8 Landscape and Visual Impacts

8.1 Introduction

This chapter assesses the impact of Line One on the townscape of the City of Edinburgh, and on the visual amenity and views enjoyed by those living and working in those parts of city affected by the line, or enjoying business, tourist and recreational facilities in the area. As a technique, landscape and visual impact analysis was developed initially for the wider environment and as a result this chapter is entitled ‘Landscape and Visual’ impacts. In the context of this project ‘Landscape’ includes the urban landscape and townscape.

Landscape and visual impacts are closely related issues that are assessed separately:

- landscape impacts are physical changes caused by a development which affect the character of the landscape and how it is experienced;
- visual impacts are changes in views resulting from the development, changes in the visual amenity enjoyed by those who benefit from those views, and people’s responses to these changes.

Landscape impacts can consist of direct impacts on specific features and elements or more subtle effects upon the overall pattern of elements, which together make up the local character. Where the area being discussed is predominantly built-up, it is described as ‘townscape’ rather than landscape.

The following sections:

- describe the existing landscape and visual environment of the area affected by Tram Line One, dividing them into ‘character zones’ to aid description and analysis;
- consider the sensitivity of the various character zones affected;
- define:
  - the extent of visibility of the proposals, and
  - the potential landscape (townscape) and visual impacts; and
- set out the measures proposed for the mitigation of these impacts.

At this stage in the development of the scheme it has not been possible to prepare visual material for the assessment in the form of photomontages. It is the intention that these will be prepared during the consideration of the proposals.

8.2 Methodology

This townscape and visual assessment is based on the ‘Guidelines for Landscape and Visual Assessment’ (The Landscape Institute with the Institute of Environmental Management and Assessment, 2nd Edition, 2002) and the ‘Design Manual for Roads & Bridges: Volume 11’ (TSO, for the Highways Agency, Scottish Executive and others), including Scottish Executive Supplementary Guidance.
For the sake of consistency between this and the STAG 2 report, the scales for recording the magnitude of effect and significance are in accordance with ‘Scottish Transport Appraisal Guidance, Version 1.0’ (Scottish Executive, September 2003).

8.2.1 Townscape Impact Assessment

Physical changes to the fabric of the city, such as the addition or removal of structures and buildings, or alterations to roads and open spaces, may alter the character and perceived quality of an area. These are considered to be townscape ‘effects’.

Townscape impact assessment considers these effects on the integrity and character of the townscape as a whole, considering not only the individual components but also the overall form and coherence of the places affected.

The significance of the impact derives from the combination of the magnitude of the ‘effect’ - the physical change and the degree of change this causes to the character of the site and its surrounding - with the sensitivity of the site and its surroundings (its perceived importance and its ability to accept change).

Baseline and Sensitivity

The first stage of the townscape assessment therefore consists of the collection of baseline data relating to the components, character and quality of the townscape of the areas affected by the tram, in order to assess their sensitivity to change.

The assessment of the sensitivity of the site and its surroundings is a combination of objective and subjective judgements. It combines a consideration of planning and conservation designations, an understanding of historic and cultural associations, and an understanding of the site’s past and likely future development, with professional judgement on its situation and value and how the anticipated changes will be perceived.

For the purposes of this assessment, sensitivity has been categorised as:

- **Highly sensitive**: areas of townscape that are highly valued, particularly distinctive, or considered susceptible to small changes. The World Heritage Site, Conservation Areas and the setting of key Listed Buildings fall into this category.
- **Moderately sensitive**: areas of townscape that are valued more locally and/or are tolerant of moderate levels of change.
- **Slightly sensitive**: areas that are generally not valued for the quality of their townscape, areas considered potentially tolerant of noticeable change, or areas undergoing substantial development such that their character is one of change. This category would include areas of very mixed development forms with weak urban structure, or areas currently undergoing significant development such as most of Leith Docks and Granton Waterfront.

Magnitude

The project is then described, character area by character area. The changes to elements of the townscape arising from the development, and the degree to which this affects the townscape as a whole are made clear.

For the purposes of this assessment, magnitude is considered to be a function of the extent and the degree of change predicted and is defined as follows:
• **High**: a material change over an extensive area or intensive change to a limited area. Examples of this would be:
  
  o the construction or demolition of buildings or substantial structures, including tram stops, in a manner that alters the pattern and form of the area,

  o substantial realignment of a road or

  o the introduction of overhead cabling into a principal, main or formal street.

• **Medium**: a small change over an extensive area or material change to a limited area. Examples of this would be:
  
  o the construction or demolition of buildings or substantial structures, including tram stops, in a manner that makes only small changes to the pattern and form of the area,

  o the minor realignment of a road or extensive resurfacing with new materials, or

  o the introduction of overhead cabling into a minor street or industrial estate.

• **Low**: a negligible change over an extensive area or small change to a limited area. Examples of this would be:
  
  o alterations to buildings or structures in a manner that makes virtually imperceptible changes to the pattern and form of the area,

  o minor resurfacing with new materials, or

  o the introduction of overhead cabling in an industrial area, or in a location where such cabling already exists.

**Significance**

To provide a framework to aid consistency of reporting, both townscape and visual impacts are assessed as follows:

• Major (positive or negative)

• Moderate (positive or negative)

• Minor (positive or negative)

which is derived by combining the impact magnitude and receptor sensitivity in the matrix set out below.

Issues of sensitivity and magnitude are a matter of judgement and are categorised into three broad bands. The placing of effects and sensitivity into these bands, as well as the categorisation of the results in the matrix are issues of professional judgement.
## Magnitude of townscape effect

<table>
<thead>
<tr>
<th>Sensitivity of townscape to change</th>
<th>High</th>
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<th>Low</th>
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<tr>
<td>Highly sensitive</td>
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<td>Slightly sensitive</td>
<td>Moderate</td>
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</tbody>
</table>

Major and moderate impacts are considered significant.

Change that neither improves nor degrades the townscape may be judged to be neutral.

### 8.2.2 Visual Impact Assessment

Visual effects are changes in the composition and character of views available to people living, working and recreating in the area affected by the proposed development. The places from which these views are obtained, and by inference the people occupying these places, are described as the ‘receptors’ of the views.

Visual impact assessment considers the response of the receptors to the changes and the overall effect on the visual amenity - the pleasantness of the view or outlook - they enjoy.

The significance of the impact derives from the combination of the magnitude of the effect (the change) with the sensitivity of the receptor.

By definition, visual effects can only occur within the area from which the tram system is visible. The first step is therefore to establish this area, the ‘visual envelope’ (see Figure 8.1).

### Sensitivity

The sensitivity of the receptors of visual effects has been assessed by taking account of peoples differing responses to views and thus their perception of visual amenity. Factors considered were the nature and context of the viewpoint, the importance of the view, and the expectations and reasons for being there of the receptors.

For the purposes of this assessment, sensitivity has been categorised as follows.

- **Highly sensitive:** receptors for whom the view is important or where changes could be critical to the visual amenity, such as
  - iconic views of the city (classic pictures such as the Castle from Princes Street),
  - designed vistas in the New Town,
  - the main outlook from residential properties,
  - people enjoying tourist locations, and
  - people enjoying outdoor recreation activities.
Moderately sensitive: receptors for whom the change in the view is a small element in the overall view, not critical to the visual amenity, or where the nature of the view is of secondary importance to the user - for example

- people travelling through or past (on roads and railways),
- shoppers and
- people enjoying indoor recreation activities.

Slightly sensitive: receptors for whom the change is of little importance or irrelevant, for example people at places of work such as offices and industrial areas where their attention can reasonably be expected to be focussed on their work or activity.

Magnitude

The assessment of magnitude of visual change takes into account the scale of the change within the townscape in the view in question, the importance and value of the townscape viewed and the extent of the view affected by the change. For the purposes of this assessment, the magnitude of visual change has been be categorised as:

- High: the proposed development dominates the view and substantially changes its character and quality
- Medium: the proposed development is clearly noticeable in the view and affects its character or quality
- Low: the proposed development is visible but has no material effect on its character or quality

All receptors within the study area likely to experience visual impacts have been assessed and the results tabulated and plotted on plan. However, due to the scale and complexity of the urban fabric and the similarity of views from adjacent properties, all but the most important receptor buildings have been grouped and considered as streets and blocks rather than individual locations.

Significance

As with townscape assessment, visual impacts are assessed as follows:

- Major (positive or negative)
- Moderate (positive or negative)
- Minor (positive or negative)

This again is derived by combining the impact magnitude and receptor sensitivity in the matrix set out below. Issues of sensitivity and magnitude are a matter of judgement and are categorised into three broad bands. The placing of effects and sensitivity into these bands, as well as the categorisation of the results in the matrix are issues of professional judgement.
<table>
<thead>
<tr>
<th>Sensitivity of receptor</th>
<th>Magnitude of visual effect</th>
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<tr>
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<td>Moderately sensitive</td>
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</table>

Major and moderate impacts are considered significant.

Change that is minor and neither improves nor degrades the view may be judged as neutral.

8.2.3 Scheme Design and Mitigation

The Edinburgh Tram Line One is not precisely defined at the time of writing this assessment. The following paragraphs explain the background to the indicative scheme design that has been used as a basis for these assessments.

The Bill to be laid before Parliament will give wide-ranging powers for the construction of the Edinburgh Tram Line One, within the ‘limits of deviation’ laid down in the plans accompanying the Bill. In addition, neither the form of contract nor the contractual specification have been defined at the time of writing. There is therefore no contracted design.

The Bill will be based on an indicative design developed by the Line One team. This design is based on best engineering, traffic and transport knowledge and has been designed in the knowledge of environmental and social concerns to balance the economic and transport benefits of the tram against any traffic and environmental disbenefits.

