junction	Baseline	Future baseline	Stage 1d (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	870	47	917	5.4%
Walthamstow Avenue	2,439	2,871	11	2,882	0.4%
A406 east of Cooks Ferry Roundabout	7,088	7,811	22	7,833	0.3%
A406 WB off-slip at Cooks Ferry Roundabout	872	1,028	11	1,039	1.2%
Argon Road at Cooks Ferry Roundabout	842	1,240	0	842	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	520	12	532	2.5%
A406 EB off-slip at Cooks Ferry Roundabout	558	651	13	664	2.0%
A406 west of Cooks Ferry Roundabout	5,568	6,199	25	6,224	0.4%
Montagu Road/Conduit Lane	1,379	1,640	5	1,645	0.3%
A1055 Meridian Way north of A406	1,717	2,003	3	2,006	0.1%
Ardra Road	1692	1,849	1	1,850	0.1%
A1055 Meridian Way south of A406	2,655	3,089	2	3,091	0.1%
A406 WB off-slip at A1010 Fore Street	762	833	3	836	0.3%
A406 WB on-slip at A1010 Fore Street	478	522	0	522	0.0%
A406 EB off-slip at A1010 Fore Street	684	748	0	748	0.0%
A406 EB on-slip at A1010 Fore Street	677	740	3	743	0.4%
A1010 Fore Street north of A406	1,281	1,400	3	1,403	0.2%
A1010 Fore Street south of A406	1,097	1,199	3	1,202	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,643	7	1,650	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	565	0	565	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,196	0	1,196	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,836	4	2,840	0.1%
A10 Great Cambridge Road north of A406	4,041	4,417	4	4,421	0.1%
A10 Great Cambridge Road south of A406	2,792	3,052	3	3,055	0.1%

6.5.7 The cumulative traffic flow assessment (including Meridian Water) for Stage 1d shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well for public/employee traffic using Lee Park Way. However, as the traffic flows are already low on Advent Way, there would be adequate spare capacity on the link to accommodate the additional traffic flows.

6.5.8 The increases in traffic on the other links would each be less than 10 per cent which is of negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

Stage 2 without Meridian Water

6.5.9 The traffic flows generated by the Project have been considered against a future baseline that includes the cumulative schemes but not including Meridian Water. The resulting increases in traffic on the local highway network as a result of the Project are shown in Table 6.30,

6.5.10 Table 6.31 and Table 6.32.

Table 6.30: Stage 2 two-way traffic flow increases considering cumulative schemes (without Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	515	28	543	5.3%
Walthamstow Avenue	1,598	1,761	1	1,762	0.0%
A406 east of Cooks Ferry Roundabout	5,066	5,546	1	5,547	0.0%
A406 WB off-slip at Cooks Ferry Roundabout	849	937	1	938	0.1%
Argon Road at Cooks Ferry Roundabout	293	327	0	327	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	553	13	566	2.4%
A406 EB off-slip at Cooks Ferry Roundabout	453	500	13	513	2.6%
A406 west of Cooks Ferry Roundabout	6,260	6,869	26	6,895	0.4%
Montagu Road/Conduit Lane	1,528	1,695	6	1,701	0.4%
A1055 Meridian Way north of A406	1,792	1,981	-1	1,980	0.0%
Ardra Road	1814	1,983	1	1,984	0.1%
A1055 Meridian Way south of A406	2,203	2,430	1	2,431	0.0%
A406 WB off-slip at A1010 Fore Street	782	855	17	872	2.0%
A406 WB on-slip at A1010 Fore Street	442	483	0	483	0.0%
A406 EB off-slip at A1010 Fore Street	740	809	0	809	0.0%
A406 EB on-slip at A1010 Fore Street	521	569	17	586	3.0%
A1010 Fore Street north of A406	1,459	1,595	-1	1,594	0.0%
A1010 Fore Street south of A406	1,320	1,443	3	1,446	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,339	19	1,358	1.4%
A406 WB on-slip at A10 Great Cambridge Road	775	847	0	847	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,440	0	1,440	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,319	25	2,344	1.0%
A10 Great Cambridge Road north of A406	4,056	4,433	-1	4,432	0.0%
A10 Great Cambridge Road south of A406	3,056	3,340	4	3,344	0.1%

Table 6.31: Stage 2 two-way traffic flow increases considering cumulative schemes (without Meridian Water) – interpeak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	622	59	681	9.4%
Walthamstow Avenue	1,753	1,927	4	1,931	0.2%
A406 east of Cooks Ferry Roundabout	5,300	5,803	51	5,854	0.9%
A406 WB off-slip at Cooks Ferry Roundabout	818	900	4	904	0.4%
Argon Road at Cooks Ferry Roundabout	688	757	0	757	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	413	25	438	6.2%
A406 EB off-slip at Cooks Ferry Roundabout	598	657	25	682	3.9%
A406 west of Cooks Ferry Roundabout	4,164	4,577	20	4,597	0.4%
Montagu Road/Conduit Lane	1,264	1,405	1	1,406	0.1%
A1055 Meridian Way north of A406	1,634	1,807	0	1,807	0.0%
Ardra Road	1454	1,589	1	1,590	0.1%
A1055 Meridian Way south of A406	2,073	2,288	0	2,288	0.0%
A406 WB off-slip at A1010 Fore Street	526	575	16	591	2.7%
A406 WB on-slip at A1010 Fore Street	511	559	0	559	0.0%
A406 EB off-slip at A1010 Fore Street	774	846	0	846	0.0%
A406 EB on-slip at A1010 Fore Street	614	671	4	675	0.6%
A1010 Fore Street north of A406	1,212	1,325	0	1,325	0.1%
A1010 Fore Street south of A406	1,171	1,280	8	1,288	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,017	12	1,029	1.3%
A406 WB on-slip at A10 Great Cambridge Road	476	520	0	520	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	980	0	980	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	1,960	6	1,966	0.3%
A10 Great Cambridge Road north of A406	3,250	3,552	3	3,555	0.1%
A10 Great Cambridge Road south of A406	2,509	2,742	11	2,753	0.4%

Table 6.32: Stage 2 two-way traffic flow increases considering cumulative schemes (without Meridian Water) – PM peak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	800	-25	775	-3.1%
Walthamstow Avenue	2,439	2,684	-7	2,677	-0.3%
A406 east of Cooks Ferry Roundabout	7,088	7,754	-13	7,741	-0.2%
A406 WB off-slip at Cooks Ferry Roundabout	872	971	-7	964	-0.7%
Argon Road at Cooks Ferry Roundabout	842	930	0	930	0.0%

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
A406 WB on-slip at Cooks Ferry Roundabout	454	500	-5	495	-1.1%
A406 EB off-slip at Cooks Ferry Roundabout	558	619	-5	614	-0.9%
A406 west of Cooks Ferry Roundabout	5,568	6,117	-11	6,106	-0.2%
Montagu Road/Conduit Lane	1,379	1,540	3	1,543	0.2%
A1055 Meridian Way north of A406	1,717	1,904	-1	1,903	0.0%
Ardra Road	1692	1,849	1	1,850	0.1%
A1055 Meridian Way south of A406	2,655	2,929	0	2,929	0.0%
A406 WB off-slip at A1010 Fore Street	762	833	8	841	1.0%
A406 WB on-slip at A1010 Fore Street	478	522	0	522	0.0%
A406 EB off-slip at A1010 Fore Street	684	748	0	748	0.0%
A406 EB on-slip at A1010 Fore Street	677	740	3	743	0.4%
A1010 Fore Street north of A406	1,281	1,400	3	1,403	0.2%
A1010 Fore Street south of A406	1,097	1,199	3	1,202	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,643	7	1,650	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	565	0	565	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,196	0	1,196	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,836	4	2,840	0.1%
A10 Great Cambridge Road north of A406	4,041	4,417	4	4,421	0.1%
A10 Great Cambridge Road south of A406	2,792	3,052	3	3,055	0.1%

6.5.11 The cumulative traffic flow assessment not including Meridian Water for Stage 2 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access on Advent Way as well as for public/employee traffic using Lee Park Way. However, the increase in traffic flows would be less than 10 per cent and would have a negligible effect on the operation of Advent Way.

