Natural Resources Wales

Stephenson Street Flood Defence Scheme

Landscape and Visual Appraisal

274580-ARP-XX-XX-RP-LA-0002

For Planning | 23 June 2021

Job number 274580

Ove Arup & Partners Ltd
63 St Thomas Street
Bristol BS1 6JZ
United Kingdom
www.arup.com

ARUP

Contents

Tables

Figures

Appendices

1 Introduction

This Landscape and Visual Appraisal has been prepared by Ove Arup and Partners Ltd. (Arup) for Natural Resources Wales to provide an appraisal of effects that would arise as a result of the construction and operation of the proposed flood risk management scheme at Stephenson Street in Newport (Wales) between National Grid Reference (NGR): ST3191986152 and NGR ST 32873 85428.

The proposed development is for the construction of 1.7km new flood defences (bund, sheet pile wall and reinforced concrete wall), 450m new highway and related landscape beneficial effects. The scheme manages flood risk in accordance with the Severn Estuary Flood Risk Management Strategy.

Landscape impacts relate to the effect on the landscape features contained within the study area and the overall character of the local landscape. Visual impacts relate to the effects on the visual amenity of people able to see the proposed development from the surrounding areas.

2 Method

This appraisal is a high-level study to identify the most important potential visual effects. It is not a full EIA compliant Landscape and Visual Impact Assessment (LVIA) and should not be interpreted as predicting the significance of effects. Some of the terminology used is necessarily similar to that used in Environmental Impact Assessment (EIA). The term ‘significance’ has intentionally been avoided,

indicating instead the likely level of predicted effects on receptors in terms of their importance in reaching a planning determination.

For each receptor, the baseline (existing condition) is described and the changes arising from the proposed development are quantified to give a magnitude of change (high, medium, or low).

Next, the judgements on sensitivity and magnitude of change are combined to give an overall assessment of level of the effect (very large, large, moderate, slight, or negligible).

Typical criteria for judging sensitivity, magnitude and level of effect are presented in **Appendix B.**

Once the level of effects is understood mitigation measures are incorporated where possible to reduce the predicted effects.

This assessment has followed guidance set out in the following documents:

- 'Guidelines for Landscape and Visual Impact Assessment', Third Edition (Landscape Institute and the Institute of Environmental Assessment, 2013).
- Photography and Photomontage in Landscape and Visual Impact Assessment Landscape Institute Advice Note 01/11.
- Visual Representation of Development Proposals, Landscape Institute Technical Guidance Note 02/17 (31 March 2017)

2.1 Visibility and Study Area

An existing 1,350m long flood defence embankment is located on the eastern bank of the River Usk, running from Stephenson Street, at the north, to Corporation Road (Bird Port) in the south. This section of flood defence is commonly referred to as Stephenson Street Embankment.

A public footpath, the Wales Coast Path, runs through the site on the existing flood defence embankment.

To the west of this is saltmarsh and intertidal mud of the River Usk. To the east is a mosaic of habitats including: amenity grassland to the north within Coronation Park, and towards the south: a mixture of scrub, swamp and standing water amongst areas of hardstanding, spoil and a manmade conveyor which extends into the saltmarsh and intertidal areas.

Further east and south of the conveyor belt there are large areas of hardstanding as part of Hansons and Marshalls yards and the Felnex Industrial Estate. Internal roads connect these sites and link with Corporation Road at the south eastern end of the site.

A Zone of Theoretical Visibility has been produced over an OS mapping and this is showing in **Figure 2.**

Visibility of the site is:

- Open, within Coronation Park,

- Open, along the embankment section next to Coronation Park with views towards the river and the Grade I Listed Transporter Bridge and towards Coronation Park; and
- Open/Limited along the embankment section south of Coronation Park next to the industrial properties due to dense vegetation and fences along the industrial area.
- Open/Limited along the embankment section south of Coronation Park next to the industrial properties due to dense vegetation and fences along the industrial area.

Based on the limited visibility within the landscape and considering the scale and height of the proposed development, the Study Area for this appraisal was set at approximately 0.5km with an extended Study Area of 3km to include viewpoint that may have long distance or none views.

A set of 8 representative viewpoints have been selected within the Extended Study Area. **Figure 1** shows the locations of the selected representative viewpoints and **Figure 2** includes the corresponding viewpoint photographs.

2.2 Panoramic Photographs

Site visits were carried out by chartered landscape architects during November 2020 whilst deciduous vegetation was losing leaf. However, the photographs do not represent the worst-case scenario in terms of visibility. During winter, views would be more open. This has been taken into account in the appraisal.

Field work was undertaken at a time when Covid restrictions was in place and therefore only one site visit was possible part of which was during unfavourable weather conditions. It has not been possible to gain additional photography in better weather conditions by the time of writing.

Photographs illustrating views from each viewpoint were taken with a full frame Nikon D610 digital camera using a lens with a fixed 50 mm focal length. Each frame was taken in portrait format, and up to four frames have been stitched together using the ‘Rotating Motion’ and ‘Cylindrical Projection’ settings in Microsoft Image Composite Editor software. This provides a panoramic image.

The wide panoramic views are intended to give an understanding of the visual context. The choice of an A3 format is for ease of handling and reproduction. Theoretically, when printed at the correct size on an un-scaled A3 page and viewed at a distance of 300mm using one eye, the photographs closely represent the view experienced from each viewpoint by the viewer’s naked eye. The images should theoretically be viewed curved at a radius to match the viewing distance. In practice, however, it is difficult to view the photographs at the exact viewing distance. The images are intended to be viewed with the paper flat and at a comfortable distance with the viewer’s arms bent to around 90° (approximately 350mm).

The photographs provide a tool for assessment that can be compared with an actual view in the field; they should never be considered as a substitute to visiting a viewpoint in the field.

2.3 Temporal scope

The appraisal is carried out at the following stages during the project life:

Phase	Terms	Reversibility
Construction (entire duration of construction phase)	18 months – short term	Temporary and reversible
Year 1 (winter of the first year following construction)	5 years medium-term	Permanent and irreversible
Year 5 (winter of the fifth year following construction)	Ongoing long – term	Permanent and irreversible

3 Landscape Planning Policy Context:

3.1 European Landscape Convention

The following paragraphs are quoted from Institute of Environmental Management and Assessment (IEMA) and the Landscape Institute's GLVIA3.

"The UK has signed and ratified the European Landscape Convention (ELC) since 2002, when the last edition of this guidance was published. The recognition that government has thus given to landscape matters raises the profile of this important area and emphasises the role that landscape can play as an integrating framework for many areas of policy. The ELC is designed to achieve improved approaches to the planning, management and protection of landscapes throughout Europe and to put people at the heart of this process."

The ELC defines landscape as: "…an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors."

3.2 National Planning Policy

Section 70(2) of the Town and Country Planning Act 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004 require that 'planning applications are to be determined in accordance with the Development Plan unless material considerations indicate otherwise'.

3.2.1 Future Wales – The National Plan 2040

The Future Wales – the National Plan 2040 constitutes the national development framework which sets out the direction for development in Wales to 2040. The development plan sets out the strategy for addressing key national priorities including climate resilience, developing strong ecosystems, and improving the health and well-being of communities.

The National Plan states that changes in the climate and weather patterns will have a significant impact on well-being on both current and future generations. Increased temperatures and extreme weather events caused by climate change will

put additional pressure on ecosystems, infrastructure, the built environment and social, economic, and ecological resilience. By 2050, it is projected that average summer temperatures will increase by 1.34 degrees and winter precipitation increasing by 5%.

Newport is situated within the 'South East' Regional Growth Area, as identified by the National Plan 2040. Policy 1 of the plan states that development and growth in National Growth Areas should be of an appropriate scale and support local aspirations and needs.

Policy 8 - Flooding states that flood risk management that enables and supports strategic growth and regeneration in National and Regional Growth Areas will be supported.

Policy 9 – Resilient Ecological Networks and Green Infrastructure requires developers to ensure the enhancement of biodiversity, the resilience of ecosystems and provision of green infrastructure. In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net-benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals.

3.2.2 Planning Policy Wales: Edition 10

Planning Policy Wales: Edition 11 (adopted February 2021) (PPW) sets out the land use planning policies of the Welsh Government. PPW provides advice on a wide range of issues and is supported by a number of Technical Advice Notes (TANs). The Welsh Government is committed to sustainable development and PPW states that the planning system shall provide a presumption in favour of sustainable development.

PPW Edition 11 states that a 'Resilient Wales' can be supported by protecting sufficient scales, extent and connectivity between landscapes and habitats to enable them to withstand the pressures of change through the protection and enhancement of water sources and enable flood mitigation measures.

Development should demonstrate suitable adaption to the existing and predicted effects of climate change. Challenges to Wales in terms of adaption include the impacts of flooding and coastal change to communities, businesses, and existing/planned infrastructure, as well as, the risk to health and well-being.