The Design Manual, currently at draft status, defines the principles of design and detailing to be followed in the final design (see Section 2.4). It sets out key issues and principles in Part One: Strategic Principles; Part Two: Design Parameters provides Design Guidance and sets out draft Design Requirements. The draft Design Requirements will be expanded as the detailed design of the project progresses.

tie has also commissioned specimen townscape-led designs for a number of key areas within the World Heritage Site including Princes Street, Haymarket, Shandwick Place and Picardy Place. tie has committed to including a requirement in any design or design and build contract that the final design is to comply with the requirements of the Design Manual.

The indicative engineering design has been assessed in this chapter, so as to consider the ‘worst case scenario’. Potential mitigation is identified in this assessment and the mitigation that tie is committing to include in the finished works is outlined. In following the requirements of the Design Manual, the mitigation requirements identified below will be taken into account in the design of the project. Areas where mitigation is provided by planting are assessed at a notional ten years after completion to allow for plant establishment. Specific assumptions about the finished design in any particular area are included in the relevant sections of scheme description below.
8.3 Townscape Baseline: Edinburgh’s Townscape

Edinburgh is long established as one of UK’s national cultural assets and is the most highly valued of Scottish townscapes. It contains one of the largest areas of Georgian architecture in Europe and almost the entire city centre is inscribed on the UNESCO register of World Heritage Sites due to its unique architectural heritage and distinctive townscape. Conservation areas cover about one third of the city and there is a general agreement that its special urban qualities have to be safeguarded and protected.

The route has been divided into a series of character zones (see Figure 8.2) and the following paragraphs describe the townscape of each zone.

8.3.1 Haymarket

Haymarket is a mixed residential, retail and office area around the city’s second station, laid out in the latter part of the 19th Century as part of rapid westward and southerly expansion of the city. It is a major transport interchange and a busy traffic junction with high vehicular and pedestrian flows.

Haymarket Station, built in 1840 to a design by John Miller, is the oldest Scottish station surviving mostly in its original state. It was the terminus of the Glasgow-Edinburgh railway until the line was pushed through Princes Street Gardens to Waverley in 1846.

The station is particularly busy at rush hour, with commuters from the west and Fife. Haymarket Terrace and Dalry Road are the main traffic routes from the west into the city.

The street pattern is complex particularly in Haymarket Terrace where building lines do not always follow the street pattern. This dilutes the sense of containment and, together with the large car park adjacent to the station creates a fragmented appearance.

One of the principal features of the area to be considered with the introduction of the new tram route is the axial view along West Maitland Street, terminating at the station. This view is contained within formalised terraces of tenements continuing the character of the western New Town, albeit with more modest architecture.

There is a wide diversity of architectural styles: modern office blocks and car parking around the station and alongside the railway; modern terraced housing where Haymarket merges into the back of Roseburn; Victorian tenements, with continuous shop fronts on the north side of Haymarket Terrace.

Haymarket Station, with its classical frontage, is aligned on the axis of West Maitland Street and terminates, albeit weakly, an important vista from the West End.

Haymarket goods yard (Dalry Road/Morrison Street corner) is the last major empty site in the city and is currently the subject of development proposals.

8.3.2 New Town: West End

The West End, from just east of Haymarket to the end of Princes Street, is an architecturally coherent extension of the New Town developed in the period up to 1880, and part of the World Heritage site.

The principal characteristics of the street are its formal axiability and symmetry. Three to four storey classical sandstone tenements with front basements line most of the street, with shop-fronts projecting forward to the pavement line at both the Princes Street and Haymarket ends. Midway along the street, the formal Atholl and Coates Crescents step back to create a central oval open space, with the main road passing between almost symmetrical garden enclosures. The street is defined by trees, which continue the line of the building frontages either side.
The Princes Street end is an extension of the town centre retail area; the centre section is in office and residential use, with local retail adding to the mix close to Haymarket. It is also a major traffic thoroughfare to the city centre, with the Haymarket end effectively an extension of the Haymarket transport interchange.

### 8.3.3 New Town: Princes Street

Originally named South Street, Princes Street is the southern-most of the three principal east-west axes that, together with the seven cross streets, make up the formal planned grid of James Craig’s design for the first New Town, development of which started in 1767.

The Parliamentary Act of 1816 prevented further building on the south side of Princes Street, leaving St Johns Church, the National Galleries Playfair building and the Scott Monument as the only structures above street level between the New Town and the Old Town across Princes Street Gardens. It also left Edinburgh with a townscape unique in world cities, described\(^1\) as "the most important asset and the true singularity of Edinburgh; the physical separation and the visible conjunction of the Old Town and the New.”

The north side of the street has a continuous façade, three to six storeys high, broken only by the cross-streets. There has been continuous demolition and renewal over the past 200 years, such that the architectural style and quality of the north side is extremely varied, a catholic mix of shop and some hotel fronts of almost every era: from a few Georgian remnants, through exuberant Victoriana to brutalist 1970s major store developments and 1990s post-modernism. Although several have architectural interest, their collective appearance can best be described as incoherent. Many exhortations to comprehensive redevelopment have been made over the years and in 1958 total redevelopment was proposed by the Princes Street panel, with each block having a first floor walkway to ease congestion at pavement level and a number of examples of this imposition remain.

The defining point of the street is its magnificent setting, open to the south with views across the gardens to the Castle and the Old Town. Assisted by the topography of the New Town site, the north-south streets offer spectacular views across Princes Street Gardens to the Old Town, especially Castle Street looking towards the Castle, Hanover Street looking towards the Mound, but punctuated by the façade of the National Gallery and South St David Street, where the Scott Monument forms a landmark in the vista to the High Street on the ridge.

Along the south side of the street there is a decorative cast iron railing and a solid row of traditional memorial park benches donated over the years. The wide pavement of the north side has been improved recently with the introduction of clean-lined modern bus shelters and litterbins. Street lighting is mainly provided by building mounted spotlights.

The road has an asphalt carriageway with a mixture of concrete and granite kerbs, laid to give a broad kerb. The wide northern footway is paved with ground aggregate finish paving slabs and the narrow central reserve is setted. Most of the southern footway is surfaced with basic concrete slabs, except the area around Waverley Bridge, which has recently been upgraded with York-stone and granite paving.

As Edinburgh’s principal shopping street, also containing hotels and offices, Princes Street is usually very busy and on Saturday afternoons the broad northern footway can be almost full. It is also a main public transport corridor, served by the majority of cross-city bus services. Waverley Station lies just south of the east end, at low level, poorly connected for pedestrians.

\(^1\) Professor A J Youngson, The Making of Classical Edinburgh
8.3.4 New Town: St Andrew Square

St Andrew Square, a formal tree-lined square bounded with railings, marks the end point of George Street, the principal axis of the New Town and, balanced by Charlotte Square, is a key element in the formal layout of this part of the World Heritage site.

Although never unified architecturally and despite almost continuous rebuilding over the past 235 years, St Andrew Square, as the banking centre of Scotland, has retained its scale and formality. Four storey Georgian frontages line the north side, whilst there is a diverse mix of building styles on the other three sides. Possibly the most important building is the imposing Royal Bank of Scotland (1771, Sir William Chambers), which together with the 41m high Melville Monument (1823, William Burn), terminates the axis of George Street. Other notable buildings include the Bank of Scotland (1851, David Bryce), Scottish Equitable (1899, Peddie and Brown), Scottish Provident (1961 by Rowand Anderson, Kininmonth and Paul) and Harvey Nichols (Comprehensive Design Architects, 2002).

The central gardens, now a formal square bounded with a low wall and railings, retain their important picturesque landscape function in the overall composition of Craig’s New Town, even if little of the original design intention remains.

Because the Square sits astride a ridge, there are important views to the north, along North St Andrews Street and North St David Street over Queens Street Gardens and out to the Forth. To the south there are classic views to the Old Town, punctuated at the foot of south St David’s Street by the Scott Monument.

The extent and maturity of the planting in the square allow few views of the whole space and the eye tends to be drawn along streets. The way the Royal Bank is set back gives an openness to the east side of the square. The buildings around the square are primarily in office use, with some retail, most notably the new Harvey Nichols. Although it links to all the main shopping areas of the city centre, the relative position of these is such that the pedestrian traffic around the square is comparatively light. This may change, however, if the new shopping street link to the St James Centre proves successful.

The roads have an asphalt carriageway with whin kerbs and the footways are generally paved with concrete flags. Caithness slabs have been used to repave the footways in front of Harvey Nichols and the new bus station. Most of the street furniture is of simple utilitarian design with the exception of the fine cast iron railings to the square and along the front of the original facades.

8.3.5 New Town: Queen Street to Picardy Place

Queen Street is the most northerly of the main original New Town axes. Like Princes Street, it is single sided and faces north to Queens Street Gardens, across which lies the northern extension or second New Town planned in 1801 by Reid and Sibbald.

York Place, similar to the West End although broader and more austere, is also an architecturally coherent, symmetrical, and generally high quality extension of the New Town. Largely completed in 1804, it contains probably the best of the surviving New Town houses, three to four storey classical sandstone tenements set back behind basements and protected by traditional cast iron railings. The eastern end of Queen Street was completed with north facing houses a little later, but is now dominated by the exuberant red sandstone Scottish National Portrait Gallery (Sir Robert Rowand Anderson, 1895).

Queens Street and York Place have a marked cross fall, requiring distinctive stepped kerbing along the southern footpath. This provides an important plinth below the terraced frontages.
At Picardy Place the building line continues in a similar style along the north side whilst the south side
opens out into the complex junction with Leith Walk, Leith Street and Broughton Street. St Mary’s
Cathedral (J Gillespies Graham, 1813) sits back behind the east end of York Place, facing out onto
Picardy Place but currently screened by the street trees of the 1990s junction and townscape
improvements.

The high quality basement railings are a significant feature of York Place. The other street furniture –
bus shelters, litterbins and lighting - is of standard designs and quality. The road is surfaced in
blacktop with narrow whin kerbs and concrete flag footways. Street lighting is provided by building-
mounted floods.

