

Environmental Statement Addendum

Skyline Swansea

June 2024



**Land at Kilvey Hill and
Landore Park & Ride Facility,
Swansea**

ENVIRONMENTAL STATEMENT

VOLUME 1: NON-TECHNICAL SUMMARY

1.0 INTRODUCTION

- 1.1 Skyline Swansea (the Applicant) is submitting a full planning application to The City and County of Swansea Council (CCS) in respect of a proposed leisure development on Land at Kilvey Hill and Landore Park & Ride Facility, Swansea within the administrative boundary of The City and County of Swansea Council (CCS). The site measures approximately 40.56 hectares and is shown in Figure 1 of this NTS.
- 1.2 This Environmental Statement (ES) has been prepared on behalf of Skyline Swansea to accompany the planning application and an ES is a report of an Environmental Impact Assessment (EIA) undertaken under the EIA Regulations, which are contained in national law. This document is a Non-Technical Summary (NTS) of the ES and summarises its content and conclusions.
- 1.3 As part of the screening opinion the Local Planning Authority (LPA) provided detailed comments with regards to their views on the scope of the EIA. A copy of the screening opinion from CCS is attached at Volume 3, Appendix 1.1 of this ES.
- 1.4 In its scoping opinion, the LPA considered that following topics would need to be addressed in the ES:
- Landscape and Visual Impacts
- 1.5 The assessment described in this Environmental Statement (ES) relates to the design of the scheme as it stands in August 2023. The ES is published in three volumes:
- Volume 1: Non-Technical Summary
 - Volume 2: Written Statement; and
 - Volume 3: Appendices to Written Statement
- 1.6 The Environmental Impact Assessment was managed by Asbri Planning Ltd with guidance from the professional consultant team and the applicant. A hard copy of the ES, figures and appendices can be purchased for £50 each. A hard copy of the NTS can be purchased for £5 each. An electronic copy of the full ES can be purchased on CD for £5 each. All documents are available from:

Asbri Planning
Unit 9, Oak Tree Court
Mulberry Drive
Cardiff Gate Business Park
Cardiff
CF23 8RS

- 1.7 Once the planning application is submitted, the ES can be viewed online at [Simple Search \(swansea.gov.uk\)](https://www.swansea.gov.uk). The ES will be available for public viewing at the Council. Please note that the Council should be contacted ahead of any visit to confirm visiting arrangements onsite

City and County of Swansea Council
Civic Offices
Oystermouth Road
Swansea
SA1 3SN

01792 636000

2.0 THE EIA PROCESS

- 2.1 EIA is a process which assesses the likely significant effects of a proposed development on the environment and the ES which reports those results.
- 2.2 The EIA has been undertaken, and the ES prepared, taking into account the appropriate legislation and guidance. The ES has also had due reference to specific discipline guidance as set out in each technical chapter and has also been informed by the experience and professional judgement of the design team.
- 2.3 The residual significance of impacts is assessed taking into account mitigation. A residual impact is any impact that would remain following the implementation of proposed mitigation measures and mitigation is the action of reducing the severity of significance of something.
- 2.4 Using these criteria, the significance of the impacts arising from the proposed development have been categorised (where appropriate) throughout the ES using a seven point scale, as follows:
- Negligible;
 - Minor adverse;
 - Minor beneficial;
 - Moderate adverse;
 - Moderate beneficial;
 - Major adverse; and
 - Major beneficial.
- 2.5 Where the above criteria is not suitable a significance of impact criteria appropriate to the particular topic has been applied and this has been identified to the reader.
- 2.6 Impacts are assessed for all phases of the development. Construction impacts are considered to be temporary, short term impacts which occur during the construction phase only. Permanent impacts are those long terms effects which would occur as a result of the proposed development once it is in operation. Direct impacts can include effects which are as a direct result of the scheme on a receptor. Indirect impacts can include effects off site as a result of a pathway to that receptor. These effects can also be considered as short term, long term, temporary or permanent impacts.
- 2.7 The technical chapter has assessed the environmental impacts of the development along with other relevant developments and their associated environmental impacts from the outset of the preparation of the ES. These are known as cumulative impacts.

3.0 CUMULATIVE IMPACTS

- 3.1 Cumulative impacts have been considered within the ES. The impacts considered include potential effects within this proposed development and also the potential effects of this proposal when combined with existing and/or approved projects. For robustness, other proposed strategic allocations have been addressed cumulatively where appropriate. It is concluded that with appropriate mitigation / measures which will be implemented as part of this proposed development there are no unacceptable cumulative impacts.

4.0 SITE CONTEXT

- 4.1 The application site is predominantly focused on Kilvey Hill. This is where the majority of the leisure uses are proposed to be located whilst the Landore Park and Ride Facility would comprise the Gondola Station and associated car parking areas. The Gondola would elevate from the park and ride area up to Kilvey Hill crossing over the River Tawe, A4217 and Pentre Chwyth Road before moving up Kilvey Hill.
- 4.2 The car parking area at Landore is predominantly characterised by a variety of built form including light industrial uses to the east, the Swansea.com Stadium to the north, newly developed Penderyn Distillery and visitor centre building and south is remnants of the forms Hafod Coppers Works. Given the size of the site the boundaries are extensive.
- 4.3 The car parking area at Landore is predominantly characterised by a variety of built form including light industrial uses to the east, the Swansea.com Stadium to the north, newly developed Penderyn Distillery and visitor centre building and south is remnants of the forms Hafod Coppers Works. Given the size of the site the boundaries are extensive.