Paragraph 4.1.1 of PPW states that the planning system should enable people to access jobs and services through shorter, more efficient, and sustainable journeys. Land use and transport planning must ensure it enables integration with and between different types of transport, between transport measures and land use, transport measures and environmental protection and health and social well-being.

Development proposals must seek to maximise accessibility by walking, cycling and public transport through prioritising on-site infrastructure and should demonstrate accordance with The Sustainable Transport Hierarchy for Planning.

Paragraph 4.1.21 states that development proposals should integrate green infrastructure such as sustainable urban drainage systems (SUDS), street trees and verges for aesthetic, pollutant mitigation, water management and habitat creation. The design of streets and road systems in Wales should further contribute to the sense of place and creation of high-quality places.

The Active Travel (Wales) Act 2013 makes walking and cycling the preferred option for short journeys and promotes the adoption and connectivity of active travel networks. Developing local active travel networks can help to mitigate the impact of new development, by providing alternative modes of transport and safe and attractive recreational networks.

Paragraph 6.0.2 - regarding design, scale, siting, and use of materials in relation to distinctive landscapes and heritage assets.

Paragraph 6.0.3 states that the role of environmental components and their influence on health and wellbeing as well as creating places which are adaptable and resilient to change.

Paragraph 6.2.3 states that green infrastructure is capable of providing several functions which provide multiple benefits for social, economic, and cultural as well as environmental resilience. Benefits by improving resilience can include positive well-being, flood management and climate change mitigation.

Paragraphs 6.3.12 and 6.3.21 - regarding the use of LANDMAP to inform assessment and decision making.

3.2.3 Technical Advice Note 12: Design

The following paragraphs are from TAN12 Design provide design guidance in relation to enhancing local character:

Paragraph 4.8 – regarding design, scale, siting, use of materials in relation to landscape character and distinctiveness.

Paragraph 4.11 - regarding the use of LANDMAP in inform assessment and decision making; and

Paragraph 4.14 – regarding legibility in relation to views and vistas, landscape features and connectivity of the footpath network.

The following paragraphs from TAN 5 - Nature Conservation and Planning provide guidance in relation to protection and enhancement of the natural environment.

Paragraph 4.3 – regarding layout and design in relation to landscape features and distinctiveness.

3.2.4 Technical Advice Note 18: Transport (2007)

Integration of land use planning and development of transport infrastructure plays a key role in addressing environmental aspects of sustainable development such as climate change. Sustainable development should be sought through:

- ensuring that transport infrastructure or service improvements allow existing networks to perform their function and sufficiently accommodate future demand.
- encourage good quality design of streets and provide a safe public realm with a distinct sense of place; and,
- promoting cycling and walking.

Paragraph 5.4 outlines that transport infrastructure should contribute to a sense of place and should have five principle functions: place, movement, access, parking, and utilities. New junction arrangements should provide adequate visibility and should avoid, where possible, the requirement for drivers to make a three-point turn.

LPAs should promote walking and cycling networks wherever possible and should adopt the following principles; ensure pedestrian/cycling routes are safe and inclusive, adopt adequate pavement widths, lighting and desire lines, support the use of public rights of way (PRoWs) and identify and protect existing routes, as set out in paragraph 6.2 and 6.4.

3.2.5 Technical Advice Note 24: The Historic Environment (2017)

TAN24 outlines that Applicants should demonstrate accordance with the 'well-being goals' set out in the Well-being of Future Generations (Wales) Act 2015. The well-being goals include achieving 'a Wales of vibrant culture and Welsh language' which is described as 'a society that promotes and protects culture, heritage and the Welsh language'. Development proposals should serve to conserve or enhance the character and setting of cultural/heritage assets.

Section 5.1 of the TAN24 outlines that designated heritage assets such as Listed Buildings and Conservation Areas are important assets which contribute to the quality and character of Welsh landscapes and townscapes. The setting of a historic asset includes its surroundings, in which it is understood, experiences and appreciated, embracing the past and present relationships to the surrounding landscape.

In determining planning applications involving Listed Buildings, Section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 states that conserve or enhance the character and setting of the designated heritage asset.

3.2.6 Active Travel (Wales) Act 2013

The Active Travel (Wales) Act 2013 aims to make active travel the most attractive option for most short journey. The Act requires local authorities in Wales to produce active travel maps and deliver year on year improvements in act travel routes and facilities. It requires highways authorities to make enhancements for pedestrians and cyclists in all new road schemes

3.2.7 Environment (Wales) Act 2016

Section 6 of the Environment (Wales) Act 2016 places a duty on public authorities (including Statutory Undertakers) that exercise their function in Wales to maintain or enhance biodiversity and promote the resilience of ecosystems. Section 6(2) states that public authorities should consider the following in undertaking their undertakings; diversity between and within ecosystems, connections, scale, conditions, and adaptability of ecosystems.

3.3 Local Planning Policy

The development plan for the area comprises the Newport City Council Local Development Plan (LDP), which sets out policies to guide development for the plan period of 2011-2026. The LDP was formally adopted on 27 January 2015 which superseded the previous Unitary Development Plan.

3.3.1 Newport City Council Local Development Plan

The following LDP policies are considered to be relevant to this assessment:

Objective 1 – Sustainable Use of Land: To ensure that all development makes the most efficient use of natural resources by seeking to locate development in the most sustainable locations, minimise the impact on the environment and make a positive contribution to local communities.

Objective 2 – Climate Change: To ensure that development and land uses make a positive contribution to minimising and adapting to or mitigating against the causes and impacts of climate change, by incorporating the principles of sustainable design, changes to travel behaviour, managing the risk and consequences of flooding, and improving efficiency in the use of energy, waste and water.

Objective 5 – Conservation of the Built Environment: To ensure that all development or use of land does not adversely affect, and seeks to preserve or enhance, the quality of the historic and built environment.

Objective 6 – Conservation of the Natural Environment: To protect and enhance the quality of the natural environment, including landscape, protected habitats, and species of principal importance for biodiversity in Wales and the protection of controlled waters.

Objective 9 – Health and Well-being: To provide an environment that is safe and encourages healthy lifestyle choices and promotes well-being.

Policy SP1 – Sustainability: Proposals will be required to make a positive contribution to sustainable development by concentrating development in sustainable locations. Particularly, proposed developments are expected to minimise flood risk, sea level rise and impacts of climate change.

Policy GP1 – Climate Change: Proposed developments should be designed to withstand the local climate and reduce the risk of flooding on and off site.

Policy GP4 – Highways and Accessibility: Proposed developments should provide appropriate access for non-vehicular users, be accessible by a choice of means of transport, be designed to reduce transport severance and ensure that development would not be detrimental to highways or pedestrian safety or result in traffic generation exceeding capacity of the highway network.

Policy GP5 – Natural Environment: Proposals shall be designed and managed to protect and encourage biodiversity and ecological connectivity, mitigate/compensate negative impacts to biodiversity and ensure that there are no significant adverse effects and ensure there are no unacceptable impacts on water quality.

Policy GP6 – Quality of Design: Proposals are expected to create safe, accessible, attractive, and convenient environments which are sensitive to the existing built form and qualities, connectivity, and materials.

Policy GP7 – Environmental Protection and Public Health: Development will not be permitted which would cause or result in unacceptable harm to health because of land contamination, dust, instability or subsidence, air, heat noise or light pollution, flooding water pollution or any other identified risk to environment, local amenity or public health and safety.

Policy CE4 – Historic Landscapes, Parks, Gardens and Battlefields: Development proposals should protect, conserve, enhance and where appropriate restore designate heritage assets, landscapes, and their associated setting.

4 Baseline

The baseline is considered as the existing conditions at the time of the site visit in November 2020, considering the assumptions below.

4.1 Description of the study area and its visual setting

The site is generally visually exposed due to low vegetation and low buildings. However, given the low topography of the site (up to 8/9m AOD), it is only well visible from nearby locations and only from few elevated key points in the surroundings.

Field work was carried out on the 20th November 2020 to confirm the visual envelope from which any note-worthy effects arising from the scheme were likely to be viewed.

Representative assessment viewpoints were selected to represent the visual receptors identified above. Viewpoints were chosen based on locations where potential receptors maybe located by the proposed scheme. This considered the receptors proximity to site, areas which are accessible to the general population including public rights of way and how views would be influenced by landform and existing vegetation cover.

Nine viewpoints were visited from which eight were selected, 4 of them localised in the extended study area and the other 4 localised in the immediate study area. The list of potential viewpoints was sent to Newport County Council via email on the 18th November who confirmed that "the locations would generally be appropriate to undertake a landscape and visual appraisal".

The four viewpoints withing the study area have been appraised for potential effects of the proposed scheme. The viewpoint locations are shown on Figure 1: Site location plan and viewpoint locations, Photographs from the viewpoints are provided separately, please refer to Figures 5.