6.5.12 The increases in traffic on the other links would each be less than 10 per cent. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout. The decreases shown in the PM peak hour occur as a result of the lower number of employees on the Application Site.

Stage 2 with Meridian Water

6.5.13 The traffic flows generated by the Project have been considered against a future baseline that includes the cumulative schemes including Meridian Water. The resulting increases in traffic on the local highway network as a result of the Project are shown in Table 6.33, Table 6.34 and Table 6.35.

Table 6.33: Stage 2 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	529	28	557	5.2%
Walthamstow Avenue	1,598	1,980	1	1,981	0.0%
A406 east of Cooks Ferry Roundabout	5,066	5,669	1	5,670	0.0%
A406 WB off-slip at Cooks Ferry Roundabout	849	1,061	0	1,061	0.1%
Argon Road at Cooks Ferry Roundabout	293	778	0	778	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	570	13	583	2.4%
A406 EB off-slip at Cooks Ferry Roundabout	453	569	13	582	2.6%
A406 west of Cooks Ferry Roundabout	6,260	6,983	27	7,010	0.4%
Montagu Road/Conduit Lane	1,528	1,838	6	1,844	0.4%
A1055 Meridian Way north of A406	1,792	2,139	0	2,139	0.0%
Ardra Road	1814	1,983	1	1,984	0.1%
A1055 Meridian Way south of A406	2,203	2,663	0	2,663	0.0%
A406 WB off-slip at A1010 Fore Street	782	855	17	872	2.0%
A406 WB on-slip at A1010 Fore Street	442	483	0	483	0.0%
A406 EB off-slip at A1010 Fore Street	740	809	0	809	0.0%
A406 EB on-slip at A1010 Fore Street	521	569	17	586	3.0%
A1010 Fore Street north of A406	1,459	1,595	-1	1,594	0.0%
A1010 Fore Street south of A406	1,320	1,443	3	1,446	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,339	19	1,358	1.4%
A406 WB on-slip at A10 Great Cambridge Road	775	847	0	847	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,440	0	1,440	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,319	25	2,344	1.0%
A10 Great Cambridge Road north of A406	4,056	4,433	-1	4,432	0.0%
A10 Great Cambridge Road south of A406	3,056	3,340	4	3,344	0.1%

Table 6.34: Stage 2 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	639	59	698	9.1%
Walthamstow Avenue	1,753	2,221	4	2,225	0.2%
A406 east of Cooks Ferry Roundabout	5,300	5,954	50	6,004	0.9%
A406 WB off-slip at Cooks Ferry Roundabout	818	1,050	4	1,054	0.4%
Argon Road at Cooks Ferry Roundabout	688	1,339	0	1,339	0.0%

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
A406 WB on-slip at Cooks Ferry Roundabout	375	438	25	463	6.2%
A406 EB off-slip at Cooks Ferry Roundabout	598	741	25	766	3.9%
A406 west of Cooks Ferry Roundabout	4,164	4,726	20	4,746	0.4%
Montagu Road/Conduit Lane	1,264	1,590	1	1,591	0.1%
A1055 Meridian Way north of A406	1,634	2,009	-1	2,008	0.0%
Ardra Road	1454	1,589	1	1,590	0.1%
A1055 Meridian Way south of A406	2,073	2,588	0	2,588	0.0%
A406 WB off-slip at A1010 Fore Street	526	575	16	591	2.7%
A406 WB on-slip at A1010 Fore Street	511	559	0	559	0.0%
A406 EB off-slip at A1010 Fore Street	774	846	0	846	0.0%
A406 EB on-slip at A1010 Fore Street	614	671	4	675	0.6%
A1010 Fore Street north of A406	1,212	1,325	0	1,325	0.1%
A1010 Fore Street south of A406	1,171	1,280	8	1,288	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,017	12	1,029	1.3%
A406 WB on-slip at A10 Great Cambridge Road	476	520	0	520	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	980	0	980	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	1,960	6	1,966	0.3%
A10 Great Cambridge Road north of A406	3,250	3,552	3	3,555	0.1%
A10 Great Cambridge Road south of A406	2,509	2,742	11	2,753	0.4%

Table 6.35: Stage 2 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – PM peak hour

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	806	-25	781	-3.1%
Walthamstow Avenue	2,439	2,871	-7	2,864	-0.3%
A406 east of Cooks Ferry Roundabout	7,088	7,811	-13	7,798	-0.2%
A406 WB off-slip at Cooks Ferry Roundabout	872	1,028	-7	1,021	-0.7%
Argon Road at Cooks Ferry Roundabout	842	1,240	0	1,240	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	520	-6	514	-1.1%
A406 EB off-slip at Cooks Ferry Roundabout	558	651	-5	646	-0.9%
A406 west of Cooks Ferry Roundabout	5,568	6,199	-11	6,188	-0.2%
Montagu Road/Conduit Lane	1,379	1,640	3	1,643	0.2%
A1055 Meridian Way north of A406	1,717	2,003	-1	2,002	0.0%
Ardra Road	1692	1,849	1	1,850	0.1%
A1055 Meridian Way south of A406	2,655	3,089	-1	3,088	0.0%
A406 WB off-slip at A1010 Fore Street	762	833	8	841	1.0%

Link/junction	Baseline	Future baseline	Stage 2 (net)	Total	% increase
A406 WB on-slip at A1010 Fore Street	478	522	0	522	0.0%
A406 EB off-slip at A1010 Fore Street	684	748	0	748	0.0%
A406 EB on-slip at A1010 Fore Street	677	740	3	743	0.4%
A1010 Fore Street north of A406	1,281	1,400	3	1,403	0.2%
A1010 Fore Street south of A406	1,097	1,199	3	1,202	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,643	7	1,650	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	565	0	565	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,196	0	1,196	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,836	4	2,840	0.1%
A10 Great Cambridge Road north of A406	4,041	4,417	4	4,421	0.1%
A10 Great Cambridge Road south of A406	2,792	3,052	3	3,055	0.1%

6.5.14 The cumulative traffic flow assessment including Meridian Water for Stage 2 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. However, the increase in traffic flows would be less than 10 per cent and would have a negligible effect on the operation of Advent Way.

6.5.15 The increases in traffic on the other links would each be less than 10 per cent. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout. The decreases shown in the PM peak hour occur as a result of the lower number of employees on the Application Site.