The street is now mainly in office use, with some residential on the upper floors. There is one hotel, a
few shops and, at the west end, the National Portrait Gallery. Traffic flows, both car and bus are
heavy, but pedestrian movements along the street much less so. There are quite significant pedestrian
flows across the east end of the street to Broughton Street.

8.3.6  Leith Walk

The main road from Edinburgh to Leith and laid out as a wide straight boulevard in the 19th century,
Leith Walk is now a busy and active thoroughfare, important local shopping street and residential area.

Most of the street is lined with four-storey bay windowed or plain terraced Victorian sandstone
tenements, with small, mainly independent shops on the ground floor, with front servicing. The
generally uniform character and consistent building line is occasionally interrupted by unsightly office
buildings, filling station and warehouses, set back from the street line. There are significant numbers
of street trees, at the north end on the east side, in the centre on the west side, at Elm Row and at
Gayfield Square. The character of the street is significantly affected by heavy traffic flows with bus
services particularly frequent and the street is also busy with pedestrians.

Leith Walk was the subject of environmental improvements in the 1990s. The most successful part
being at Elm Row, where new railings, planting and walls enclose the parallel street and the area is
embellished with high quality paving, bespoke street furniture and artwork, all reinforcing the
continental character of the street.

Elsewhere the ball shaped bollards, bollard post and rail pedestrian barriers and tree guards introduced
as part of the improvements are dominant but mixed with standard pedestrian barriers, lampposts and
bins. The bus shelters are mostly recent, of a simple pleasant design.

Leith Walk is surfaced with asphalt edged by narrow whin kerbs. The footways are generally paved
with high quality concrete slabs, although the quality of the material can be hard to distinguish at the
north end.

8.3.7  Leith

An independent Burgh for a relatively short period in the 19th and early 20th centuries but dating from
the 12th century, Leith achieved independence from the City of Edinburgh in 1827, only to be re-
amalgamated in 1921.

Historically, Leith was Scotland’s primary port of entry prior to the union of the Parliaments in 1707,
but much of its earlier building was replaced as a result of the massive upturn in Victorian trading,
following by the Leith Improvement Act of 1880, which initiated wide-scale renewal.

Decline during the 20th century led to the demolition of some historic buildings and gaps in the urban
fabric but the area has recently recovered and is undergoing a local development boom. A mix of
recent and Victorian tenements, some of them elaborately ornamented, set directly at the rear of the
footway, line much of Constitution Street creating a generally narrow street. A number of churches, set back from the building line, punctuate the street and the cemetery wall at the south end is a distinctive feature. Despite some 1960s high-rise flats visible from the route and a few unsightly buildings, the area has retained a distinctive character.

The street opens out north of Queen Charlotte Street, where the old centre has retained its historic alignment and a sizable number of high quality buildings with a mix of business, retail and mostly residential uses. Many of the frontage buildings are grade A and B listed, notably: the Assembly Rooms (1783 altered by Thomas Burn 1809); the Town Hall (1928 by R & R Dickson) and St James Church (1862 by Giles Gilbert Scott) (see also Appendix F for schedule of listed buildings along the route).

The main carriageway is asphalt surfaced, except at the northern end where it is setted, with narrow whin kerbs. The footways are mostly in-situ concrete surfaced, with some areas of concrete flags. There is little street furniture and what there is, is of a utilitarian nature.

Constitution Street is primarily in residential use at the south end, commercial in the old centre and a mix at the north end. It is moderately busy with traffic but has comparatively light pedestrian flows.

8.3.8 Port of Leith

Leith Docks evolved piecemeal from the mid 16th century, culminating in a radical programme of improvement and extension after the mid 19th century. This saw the construction of the Victoria Dock (1851), the Albert Dock (1869), the Victoria Swing Bridge (1871-4), the Edinburgh Dock (1873-81), the Prince of Wales Dock and Alexandra Graving Dock (1894-6). These monuments therefore constitute a coherent and strategically planned group of maritime/industrial structures, the source of Leith’s commercial success from the late 19th century.

The port area is currently undergoing a major transformation with new upmarket residential and business developments springing up between derelict industrial sites, scrap yards, newly landscaped areas, car parks and docks south of the still active port. There is a wide diversity of architectural styles from single-storey industrial shed depots and warehouses, to elegant Victorian brick built industrial buildings to modern multi-storey luxury apartment blocks, offices and shopping centres. Between these are the remnants of the robust, primarily Victorian, industrial architecture of the docks, such as the Alexandria Dry Dock and its pumping house, and the Victoria Swing Bridge, now stilled by the inelegant new Ocean Drive bridge adjacent. The older parts of the port are generally very open and exposed but the current building activity is increasing the urban density. Pedestrian routes around the area can be disjointed and hard to follow.

Around the new developments the street furniture is of a modern international style, with much stainless steel and tree planting. Elsewhere it is generally more utilitarian but there is some interesting Victorian detailing.

The recent developments are mostly asphalt roads with standard concrete kerbs and some concrete flag paved footways. The older parts have mostly sett-paved roads and a mixture of stone flags and in-situ concrete footways and footpaths.

The docks area a busy, fast developing mixed use area with increasing quantities of residential and commercial rapidly outweighing the industrial origins. Traffic flows are moderately heavy whilst pedestrian movements are light.

8.3.9 Newhaven to Granton

The heart of Newhaven retains the form, scale and character of its origins as a small fishing village, although now slightly cut off from its harbour by the traffic on Pier Place. Granton Square was
developed in the 1830s as a part of the approach to Granton harbour and retains a strong formal quality.

Between the two is a quiet, primarily residential, seafront consisting mostly of two to four storey terraced houses along the south side of the street including brick terraces (unusual for Edinburgh) with open views to the Forth. Few buildings have a front garden or elaborate facades. School grounds and small open spaces occasionally break the building line.

Lawns and a footpath occupy the linear space between Lower Granton Road and the seafront where the railway embankment was removed, leaving some remnant railway stonework. There are no buildings on the seaward side obstructing the view except for the Old Chain Pier and the sewage works. The vehicular traffic is steady but there is only little pedestrian movement in the area apart from some recreational walking at the seafront.

There is very little street furniture in the area, apart from standard street lighting, bus stops and some short sections of guardrail. The roads are paved

Asphalt road, in-situ concrete footways, narrow whin and concrete kerbs.

8.3.10 Waterfront Granton

Waterfront Granton is currently a mixture of derelict industrial areas and run-down, mostly post-war light industrial, warehousing and ‘edge-of-town’ retail developments. Almost lost in the centre of the area is Caroline Park house, with a remnant seventeenth century designed landscape (see Chapter 11: Cultural Heritage). Small areas of 19th century industrial waterfront survive along West Harbour road, including one key building: the lighthouse. The area is set to be almost totally transformed by the Waterfront Regeneration Project.

8.3.11 Pilton

The tram route runs along the edge of the recently constructed main road to the Granton Waterfront development, cutting a broad and still fairly raw swathe through this deprived area of post-war social housing. The corridor is separated from the neighbouring estates by substantial timber noise barrier fences and hedges and grass verges with a little planting. A wide pedestrian / cycle path along the east side make the road seem wider than it actually is. It is a traffic thoroughfare mainly for cars but currently little used by pedestrians and cyclists. Vehicle flows can be expected to increase substantially as the Granton development progresses.

8.3.12 Roseburn Railway Corridor

The disused Granton Branch of the Caledonian Railway, now a linear open space and well used cycle and pedestrian path. The northern end is a broad flat strip of neglected open ground, an area of overgrown grass and shrubs bounded by low-rise housing estates and in part opening out onto a lightly used playground and mown grass recreation space. The southern half is mostly a lush woodland valley below surrounding residential areas but occasionally surfaces to level and in parts runs on embankment. A continuous overgrown hedge lines the path on either side and defines the boundary of the corridor.

A quiet park used mostly for recreational walking and cycling, parts of the route can feel somewhat insecure and remote, particularly at night, because little of it is overlooked.

Stone bridges, extensive stone retaining walls and old platforms act as reminders of the disused railway line. The cycle route is a simple asphalt path with no edge treatment, and timber steps lead to crossing streets. The only street furniture is street lighting and some information boards, mainly vandalised.
8.4 Predicted Townscape Impacts and Mitigation

Sources of Townscape Impact Details of the changes in the townscape arising from the introduction of the tram, including mitigation to which tie has committed, are described below, character zone by character zone, in a counter-clockwise direction, starting at Haymarket, where the south end of the Roseburn railway corridor meets the heavy rail and probable junction with Tram Line Two just west of Haymarket Station.

The effect of the tram on individual listed buildings and Conservation Areas is considered in the Cultural Heritage chapter. Account is taken of Conservation Area designations in the assessments in this section and the effects on the settings of key buildings are noted.

Overall, the proposal comprises:

- the insertion of a twin-track light rapid transit track-bed, paved in a variety of materials according to the situation;
- stops with shelters, lighting, seating, ticketing and information;
- tram vehicles;
- overhead line equipment – conductor wires, supported on a combination of cables or poles and powered from new substations;
- signalling equipment and signs, and;
- a tram depot.

The tram tracks will generally be inserted at existing grade. A number of existing bridge and wall structures will require alteration (see Chapter 2). Exceptions to the above, such as regrading of parts of the railway embankment at Roseburn and single-track running in the St Andrew Square area, and alterations to structures, are highlighted in the section-by-section descriptions that follow.

A number of major road junctions will require to be comprehensively rearranged, including new traffic signalling, and existing traffic will be diverted from the tram route in a number of places. There will be a change of low magnitude in the townscape of a number of areas due to increased traffic, but because the extent of traffic diversion has not been fully modelled this cannot be assessed in detail.

The main sources of townscape impact generated by the tram will be the overhead infrastructure – wires and supports, new and altered structures – such as bridges, new buildings – the tram depot and substation housings, and the tram stops with their associated shelters, seating etc.