4.2 Description of the wider landscape and visual setting

Landscape Character

4.2.1 National Landscape Character Areas: Gwent Levels

The Study area lies in the Gwent Levels area.

The extract below is from NLCA34 Gwent Levels, 31/03/2014, Natural Resources Wales.

"*This is a distinctive, flat, lowland landscape with a geometric patchwork of watercourses that run between fertile fields. It is remarkable for having been created by reclaiming marshland and inter-tidal areas during successive periods going back to Roman times. In parts, the older patterns have changed almost beyond recognition over the past 150 years, sections having been built over by a major railway line, two motorways, a large steelworks, and a power station.*

In addition, there has been a rapid growth of once small settlements into dormitory villages, and urban expansion from both Cardiff and Newport. Yet despite these changes, substantial areas of rural landscape and traditional historic features remain, including in many places the pattern reens, being ditches that manage the water between the fields, and whose size and appearance varies according to the fashion of the period when reclamation work took place.

Medieval churches and farmsteads stand on low horizons; the characteristic pollarded willows stand in lines beside the reens, though they are ever-decreasing; and the fertile soils are used for a variety of land uses, including cereal production, dairying, sheep and store cattle rearing and equestrian pursuits. The reens support rare aquatic plants and a diverse range of invertebrates, while the newly developed Newport Wetlands Reserve is proving to be successful in attracting rare birdlife.

The alluvial deposits and peat beds overlay and hide from view archaeological evidence extending from the Mesolithic period, with human footprints embedded in the clay, to later, Bronze Age trackways and house platforms, Roman timber features, and Medieval granges and farms buildings. This is potentially an n

enormously rich historical and archaeological resource which has yet to be fully explored.

Key characteristics: Alluvium, Reclaimed landscape, Divided by the Usk estuary, Reens and willows or hedgerows, Flood embankment to the sea, Fertile soils and agriculture, Wet pasture, Archeologically important, Comparatively little settlement, Open views between hills in Wales and England, Major developments on fringes."

4.2.2 LANDMAP

Information on broader scale landscape character is drawn from the LANDMAP information published by Natural Resources Wales and is available on-line. LANDMAP describes and evaluates five aspects of the landscape. The key aspect for this type of proposal is the Visual and Sensory aspect although all five aspects are considered and inform this appraisal.

The study area predominantly lies within: the Eastern Usk Industrial Area (NWPRTVS041), the Docks and Level of Mendalgrief (NWPRTVS040), the Usk Built Urban Corridor (NWPRTVS042), the Lower River Usk (NWPRTVS010) and a small section of the study area also falls within Newport West (NWPRTVS056). The Lower River Usk is characterised as "Water" and all the other aspect areas are characterised as urban (refer to Figure 4).

The extracts below are from the LANDMAP 'Visual and Sensory' layers which include the site. Note that evaluation criteria range from Low, Moderate, High through to Outstanding and that the descriptions cover a wider geographic area than the setting to the site.

Eastern Usk Industrial Area (NWPRTVS041). "Primarily commercial and industrial area with some housing, education and recreational uses. Located on the levels below 10 m AOD. The largest building is the Uskmouth power station and pylons carry power lines to the area. The old industrial buildings are rundown in places and boundaries are overgrown with little management input. The boundary with the Usk is particularly prone to this condition. There are a number of derelict and empty sites. Newer development is has occurred to the east and is generally better maintained and manicured in places. The peripheral distributor road forms the northern boundary crossing over the Usk new bridge. There is significant landscape treatment adjacent to this road."

Principal management recommendation from LANDMAP includes: Strengthen boundary vegetation and manage to maximise screening and for nature conservation

Relevant management guidelines from LANDMAP includes:

- Plant and manage infrastructure planting particularly by roads and on and on boundaries replacing failing trees with long lived native species and fast-growing species where appropriate.
- Prepare strategy for phased improvement of the area

- Put in place guidelines to ensure new development minimises visual impact on adjacent areas

Docks and Level of Mendalgrief (NWPRTVS040) "primarily dock related commercial and industrial area with some waste disposal use around the level of Mendalgief. Located on the levels below 10 m AOD. The area is dominated by the extensive docks and by the raised mound of the waste disposal site and is a mixture of old and new commercial and industrial buildings bordering the Usk. It is difficult to discern a logical pattern to development other than the buildings around the docks. The peripheral distributor road with associated landscaping runs east west allows views into the area making it prominent. The old industrial buildings are rundown in places and boundaries and unused land is overgrown with little management input. The boundary with the Usk is particularly prone to this condition. There are a number of derelict and empty sites. Newer development has occurred and is generally better maintained. The waste disposal tip is an alien feature in this flat landscape and whilst contouring is carefully applied. Change detection 2014: new developments/less dereliction"

Principal management recommendation from LANDMAP includes: Introduce a strategy for major landscape infrastructure to maximise screening and for nature conservation

Relevant management guidelines from LANDMAP includes:

- Plant and manage infrastructure planting particularly by roads and on and on boundaries replacing failing trees with long lived native species and fast-growing species where appropriate.
- Prepare strategy for phased improvement of the area

Usk Built Urban Corridor (NWPRTVS042) "Industrial and commercial area with some dereliction on the lower river corridor of the River Usk in the urban area of Newport. The area is a mix of older Victorian and more recent commercial developments with a dislocated urban character. The older buildings and structures are often associated with defunct docks. Some refurbishment has created pleasant buildings, especially near the centre and public spaces. Much of the older development does not address the river or use it in a positive way. There are bridges crossing the river which create noise and there is also the distinctive Transporter Bridge. Some of the older buildings and their curtilages have a feeling of neglect and redevelopment is under way creating the impression of an area in transition. There is limited public access along the river. Change detection 2014: various new developments - less neglect"

Principal management recommendation from LANDMAP includes: Create strong, high quality urban form with appropriate landscape infrastructure which addresses river

Relevant management guidelines from LANDMAP includes:

- Improve quality and character of urban form and buildings to give stronger, legible urban form addressing river

Lower River Usk (NWPRTVS010) "Lower river corridor of the River Usk to Severn Estuary through the urban area of Newport including watercourse, adjacent riverbanks, flood embankments and riparian vegetation. The river is an important natural, linear feature in the centre of Newport. wide and powerful and full of sediment. It has a modified, straightened course, tidal in nature with wide grey muddy banks, with stone and "beaches" on inside bends at lower levels exposed at low tide, indicating a large tidal range. The banks have walls and hard edges in places, mainly in the centre of Newport. Some more recent development addresses the river and creates pleasant public spaces. There is also evidence of older riverside docks which give character but are no longer used. Much development does not address the river or use it in a positive way. There are five bridges crossing the river from the M4 down to the distinctive Transporter Bridge. This and the city bridge are the most attractive and promote contact with the river. There is limited marginal reed-like vegetation in lower parts, where there is less intense development. Rubbish is exposed at low tide in more urban areas giving the river the feeling of neglect. There is limited public access along the river

Principal management recommendation from LANDMAP includes: Tidy up edge in centre, increase access, where possible, where this does not conflict with other uses, and increase nature conservation initiatives to south

Relevant management guidelines from LANDMAP includes:

- Improve city centre frontage allowing access
- Encourage native species riparian regeneration where appropriate to south
- Seek to achieve a River Usk walk along length

Newport West (NWPRTVS056) "Part of the city on the western side of the Usk running from hills at 109 m AOD at the Ridgeway to 10m AOD on the flat valley floor and levels. The area includes the Victorian retail centre of Newport, close to the Usk, with vibrant main street and relatively new mall. The Portland stone art deco Civic Centre is dominant on a hill overlooking the city and visible from the station and railway. Stow Hill to the south with the church of St Woolos is the other main landmark of note. The most affluent houses, detached and semi-detached, lie north of the civic centre on the higher ground, some with views to the countryside to the north on the Ridgeway. Victorian development of terraces lies to the south towards the docks. To the west there is expansion of estates, some council, which form the eastern margins of the built-up area and are visible from the M4 above the Gaer fort. Stow Park and Bellevue Park are important formal open spaces. The A4042 cuts a strong swathe into the town centre, with traffic dominating this area."