Stage 3 without Meridian Water

6.5.16 The traffic flows generated by the Project have been considered against a future baseline that includes the cumulative schemes but not including Meridian Water. The resulting increases in traffic on the local highway network as a result of the Project are shown in Table 6.36, Table 6.37 and Table 6.38

Table 6.36: Stage 3 two-way traffic flow increases cumulative schemes (without Meridian Water) – interpeak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	568	27	595	4.8%
Walthamstow Avenue	1,598	1,799	2	1,801	0.1%
A406 east of Cooks Ferry Roundabout	5,066	5,664	5	5,669	0.1%
A406 WB off-slip at Cooks Ferry Roundabout	849	957	3	960	0.3%
Argon Road at Cooks Ferry Roundabout	293	334	0	7	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	565	12	577	2.3%

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
A406 EB off-slip at Cooks Ferry Roundabout	453	511	12	523	2.5%
A406 west of Cooks Ferry Roundabout	6,260	7,015	26	7,041	0.4%
Montagu Road/Conduit Lane	1,528	1,731	1	1,732	0.1%
A1055 Meridian Way north of A406	1,792	2,023	-1	2,022	0.0%
Ardra Road	1814	2,025	1	2,026	0.0%
A1055 Meridian Way south of A406	2,203	2,482	0	2,482	0.0%
A406 WB off-slip at A1010 Fore Street	782	873	21	894	2.4%
A406 WB on-slip at A1010 Fore Street	442	493	0	493	0.0%
A406 EB off-slip at A1010 Fore Street	740	826	0	826	0.0%
A406 EB on-slip at A1010 Fore Street	521	582	21	603	3.7%
A1010 Fore Street north of A406	1,459	1,629	0	1,629	0.0%
A1010 Fore Street south of A406	1,320	1,474	3	1,477	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,368	5	1,373	0.4%
A406 WB on-slip at A10 Great Cambridge Road	775	865	0	865	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,470	0	1,470	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,369	28	2,397	1.2%
A10 Great Cambridge Road north of A406	4,056	4,528	-1	4,527	0.0%
A10 Great Cambridge Road south of A406	3,056	3,412	4	3,416	0.1%

Table 6.37: Stage 3 two-way traffic flow increases considering cumulative schemes (without Meridian Water) – PM peak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	686	59	745	8.5%
Walthamstow Avenue	1,753	1,968	2	1,970	0.1%
A406 east of Cooks Ferry Roundabout	5,300	5,927	5	5,932	0.1%
A406 WB off-slip at Cooks Ferry Roundabout	818	919	2	921	0.3%
Argon Road at Cooks Ferry Roundabout	688	774	0	5	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	422	20	442	4.9%
A406 EB off-slip at Cooks Ferry Roundabout	598	671	20	691	3.0%
A406 west of Cooks Ferry Roundabout	4,164	4,674	41	4,715	0.9%
Montagu Road/Conduit Lane	1,264	1,434	1	1,435	0.0%
A1055 Meridian Way north of A406	1,634	1,846	-1	1,845	0.0%
Ardra Road	1454	1,623	1	1,624	0.1%
A1055 Meridian Way south of A406	2,073	2,337	0	2,337	0.0%
A406 WB off-slip at A1010 Fore Street	526	587	23	610	3.9%
A406 WB on-slip at A1010 Fore Street	511	571	0	571	0.0%

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
A406 EB off-slip at A1010 Fore Street	774	864	0	864	0.0%
A406 EB on-slip at A1010 Fore Street	614	686	4	690	0.6%
A1010 Fore Street north of A406	1,212	1,353	1	1,354	0.1%
A1010 Fore Street south of A406	1,171	1,307	8	1,315	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,038	13	1,051	1.2%
A406 WB on-slip at A10 Great Cambridge Road	476	531	0	531	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	1,001	0	1,001	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	2,002	6	2,008	0.3%
A10 Great Cambridge Road north of A406	3,250	3,628	3	3,631	0.1%
A10 Great Cambridge Road south of A406	2,509	2,801	11	2,812	0.4%

Table 6.38: Stage 3 two-way traffic flow increases considering cumulative schemes (without Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	882	-25	857	-2.8%
Walthamstow Avenue	2,439	2,741	-6	2,735	-0.2%
A406 east of Cooks Ferry Roundabout	7,088	7,920	-11	7,909	-0.1%
A406 WB off-slip at Cooks Ferry Roundabout	872	992	-7	985	-0.6%
Argon Road at Cooks Ferry Roundabout	842	950	0	10	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	511	-5	506	-1.1%
A406 EB off-slip at Cooks Ferry Roundabout	558	632	-5	627	-0.9%
A406 west of Cooks Ferry Roundabout	5,568	6,248	-13	6,235	-0.2%
Montagu Road/Conduit Lane	1,379	1,572	-1	1,571	-0.1%
A1055 Meridian Way north of A406	1,717	1,944	-1	1,943	0.0%
Ardra Road	1692	1,889	1	1,890	0.1%
A1055 Meridian Way south of A406	2,655	2,991	0	2,991	0.0%
A406 WB off-slip at A1010 Fore Street	762	851	7	858	0.9%
A406 WB on-slip at A1010 Fore Street	478	534	0	534	0.0%
A406 EB off-slip at A1010 Fore Street	684	764	0	764	0.0%
A406 EB on-slip at A1010 Fore Street	677	756	3	759	0.4%
A1010 Fore Street north of A406	1,281	1,430	3	1,433	0.2%
A1010 Fore Street south of A406	1,097	1,225	3	1,228	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,678	7	1,685	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	577	0	577	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,221	0	1,221	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,897	4	2,901	0.1%

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
A10 Great Cambridge Road north of A406	4,041	4,512	3	4,515	0.1%
A10 Great Cambridge Road south of A406	2,792	3,117	3	3,120	0.1%

6.5.17 The cumulative traffic flow assessment not including Meridian Water for Stage 3 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. However, the increase in traffic flows would be less than 10 per cent and would have a negligible effect on the operation of Advent Way.

6.5.18 The increases in traffic on the other links would each be less than 10 per cent and of a negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

6.5.19 During the PM peak hour, some of the traffic flows show a decrease on the future baseline traffic flows. This is due to the fact that the number of employees associated with future operations at the Edmonton EcoPark is less than the number of employees associated with the existing operations.

Stage 3 with Meridian Water

6.5.20 The traffic flows generated by the Project have been considered against a future baseline that includes the cumulative schemes including Meridian Water. The resulting increases in traffic on the local highway network as a result of the Project are shown in Table 6.39, Table 6.40 and Table 6.41.

Table 6.39: Stage 3 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	582	27	609	4.7%
Walthamstow Avenue	1,598	2,018	2	2,020	0.1%
A406 east of Cooks Ferry Roundabout	5,066	5,788	5	5,793	0.1%
A406 WB off-slip at Cooks Ferry Roundabout	849	1,081	2	1,083	0.3%
Argon Road at Cooks Ferry Roundabout	293	785	0	458	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	582	13	595	2.3%
A406 EB off-slip at Cooks Ferry Roundabout	453	580	13	593	2.5%
A406 west of Cooks Ferry Roundabout	6,260	7,130	26	7,156	0.4%
Montagu Road/Conduit Lane	1,528	1,873	2	1,875	0.1%
A1055 Meridian Way north of A406	1,792	2,181	0	2,181	0.0%
Ardra Road	1814	2,025	1	2,026	0.0%
A1055 Meridian Way south of A406	2,203	2,715	0	2,715	0.0%
A406 WB off-slip at A1010 Fore Street	782	873	21	894	2.4%
A406 WB on-slip at A1010 Fore Street	442	493	0	493	0.0%