The tram signalling equipment and traffic signalling and signage required because of junction and traffic alterations are generally of themselves of low magnitude of effect. However, they potentially add a degree of clutter to the streetscape and may in sensitive locations have a cumulative effect, raising the overall townscape impact above a significance threshold.

The tram vehicles themselves will have an impact analogous to two or three coaches. This is a potential townscape impact in areas not currently trafficked, such as the railway corridor.

The tram will be a new element in the city, clearly visible to all. The degree of impact is entirely dependent on the design of the system and the only real potential for mitigation is in ensuring that the various new and altered elements are appropriately designed and integrated into the fabric of the city.
To this end, we have commissioned a Design Manual, the contents of which are to be agreed with City of Edinburgh Council City Development (Planning) and which is currently under preparation. Through the Design Manual, we are committing to mitigating the potential impact of the tram through good design and the use of appropriate materials to integrate the tram into the existing streetscape. We have committed to implementing the proposals and recommendations that arise from the Design Manual.

General commitments from the Design Manual include:

- Improvement to the pedestrian realm including comprehensive wall to wall repaving of footways where the substantial majority of a pedestrian area requires to be disrupted and resurfaced to install the tram;
- Careful design of the OLE to simplify the layout, balance conductor wire and support cable sizes against support spacing so as to minimise the visual intrusion of the wiring;
- To use visually appropriate methods of support, integrate the OLE supports with other vertical elements in the street (lighting and signing poles) as far as possible, and
- To coordinate the spacing of new poles and rationalise existing ones, including detailing and design of wire supports and their arrangement to suit the form of the street, particularly at junctions;
- A simple alignment of the tram through formal streets to minimise the need for complex OLE support structures or wiring, and to reduce the impact on the important designed vistas of the New Town;
- The use of surfacing and kerb materials appropriate to the location, in accordance with City of Edinburgh Council’s public realm strategies;
- A coordinated and visually integrated design for tram stops, creating a high quality pedestrian spaces.

Site specific commitments are covered in the relevant sections below.

8.4.1 Haymarket

The Haymarket area has been defined as one townscape zone but it is heterogeneous in character and inconsistent in built form, such that the impact of the tram will vary substantially within the zone.

The tram enters this zone parallel to the existing heavy railway to the south of Balbirnie Place, where a strip of existing screen planting will be replaced by twin tram tracks, opening up further an area where spaces are currently weakly defined by the built form. Overhead cabling will add to the general clutter of this area, already dominated by the heavy rail and its associated overhead wiring. A possible substation site has been identified in an unobtrusive location at the rear of the yard to the warehouse at 15 Devon Place.

East of Balbirnie Place, the tram will turn north, away from the heavy rail, passing between the new office developments of Haymarket Yards and the rear of the warehouses on Devon Place and the rear of the offices and tenements of Haymarket Terrace and emerging onto the top section of Haymarket Yards alongside Rosebery House. The tram track will replace some areas of car parking and small areas of landscaping and larger areas of derelict and apparently abandoned land, and lead to the loss of a small group of badly pruned trees in front of Rosebery House.

At the top of Haymarket Yards, the tram lines will turn east, at street level, onto a structure to be built up over the current station car park and run parallel to Haymarket Terrace, where a tram stop is
proposed. They will then move onto to the street in a reverse curve at the end of Haymarket Terrace at the location of the current Caledonian Ale House, requiring the demolition of this C listed building. The line will cross the Haymarket junction following the curve of Haymarket Terrace into Clifton Terrace and continuing straight along West Maitland Street towards the West End.

The demolition of the Caledonian Ale House will have the effect of weakening the already poor enclosure to Haymarket Junction. However, a coordinated and visually integrated design solution for the tram stop creates the opportunity to reinforce the building line and improve the townscape of Haymarket Terrace.

To accommodate the tram running in a segregated lane, the entire junction at Haymarket will be reorganised. This reorganisation primarily includes the alteration of traffic flow and the relocation of traffic islands and has localised townscape effect on the listed war memorial.

The surface materials used through this area will vary according to circumstance. Where the track runs on-street, at the top of Haymarket Yards and through the Haymarket junction, the track-bed will be finished in bitumen macadam with granite chips rolled in, in order to integrate it visually with the surrounding road. Within the off-road section at Haymarket Terrace, and through the tram stop, the track-bed surface will be an integral part of the creation of a high quality pedestrian environment in this area.

The provision of the OLE with the conductor wires, support poles, cables and fixing will have a negative effect on the townscape, ranging in magnitude from high – through the junction and Haymarket Terrace – to low – between Balbirnie Place and the existing heavy rail.

Through this area Design Manual commitments include particularly:

- Improvement to the pedestrian realm as part of the comprehensive redesign of Haymarket junction required for the tram;
- The creation of an appropriate setting for the war memorial;
- A simple alignment of the tram through Haymarket junction to reduce the impact on the important designed vista down Shandwick Place terminating at Haymarket Station;
- A straight alignment into and along West Maitland Street to respect the formality of urban design of the New Town;
- A coordinated and visually integrated design for the tram stop including walls or other architectural devices to recreate some of the enclosure of the entrance to Haymarket Terrace lost with the demolition of the Caledonian Ale House, to link the tram stop with Haymarket Station and to enhance the setting of the station building;
- The possible introduction of barrier fencing and hedging between Balbirnie Place and the tram in order to create visual enclosure and reinforce the urban form between the housing and the tram;
- Soft landscape works to the open space between Balbirnie Place and the new offices at Haymarket yards to compensate for the loss of amenity;
- Simple, unobtrusive design for the housing of the substation to the rear of 15 Devon Place.

Overall the townscape impacts of the introduction of the tram to the Haymarket area, with the committed mitigation, vary from major adverse to a limited area of major beneficial at Haymarket Terrace.
At Balbinnie Place, the introduction of the tram would be a change of medium magnitude, reducing the townscape quality of an area of slight townscape sensitivity. The townscape impact is therefore minor adverse.

At Haymarket Yards, there would be a change generally of low magnitude, medium at the top of the road in front of Rosebery House, reducing the townscape quality of the areas currently landscaped and improving the quality of the apparently derelict areas. The whole area is of slight townscape sensitivity; the townscape impact is therefore minor adverse to minor beneficial.

From Haymarket Station and across the junction, the tram would be a change of high magnitude on the boundary between an area of moderate sensitivity – Haymarket Terrace – and an area of high sensitivity, the edge of the New Town and the World Heritage Site. The townscape impact is therefore major adverse.

The tram stop itself would constitute a small area of change of high magnitude, improving the townscape of an area of moderate sensitivity, leading to a major beneficial impact. The degree to which this offsets some of the major adverse impact above will be entirely dependent on the quality of design of the area between the station and the stop.

Potential further mitigation outwith the remit of Line One is being explored as part of a separate study with CEC and Network Rail to explore the opportunity for a more radical approach to the design of the Haymarket area, considering a comprehensive upgrading of the transport interchange facilities and significant improvements to the public realm. This may be extended to consider the potential synergies with the new development proposed by EDI for the Goods Yard site, currently temporary car parking, between Morrison Link and Dalry Road.

8.4.2 New Town: West End

The tram will run straight through the West End, on road from West Maitland Street to Shandwick Place, with a stop proposed between Coates and Atholl Crescents.

The track-bed will be finished in the same material as the adjacent road, in this location bitumen macadam with granite chips rolled in, in order to integrate it visually. Textured bands will define the edge of the tram lanes, and from West Maitland Street to the east end of Coates Crescent the tram lanes may be slightly (50-100mm) raised above the adjacent road level to indicate that they are reserved exclusively for tram use. Footways in this area will generally be untouched, except between the open space of Coates and Atholl Crescents, where they will require to be realigned to accommodate the stop. These altered footways will be resurfaced in their entirety in materials appropriate to their location in accordance with the CEC public realm guidelines.

The OLE in this area will consist of conductor wires supported from span wires. The span wires will be supported either from appropriately designed building fixings or from support poles. Together these will have a negative effect on the townscape, particularly in terms of the view down the designed vista towards Haymarket.

A stop, currently envisaged as an island stop, is proposed between Coates and Atholl Crescents. This would take the form of an extended island designed to appear as a well-detailed slightly raised area of pavement. The shelters, seating, signage and other equipment will be designed as an integrated whole, visually light and transparent.

To accommodate the two lanes of traffic that have to pass the island stop in either direction (a tram lane and a general traffic lane) the footways along the front of the garden areas will have to be set back, with consequent requirements to comprehensively redesign and rebuild the edges of the gardens along Shandwick Place. This would include taking down the broad low stone wall, and taking down approximately 25 trees, of which 7 are mature and the rest semi-mature.
The design as currently envisaged entails the reconstruction and making good of the edges of the gardens generally matching the existing design, but set back by up to 2m to accommodate the island stop. The trees would be replaced by semi-mature specimen trees of a minimum 40cm girth aligned to suit the revised design, which itself would respect the formality of alignment of the New Town.

New traffic signals will be required at the east end of Coates and Atholl Crescents, which would add a degree of clutter to this part of the street.

At Rutland Place slight realignment of the kerbs may be required to accommodate the tram alignment through the reverse curves in the road.

Interpreting the requirements of the Design Manual would require mitigation in the form of:

- A straight alignment along West Maitland Street and Shandwick Place to respect the formality of urban design of the New Town;
- The redesign and reconstruction of the affected parts of the garden spaces to a design and standard acceptable to Historic Scotland and CEC planning department;
- Retention of as many of the existing mature trees as possible, where removal is unavoidable replacement of lost trees with an equivalent number of semi-mature specimen trees of a minimum 40cm girth, of species suitable for the location;
- If the design of Rutland Place entails the realignment of kerbs, the kerbs, adjacent paving, dwarf walls and bespoke railings would be rebuilt and made good to match the existing.