Principal management recommendation from LANDMAP includes: Improve main road corridors and commercial areas where possible, improve green network and maximise screening on edges from peripheral roads

Relevant management guidelines from LANDMAP includes:

- Create open space network linking into Usk and Ebbw corridors and out to countryside

- Plant and manage infrastructure planting particularly on western edges to screen housing, enhance railway and improve views from peripheral roads and radial routes
- Put in place guidelines to ensure new development minimises visual impact on adjacent areas
- Upgrade city centre

Table 1 Summary of all LANDMAP layers within the core study area (refer to Figure 4)

LANDMAP Aspect area	**Description**	**Characterisation**	**Evaluation**
Visual & Sensory	Eastern Usk Industrial Area NWPRTVS040	Urban	Low
	Docks and Level of Mendalgrief NWPRTVS040	Urban	Low
	Usk Built Urban Corridor NWPRTVS042	Urban	Low
	Lower River Usk	Water	Moderate
	Newport West NWPRTVS056	Urban	Low
Landscape Habitats	NWPRTLH037	Improved grassland, Amenity grassland, Buildings, Bare ground, Not accessed land	Low
	NWPRTLH047	Standing water, Refuse-tip, Buildings, Bare ground, Not accessed land	Moderate
	NWPRTLH039	Amenity grassland, Semi-natural broadleaved woodland, Intertidal mud/sand, Buildings, Not accessed land	Low
Historic Landscape	East Usk and Llanwern Industrial NWPRTHL022	Industrial Processing, Manufacturing	N/A
	Newport Docklands NWPRTHL032	Industrial Processing, Manufacturing	N/A
Geological	Newport (Barnardstown-Green Moor) NWPRTGL004	Man-made	Low

	Newport (Pilgwenlly-Crindau) NWPRTGL002	Man-made	Low
Cultural Landscape	Eastern Usk Industrial Area NWPRTCLS055	Urban	N/A
	Docks and Level of Mendalgrief NWPRTCLS054	Urban	N/A

Designations

The study area does not lie within an area that is designated for its landscape. However, within and extended study area of approx. 3km buffer from the core study area, the following landscape designations were found:

- The Gwent levels historic landscape of outstanding historic interest in Wales. Due to the visually enclosed nature of the landscape surrounding the site, there is no perceptual connection with the site, therefore this designation is not appraised as a landscape receptor
- Historic parks and Gardens: Llanwern Park, Newport (Nos 15 and 17, Sto Park Circle), Tredegar Park
- The Transporter Bridge (Grade I Listed Building) potential effects on this asset relate mainly to its visual setting and therefore it is not considered further as a landscape receptor but is included as a visual receptor below.
- The Wales Coast Path. Potential effects on this route relate mainly to its visual setting and therefore it is not considered further as a landscape receptor but is included as a visual receptor below.

4.3 Receptors

4.3.1 Landscape receptors

Landscape receptors are components of the landscape which may be affected by the proposed scheme. These include:

<u>Landscape receptors that may receive direct effects</u>

- The landscape features, characteristics, and the overall character of the local landscape of the visual and sensory LANDMAP aspect area Eastern Usk Industrial Area (NWPRTVS041) within which the site lies

<u>Landscape receptors which may receive indirect effects</u>

- The character of the local landscape including the visual and sensory LANDMAP aspect area Lower River Usk (NWPRTVS010) within which the site lies
- The wider LANDMAP landscape character areas: Docks and Level of Mendalgrief (NWPRTVS040), Usk Built Urban Corridor (NWPRTVS042) and Newport West (NWPRTVS056). Due to the nature of the proposed development and the limited potential for significant indirect landscape effects, on the setting of these wider character these are grouped and assessed as a single receptor.

Landscape sensitivity

As set out in Table 1 above, the overall evaluation of the five LANDMAP Aspect Areas of the site is low to moderate.

As the site is not located within an area designated for landscape it is recognised that its character is considered to be **valued at a local level**.

The landscape is robust and considered able to absorb development of this type. It is therefore judged to have a **low susceptibility** to change.

Combining the low to moderate local value with a low susceptibility to change, the sensitivity of the landscape character of the LANDMAP Areas to change of the type proposed is **low**

4.3.2 Visual receptors

The key people whose views may be affected by the proposed scheme are located within the immediate setting of the site and along the river corridor.

These include users of the Public Right of Way network, users of public rights of way especially the Wales Coast Path, users of Coronation Park and the network of informal footpaths, users and visitors of the Grade I Listed Transporter Bridge and users of the small industrial site opposite the site.

People who will potentially be affected by changes in view and visual resource as a result of the proposed scheme are known as visual receptors. These have been selected using desk-based research including OS maps and during consultation with Newport County Council. The value of the viewpoint has been assessed on a scale of National, Regional, Local, Community value and include:

Viewpoint	Receptor	Description	Value
VP 1 transporter bridge	Visitors to this historic asset enjoying its visual setting	Taken from the Transporter Bridge western access facing south-east towards the Usk river and the flood defence embankment along the Wales Coast Path.	National

VP 2 Industrial site opposite the site	Industrial site's employees and general public	Taken from E Way Road Opposite the CEMEX Newport Cement Terminal facing North East towards the flood defence embankment	Local
VP 3 Coronation Park	General public, users of Wales Coast Path, Local communities, Newport Corinthians Football Club	Taken from Coronation Park in correspondence of its north-east access from Stephenson Street.	Local/ Community
VP 4 Wales Coast Path – Conveyor Belt area	Users of Wales Coast Path	Taken from the Wales Coast Path next to the Conveyor Belt facing North East towards the flooding defence embankment	Regional

4.4 The Proposed Development

NRW has developed the Stephenson Street Flood Scheme to mitigate the current and anticipated flood risk in the Liswerry area of Newport. The proposed works would include improvements to flood walls, earth bunds and minor ground raising along the eastern bank of the River Usk. In addition to the flood defence infrastructure, the proposals would include a new highway connecting Corporation Road to East Bank Road, a new flood gate and landscape mitigation within Coronation Road.

The following assumptions have been applied in this appraisal:

- Minor land raising at 2No. areas north of Stephenson Street
- Minor land raising of Stephenson St highway
- New flood bund (Coronation Park)
- New sheet pile wall (Coronation Park to East Bank Road) and transition to incorporate connecting Wales Coast Path to existing ground level.
- New reinforced concrete stem wall through the Felnex Industrial Estate
- New highway and associated drainage connecting East Bank Road and Corporation Rd, including a new T-junction, and turning head on East Bank Road
- Installation of a flood gate and associated flood walls at Corporation Road
- New reinforced concrete stem wall at Railway Wall site
- New reinforced concrete stem wall at Nash Wall site
- Landscaping and enhancements

5 Landscape and visual appraisal

5.1 Landscape Effects

Table 2 appraisal of landscape effects

Landscape Receptor	Value and Susceptibility	Magnitude of Change: Construction	Magnitude of Change: Operation		Level of effect
Eastern Usk Industrial Area NWPRTVS040	**Low local value and Low susceptibility to change. Therefore, a Low overall sensitivity to change**	**Medium (negative)** – Direct impact from construction will affect a small section of this Visual and Sensory Aspect Area along the proposed works area which include (please refer to sections 2.4, 2,5 for more details): - improvement to flood walls, earth bunds and minor ground raising along the eastern bank of the River Usk - New flood defence infrastructure connecting Corporation Road to East Bank Road and a new flood gate and landscape mitigation within Corporation Road. Effects will include disruption to recreational users due to the presence of heavy machinery, temporary fencing, haul road constructed from the existing entrance to Coronation Park off Stephenson Street,	**At year 1 (Operation) – Medium (negative)** Impact from the proposed works will directly affect a small section of this Visual and Sensory Aspect Area for the length of the flood defence embankment. A magnitude of change is expected due to clearance of existing vegetation via hand tools and removal of arisings from site. Expected loss of perceptual qualities of this Visual and Sensory Aspect Area such as tranquillity. Although the minor changes of some landscape features is expected (existing flood defence height and vegetation) they are relatively small to medium scale in comparison with the whole area of this Visual and Sensory Aspect Area.	**At year 5 (Mitigation) – Low (improvement)** Proposed mitigation measures include: proposed wildflower re-seeding of the embankments of the raised flood defence, new surface treatment, trees and shrubs planting along raised embankment and at Coronation Park, Young woodland planting at Coronation Park. These measures will help in blending and integrating the proposed works with this Visual and Sensory Aspect Area aiming to keep and enhance its key characteristics. It is also expected that the proposed new planting will provide new ecology habitats and therefore a biodiversity gain. Given the above, the proposed mitigation will	**Construction: Slight (negative) effect** **Year 1 (Operation): Slight (negative) effect** **Year 5 (Mitigation): Negligible effect**

		compound and material laydown in Coronation Park and workers within the site. Disruption of recreational users due to the localised diversion of the Wales Coast Path (WCP) during construction. Expected loss of perceptual qualities of this Aspect Area such as tranquillity.		result in a slight reduction of the negative effect in terms of the magnitude of change.	
Lower River Usk (NWPRTVS010)	**Low Local value and Low susceptibility to change. Therefore, a Low overall sensitivity to change**	**Low (negative)** – Impacts from construction will affect a small section of this LCA only indirectly. The proposed works will not encroach into this Visual and Sensory Aspect Area and the River Usk SSSI and SAC. Effects will be temporary on views and the perception of the landscape.	**At year 1 (Operation) – Low (negative)** Impacts from construction will indirectly affect a small section of this Visual and Sensory Aspect Area.	**At year 5 (Mitigation) – Low (improvement)** The proposed mitigation measures will have a positive effect on the views and the perception of the landscape on this Visual and Sensory Aspect Area. At year 5 the planting will be established and more integrated in the landscape. The proposed species rich grass seeding mix for SSSI beneficial effects on the west side of the new embankment is expected to reduce the effects of the works and blend in with the existing planting with a medium positive effect.	**Construction: Slight (negative) effect** **Year 1 (Operation): Slight (negative) effect** **Year 5 (Mitigation): Slight (beneficial) effect**
Wider Character Areas - Docks and Level of	**Low to moderate local value and Low**	**Low (negative)** – Impacts from construction will indirectly affect a small section of this wider Character	**At year 1 (Operation) – Low (negative)** Impacts from construction will indirectly affect a small	**At year 5 (Mitigation) – Low (improvement)** The proposed mitigation measures will have a	**Construction: Negligible**