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
A406 EB off-slip at A1010 Fore Street	740	826	0	826	0.0%
A406 EB on-slip at A1010 Fore Street	521	582	21	603	3.7%
A1010 Fore Street north of A406	1,459	1,629	0	1,629	0.0%
A1010 Fore Street south of A406	1,320	1,474	3	1,477	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,368	5	1,373	0.4%
A406 WB on-slip at A10 Great Cambridge Road	775	865	0	865	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,470	0	1,470	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,369	28	2,397	1.2%
A10 Great Cambridge Road north of A406	4,056	4,528	-1	4,527	0.0%
A10 Great Cambridge Road south of A406	3,056	3,412	4	3,416	0.1%

Table 6.40: Stage 3 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – Interpeak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	703	59	762	8.3%
Walthamstow Avenue	1,753	2,262	3	2,265	0.1%
A406 east of Cooks Ferry Roundabout	5,300	6,078	5	6,083	0.1%
A406 WB off-slip at Cooks Ferry Roundabout	818	1,069	3	1,072	0.3%
Argon Road at Cooks Ferry Roundabout	688	1,355	0	587	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	447	20	467	4.9%
A406 EB off-slip at Cooks Ferry Roundabout	598	755	21	776	3.0%
A406 west of Cooks Ferry Roundabout	4,164	4,823	41	4,864	0.9%
Montagu Road/Conduit Lane	1,264	1,619	1	1,620	0.0%
A1055 Meridian Way north of A406	1,634	2,047	0	2,047	0.0%
Ardra Road	1454	1,623	1	1,624	0.1%
A1055 Meridian Way south of A406	2,073	2,636	1	2,637	0.0%
A406 WB off-slip at A1010 Fore Street	526	587	23	610	3.9%
A406 WB on-slip at A1010 Fore Street	511	571	0	571	0.0%
A406 EB off-slip at A1010 Fore Street	774	864	0	864	0.0%
A406 EB on-slip at A1010 Fore Street	614	686	4	690	0.6%
A1010 Fore Street north of A406	1,212	1,353	1	1,354	0.1%
A1010 Fore Street south of A406	1,171	1,307	8	1,315	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,038	13	1,051	1.2%
A406 WB on-slip at A10 Great Cambridge Road	476	531	0	531	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	1,001	0	1,001	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	2,002	6	2,008	0.3%

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
A10 Great Cambridge Road north of A406	3,250	3,628	3	3,631	0.1%
A10 Great Cambridge Road south of A406	2,509	2,801	11	2,812	0.4%

Table 6.41: Stage 3 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – PM peak hour

Link/junction	Baseline	Future baseline	Stage 3 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	888	-24	864	-2.8%
Walthamstow Avenue	2,439	2,928	-6	2,922	-0.2%
A406 east of Cooks Ferry Roundabout	7,088	7,977	-11	7,966	-0.1%
A406 WB off-slip at Cooks Ferry Roundabout	872	1,048	-6	1,042	-0.6%
Argon Road at Cooks Ferry Roundabout	842	1,260	0	320	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	530	-5	525	-1.1%
A406 EB off-slip at Cooks Ferry Roundabout	558	664	-5	659	-0.9%
A406 west of Cooks Ferry Roundabout	5,568	6,330	-13	6,317	-0.2%
Montagu Road/Conduit Lane	1,379	1,672	-1	1,671	-0.1%
A1055 Meridian Way north of A406	1,717	2,043	0	2,043	0.0%
Ardra Road	1692	1,889	1	1,889	0.1%
A1055 Meridian Way south of A406	2,655	3,151	-1	3,150	0.0%
A406 WB off-slip at A1010 Fore Street	762	851	7	858	0.9%
A406 WB on-slip at A1010 Fore Street	478	534	0	534	0.0%
A406 EB off-slip at A1010 Fore Street	684	764	0	764	0.0%
A406 EB on-slip at A1010 Fore Street	677	756	3	759	0.4%
A1010 Fore Street north of A406	1,281	1,430	3	1,433	0.2%
A1010 Fore Street south of A406	1,097	1,225	3	1,228	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,678	7	1,685	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	577	0	577	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,221	0	1,221	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,897	4	2,901	0.1%
A10 Great Cambridge Road north of A406	4,041	4,512	3	4,515	0.1%
A10 Great Cambridge Road south of A406	2,792	3,117	3	3,120	0.1%

6.5.21 The cumulative traffic flow assessment including Meridian Water for Stage 3 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. However, the increase in traffic flows would be less than 10 per cent and would have a negligible effect on the operation of Advent Way.

6.5.22 The increases in traffic on the other links would each be less than 10 per cent and of negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

6.5.23 During the PM peak hour, some of the traffic flows show a decrease on the future baseline traffic flows. This is due to the fact that the number of employees associated with future operations at the Edmonton EcoPark is less than the number of employees associated with the existing operations.

Stage 4 without Meridian Water

6.5.24 The traffic flows generated by the Project have been considered against a future baseline that includes the cumulative schemes but not including Meridian Water. The resulting increases in traffic on the local highway network as a result of the Project are shown in Table 6.42, Table 6.43 and

6.5.25

6.5.26 Table 6.44.

Table 6.42: Stage 4 two-way traffic flow increases considering cumulative schemes (without Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	571	27	598	4.8%
Walthamstow Avenue	1,598	1,809	-3	1,806	-0.2%
A406 east of Cooks Ferry Roundabout	5,066	5,697	-5	5,692	-0.1%
A406 WB off-slip at Cooks Ferry Roundabout	849	963	-3	960	-0.3%
Argon Road at Cooks Ferry Roundabout	293	336	30	366	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	568	7	575	1.4%
A406 EB off-slip at Cooks Ferry Roundabout	453	514	7	521	1.5%
A406 west of Cooks Ferry Roundabout	6,260	7,056	15	7,071	0.2%
Montagu Road/Conduit Lane	1,528	1,740	0	1,740	0.0%
A1055 Meridian Way north of A406	1,792	2,034	0	2,034	0.0%
Ardra Road	1814	2,025	1	2,026	0.0%
A1055 Meridian Way south of A406	2,203	2,496	0	2,496	0.0%
A406 WB off-slip at A1010 Fore Street	782	878	25	903	2.9%
A406 WB on-slip at A1010 Fore Street	442	496	0	496	0.0%
A406 EB off-slip at A1010 Fore Street	740	831	0	831	0.0%
A406 EB on-slip at A1010 Fore Street	521	585	25	610	4.3%
A1010 Fore Street north of A406	1,459	1,638	0	1,638	0.0%
A1010 Fore Street south of A406	1,320	1,482	3	1,485	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,376	4	1,380	0.3%
A406 WB on-slip at A10 Great Cambridge Road	775	870	0	870	0.0%

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,479	0	1479	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,383	29	2,412	1.2%
A10 Great Cambridge Road north of A406	4,056	4,528	-1	4,527	0.0%
A10 Great Cambridge Road south of A406	3,056	3,432	4	3,436	0.1%