Overall the introduction of the tram to the West End, with the committed mitigation, will have a townscape effect of high magnitude, primarily arising from the OLE and the Shandwick Place tram stop. The site, a formally designed and laid out part of the World Heritage site is highly sensitive to change. The townscape impact is therefore major adverse.

8.4.3 New Town: Princes Street

The tram will run on-street from Rutland Place centrally onto and in a straight line along Princes Street, as far as South St David Street for eastbound trams and South St Andrew for westbound trams. A stop is proposed just east of the junction with Castle Street.

Between Lothian Road and South Charlotte Street there are three lanes in either direction, occupying the entire current road width to accommodate vehicle flows in this busy junction.

The main part of Princes Street will have a layout broadly similar to the existing but with reduced road space. It will consist of a dual carriageway as at present but the centre strip will be increased to approximately 1.6m width. There will be one continuous lane of mixed tram and bus traffic and a discontinuous second lane in each direction. The discontinuous second lane accommodates bus stopping and limited amounts of bus running, but is frequently interrupted to allow variously for the tram stop, reduced width pedestrian crossings, and increased pedestrian circulation space at key points, as outlined below.

At the junction with South Charlotte Street the north footway is widened for a length of approximately 20 metres. At Castle Street both the north and south footways are widened over a length of approximately 100m including the Princes Street tram stop. At the mound the north side footway is widened over approximately 50m west and 20m east of the junction and the south footway over approximately 100m east of the junction, including the current pedestrian pinch-point at the steps to the Royal Scottish Academy. At South St David Street the north side footway is widened over approximately 60m in front of Jenners and the Mount Royal Hotel.
In addition, the design allows for a general slight widening (½ to 1 m) of the south side footway between Waverley Bridge and the tram stop at Castle Street.

The track-bed will be surfaced to visually integrate with the existing carriageway. Textured bands will define the edge of the tram lanes.

The realigned kerbs will be formed with a broad kerb in natural stone, and the altered footways will be resurfaced in their entirety in materials appropriate to their location in accordance with the CEC public realm guidelines.

Signalised junctions will be modified and signals relocated but overall no significant increase in the extent of traffic signalisation is anticipated.

The works to the road will have an positive effect on the townscape of Princes Street, reducing the carriageway widths and simplifying the kerb alignments. There will also be a small gain in terms of urban function, with enhanced footway widths and eased pedestrian circulation.

The OLE along most of Princes Street will consist of conductor wires supported from twin cantilever (T-shape) columns along the centre island strip between the two carriageways. Between Lothian Road and South Charlotte Street the conductor wires may be supported from span wires, either from appropriately designed building fixings or from support poles. At the junctions with South St David and South St Andrew Streets more complicated OLE support wiring will be required to accommodate the curves in the conductors.

The use of support columns in Princes Street is particularly sensitive because there are currently no existing permanent vertical elements in the street.

The OLE will have a negative effect on the townscape, particularly in terms of the designed vistas down Princes Street towards Carlton Hill and from cross-streets, and in terms of the classic tourist views from the north side footway towards the Castle and Old Town skyline.

A stop, currently envisaged as a pair of kerbside stops opposite each other, is proposed just east of Castle Street. These would take the form of extended build-outs of the footway across the discontinuous nearside lane and would be designed to appear as a well-detailed slightly raised area of pavement. The shelters, seating, signage and other equipment will be designed as an integrated whole, visually light and transparent.

Interpreting the requirements of the Design Manual would require mitigation in the form of:

- A straight alignment, to respect the formality of urban design of the New Town and allow simplest overhead wiring design, along the full length of Princes Street from South Charlotte Street to South St David and St Andrew Streets, and the minimum practical change in alignment at South Charlotte Street;

- A street layout that increases as far as possible the space for pedestrians, whilst maintaining adequate tram run-times and adequate space for bus services including, in particular the footway widening across the nearside traffic lane described above;

- The use of visually appropriate methods of support, including designing a simple and elegant support column;

- The stop located east of the end of Castle Street so that it does not affect the important designed vista of the Castle from Castle Street.
Overall the introduction of the tram to Princes Street, including the committed mitigation, will have a negative townscape effect of high magnitude, primarily arising from the OLE and the prominent tram stop. The site, Edinburgh’s principal street and a formally laid out part of the World Heritage site has a very high public profile. Its designation and location would make it highly sensitive to change, although it can be argued that the degree of change wrought on the street in post-war developments is such that it is now only moderately sensitive. However, in either case, the townscape impact is major adverse.

There is the potential for further mitigation outwith the remit of Tram Line One by taking the opportunity to comprehensively redesign and upgrade the paving and street furniture of Princes Street as a whole.

**8.4.4 New Town: St Andrew Square**

Between Princes Street and Queen Street the tram will run on-street single-track on either side of the square. The northbound trams will run up South St David Street in a straight line along the edge of the square and down North St David Street, turning east on to Queen Street. Southbound trams will turn off York Place and follow the equivalent route on North and South St Andrew Street.

Stops are proposed on South St David and South St Andrew Streets, between St Andrew Square and Meuse Lane.

The main changes to the townscape apart from the OLE (covered below) will be the introduction of the stops, with the concomitant reduction in road area and parking space, on South St David and South St Andrew Streets, together with some realignments of kerbs and traffic islands.

The track-bed will be visually integrated with the road surface. There are current proposals to upgrade the streetscape of the Square and the tram design will be developed to tie in with this. If these proposals do not proceed, it is envisaged that the road will be finished in bitumen macadam, with granite chips rolled in, with textured bands to define the edge of the tram lanes. The realigned kerbs will be formed with a broad kerb in natural stone, and the altered footways will be resurfaced in their entirety in materials appropriate to their location in accordance with the CEC public realm guidelines.

Signalised junctions will be modified and signals relocated but overall no significant increase in the extent of traffic signalisation is anticipated.

The stops would take the form of extended build-outs of the footway designed to appear as a well-detailed slightly raised area of pavement. The shelters, seating, signage and other equipment will be designed as an integrated whole, visually light and transparent.

The OLE will consist of conductor wires supported from single cantilever columns, or from span wires attached to appropriately designed building fixings or support poles, according to situation.

The OLE and the stops will have a negative effect on the townscape, particularly in terms of the designed vista from South St David Street to the Scott Monument, and also in views north from the square towards the Firth of Forth.

Interpreting the requirements of the Design Manual would require mitigation in the form of:

- Straight alignments either side of St Andrew Square, to respect the formality of urban design of the New Town and allow simple overhead wiring design;
- Possible increased space for pedestrians on South St Andrew and South St David Streets;
• The use of visually appropriate methods of support including a simple and elegant support column;

• The stops located south of St Andrew Square so that they do not impact on the square itself or the designed vista down George Street, and so that they are as close as practical to Waverley Station.

Overall the introduction of the tram to this area, including the committed mitigation, will have a negative townscape effect of high magnitude, primarily arising from the OLE and the tram stops. The area is a formally designed and laid out part of the World Heritage site and is highly sensitive. The townscape impact is therefore major adverse.

There is the potential for further mitigation outwith the remit of Tram Line One by integrating the design of the tram fully in the planned townscape improvements to St Andrew Square.

8.4.5 New Town: York Place

The northbound tram will run on-street single-track on Queen Street between North St Andrew and North St David Streets and both north and southbound trams will run twin-track along the centre of York Place. There will be an additional chord between North St Andrew Street and Queen Street to allow vehicles to turn back.

In order to accommodate the heavy vehicular flows along York Place and Queen Street, two general traffic lanes are maintained in each direction. The result is a requirement to widen both York Place and Queen Street. The extent of this widening cannot be precisely defined until detailed topographical surveys have been carried out but it is anticipated to be in the order of 3m for York Place, less in Queen Street. This is exacerbated by the significant cross-fall on York Place and it is currently envisaged that the current stepped kerb on the south side between North St Andrew Street and Elder Street East will be reviewed in order to accommodate a level change of between 500 and 750mm high.

The track-bed will be finished in bitumen macadam, with granite chips rolled in, in order to integrate it visually with the existing road. Textured bands will define the edge of the tram lanes.

The realigned kerbs will be formed with a broad kerb in natural stone, and the altered footways will be resurfaced in their entirety in materials appropriate to their location in accordance with the CEC public realm guidelines.

The OLE will consist of conductor wires supported either from span wires from support poles or from appropriately designed building fixings, or supported by twin cantilever (T-shape) columns between the tracks. The OLE will have a negative effect on the townscape, particularly in terms of the introduction of support poles into a streetscape that currently has no vertical elements apart from the buildings. At the junctions more complicated OLE support wiring will be required to accommodate the curves in the conductors.

The complex OLE at the junction of Queen Street and North St Andrew Street, and the road widening will have a major negative effect on the setting of the National Portrait Gallery.

A substation will be incorporated either in part of the multi-storey car park on Elder Street East or in a shop unit on Elder Street. In either case the effect on the townscape will be negligible.

Interpreting the requirements of the Design Manual would require mitigation in the form of:

• A straight alignment down York Place, to respect the formality of urban design of the New Town and to allow simple overhead wiring design;
The use of natural stone to face all visible components associated with changes in level, together with bespoke designed hand-railing where safety rails are required;

Overall the introduction of the tram to Queen Street and York Place, including the committed mitigation, will have a negative townscape effect of high magnitude, primarily arising from the OLE, the road widening and the level changes between Elder Street East and North St Andrew Street. The area forms part of the formally designed and laid out New Town, part of the World Heritage site and is highly sensitive to change. The townscape impact is therefore major adverse.

8.4.6 Leith Walk

The junctions at the top of Leith Walk will be entirely reorganised. The roundabouts at Picardy Place and London Road will both be replaced by T-junctions and an stop introduced in the reorganised junction at Picardy Place. The tram will then run the full length of Leith Walk along the centre of the road, with stops at MacDonald Road, Balfour Street and the foot of the Walk.