Mendalgrief (NWPRTVS040) , Usk Built Urban Corridor (NWPRTVS042) and Newport West (NWPRTVS056)	**susceptibility to change. Therefore, a Low overall sensitivity to change**	Area and only indirectly. Effects will be temporary on views and the perception of the landscape.	section of this Visual and Sensory Aspect Area.	positive effect on the views and the perception of the landscape on this Visual and Sensory Aspect Area, given that at year 5 the planting will be established and integrated in the existing landscape.	**Year 1 (Operation): Negligible** **Year 5 (Mitigation): Negligible**

5.2 Visual Effects

Table 3 appraisal of visual effects

VP	Value	Susceptibility and sensitivity	Magnitude of Change: Construction	Magnitude of Change: Operation		Level of effect
VP 1 Transporter Bridge	**National**	**High**	**Medium (negative)** During any single construction phase, it has been assessed that a maximum of 15% of this medium distance view will be occupied by construction works: earthworks, heavy machinery, cranes, and temporary fencing. It is assumed that some of the existing vegetation will be removed to enable construction access and the existing embankment would be disturbed. The existing pylon and HV line are already a detracting element of this view. The view onto construction activity would be open and wide, however construction would be temporary and reversable	**At year 1 (Operation) – Low (negative)** During the operational phase it has been assessed that a maximum 5% of this medium distance view will be occupied by direct results of the Proposed Works: raised embankment/flood defence, new woodland planting, new shrubs planting on the embankment and new placemaking and resting areas. The Proposed Works will occupy the medium section of the field of view and the horizon line	**At year 5 (Mitigation) – Low (improvement)** The proposed planting mitigation measures (scrub planting, species rich grass seeding, young tree planting and young woodland planting). Apart from the woodland the rest of the mitigation planting will be already established and therefore will have a positive effect on the view and will help in blending the Proposed Works with the existing landscape. The visual prominence of the mitigation proposal (species rich grass seeding) is tiny but will	**Construction: Large (negative) effect** **Year 1: Moderate (negative) effect** **Year 5: Negligible**

				will be slightly modified by the new woodland planting and raised embankment.	help reducing the magnitude of change as the embankment becomes more integrated within the SSSI and SAC habitat.	
VP 2 Industrial site opposite the site	**Local**	**Low**	**Medium (negative)** During any single construction phase, it has been assessed that a maximum of 15% of this medium/long distance view will be occupied by construction works: earthworks, heavy machinery, cranes, and temporary fencing. It is assumed that some of the existing vegetation will be removed to enable construction access. The view onto construction activity would be open and wide, however construction would be temporary and reversable.	**At year 1 (Operation) – Low (negative)** During the operational phase it has been assessed that a maximum 10% of this medium/long distance view will be occupied by direct results of the Proposed Works: raised sheet pile wall over existing embankment, new concrete flood wall by conveyor belt, new woodland planting, new shrubs planting and new placemaking and access ramp into conveyor belt area, new flood defence infrastructure connecting Corporation Road to East Bank Road and a new flood gate and landscape mitigation within Coronation Road (please refer to sections 2.4, 2,5 for more details). The Proposed Works will occupy the medium section of the field of view.	**At year 5 (Mitigation) – Low (negative)** The proposed planting mitigation measures (scrub planting, species rich grass seeding,young tree planting and young woodland planting) will have a negligible effect on the view. The use of appropriate materials for the hard landscape would help integrate the works. The visual prominence of the mitigation proposal (species rich grass seeding) is tiny but will help reducing the magnitude of change as the embankment becomes more integrated within the wetland habitat.	**Construction: Slight (negative) effect** **Year 1: Negligible** **Year 5: Negligible**

VP 3 Coronation Park	**Regional**	**Medium**	**Medium (negative)** During any single construction phase, it has been assessed that a maximum of 25% of this short/medium distance view will be occupied by construction works: earthworks, heavy machinery, haul road, compound and material laydown, cranes, and temporary fencing. It is assumed that some of the existing vegetation will be removed to enable construction access. The view onto construction activity would be open and wide, however construction would be temporary and reversable	**At year 1 (Operation) – Low (negative)** During the operational phase it has been assessed that a maximum 20% of this medium/long distance view will be occupied by direct results of the Proposed Works: raised embankment/flood defence, new woodland planting, new tree planting, new shrubs planting on the embankment, new footpath networks. The Proposed Works will occupy the low/medium section of the field of view and the horizon line will be slightly modified by the new woodland planting and raised embankment.	**At year 5 (Mitigation) – Low (improvement)** The proposed planting mitigation measures (scrub planting, species rich grass seeding, tree planting and young woodland planting) will have a slight positive effect on the view. The proposed planting once established will be a key contributor to the reduction of the visual effects of the Proposed Works but this is only expected later than year 5.	**Construction: Moderate (negative) effect** **Year 1: Slight (negative) effect** **Year 5: Slight (beneficial) effect**

VP 4 Wales Coast Path –Conveyor Belt area	**Local/Community**	**Medium**	**Medium (negative)** During any single construction phase, it has been assessed that a maximum of 30% of this short/medium distance view will be occupied by construction works: earthworks, heavy machinery, cranes, haul road, compound and material laydown and temporary fencing. It is assumed that some of the existing vegetation will be removed to enable construction access. The view onto construction activity would be open and wide, however construction would be temporary and reversable.	**At year 1 (Operation) – Medium (negative)** During the operational phase it has been assessed that a maximum 20% of this short/medium distance view will be occupied by direct results of the Proposed Works: raised sheet pile wall over existing embankment, new concrete flood wall by conveyor belt, new woodland planting, new shrubs planting and new placemaking and access ramp into conveyor belt area, new flood defence infrastructure connecting Corporation Road to East Bank Road and a new flood gate and landscape mitigation within Corporation Road (please refer to sections 2.4, 2,5 for more details). The Proposed Works will occupy the low/medium section of the field of view and the horizon line will be slightly modified by the Proposed Works described above.	**At year 5 (Mitigation) – Low (improvement)** The proposed planting mitigation measures (scrub planting, species rich grass seeding,young tree planting and young woodland planting) together with an appropriate use of hard landscape materials and surfaces, will have a positive effect on the view and will help in blending the Proposed Works with the existing landscape. The proposed planting once established will be a key contributor to the reduction of the visual effects of the Proposed Works.	**Construction:** Moderate effect (negative) **Year 1:** Moderate effect (negative) **Year 5:** Slight (beneficial) effect

6 Summary of Effects

Effects with levels of moderate or greater are considered to be material or 'significant' in terms of consenting. Effects of less than moderate significance, are likely to be immaterial or 'insignificant' in terms of consenting but have still been useful in informing the design of the Proposed Works and mitigation measures.

6.1 Construction

6.1.1 Landscape receptors

The only landscape receptors that are predicted to receive slight effects (negative) are: Eastern Usk Industrial Area NWPRTVS040 and Lower River Usk (NWPRTVS010). These effects will be adverse temporary and short term.

The rest of the landscape receptors will only receive negligible effects.

6.1.2 Visual receptors

Visual receptors that are receiving large or moderate effects (negative) are: Viewpoint 1, viewpoint 3 and viewpoint 4. These effects will be adverse temporary and short term.

The rest of the visual receptors receive effects that are slight or negligible

6.2 Early operation

6.2.1 Landscape receptors

Landscape receptors that are receiving moderate effects (negative) are: Eastern Usk Industrial Area NWPRTVS040. These effects will be adverse permanent and medium term.

The rest of the landscape receptors receive effects that are slight or negligible

6.2.2 Visual receptors

Visual receptors that are receiving a moderate effects (negative) are: Viewpoint 1 and Viewpoint 4. These effects will be adverse permanent and medium term.

The rest of the visual receptors receive effects that are slight or negligible

6.3 Residual

6.3.1 Landscape receptors

Landscape receptors that are receiving slight (beneficial) effects are Lower River Usk (NWPRTVS010): These effects will be beneficial permanent and long term.