Table 6.43: Stage 4 two-way traffic flow increases considering cumulative schemes (without Meridian Water) – interpeak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	690	59	749	8.5%
Walthamstow Avenue	1,753	1,979	-1	1,978	-0.1%
A406 east of Cooks Ferry Roundabout	5,300	5,962	-3	5,959	0.0%
A406 WB off-slip at Cooks Ferry Roundabout	818	924	-1	923	-0.2%
Argon Road at Cooks Ferry Roundabout	688	778	0	778	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	424	16	440	3.9%
A406 EB off-slip at Cooks Ferry Roundabout	598	675	16	691	2.4%
A406 west of Cooks Ferry Roundabout	4,164	4,701	33	4,734	0.7%
Montagu Road/Conduit Lane	1,264	1,443	-2	1,441	-0.1%
A1055 Meridian Way north of A406	1,634	1,856	0	1,856	0.0%
Ardra Road	1454	1,623	1	1,624	0.1%
A1055 Meridian Way south of A406	2,073	2,350	0	2,350	0.0%
A406 WB off-slip at A1010 Fore Street	526	591	28	619	4.8%
A406 WB on-slip at A1010 Fore Street	511	574	0	574	0.0%
A406 EB off-slip at A1010 Fore Street	774	869	0	869	0.0%
A406 EB on-slip at A1010 Fore Street	614	689	5	694	0.6%
A1010 Fore Street north of A406	1,212	1,361	1	1,362	0.1%
A1010 Fore Street south of A406	1,171	1,315	8	1,323	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,044	13	1,057	1.2%
A406 WB on-slip at A10 Great Cambridge Road	476	535	0	535	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	1,007	0	1,007	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	2,013	7	2,020	0.3%
A10 Great Cambridge Road north of A406	3,250	3,650	2	3,652	0.1%
A10 Great Cambridge Road south of A406	2,509	2,817	11	2,828	0.4%

Table 6.44: Stage 4 two-way traffic flow increases considering cumulative schemes (without Meridian Water) – PM peak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	887	-25	862	-2.8%
Walthamstow Avenue	2,439	2,757	-11	2,746	-0.4%
A406 east of Cooks Ferry Roundabout	7,088	7,966	-21	7,945	-0.3%
A406 WB off-slip at Cooks Ferry Roundabout	872	997	-10	987	-1.1%
Argon Road at Cooks Ferry Roundabout	842	955	0	10	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	454	514	-10	504	-1.9%
A406 EB off-slip at Cooks Ferry Roundabout	558	636	-9	627	-1.5%
A406 west of Cooks Ferry Roundabout	5,568	6,284	-19	6,265	-0.3%
Montagu Road/Conduit Lane	1,379	1,581	-4	1,577	-0.2%
A1055 Meridian Way north of A406	1,717	1,955	-1	1,954	0.0%
Ardra Road	1692	1,889	1	1,890	0.1%
A1055 Meridian Way south of A406	2,655	3,008	0	3,008	0.0%
A406 WB off-slip at A1010 Fore Street	762	856	7	863	0.8%
A406 WB on-slip at A1010 Fore Street	478	537	0	537	0.0%
A406 EB off-slip at A1010 Fore Street	684	768	0	768	0.0%
A406 EB on-slip at A1010 Fore Street	677	760	3	763	0.4%
A1010 Fore Street north of A406	1,281	1,438	3	1,441	0.2%
A1010 Fore Street south of A406	1,097	1,232	3	1,235	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,688	7	1,695	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	581	0	581	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,228	0	1,228	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,914	3	2,917	0.1%
A10 Great Cambridge Road north of A406	4,041	4,538	3	4,541	0.1%
A10 Great Cambridge Road south of A406	2,792	3,135	3	3,138	0.1%

6.5.27 The cumulative traffic flow assessment not including Meridian Water for Stage 4 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. However, the increase in traffic flows would be less than 10 per cent and would have a negligible effect on the operation of Advent Way.

6.5.28 The increases in traffic on the other links would each be less than 10 per cent and of negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

6.5.29 During the PM peak hour, some of the traffic flows show a decrease on the future baseline traffic flows. This is due to the fact that the number of

employees associated with future operations at the Edmonton EcoPark is less than the number of employees associated with the existing operations.

Stage 4 with Meridian Water

6.5.30 The traffic flows generated by the Project have been considered against a future baseline that includes the cumulative schemes including Meridian Water. The resulting increases in traffic on the local highway network as a result of the Project are shown in Table 6.45, Table 6.46 and Table 6.47

Table 6.45: Stage 4 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – AM peak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
AM peak hour (08:00 – 09:00) – two-way flows					
Advent Way	493	585	27	612	4.7%
Walthamstow Avenue	1,598	2,028	-3	2,025	-0.2%
A406 east of Cooks Ferry Roundabout	5,066	5,820	-5	5,815	-0.1%
A406 WB off-slip at Cooks Ferry Roundabout	849	1,086	-3	1,083	-0.3%
Argon Road at Cooks Ferry Roundabout	293	787	0	787	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	502	585	8	593	1.4%
A406 EB off-slip at Cooks Ferry Roundabout	453	583	8	591	1.5%
A406 west of Cooks Ferry Roundabout	6,260	7,171	15	7,186	0.2%
Montagu Road/Conduit Lane	1,528	1,883	0	1,883	0.0%
A1055 Meridian Way north of A406	1,792	2,193	-1	2,192	0.0%
Ardra Road	1814	2,025	1	2,026	0.0%
A1055 Meridian Way south of A406	2,203	2,729	0	2,729	0.0%
A406 WB off-slip at A1010 Fore Street	782	878	25	903	2.9%
A406 WB on-slip at A1010 Fore Street	442	496	0	496	0.0%
A406 EB off-slip at A1010 Fore Street	740	831	0	831	0.0%
A406 EB on-slip at A1010 Fore Street	521	585	25	610	4.3%
A1010 Fore Street north of A406	1,459	1,638	0	1,638	0.0%
A1010 Fore Street south of A406	1,320	1,482	3	1,485	0.2%
A406 WB off-slip at A10 Great Cambridge Road	1,225	1,376	4	1,380	0.3%
A406 WB on-slip at A10 Great Cambridge Road	775	870	0	870	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,317	1,479	0	1479	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,122	2,383	29	2,412	1.2%
A10 Great Cambridge Road north of A406	4,056	4,528	-1	4,527	0.0%
A10 Great Cambridge Road south of A406	3,056	3,432	4	3,436	0.1%

Table 6.46: Stage 4 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – interpeak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
Interpeak hour (11:00 – 12:00) – two-way flows					
Advent Way	603	707	59	766	8.2%
Walthamstow Avenue	1,753	2,273	-1	2,272	-0.1%
A406 east of Cooks Ferry Roundabout	5,300	6,112	-3	6,109	0.0%
A406 WB off-slip at Cooks Ferry Roundabout	818	1,075	-2	1,073	-0.2%
Argon Road at Cooks Ferry Roundabout	688	1,360	0	587	0.0%
A406 WB on-slip at Cooks Ferry Roundabout	375	449	16	465	3.9%
A406 EB off-slip at Cooks Ferry Roundabout	598	759	16	775	2.4%
A406 west of Cooks Ferry Roundabout	4,164	4,850	33	4,883	0.7%
Montagu Road/Conduit Lane	1,264	1,627	-1	1,626	-0.1%
A1055 Meridian Way north of A406	1,634	2,058	-1	2,057	0.0%
Ardra Road	1454	1,623	1	1,624	0.1%
A1055 Meridian Way south of A406	2,073	2,650	0	2,650	0.0%
A406 WB off-slip at A1010 Fore Street	526	591	28	619	4.8%
A406 WB on-slip at A1010 Fore Street	511	574	0	574	0.0%
A406 EB off-slip at A1010 Fore Street	774	869	0	869	0.0%
A406 EB on-slip at A1010 Fore Street	614	689	5	694	0.6%
A1010 Fore Street north of A406	1,212	1,361	1	1,362	0.1%
A1010 Fore Street south of A406	1,171	1,315	8	1,323	0.6%
A406 WB off-slip at A10 Great Cambridge Road	930	1,044	13	1,057	1.2%
A406 WB on-slip at A10 Great Cambridge Road	476	535	0	535	0.0%
A406 EB off-slip at A10 Great Cambridge Road	897	1,007	0	1,007	0.0%
A406 EB on-slip at A10 Great Cambridge Road	1,793	2,013	7	2,020	0.3%
A10 Great Cambridge Road north of A406	3,250	3,650	2	3,652	0.1%
A10 Great Cambridge Road south of A406	2,509	2,817	11	2,828	0.4%