The tram lines will run on-street out of the centre of York Place into Picardy Place, swinging slightly south to allow two lanes of general traffic along Picardy Place on the line of the current access lane. Through the new junction and tram stop at Picardy Place there will be a short section of fully segregated running. Down Leith Walk the tracks will generally follow the alignment of the street, along the centre of the road, but weaving slightly at a number of places, such as Pilrig Street and Balfour Street, to allow for right turn lanes.

The track-bed will be finished in bitumen macadam, with granite chips rolled in, in order to integrate it visually with the existing road. Textured bands will define the edge of the tram lanes.

Between Picardy Place and Annandale Street, realigned kerbs will be formed with a broad kerb in natural stone and altered footways will be resurfaced in their entirety in materials appropriate to their location in accordance with the CEC public realm guidelines.

North of Annandale Street realigned kerbs will reuse existing whin-stone kerbs. Altered footways will be resurfaced as far as necessary to tie in materials and paving patterns completely, using materials appropriate to their location in accordance with the CEC public realm guidelines.

The OLE through the stop area at Picardy Place anticipated to consist of conductor wires supported by twin cantilever (T-shape) columns between the tracks. Down the length of Leith Walk, the OLE will consist of conductor wires supported from span wires between kerb mounted poles. The OLE will have a negative effect on the townscape, particularly in the long views down Leith Walk.

Stops are proposed at Picardy Place, MacDonald Road, Balfour Street and the foot of Leith Walk. All these stops are currently envisaged as island stops, with Picardy Place linked to a large pedestrian traffic island. These would take the form of extended traffic islands designed to appear as well-detailed slightly raised areas of pavement. The shelters, seating, signage and other equipment will be designed as an integrated whole, visually light and transparent.

Some additional signalisation of junctions will be required adding slightly to the clutter in the streetscape.

The junctions at the top of Leith Walk will be entirely reorganised, with the roundabouts at Picardy Place and London Road both replaced by T-junctions. The introduction of segregated running tram lines will entail the widening of Leith Walk between these junctions, with consequent loss of pavement space at Antigua Street and at Greenside Place in front of the Playhouse and the Omni Centre. Loss of public space (pedestrian space) will have an adverse impact on the public life of the city.
Some or all of the trees established over the last decade at Picardy Place and in front of St Mary’s RC Cathedral will be lost, opening up views down Leith Walk from the Cathedral. This creates the opportunity to re-open views down Leith Walk and to the façade of St Mary’s Cathedral as part of a redesign for the cathedral precinct. The new traffic islands should be positioned to reflect pedestrian desire lines. Where possible priority should be given to maximising pedestrian space, particularly outside the new cinema complex and Picardy Place at Elm Row, the south end of the decorative railings, planting and line of trees will be truncated but will be reinstated to match the existing on a new line to suit the revised road layout.

At the north end of Leith Walk, some minor road widening and realignment of parking and loading bays will be required which is likely to lead to the loss of a proportion of the existing street trees.

Interpreting the requirements of the Design Manual would require mitigation in the form of:

- Between Gayfield Square, Leith Street and York Place the redesign of the public realm will be considered as part of the junction designs.
- the reinstatement of decorative railings, sculpture, paving, planting and trees at Elm Row to match the existing, on a new line to suit the revised road layout;
- the integration of the layout and design of span wire supports and the design and positions of street lighting columns to give an ordered layout of a family of columns, including where appropriate the replacement of the existing street lighting.

Overall the introduction of the tram to Picardy Place and Leith Walk, taking into account the committed mitigation, will have a negative townscape effect of high magnitude, primarily arising from the OLE, the removal of the maturing trees and the prominent location of the Picardy Place tram stop.

Picardy Place and Leith Walk, south of Annandale Street, form part of the World Heritage site, a designation that, in the context of this assessment, means it is considered highly sensitive to change. Leith Walk is valued more locally and can be considered moderately sensitive to change. In both cases, however, the negative townscape effect of high magnitude means that the townscape impact is major adverse.

8.4.7 Leith

Tram Line One will run on-street, sharing road space with all other traffic through Leith from the foot of Leith Walk along Constitution Street to the dock gates at Constitution Place, with a stop in the old town centre between Queen Charlotte and Bernard Streets.

Apart from the area of the stop and minor junction alterations at Bernard Street, the alterations to the streetscape will be minimal. The track-bed will be finished in bitumen macadam, with granite chips rolled in, in order to integrate it visually with the existing road and, except as noted above, the footways will remain unaltered.

The OLE will consist of conductor wires supported from span wires, fixed to buildings where practical, otherwise supported by kerb mounted poles.

The stop between Queen Charlotte and Bernard Streets is currently envisaged as an island stop. This would take the form of an extended traffic island designed to appear as well-detailed slightly raised areas of pavement. The shelters, seating, signage and other equipment will be designed as an integrated whole, visually light and transparent. Alterations to the kerb alignment will be required to accommodate traffic flow around the stop.
Through the Design Manual, tie is committing to mitigating the potential impact of the tram through good design and the use of appropriate materials to integrate the tram into the existing streetscape. Interpreting the requirements of the Design Manual would require mitigation in the form of:

- Fully integrated on-street running to minimise the need to alter the road layout through the narrow small scale streets;
- A coordinated and visually integrated design for the tram stop, including improvement to the pedestrian realm in the vicinity of the stop;
- The use of visually appropriate methods of support for the OLE, including the use of building mounted brackets for the span wires wherever possible;
- The integration of the layout and design of span wire supports and the design and positions of street lighting columns to give an ordered layout of a family of columns, including where appropriate the replacement of the existing street lighting.

Overall the introduction of the tram to Leith, taking into account the committed mitigation, will have a negative townscape effect of high magnitude, primarily arising from the OLE and the tram stop.

Old Leith is a Conservation Area with a distinctive small-scale local character that is highly sensitive to change. The negative townscape effect of high magnitude means that the townscape impact is major adverse.

There is the potential for further mitigation of the impact of the tram in Leith, outwith the remit of tie, by extending the streetscape improvements associated with the stop to encompass the whole of the old Leith town centre.

8.4.8 Port of Leith

Tram Line One will run through the Port of Leith from Constitution Street along the line of Ocean Drive to Ocean Terminal, along the dock road past the entrance to Chancelot Mill and then ramp up to join Lindsay Road at Anchorfield. The tram depot will be located just inside the port area, on the east side of the route, immediately north of the dock gates on Constitution Street. There will be two stops, one at Ocean Terminal and one on Ocean Drive, between Constitution Street and Tower Place.

Between Constitution Street and Tower Place the tram will run on a segregated alignment alongside a new section of Ocean Drive, realigned as part of the redevelopment of this area. It will then run on-street along Ocean Drive, sharing with all traffic, crossing the Water of Leith on the existing bridge. Once clear of Victoria Dock, the tram will run parallel to Ocean Drive on a segregated alignment on the south side of the road, to Ocean Terminal, again as part of the redevelopment of the area.

From Ocean Terminal to Lindsay Road the tram will run on-street for a short section (to avoid the sewage pumping station) then on a segregated route parallel to the street. A new ramp structure, approximately on the line of the existing pedestrian ramp, will provide access from the dock road to Lindsay Road. This will cut the end off a planted area of banking but allows the opportunity to redesign the area to a higher quality and provide better public access.

The track-bed surfacing will vary through the docks, according to situation. The on-street sections will be finished in bitumen macadam, with granite chips rolled in, in order to integrate visually with the existing road. The segregated sections through redevelopment areas will be surfaced to coordinate with the adjacent development, generally either with grass through the landscaped area or reclaimed second-hand setts as appropriate.
The track-bed through the new ramp structure between Lindsay Road and the dock road has not been determined but may be reinforced grass. The visible parts of the structure will be finished to a good architectural standard, probably in high quality concrete block-work, similar to the existing retaining wall.

The OLE through the segregated running sections will generally consist of conductor wires supported from twin cantilever (T-shape) columns between the two tracks. These will be continued through on-street sections where there is the space available for a central island to carry the poles. Elsewhere the conductors are likely to be supported either from single side columns with extended cross-arms, or from span-wires between kerbside columns. Through the junctions, more complicated OLE support wiring will be required to accommodate the curves in the conductors.

The depot building will, due to its function, be a large structure - approximately seven to eight metres in height. Issues relating to the detailed design of the structure are covered within a specific chapter in the Design Manual. The location currently envisaged is on the south side of the depot site, adjacent the timber yard buildings on Salamander Street, and behind the industrial units on Constitution Street. There will be a large area of open space for track, working platforms and turn-back area around the north and east sides of the site.

The size and position of the depot development is such that it removes the potential for making the dock area more ‘permeable’ - new routes into future dock development areas will not be possible from Salamander and Baltic Streets west of Bath Road. Careful consideration will therefore be given to the quality of pedestrian routes provided around the edge of the site. To minimise the impact on the Leith Conservation Area, careful consideration will also be given to the Constitution Street frontage.

The main road alterations required for the tram through the port area will be carried out as part of other redevelopment works. Additional signalisation of junctions will be required at the depot, at Tower Place, on Ocean Drive opposite Victoria Quay, and at Ocean Terminal.

Interpreting the requirements of the Design Manual would require mitigation in the form of:

- The coordination of the design for the tram and for the new developments to ensure, as far as this is within the’s power, the proper integration of the tram with the new townscape;

- Appropriate finishing to the visible parts of the ramp structure between Lindsay road and the dock road;

- The scale and massing of the depot building and its siting within the context of the available site must be carefully considered to ensure an appropriate fit with the surrounding area.

In the industrial parts of the port, the tram will be an additional element with an effect of low magnitude on the townscape. In the development areas of the port, it will form part of much wider townscape change. In these areas the introduction of overhead cabling and the Ocean Terminal tram stop will have an effect on the townscape of medium magnitude. However, they will be minor elements compared with the wholesale changes wrought by the current redevelopments.