The rest of the landscape receptors receive effects that are negligible.

6.3.2 Visual receptors

Visual receptors that are receiving slight beneficial effects are viewpoint 3 and 4. These effects will be beneficial permanent and long term.

The rest of the visual receptors receive effects that are negligible.

6.4 Conclusion

At year 5, when the mitigation measures would have been fully established, the expected effects on the landscape and visual receptors are either negligible or result in a slight beneficial effect.

Appendix A

Figures

A1 Figure 1 – Site location and viewpoints map

A3

LEGEND

- STUDY AREA
- STEPHENSON STREET EMBRANKMENT
- SELECTED VIEWPOINTS WITH VIEWS
- VIEWPOINTS WITH OUT VIEWS
- VIEWPOINT VISITED, BUT EXCLUDED FROM ASSESSMENT AS NO POTENTIAL FOR NOTICEABLE VISUAL EFFECTS

Rev	Date	By	Chkd	Appd
01	03-02-21	BS	AF	JD

ARUP

13 Fitzroy Street
London W1T 4BQ
Tel +44 (0)20 7636 1531 Fax +44 (0)20 7580 3924
www.arup.com

Client

Natural Resources Wales

Project Title

Stephenson Street Embankment Flood Risk Management

Drawing Title

Site location and viewpoints map

Scale at A3 1:35000

Role Landscape

Suitability S0 - Work In Progress

Arup Job No **274580**

Rev

Drawing No

Figure 1

Do not scale

A2 Figure 2 – ZTV P01

A3

328000 329000 330000 331000 332000 333000 334000 335000 336000 337000

190000 189000 188000 187000 186000 185000 184000 183000 182000

BUND CENTRELINE / SHEET PILE WALL

STUDY AREA

3KM BUFFER FROM STUDY AREA

BUILDING AND WOODLAND POLYGONS

BUND NOT VISIBLE

BUND VISIBLE

NO LIDAR DATA AVAILABLE

Coordinate System: British National Grid

ZTV based upon 1m DSM LiDAR data (NRW) and 10m interval observer points along the sheet pile wall (9.31m) or centreline (9.58m) where no sheet pile wall is present.
The use of DSM data for this analysis places the observer at the height of the building or top of tree when assessing visibility. These areas have been highlighted on the plan to indicate the influence of these surface features on the visibility rating.

Metres

0 375 750 1,500

Rev	Date	By	Chkd	Appd
P0	2020-10-15	SJ	AF	JD

ARUP

Client
Natural Resources Wales

Project Title
Stephenson Street Embankment Flood Risk Management

Drawing Title
Zone of Theoretical Visibility within the study area

Scale at A3
1:32,000

Role

Suitability
Preliminary

Arup Job No
274580

Rev
P0

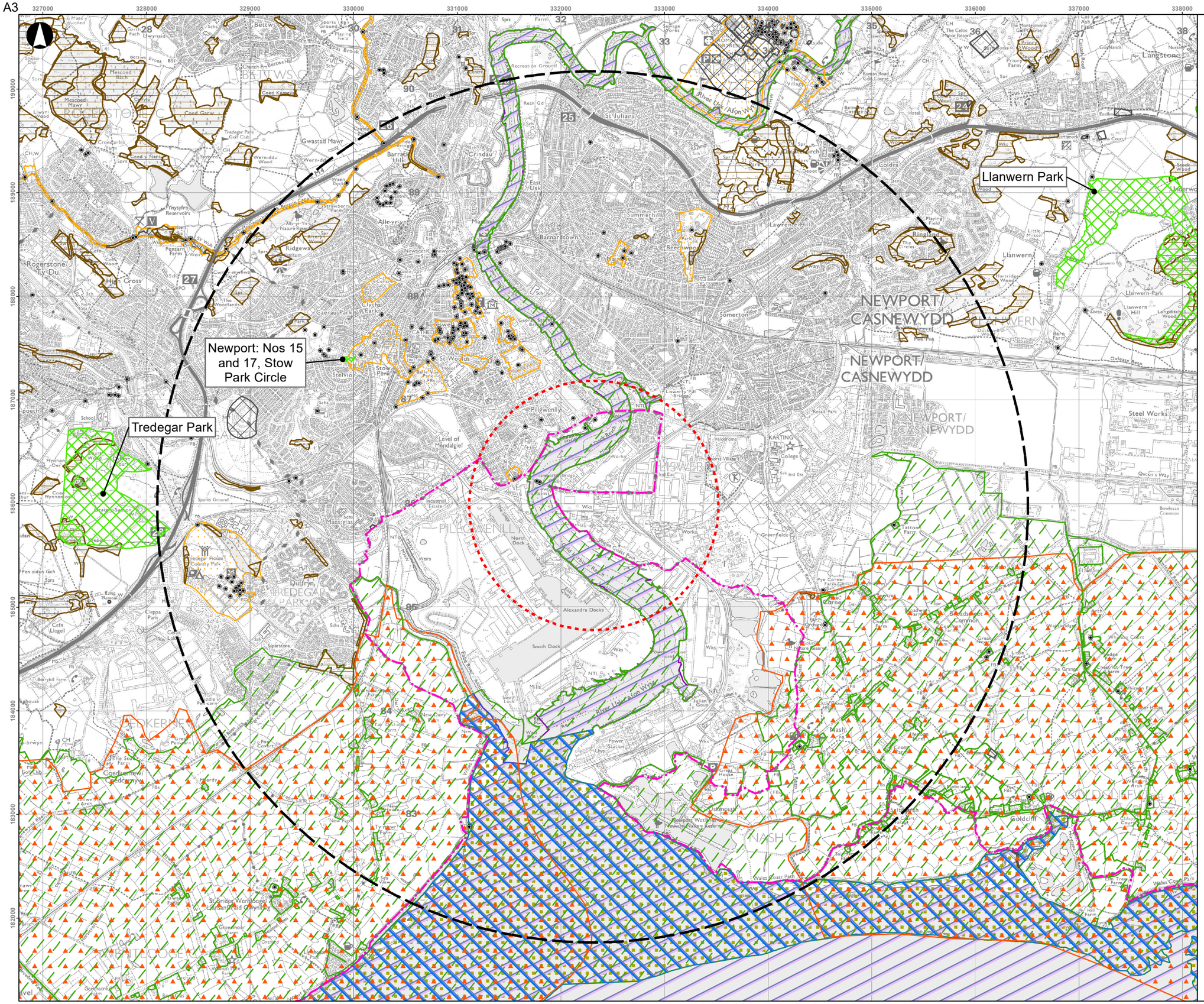
Name
001

21/10/2020 18:30:36

\\global\europe\Cardiff\Jobs\274000\274580-00\4 Internal Project Data\4-80 GIS\4-84 Map Documents\LAN_Landscape\274580_001 ZTV P01.mxd

A3 Figure 3 – Environmental Designation P0

A3



- STUDY AREA
- 3KM BUFFER FROM STUDY AREA
- LISTED BUILDING
- WALES COASTAL PATH
- HISTORIC PARKS AND GARDENS
- THE GWENT LEVELS HISTORIC LANDSCAPE OF OUTSTANDING HISTORIC INTEREST IN WALES
- ANCIENT WOODLAND INVENTORY
- CONSERVATION AREA
- SCHEDULED MONUMENT
- RAMSAR SITE
- SITES OF SPECIAL SCIENTIFIC INTEREST
- SPECIAL AREA OF CONSERVATION
- SPECIAL PROTECTION AREA
- HISTORIC PARKS AND GARDENS

04/02/2021 19:53:56

Coordinate System: British National Grid

Metres

0 500 1,000 2,000

Rev	Date	By	Chkd	Appd
P0	2021-02-04	BS	AF	JD

ARUP

13 Fitzroy Street
London W1T 4BQ
Tel +44 20 7636 1531 Fax +44 20 7580 3924
www.arup.com

Client
Natural Resources Wales

Project Title
Stephenson Street Embankment Flood Risk Management

Drawing Title
Environmental Designations and other protected features within the study area