Table 6.47: Stage 4 two-way traffic flow increases considering cumulative schemes (with Meridian Water) – PM peak hour

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
PM peak hour (17:00 – 18:00) – two-way flows					
Advent Way	773	893	-24	869	-2.8%
Walthamstow Avenue	2,439	2,944	-10	2,934	-0.4%
A406 east of Cooks Ferry Roundabout	7,088	8,023	-21	8,002	-0.3%
A406 WB off-slip at Cooks Ferry Roundabout	872	1,054	-10	1,044	-1.1%
Argon Road at Cooks Ferry Roundabout	842	1,265	0	320	0.0%

Link/junction	Baseline	Future baseline	Stage 4 (net)	Total	% increase
A406 WB on-slip at Cooks Ferry Roundabout	454	533	-9	524	-1.9%
A406 EB off-slip at Cooks Ferry Roundabout	558	668	-9	659	-1.5%
A406 west of Cooks Ferry Roundabout	5,568	6,366	-19	6,347	-0.3%
Montagu Road/Conduit Lane	1,379	1,681	-3	1,678	-0.2%
A1055 Meridian Way north of A406	1,717	2,054	0	2,054	0.0%
Ardra Road	1692	1,889	1	1,890	0.1%
A1055 Meridian Way south of A406	2,655	3,168	0	3,168	0.0%
A406 WB off-slip at A1010 Fore Street	762	856	7	863	0.8%
A406 WB on-slip at A1010 Fore Street	478	537	0	537	0.0%
A406 EB off-slip at A1010 Fore Street	684	768	0	768	0.0%
A406 EB on-slip at A1010 Fore Street	677	760	3	763	0.4%
A1010 Fore Street north of A406	1,281	1,438	3	1,441	0.2%
A1010 Fore Street south of A406	1,097	1,232	3	1,235	0.3%
A406 WB off-slip at A10 Great Cambridge Road	1,503	1,688	7	1,695	0.4%
A406 WB on-slip at A10 Great Cambridge Road	517	581	0	581	0.0%
A406 EB off-slip at A10 Great Cambridge Road	1,094	1,228	0	1,228	0.0%
A406 EB on-slip at A10 Great Cambridge Road	2,595	2,914	3	2,917	0.1%
A10 Great Cambridge Road north of A406	4,041	4,538	3	4,541	0.1%
A10 Great Cambridge Road south of A406	2,792	3,135	3	3,138	0.1%

6.5.31 The cumulative traffic flow assessment including Meridian Water for Stage 4 shows that the largest increase in traffic flows would be experienced on Advent Way, leading to and from the southern site access as well as for public/employee traffic using Lee Park Way. However, the increase in traffic flows would be less than 10 per cent and would have a negligible effect on the operation of Advent Way.

6.5.32 The increase in traffic on the other links would each be less than 10 per cent and of negligible effect. The increase in traffic would be significantly less than 10 per cent on a number of links including the A406 North Circular Road both to the east and to the west of the Cooks Ferry Roundabout.

6.5.33 During the PM peak hour, some of the traffic flows show a decrease on the future baseline traffic flows. This is due to the fact that the number of employees associated with future operations at the Edmonton EcoPark is less than the number of employees associated with the existing operations.

Public Transport

6.5.34 The additional trips generated by the Project on public transport services has also been considered with respect to the additional trips generated by the cumulative schemes.

6.5.35 When Meridian Water is excluded, the additional cumulative scheme public transport trips, as set out in Table 5.28, will not result in a significant

reduction in the residual public transport capacity and therefore the public transport trips generated by the Project will not have a material effect on public transport services.

6.5.36 When Meridian Water is included, there would be a significant increase in public transport trips, as set out in Table 5.29, and this is likely to require public transport enhancements to be delivered to support the Meridian Water development. However, the additional trips generated by the Project would be negligible in comparison and the Project would therefore not affect the capacity of public transport services.

Walking and cycling

6.5.37 The additional walking and cycling trips generated by the cumulative schemes when Meridian Water is not included would not affect the existing pedestrian and cycle infrastructure and therefore, the effect of the additional walking and cycling trips generated by the Project would be negligible.

6.5.38 When the additional walking and cycling trips generated by Meridian Water are considered, the additional trips generated by the Project would be negligible in comparison and would therefore not materially affect existing pedestrian and cycle infrastructure.

7 Water transport

7.1 Introduction

7.1.1 A water transport study has been undertaken by Peter Brett Associates in order to establish the viability of transporting IBA from and municipal solid waste (MSW) to the Edmonton EcoPark.

7.1.2 The Peter Brett Associates report is provided in Appendix I.

7.2 Infrastructure upgrades

7.2.1 The study indicates that the water transport option would not be feasible without significant upgrades to the existing infrastructure, regular monitoring and maintenance; and owing to the complexity of the movements (involving three barging operations) would require a significant degree of management and oversight.

7.2.2 The civil works would be likely to include: upgrading at least three of the four locks[24] (from hand-pumped to hydraulic operations); upgrading the wharf at the Edmonton EcoPark; and the installation of new commercial landing stages[25] (for queuing barges) at either side of each lock.

7.2.3 At the Edmonton EcoPark, the wharf upgrade would be likely to include replacing the existing wharf wall, resurfacing the wharf area, possible extension of the wharf area and the installation of a gantry crane (for the combined IBA/MSW options). In addition, the use of the wharf would require the relocation of the Edmonton Sea Cadets.

7.2.4 Upgrading the locks would be necessary to ensure commercial freight operations are kept separate from the leisure traffic and barges may pass through the gates in a timely manner. Throughout the life of the completed Project, regular monitoring and maintenance of the canals and locks would be necessary in order to mitigate the effects of increased usage. Maintenance activities associated with the locks would be likely to include brickwork repairs, masonry re-pointing, gate repainting/refurbishment, chamber refurbishments and the installation of new sluice gates. Spot dredging of the canals would be required at specific points or to clear erroneous obstructions.

7.2.5 Discussions with the Canal and River Trust (C&RT) indicate that the barge operator would pay to use the waterway through a leasing arrangement (peppercorn lease) on a repair and maintenance basis. At the end of the contract the locks would be 'handed' back to the C&RT.

7.3 Vehicle reduction

7.3.1 The overall number of daily trips to move IBA is modest and would be expected to be in the range of between 30 to 48 one-way journeys per day,

[24] No refurbishment cost for the fourth lock (Bow Lock) has been made, as it is assumed the Canal and River Trust would want to maintain overall control of this lock since it is the interface with the tidal creek

[25] Note: The final decision on whether landing stages are required is a matter that needs to be agreed between Canal and River Trust and the barge operator.

depending on the waste throughput/output. This would not represent a significant reduction on the number of vehicle trips travelling to and from the Application Site.

7.4 Financial costs

7.4.1 Regarding investment costs, in all cases the total costs of transporting IBA and/or MSW via the waterways would be substantially more expensive than the equivalent road transport scenario – between 2.2 and 3.0 times as expensive. The total costs include waterways infrastructure, waterways maintenance, wharf construction, on-site transfer costs, barge loading costs and transport costs for the River Lee Navigation, Bow Creek, and River Thames.