The port area as a whole is mostly only slightly sensitive to change, either because it is industrial or because its current character is one of rapid change and development. There is a limited area in the immediate vicinity of Ocean Terminal where new development is complete and the townscape is now moderately sensitive to further change.

The townscape impact of the tram on the Port of Leith is therefore minor through most of the area and moderate immediately adjacent Ocean Terminal.
The depot building and service area will be similar in broad massing and form to many of the industrial buildings in the vicinity. It would have a townscape effect of medium magnitude as, despite its size, it would not fundamentally alter the pattern and form of the area. The site is on the edge of the Leith Conservation Area but it is an industrial site, potentially tolerant of noticeable change. In addition the area is currently undergoing substantial development such that its character is currently one of change. The area as it stands is thus only slightly sensitive to change and the townscape impact is minor beneficial.

There is the potential for further mitigation of the introduction of the tram, outwith tie’s remit, by improving pedestrian routes from the stops to the new development areas.

8.4.9 Newhaven to Granton

The tram will run from Newhaven to Granton along the waterfront – Lindsay Road, Pier Place, Starbank Road, Trinity Crescent and Lower Granton Road. Stops are proposed at Newhaven, adjacent to Great Michael Square, and at the east end of Lower Granton Road.

From the top of the ramp at Anchorfield to the junction at Newhaven Place, the tram will run on-street in segregated on the north (dock) side of the road. Detail alterations to the road alignment will be required along much of the length and new traffic islands will be introduced.

From Newhaven Place to Trinity Road it will run on-street, entirely integrated with other traffic, and with minimal effect on the floorscape. At Newhaven Place and at the junction between Craighall Road and Starbank Road, the junctions will be reorganised, within the existing road area, and signalised. The junction at the foot of Trinity Road will be realigned, taking up some of the existing open space but providing a layout that is more visually logical as well as functional.

Starbank Road is particularly narrow with restricted pavement widths and restrictions will be required on frontager access and informal parking. Abuse of these restrictions may impact on the timetabling of the tram. Consideration is therefore being given to a new 3 metre wide combined footway and cycle path on the seaward side of the existing sea wall to potentially mitigate against this.

Where the tram runs on-street, the track-bed will be finished in bitumen macadam with granite chips rolled in, to integrate it visually with the existing road. Realigned kerbs will be generally be reconstructed using existing whin kerbs. Some islands and tie-ins may be constructed with concrete kerbs where necessary to match the existing to ensure visual integration.

Altered footways will be resurfaced as far as necessary to tie in materials and paving patterns completely, using materials appropriate to their location in accordance with the CEC public realm guidelines.

The alterations to the road between Anchorfield and Trinity Road will generally have an effect on the townscape of low magnitude. The alterations at the Trinity Road junction and along Lower Granton Road will have an effect of medium magnitude.

The OLE will consist of conductor wires supported from a combination of span wires between kerb mounted poles, centre T-shape cantilever poles and kerb-mounted double track cantilever poles. This will have a negative effect on the townscape in the partial enclosure that it will give to the open sea-front sections of the line. The introduction of clutter to the street, particularly where visually cumbersome side mounted cantilevers and complex wiring supports for sharp curves are required will also have a negative effect, which may be partially offset by the rationalisation of existing signage and the coordination and integration of the OLE support columns with new street lighting.

Stops, currently envisaged as kerbside stops, are proposed at Newhaven, adjacent Great Michael Square, and at the east end of Lower Granton Road. These would be designed to appear as well-
detailed slightly raised areas of pavement. The shelters, seating, signage and other equipment will be designed as an integrated whole, visually light and transparent.

A substation will be required in this section at a location to be agreed.

Interpreting the requirements of the Design Manual would require mitigation in the form of:

- A new combined footway and cycle path on the north side of Starbank Road, seaward of the existing sea wall, finished in a manner architecturally appropriate for the location (contingent on acceptable impacts on nature conservation issues);

- The use of grass infill between the tracks across the extensive lawn areas created by the removal of the old Granton Railway along Lower Granton Road (note: the extent of this may be affected if an amended road layout is adopted through the Wardie section to accommodate residents parking needs);

A well designed stop at Newhaven could have a moderate beneficial effect on the townscape by providing a focus and visual and functional link between the old village and the new harbour-side developments. Overall, however, the introduction of the tram to the waterfront area from Newhaven to Granton, including the committed mitigation, will have a negative townscape effect of high magnitude, primarily arising from the OLE.

Most of the area is moderately sensitive to change, with the old village of Newhaven, the Newhaven and Trinity Conservation Areas, highly sensitive. The townscape impact is major adverse in the Newhaven and Trinity Conservation Areas.

There is the potential for to reduce the townscape impact if the junction alignment at Craighall Road and Starbank Road can be revised to eliminate the curved track and thus remove the requirement for complex OLE support arrangements.

8.4.10 Waterfront Granton

The tram runs through the Granton Waterfront development area from Granton Square to the junction of West Granton Access and West Granton Road, at the northern edge of Pilton. The area is currently undergoing comprehensive redevelopment and the tram alignment through the area has been determined primarily through the development master-planning process. A stop is envisaged at Granton Square and two at key locations within the new development.

From Granton Square to the junction with the main development spine road just west of the lighthouse on West Harbour road, the tram will run on a segregated alignment along the north side of the road. The stop envisaged at Granton Square has a potential positive effect on the townscape by reinforcing what is currently a neglected place within the city. Through much of the main development area, the tram will form part of a new transport boulevard, with a short section of roadside segregated track along the newly opened northern extension of West Granton Access.

The design for this area will be developed in conjunction with the master-planners and developers so that the tram forms an integral part of the development. In particular the materials used will reflect the design intentions of the masterplan. It is envisaged that the track-bed will be grassed through most of the development, with occasional crossing points of high quality modern concrete paving, as required by the pedestrian network. Where the tracks cross roads, it is envisaged that the road surfacing will be carried through, with textured strips defining the edge of the swept path.

The OLE through the segregated running sections will generally consist of conductor wires supported from twin cantilever (T-shape) columns between the two tracks. These will be continued through on-street sections where there is the space available for a central island to carry the poles. Elsewhere the
conductors are likely to be supported either from single side columns with extended cross-arms, or from span-wires between kerbside columns. Through the junctions, more complicated OLE support wiring will be required to accommodate the curves in the conductors.

Through the Design Manual, the is committing to mitigating the potential impact of the tram through good design and the use of appropriate materials to properly integrate the tram into the new streetscape. Through this area Design Manual commitments include particularly the use of grass infill between the tracks in the boulevard sections.

The extent of redevelopment of the Granton Waterfront area is so extensive that its character is primarily one of change, so it is only slightly sensitive to further change. The introduction of the tram system has already been designed in to the masterplan. The introduction of overhead cabling and the tram stops will have an effect on the townscape of medium magnitude but this will be minor compared with the wholesale changes wrought by the current redevelopments. The townscape impact of the tram is therefore minor.

8.4.11 Pilton

The tram route through Pilton is along a reserved corridor on the west verge of the newly constructed West Granton Access from West Granton Road to Ferry Road, with a stop envisaged approximately mid-way.

The construction of the tram will involve the loss of the broad grass verge to the new road and some areas of semi-decorative shrub planting, and the opening up of the temporary infill under part of the span of the bridge carrying West Pilton Place across the road.

To reduce the effect on what is currently a fairly bleak townscape it is envisaged that the track-bed will be infilled with grass and that, wherever the room is available, a hedge will be planted immediately in front of the existing and any new barrier fencing.

The OLE is anticipated to consist of conductor wires supported from twin cantilever (T-shape) columns between the two tracks. Through the junctions, kerbside supports and span wires may be required.

The stop is currently envisaged as an island stop, with the northbound track diverging into an additional area of land to the rear of 4 to 6 Pilton Place. The stop would take the form of an extended traffic island designed to appear as a well-detailed slightly raised area of pavement. The shelters, seating, signage and other equipment will be designed as an integrated whole, visually light and transparent. Pedestrian access to West Pilton is envisaged to be via a new road as part of a new housing development. Access to the east may be provided by demolishing a property on Crewe Road West to allow a footpath link.

Through this area Design Manual commitments include particularly the use of grass infill between the tracks and hedge planting wherever possible in front of the existing and any new barrier fencing, to reduce the bleakness of the road corridor;

The creation of the transport corridor has already had a townscape effect of high magnitude; the addition of the tram will have an effect of medium magnitude, primarily arising from the OLE. However, it is a poor quality townscape that is only slightly sensitive to change and therefore the townscape impact of the introduction of the tram will therefore be minor.
8.4.12 Roseburn Railway Corridor

The tram will follow the disused railway line from Ferry Road to the point where it meets the existing heavy rail just west of Haymarket. Stops are envisaged at Ferry Road, Telford Road, Craigleith and Ravelston Dykes.

Alterations will be required to all the smaller bridges that the tram runs over, including the bridge over the A8 at Roseburn. Works will be required to the Colbribridge viaduct, but the finishes will be reinstated such that there is no significant change to the appearance of the structure.

The disused railway was converted to a cycle and footpath in the 1980s and is now a well used and popular recreational resource. The embankment and cutting slopes have become very overgrown with many mature and semi-mature trees, forming a lush enclosed landscape that is distinctly separate from the surrounding primarily residential areas.

The tram and the replacement cycle and footpath will be constructed on the line of the old track-bed, with a fence and, where space is available, a hedge, separating them wherever the tram will run at high speed. The path will be surfaced with fine asphalt or bitumen macadam as the existing, while the tram track, except at crossings, is envisaged as reinforced grass. The tram will run on the east side of the track-bed and the cycle and foot path to the west, with crossings as required to allow for accesses to the east.