Scale at A3
1:35,000

Role

Suitability
Preliminary

Arup Job No
274580

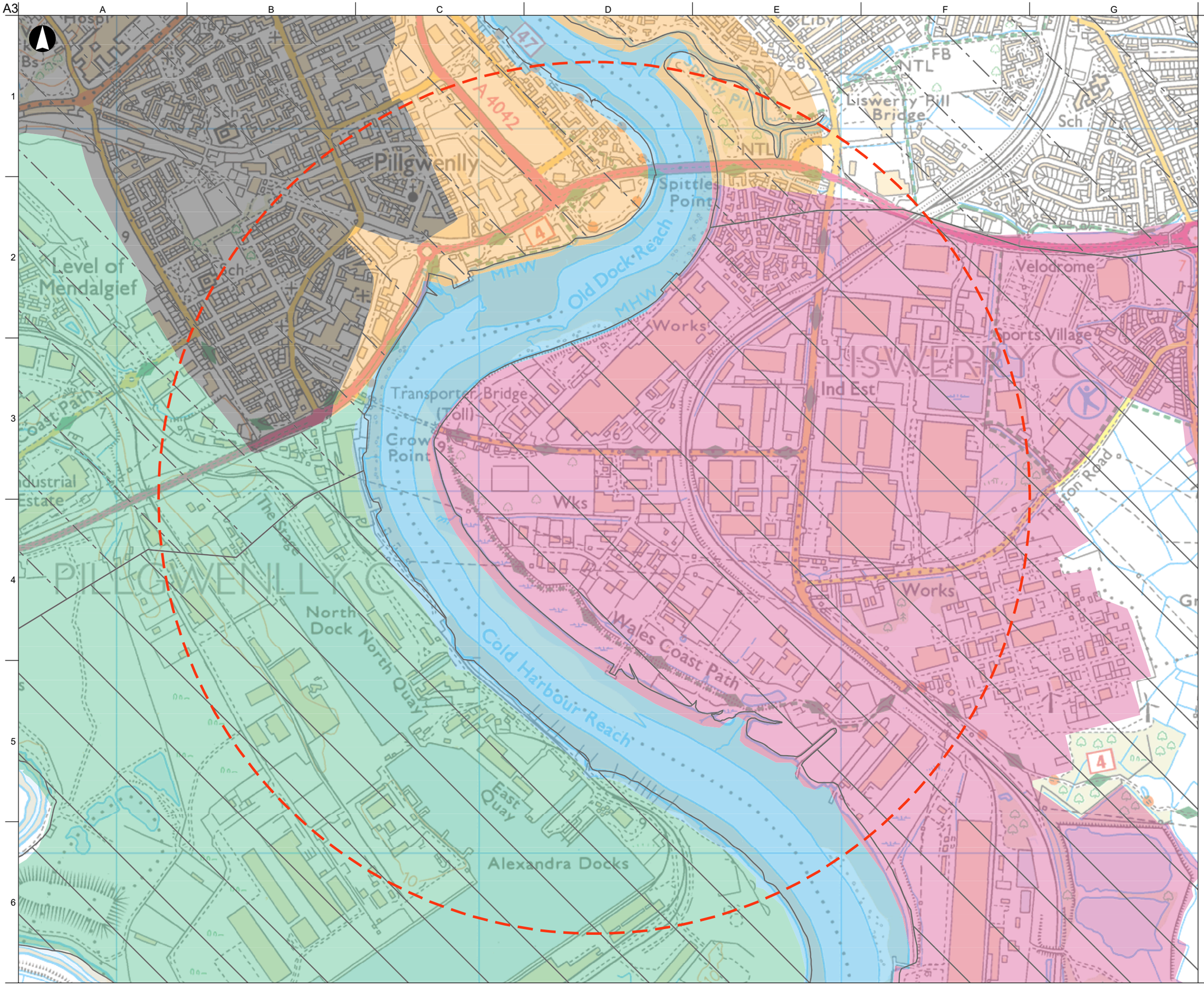
Rev
P0

Name
Figure 3

\\global\europe\Cardiff\Jobs\274000\274580-00\4 Internal Project Data\4-80 GIS\4-84 Map Documents\LAN_Landscape\274580_001 Environmental Designations P01.mxd

A4 Figure 4 – Landscape Character Map

A3



Legend

- Study Area

LANDMAP Aspect area - Visual & Sensory

- Eastern Usk Industrial Area NWPRTVS041
- Docks and Level of Mendalgrief NWPRTVS040
- Usk Built Urban Corridor NWPRTVS042
- Newport West NWPRTVS056
- Lower River Usk NWPRTVS010

National Landscape Character Area

- Cardiff and Barry
- Gwent Levels

Rev	Date	By	Chkd	Appd
01	03-02-21	BS	AF	JD

ARUP

13 Fitzroy Street
London W1T 4BQ
Tel +44 (0)20 7636 1531 Fax +44 (0)20 7580 3924
www.arup.com

Client
Natural Resources Wales

Project Title
Stephenson Street Embankment Flood Risk Management

Drawing Title
Landscape Character Map

Scale at A3 1:10,000

Role Landscape

Suitability S0 - Work In Progress

Arup Job No **274580**

Rev **01**

Drawing No
Figure 4

Do not scale

A5 Figure 5 – Photo sheets

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Extent of development

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Extent of development

VP 8

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Title	View towards XXX from XXX	HFoV (°)	39.6	Visualisation type	1	View direction	North east	
Date, time	XXXXXX	Scale/ Enlargement factor	100% at A3	Projection	Planar	Camera (lens)	Nikon D610, FFS (Nikon 50mm)	

ARUP

Issue	Date	By	Chkd	Appd
P0	xxxxx	AF	JD	BO

Job No: XXXX
DRAFT

Stephenson Street
Figure 5

Appendix B

Method

B1 Assessing the Sensitivity of Landscape Receptors to Change

This study assigns a degree of sensitivity to landscape features and to each landscape character area identified

The sensitivity of Landscape receptors to change is assessed by combining judgements of their susceptibility to the type of change or development proposed and the value of the landscape.

Value

Landscape value is concerned with the relative Importance and quality/condition that is attached to different landscapes.

In a policy context the usual basis for recognising certain important landscapes is via application of local or national landscape designations. A landscape can nonetheless be valued by different communities for many different reasons without any formal designation.

The assessment of landscape quality (condition) is based on judgements about the physical state of the landscape and about its intactness from visual, functional, and ecological perspectives. It also reflects the state of repair of individual features and elements that make up the character in any one place.

Susceptibility to Change

Susceptibility to change refers to the degree to which a particular landscape feature or character area is able to accommodate change without significant effects on its components or overall character.

It usually follows that highly valued landscapes have higher susceptibility to change, but this must also be assessed in conjunction with landscape value to give an overall assessment of sensitivity.

The Criteria used to define each sensitivity rating are given below at Table 1 below:

Table B1.1: Landscape Sensitivity

Landscape Sensitivity	**Definition**
High	Landscapes covered by designation such as AONB or Heritage Coast or a highly valued local landscape designation such as World Heritage Site or National Parks, AGLV or Special Landscape Area. Key characteristics of landscape are vulnerable to change and development can be absorbed, but only in limited situations without significant character change; thresholds for significant change are low. Development conflicts directly with and would dominate landscape character
Medium	Landscapes covered by a local designation for landscape value or with many locally valued landscape features. Key characteristics of landscape are may be moderately vulnerable to change but with some ability to absorb some development without significant character change.
Low	An undesignated and relatively robust landscape, possibly with some locally valued features. Key characteristics of landscape are resilient to change and are able to absorb development in many situations without significant character change.

B2 Assessing the Magnitude of Change to Landscape Features

The landscape assessment compares the constituent parts and overall character of the existing landscape with that which would result from the construction of the scheme. It verbally quantifies the degree of change in terms of size or scale, geographical extent of the change and its duration and reversibility.

The magnitude of change to the current (baseline) environment depends on a combination of factors:

- The extent to which the constituent characteristics of the landscape will be lost, gained, or changed and the importance of each characteristic to the overall character of the landscape.
- The degree of contrast or integration of proposed elements with the existing or remaining features or characteristics of the receiving landscape that may detract from or add to its character.
- The geographical area over which the changes will take place; site specific, immediate site setting, landscape character area wide, or spanning several distinct character areas.
- The duration and reversibility of effect.

The magnitude of the change to existing landscape character and features is assessed in accordance with the criteria set out in Table 2. These criteria can be applied to both positive and negative impacts.

Table B2.2: Magnitude of Change to the Landscape

Landscape Impact Magnitude	**Definition**
High (dominant)	The proposed development will cause either a substantial improvement or deterioration of one or more key elements/features/characteristics of the landscape, typically over much of a character area. Introducing elements that may be considered to be substantially uncharacteristic or which substantially strengthen the landscape character. Effects are likely to be long or medium term and irreversible or only partly reversible.
Medium (prominent)	A noticeable deterioration or improvement to the characteristic elements of a landscape, with the development causing a partial change to the perception landscape character. Change would typically be to the site and its immediate setting or may influence a small part of the Character area. Change will normally be medium term and at least partly reversible.
Low (present)	The proposed development will cause a minor improvement or deterioration to one or more characteristics of the landscape causing a minor change to the character of the landscape. Change will be localised, short-term and often reversible.

B3 Assessing the Sensitivity of Visual Receptors to Change

The purpose of describing the baseline visual environment is to identify the most important sensitive visual receptors around the site which have views to or across the proposed development. A visual receptor is essentially any person whose visual amenity may be affected as a result of the proposed development.