7.4.2 Depending on the scenario, the total costs associated with road transport vary from £1.57 per tonne up to £1.79 per tonne. The total costs associated with transport via the waterways vary from £3.41 per tonne up to £5.40 per tonne which would involve a complete upgrade of the wharf and installation of a gantry crane. As mentioned previously, the implementation of a water transport operation would require the relocation of the Edmonton Sea Cadets at significant additional cost.

7.4.3 Without such investment the use of water as a means of transport would not be feasible. By comparison road transport has a readymade infrastructure and would only require the procurement of the necessary vehicles and handling plant.

7.5 Environmental costs

7.5.1 The report shows that transport via the road network produces higher levels of CO_{2eq} per annum for each equivalent water transport scenario. Transport via the waterways is shown to reduce CO_{2eq} emissions by between 36 per cent and 64 per cent.

7.5.2 Considering the worst case scenario (480,000 tonnes of IBA and MSW) the annual quantities of Carbon Dioxide equivalent (CO_{2eq}) emitted are 1,150 tonnes for road transport and 740 tonnes for water transport. Putting these figures in context, by diverting 700,000 tonnes of municipal waste from landfill via energy recovery, north London's homes and businesses would avoid just over 188,000 tonnes of CO_{2eq} emissions in a year. Avoided emissions from water transport would represent just 0.2 per cent of this figure[26]. The avoided emissions are therefore minimal in the context of the wider Project and the level of infrastructure investment necessary for water transport to become feasible.

[26] CO2e emission factors were sourced from Defra's greenhouse gas conversion factors for company reporting (2012)

7.6 Transport of construction and demolition waste

7.6.1 For the transport of demolition waste and construction materials, it is assessed that only the delivery of aggregates offers the best opportunity at this time. Delivery of material from north of the M25 by water is assessed as unlikely to be cost effective or practical.

7.7 Transport of MSW from Millfields Road Depot

7.7.1 Millfields Road Waste Depot is the location where LB Hackney accepts commercial waste and is the depot at which the Borough's fleet of RCVs are based. The depot is next to the River Lee Navigation and offers direct access to the waterway.

7.7.2 There is no scope to integrate further quantities of MSW from Millfields Road Depot into the combined system as the transport of IBA and MSW (from an east London source) by water is shown to maximise the use of containers in the system. A separate operation dedicated to Millfields Road would present excessive operational difficulties and it was assessed that the delivery of waste from the Millfields Road Depot would not be practical or viable. The capital cost of introducing a separate water transport operation for Millfield Road was estimated to be approximately £16 per tonne. Coupled with operational costs a separate option is considered to be a relatively expensive scenario.

7.8 EcoPark House

7.8.1 The wharf area is the site of the proposed EcoPark House which will serve as the Edmonton EcoPark reception, location for some administration staff, accommodate the Edmonton Sea Cadets and serve as a visitor, community and education centre for visiting groups such as schools. Construction will be implemented in a staged manner to ensure that essential operations associated with the on-going waste management activities remain functioning throughout. EcoPark House will be built during the initial construction stage alongside the RRF.

7.8.2 The construction of EcoPark House is required during the initial construction stage for a number of practical reasons including to re-house the Sea Cadets and accommodate new IT server systems. In addition, the RRF will also house a publically accessible RRC which will become open to the public once the RRF (and EcoPark House) is complete. The mixing of light and heavy vehicles around the wharf area would introduce significant safety concerns in particular to public users of the RRC.

7.9 Water transport conclusion

7.9.1 For the reasons outlined above including economic, environmental and practical considerations the use of the wharf for crane operations as part of the water transport infrastructure is not viable.

8 Servicing and servicing management

8.1 Introduction

8.1.1 This section sets out the likely servicing requirements of the Project. These relate predominantly to the office and administration aspects of the Project as it is anticipated that the majority of maintenance of the ERF and RRF systems would be undertaken by on-site employees (engineers/contractors).

8.1.2 The servicing strategy sets out the movement of vehicles to and from the Project and includes calculations of the estimated number of servicing/delivery trips to the Application Site.

8.2 Vehicle generation

8.2.1 Servicing vehicle trip generation rates have been used for calculating the number of deliveries and servicing vehicles for the office/administration elements of the Project. The vehicle trip rates are then applied to the relevant building areas (100m^2 GIA) to calculate the daily delivery and servicing vehicle trips for the Project. The daily trips rate used for this assessment is 0.2 trips per 100m^2 GIA.

8.2.2 Using this trip rate, the servicing trips expected to be generated by the Project are shown in Table 8.1.

Table 8.1 : Servicing requirements

Use	GIA (m^2)	Trip rate/100m^2	Daily trips
Office/administration	5,774	0.2	12

8.2.3 The servicing trips would be expected to have an even distribution across the normal working day (08:00 to 18:00) with a slight peak in the morning between (08:00 and 10:00). The servicing trips generated by the Project have already been considered as part of the trip generation assessment and are included in the analysis presented in Section 5 and Section 6.

8.2.4 All deliveries will be received within the Application Site and vehicles will utilise the existing parking and access route to access the relevant building to which the trip relates.

8.3 Delivery and Servicing Plan

8.3.1 Fundamental to the efficient operation of servicing and deliveries to the Project will be the Delivery and Servicing Plan (DSP) which will be agreed with LB Enfield and TfL. It is intended that this would be prepared during Stage 1 and updated for other stages of the Project as required with reviews undertaken as required beyond Stage 4. As with all elements of the delivery and servicing strategy for the Project, the overall aim will endeavour to ensure that deliveries and servicing could be carried out efficiently, without creating any negative impacts upon the local highway network. The DSP will consider:

a. avoiding peaks in demand for delivery and servicing activity and ensuring that servicing trips do not conflict with the daily peak for the Project's operational and construction activity;

b. avoiding peaks in demand for delivery and servicing activity and ensuring that deliveries do not conflict with the highway daily peak hours;

c. ensuring fast turn-around of servicing vehicles, making best use of servicing bays and lay-bys;

d. providing feedback/monitoring to ensure that the Edmonton EcoPark operates effectively; and

e. ensuring that no on-street servicing or waiting takes place at locations where there is likely to be a negative impact on the public highway.

8.3.2 Consideration will be given to the regular monitoring of the servicing of the Project to ensure that it is operating in an efficient way.

8.3.3 The DSP will be implemented during Stage 1 of the Project and will be developed into a full DSP during this stage. The Applicant will work with the Edmonton EcoPark operator to ensure that the DSP is implemented and developed over time. The Operational Travel Plan and DSP are interlinked documents and it is proposed that the management of the DSP will be the responsibility of the Travel Plan coordinator. This will help ensure that the DSP is taken forward effectively and will feed back to the Applicant to ensure continued support and resources for the DSP.

8.3.4 It will be important to inform all employees and regular visitors (e.g. RCV operators from the Constituent Boroughs) about the DSP, including:

a. what is the DSP;

b. the importance of the DSPs, freight movements and their impacts;

c. what can be done to help encourage the use of sustainable deliveries and servicing;

d. routes to be used in accessing the Edmonton EcoPark; and

e. the potential benefits of successfully using and implementing a DSP.

8.3.5 Raising awareness will assist in gaining support of the employees and regular visitors for the DSP and ensure stakeholder buy-in at an early stage.