At both ends of the corridor, the existing railway corridor is on embankment some six metres above the surrounding land. Significant regrading will be required ramp the tram line up to and down from this level over a length of about.

The combined width of the tram tracks and the cycle and foot path will be approximately 11m, compared to the original railway of 8m and the current cycle-track of 3m. Parts of the existing cutting and embankments are narrower than this, so retaining structures will be required to allow for widening. The height and extent of these can not be properly determined until more detailed engineering design has been carried out, but they are not currently envisaged to be more than 1 to 1.5m high if designed as vertical walls or 2.5m high if designed as raked crib walling.

Where the railway corridor passes under narrow and low arched bridges, the track bed will be lowered slightly to allow the tram tracks to be offset from the bridge centre-line and thus allow room for a narrow cycle and footpath.

The OLE along the railway corridor will consist of conductor wires supported from twin cantilever (T-shape) columns between the two tracks. The safety clearances required for the OLE, combined with the increased width of track, mean that extensive tree clearance will be required.

The stops at Telford Road, Craigleith and Ravelston Dykes are entirely within the railway corridor and will be designed appropriately as well-detailed low platform halts, with the shelters, seating, signage and other equipment designed as an integrated whole. There is a significant level difference between these stops and the adjacent roads and footways, requiring extensive ramps and steps. The arrival point of these access ramps and steps at the roadside will be designed in an architectural manner to provide a welcoming entrance and to signal the presence of the tram line.

Work will be required to widen the listed Roseburn Bridge (see Chapter 11) but it will be reinstated to match its existing appearance such that there will be negligible effect on the townscape.

The overall effect of the vegetation clearance and construction will be to substantially reduce the enclosure and tranquillity of the cycle and footpath, particularly south of Telford Road will be much reduced. This amounts to a change in character, a townscape effect, of high magnitude to this area.
which although not designated for its landscape value is by its nature highly sensitive to change. The townscape impact will therefore be major and adverse.

Mitigation will also be provided by ensuring that the new works are generally sympathetic to the character of the area, and by replacing lost trees with a mixture of native and decorative shrub planting. Over time this will partially re-enclose and screen the area.

There are a number of pinch points, particularly at the transition points between embankment and cutting, where works will affect almost the entire corridor width removing most, if not all, of the existing vegetation. The boundary at these points will be treated in a sympathetic manner, probably with screen hedging reinforced by a fence to give privacy to the neighbouring houses.

The opening up and increased activity will make the railway corridor feel safer to cyclist and pedestrian users.

There is the potential for further mitigation, possibly outwith the remit of tie, by redesigning the ‘left-over’ spaces at north end of the railway corridor to give beneficial use as public open space.

8.5 Visual Impacts

Scope and Approach to Assessment of Visual Impacts By definition, visual effects can only occur where the tram system is visible. Along much of the route, the tram and its infrastructure will be seen from a comparatively restricted area: from buildings facing directly onto the tram line and from streets that cross the line. The buildings that form the streets generally block views from further afield. The exceptions to this are where the tram runs through or alongside open space – most importantly along Princes Street, but also through parts of the Port of Leith, along the waterfront from Newhaven to Granton, and through parts of the Granton Waterfront development area.

Figure 8.1 shows the area from which it is anticipated that the tram will be visible: the ‘visual envelope’. Because of the complex nature of visibility within the city, particularly screening by different height buildings and overlooking from upper floor windows, this has been defined entirely by site investigation, walking the route and assessing where the tram is likely to be visible.

Where there is no limit imposed by objects blocking the view, the visual envelope extends to 500 metres from the line. This limit is based on an assessment of perceptibility rather than visibility. Beyond this distance, in the visually busy urban environment, the tram infrastructure may be visible to anyone actively seeking it out but is unlikely to be perceived by the ordinary observer.

It should be noted that this investigation, albeit thorough, cannot be exhaustive and there may be glimpses of the tram and its infrastructure from occasional areas outwith the visual envelope. Likewise there may be some locations within the visual envelope where very local screening blocks views.

8.5.1 Predicted Visual Impacts

Visual impacts will be created by the tram infrastructure – overhead line equipment, signals, stops and shelters; by the tram vehicles themselves; by the buildings associated with the tram, such as the depot and the substations and; by alterations to structures such as the embankments on the railway corridor.
There will be visual impacts on virtually all the properties and roads along the tram route, on public open spaces and recreational sites such as Princes Street Gardens, St Andrew Square and the Roseburn cycle route, and from important tourist viewpoints such as Princes Street and Edinburgh Castle.

Major visual impacts are caused where proposed development is clearly noticeable and affects the character or quality of view for sensitive receptors. For this reason there will be major visual impacts along much of the route because of the unavoidable visibility of much of the tram infrastructure, particularly the overhead line equipment, from houses and flats along the route and from many of the main city centre tourist locations.

The impacts are detailed in the Visual Impacts Schedule in Appendix D. If every individual property were to be considered, each flat in each tenement building for example, there would be many thousands of individual receptors. To allow for a comprehensible assessment, receptors with a similar outlook have therefore been grouped, generally by city block, into building receptor groups and viewpoint receptors at tourist and recreational locations, open spaces and designed vistas. Because the impact from the road is comparable to that from the buildings, this has not been shown.

The receptors and receptor groups are shown in plan form on Figures 8.3a to 8.3j. Different impacts arising from different sensitivities are shown within receptor groups on these plans.

8.5.2 Mitigation

Most of the visual impacts of the tram arise from the infrastructure; the OLE, stops, signals and the like, and the tram vehicles, which for the most part cannot be screened or hidden.

The mitigation for these, to which tic has committed through the Design Manual, is to design them well, so that they fit comfortably into the scene as far as possible. Elements such as the stops and road alterations that can be designed as positive features will be so treated as such. Elements that will by their very nature be seen as detrimental, particularly the OLE, will be designed to be as visually light as possible, cleanly and simply detailed.

Along the railway corridor there is potential for mitigation by screening, particularly replacing and reinforcing hedges along the site boundary.

The mitigation for these impacts is to design the tram system well, so that it fits comfortably into the scene as far as possible. Elements such as the stops and road alterations that can be designed as positive features will be treated as such, so that whilst they are visible they do not detrimentally affect the quality of the view. Elements that will by their very nature be seen as detrimental, specifically the OLE, will be designed to be as visually light as possible, cleanly and simply detailed.

To this end tic have commissioned a Design Manual setting out the principles of design and detailing and have committed requiring in the construction contract that the final design is to comply with the Design Manual. Points in the Manual that are specifically intended to reduce the visual impact of the tram include:

- Careful design of the OLE to simplify the layout, balancing conductor wire and support cable sizes against support spacing so as to minimise the size of the wiring;
- Detailing and design of wire supports and their arrangement to suit the form of the street, particularly at junctions;
- To use visually appropriate methods of OLE support, including designing a bespoke support column, designed to be attractive in its own right;
- To integrate the OLE supports with other vertical elements in the street (lighting and signing poles) as far as possible, and coordinate the spacing of new and existing poles, replacing existing lighting columns where appropriate;

- Simple alignment of the tram track to avoid as far as reasonably possible the need for complex OLE support structures or wiring.

A number of views and viewpoints are particularly important in Edinburgh because of the designed vistas in the New Town and because of the importance of tourism in the city. Examples are former are the views down Princes Street towards Calton Hill, down St David Street to the Scott Monument, down Castle Street towards the Castle, and along George Street to St Andrew Square. Examples of the latter are the views from Princes Street, looking diagonally towards the Castle and views from the Castle across the New Town.

Where possible, these views have been taken into account in the indicative design. For example, the Princes Street stop will be located so that it does not affect the view from Castle Street. The central alignment on Princes Street was partly determined by the requirement to minimise the effect on views out of the street and to allow for simple, and thus visually lighter, OLE design.

Along the railway corridor there will be major adverse visual impacts caused by the opening up of views to a newly activity line, that are currently screened by vegetation and embankments, where these are being cut back. Here, mitigation can and will be provided by screening, particularly replacing and reinforcing hedges along the site boundary.

Major adverse visual impacts will also be experienced along the waterfront where the overhead lines will be particularly visible because they will be seen against the open sky. Again, the mitigation here will be the careful design of the equipment to keep it as simple and uncluttered as possible.

The tram depot development will have a visual effect of medium magnitude on receptors of slight to moderate sensitivity in the industrial and commercial parts of the Port of Leith, including the casino, and on receptors of high sensitivity in the new residential developments at 15-17 Tower Place. There may be significantly more highly sensitive receptors by the time the depot is constructed if the spread of new residential development in the port continues apace. Whether the visual change – from semi-derelict yards and lorry park but with a backdrop of ships and port activity, to active tram depot – is negative or positive, is a moot point. There will be a visual impact, moderate adverse to moderate beneficial, depending on the attitude of the observers.

8.6 Short Term Construction Impacts

Construction activities for the tram will appear as an ordinary construction site of the sort common in urban areas, except that the sites will generally be long and linear, and will partially fill what are normally spaces within the fabric of the city. Many activities, such as the erection of the OLE supports and the equipping of the line are of such short duration that the effect on the townscape is negligible.

The main impact will arise from the enclosure of a series of linear sites with safety fencing, typically 2m high, while the main work of constructing and surfacing the tracks is undertaken. These will have the effect of temporarily blocking views and vistas and will disrupt the enjoyment of the city for residents and tourists alike.

The degree of effect will depend in part on how the works are controlled and organised, partly on the location, and partly on how they are perceived - people’s knowledge that they are temporary. They will generally have a negative effect of moderate magnitude on the quality of the townscape affected.
Within the city centre, where important vistas and iconic views of the city are affected, the effects will be of high magnitude.

The location and disposition of the major construction compounds is unknown at the time of writing and cannot therefore be specifically assessed. It should be noted, however, that compounds for major construction projects usually have a negative effect of moderate to high magnitude on their surrounding townscape unless they are particularly well screened and managed.