The sensitivity of visual receptors to change is assessed by combining judgements of their susceptibility to the type of change or development proposed and the value of the views in question.

Value

Value is derived from evaluation of a receptor's location and context; the relationship of a receptor to planning designations; the existence of documentation and interpretation relating to particular views; and of the receptor's popularity or frequency of use.

Susceptibility to Change

The susceptibility of the receptor to changes in views is derived from evaluation of the expectations and occupation or activity of the viewer and the extent to which their attention may be focused on visual amenity.

The sensitivity of visual receptors is assessed using the criteria given below at Table 3.

Table B3.3: Visual Receptor Sensitivity

Visual Receptor Sensitivity	**Indicative Definition**
High	Views from within high quality, often designated landscapes (National Parks, AONB, Areas of Great Landscape Value), parks or gardens listed in the National Gardens Register, Scheduled Monuments, Listed Buildings, and their settings. Views from well used public rights of way often known to and used by people from beyond the local area where the attractive nature of the countryside is a significant factor in the enjoyment of the experience, such as National Trails Long Distance Routes or National Cycle Routes). Views from lower floors and gardens of and from some residential properties (typically groups of 10 or more dwellings representing a community of receptors). Viewers typically have a high susceptibility to changes in views.
Medium	Views from within medium quality non-designated but locally valued landscapes, outdoor sports, or recreation (where the landscape is not a significant factor in the enjoyment of the activity). Views from locally valued public rights of way often passing through rural landscapes. Views from passenger trains, or people within cars on local roads. Views from lower floors and gardens of some residential properties (typically single or smaller groups of dwellings representing individual receptors). Viewers typically have a moderate susceptibility to changes in views.
Low	Views from within medium-low quality non-designated landscapes. Views from less well used public rights of way which pass through less attractive landscapes or townscapes and are not used specifically for enjoyment of the scenery. Views from or near to motorways, main roads, or business premises. Viewers typically have a low susceptibility to changes in their views.

B4 Assessing the Magnitude of Visual Change

The visual assessment compares the quality of the existing view with that which would result from the construction of the scheme and then verbally quantifies the degree of change.

The magnitude of change to the current (baseline) visual environment depends on a combination of factors:

- The size and scale of change in the view.
- The proximity of the viewpoint to visible elements of the development.
- The extent and composition of the view (e.g. degree of existing screening, partial, glimpsed, or unobstructed views, fleeting or constant nature of view).
- The degree of contrast or integration of proposed elements with the existing or remaining features or characteristics of the receiving landscape that may detract from or add to its amenity.
- The relative direct or oblique angle of the view in relation to the receptor; and
- The duration and reversibility of effect.

The magnitude of change to visual amenity is assessed using the criteria given below at Table 4.

Table B4.4: Magnitude of Visual Change

Visual Impact Magnitude	**Definition**
High (dominant)	The proposed development will contrast with and visually dominate or intrude upon the view resulting in a considerable improvement or deterioration of the view These changes may be medium or long term and are likely to be irreversible or only partly reversible. New elements will occupy a large proportion of the view
Medium (prominent)	The proposed development will be visually prominent within the view and will result in either a noticeable improvement or deterioration of the view. The change will be moderate in scale, contrast with the view and be medium term permanent and sometimes irreversible or often partly reversible
Low (present)	Minor, often temporary and reversible alterations to the view that are small in scale or do not overtly contrast with the key features or characteristics of the view such that post development the existing view will be largely unchanged but there may be discernible differences

B5 Level of Effect

Broadly, the level of effects is a function of the magnitude of the change and the sensitivity of the receptor. The level of effects is assessed using professional judgement combining these two factors.

The graph below indicates that there is a continuum rather than a series of categories defining effect levels. The area highlighted in grey indicates those assessed as having a level of moderate or greater which are considered to be material in terms of planning. The white area defining effects assessed to have a level of moderate to slight or less which are considered less important in terms of a planning decision but may still be important in shaping the design of the development and mitigation.

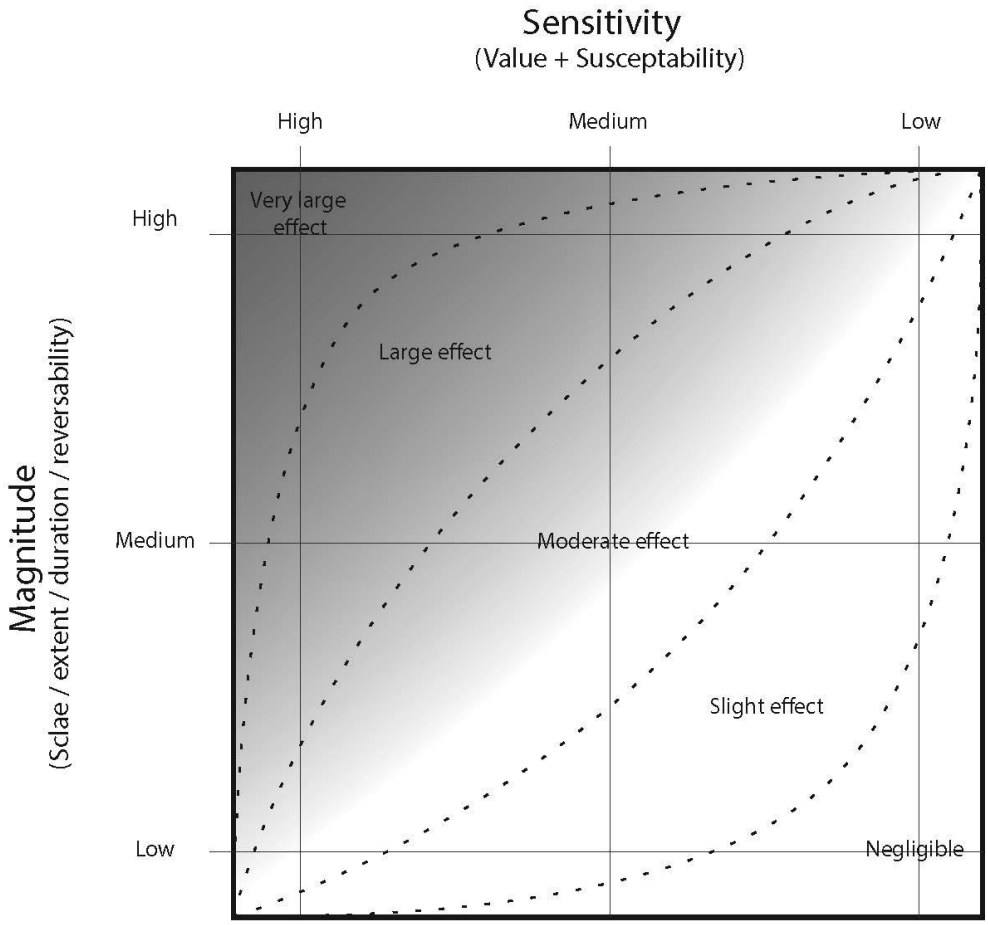


Figure B5.1: Matrix used as guidance in combining judgements on sensitivity and magnitude of change to determine the level of landscape and visual effects. This is

adapted from the version provided in IEMA's Special Report entitled, The State of Environmental Impact Assessment Practice in the UK. 2011.

Level of Effect	Definition
Very Large	These effects are generally, but not exclusively, associated with sites or features of international, international or national importance that are likely to experience very damaging or very beneficial changes of high or very high magnitude leading to permanent, irreversible loss or beneficial effects of resource integrity. The proposed development will cause complete degradation of or a very substantial improvement to the landscape character/landscape features/existing views. These effects are key factors in the decision-making process.
Large	These effects are generally, but not exclusively, associated with sites or features of national or regional importance that are likely to experience damaging or beneficial changes of medium to very high magnitude leading to long term irreversible loss or beneficial effects of resource integrity. However, a major change to a site or feature of local importance may also enter this category. The proposed development will cause substantial degradation or beneficial effects of the landscape character/landscape features/existing views. These effects are material factors in the decision-making process.
Moderate	These effects are generally, but not exclusively, associated with sites or features of regional or local importance that are likely to experience damaging or beneficial changes of low to high magnitude, often leading to reversible long or medium term loss or beneficial effects of resource integrity. The proposed development will cause noticeable degradation or beneficial effects of the landscape character/elements/existing views. These adverse effects may be important, but individually are not likely to be key decision-making factors. These effects are important in enhancing the subsequent design of the project. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall effects on a particular resource or receptor.
Slight	The proposed development will cause degradation or beneficial effects of low to medium magnitude to landscape character elements/existing views of local importance. These adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are used in enhancing the subsequent design of the project.
Negligible	The proposed development will cause barely perceptible degradation or beneficial effects of the landscape character/elements/ existing views. Or Beneficial effects balance out adverse effects such that there is no overall beneficial or adverse effect