8.3.6 To increase awareness of the DSP and so far as is reasonably practical, relevant staff and regular visitors will be given information about the DSP and encouraged to use sustainable methods of freight road transport to and from the Edmonton EcoPark. It is essential that relevant employees working at the Edmonton EcoPark and suppliers are involved in the implementation and development of the DSP. It will also allow staff and regular visitors to have an input into the on-going development of the DSP.

9 Travel Plans

9.1 Introduction

9.1.1 The Applicant is committed to promoting sustainable development and environmentally friendly modes of transport. As such, two Framework Travel Plans have been prepared to support the Application. These are a Framework Construction Travel Plan and a Framework Operational Travel Plan. Both of the Travel Plans are described in the following sections. The Travel Plans and all agreed measures therein would be secured, enforced, monitored and reviewed as part of the proposed Section 106 Draft Agreement (AD03.03).

9.2 Framework Construction Travel Plan

9.2.1 The Framework Construction Travel Plan, which will provide the basis for the full Construction Travel Plan that will be prepared prior to commencement, is provided in Appendix J. The overarching aims of the Construction Travel Plan are to:

a. influence the travel behaviour of construction employees;

b. encourage travel by public transport, cycle and by foot by improving their attractiveness;

c. minimise the number of single-occupancy car trips generated by construction employees;

d. help reduce local road congestion; and

e. promote healthy lifestyles.

9.2.2 In order to achieve these aims, the following measures have been included:

a. provision of a shuttle bus service between the Application Site and a local public transport station (e.g. Tottenham Hale). Demand for this service would be monitored throughout the construction stages but it is likely to be most effective during Stage 1d;

b. promotion of car sharing for construction employees. Consideration will be given to setting up a car sharing website; and

c. provision of on-site cycle parking and keeping the level of car parking to a practical minimum.

9.2.3 The Construction Travel Plan measures will be monitored and reviewed throughout each stage of construction.

9.3 Framework Operational Travel Plan

9.3.1 The Framework Operational Travel Plan, which will provide the basis for the full Travel Plan that will be prepared prior to completion of the Project, is provided in Appendix K. The overarching aims of the Operational Travel Plan seek to:

a. influence the travel behaviour of employees;

b. encourage travel by public transport, cycle and by foot by improving their attractiveness;

c. help reduce local road congestion; and

d. promote healthy lifestyles.

9.3.2 In order to achieve these aims, the following measures have been included:

a. promotion of car sharing for employees. Consideration will be given to setting up a car sharing website if demand for car sharing is generated;

b. provision of on-site cycle parking;

c. provision of an employee travel website providing up-to-date information on public transport services and walking and cycling route; and

d. if demand requires, provision of a shuttle bus service between the Application Site and a local public transport station (e.g. Tottenham Hale).

9.3.3 The Operational Travel Plan measures will be monitored and reviewed against the mode share targets set. The Operational Travel Plan will acknowledge that some employees working shifts may have no travel alternative other than the car/private vehicle.

10 Summary and conclusion

10.1 Summary

10.1.1 This TA has been prepared to support the Application to obtain a DCO for the Project.

10.1.2 The Edmonton EcoPark is a waste management complex of around 16 ha which is located within LB Enfield. The site is accessed from Advent Way, which leads onto the A406 North Circular Road.

10.1.3 The Project has been considered in conjunction with national, regional and local government guidance on transport matters and complies with the details set out regarding maximum accessibility using a choice of transport modes. The existing highway infrastructure and public transport provision have been set out in this TA.

10.1.4 The Application Site is in the vicinity of the A406 North Circular Road, a TLRN road. The SRN can be accessed approximately 1.7km to the west of the Application Site on the A1010 Fore Street. The Application Site currently has a low level of public transport accessibility with a PTAL score of 1b which is rated as 'very poor'. Pedestrian and cycle routes are available in the direct vicinity of the Application Site.

10.1.5 The principal development will comprise the development of an ERF generating electricity using residual waste as a fuel and capable of an electrical output of around 70MW_e and associated development of an RRF, EcoPark House comprising a visitor, community and education centre with offices and providing a base for the Edmonton Sea Cadets, and new site access points from Lee Park Way and Deephams Farm Road. Access for pedestrians and cyclists will be provided from Lee Park Way.

10.1.6 The stages of the Project are as follows:

a. Stage 1a: site preparation and enabling works;

b. Stage 1b: construction of RRF, EcoPark House and commence use of Temporary Laydown Area;

c. Stage 1c: operation of RRF, EcoPark House and demolition/ clearance of northern area;

d. Stage 1d: construction of ERF;

e. Stage 2: commissioning of ERF alongside operation of the existing EfW facility, i.e. transition period;

f. Stage 3: operation of ERF, RRF and EcoPark House, demolition of the existing EfW facility; and

g. Stage 4: operation of ERF, RRF and EcoPark House, i.e. final operational situation.

10.1.7 During construction, parking for construction employees will be provided on the Temporary Laydown Area. At the peak of construction (during Stage 1d), approximately 270 parking spaces are proposed

10.1.8 It is proposed that 128 car parking spaces be provided for the completed Project.

10.1.9 The estimated trip generation for the Project varies depending on the Project stage. The maximum vehicle trip generate would be experienced during Stage 1d when 1,176 net additional two-way vehicle trips will be generated on the local highway network. In addition, there would be approximately 100 public transport trips per day during this stage. During all other stages of construction and operation, the additional trips generated on the local highway and public transport networks would be lower than Stage 1d. The increases in traffic flows and public transport trips would be lower than Stage 1d or all other stages of the Project.

10.1.10 The TA shows that for all stages of the Project, the additional traffic generated by the Project would result in only minor increases and, in some time periods, decreases in the traffic flows on the A406 North Circular Road and other key routes on the local highway network. In the direct vicinity of the Project on the local roads, larger increases in traffic flows would be experienced. However, these increases can be accommodated given that the baseline traffic flows are low. The changes in traffic flows associated with the Project would also be much less than the changes that will occur due to background traffic growth in the future baseline scenarios.

10.1.11 The additional public transport trips generated will be accommodated within the existing capacity of the public transport network. As such, the impact of the Project on the public transport network is also considered to be negligible.

10.1.12 A study into the feasibility of moving waste by water has been undertaken. The study concludes that while the transport of IBA and MSW by water would have environmental benefits, the overall cost of transporting IBA and/or MSW via the waterways would be substantially more expensive than the equivalent road transport scenario and without significant investment in the waterways, it would not be feasible. If water transport was used, it would only reduce the number of vehicle trips by between 30 and 48 per day.

10.1.13 The number of service vehicle trips to and from the office/administration uses has been calculated. This amounts to 12 trips per day. Trips will be managed such that the times of deliveries do not coincide with the peak times for site operations. A DSP will be prepared which will ensure that the deliveries and servicing will be undertaken in an efficient manner and minimise the impact on the local highway network.

10.1.14 Framework Operational and Construction Travel Plans have been prepared. Both Travel Plans aim to promote the use of sustainable modes of transport through a range of soft measures including the provision of public transport shuttle services (for construction), the provision of cycle parking and the promotion of car sharing.

10.2 Conclusion

10.2.1 The effects of the transport aspects of the Project on the surrounding highway and public transport network have been assessed for the construction and operational stages. This TA demonstrates that the trips

generated by the Project can be accommodated within the local transport network with no significant adverse effects as a result.

10.2.2 In conclusion, the TA demonstrates that the construction and operation of the Project can be accommodated within the existing traffic and transport infrastructure surrounding the Application Site.

Series 05 Technical Documents

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