Figure 1 - Site Location Plan

- 4.4 There are a range of public right of way routes which run across Kilvey Hill providing access.
- 4.5 With regards the existing accesses to the site the Landore Park and Ride facility can be accessed via the A4217 off a roundabout. Pedestrian access is also available via the

footpaths either side of the highway.

- 4.6 In terms of Kilvey Hill there is no vehicular access to the top of the hill although it is noted that cars can partially drive up the hill via the access off Brokesby Road / Llanerch Road. There is informal parking available where footpaths can then be used to the top of the hill.

5. PROJECT DESCRIPTION

- 5.1 The site boundaries are shown in Figure 1 of this NTS.

The full description of the planning application is below:

- 5.2 'New leisure development comprising gondola stations with gondola and associated infrastructure, multi purpose visitor building including the sale of food and drink with associated outside seating and hardstanding, together with luge tracks, chairlift, skyswing, mountain bike trails, access routes, zipline and supporting infrastructure, ancillary buildings for staff and maintenance, ground profiling works, landscaping, temporary construction access and compound, drainage works, plant, highway works, demolition of park and ride terminal and associated works'
- 5.3 Fully detailed plans have been prepared which identify the scope of particular aspects of the development and are contained in the Design and Access Statement that accompanies this planning application.
- 5.4 Various surveys and technical studies have informed the plans and in turn a Masterplan has been produced.



Figure 2 - Masterplan

- 5.5 The alternatives section explores options for the site including the 'do nothing' option (Option 1) alongside an initial development proposal (Option 2) and the final scheme submitted for the planning application (Option 3). The do nothing option would result in the council not achieving aims set out within vision documents and plans for the Swansea Bay's Destination Management Plan.
- 5.6 Option 2 shows a wide spanning development of the hill which included extensive luge tracks alongside mountain bike tracks. Option 2 was discounted following a detailed design review by the technical design team and a scheme of a reduced scale which responds to the development team's comments was prepared, as described in Option 3. Option 3 provides a scheme which balances site constraints and opportunities.
- 5.7 The following activities and main buildings will be delivered across the project:
- 8-seater detachable gondola, c. 22 cabins initially transporting 700 persons per hour (pph) and final capacity of 1,800 pph, 1,352m in length.
 - 4-seater fixed grip chairlift with c. 85 chairs initially transporting 1,200 pph and final capacity of 1,600pph, 484m in length. This is used to transport luge cart and people using the Luge
 - 2 x Luge tracks and a linking track totalling 1,664m of riding experience.
 - 2 x line zipline system of approx. 680m will be created to allow families and friends to ride together.
 - A Sky Swing with a 5-person capsule of approx. 50m in height and a max speed of 100km/h, this will be very similar to the Sky Swing in Rotorua, New Zealand.
 - A 400m² multi-purpose building with permanent Food & Beverage (F&B) hall with an adjacent linked external stalls area and an area where local Food Truck & stall owners/operators will have the opportunity to set-up trucks/stalls to sell their produce. A roof top seating area will also be provided.
 - Approx. 20km of MTB trails ranging from kids friendly to intermediate trails. MTB riders and bikes will be transported to the top of the Kilvey Hill via the gondola. Cycle shelter & parking facilities will be provided as part of the proposals, both around the bottom station and at the top of the hill.

6.0 Planning Policy

- 6.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that planning applications be determined in accordance with the Development Plan unless material considerations indicate otherwise. The Development Plan for the purposes of this Planning Application comprises the following:
- National Development Framework: Future Wales – The National Plan 2040 (February, 2021);
 - Swansea Local Development Plan 2010-2025 (adopted February, 2019).
- 6.2 In addition to the Development Plan, the Planning Application has been informed by policy and guidance set out in the following:
- Planning Policy Wales Edition 11 (February, 2021), informed by The Well-Being of Future Generations (Wales) Act 2015, and supplemented by Technical Advice Notes;
 - Building Better Places: The Planning System Delivering Resilient and Brighter Futures (July, 2020);
 - Swansea Council Supplementary Planning Guidance.
 - TAN 4 Retail and Commercial Development (2016)

- Technical Advice Note (TAN) 5: Nature Conservation and Planning (2009)
- Technical Advice Note 11: Noise (1997)
- Technical Advice Note (TAN) 12: Design (2016)
- Technical Advice Note (TAN) 16: Sport, Recreation and Open Space (2009)
- Technical Advice Note (TAN) 18: Transport (2007)
- Technical Advice Note (TAN) 23: Economic Development (2013)
- Technical Advice Note (TAN) 24: The Historic Environment (2017)
- Active Travel (Wales) Act 2013
- Relevant Supplementary Planning Guidance

7.0 LANDSCAPE AND VISUAL IMPACT

- 7.1 This chapter of the ES assesses the likely significant effects of the Proposed Development, as described in Chapter 7 of this Environmental Statement, in terms of landscape and visual amenity and incorporates a summary of the Landscape and Visual Impact Assessment Baseline provided in full at Technical Appendix 7.1
- 7.2 The Environmental Dimension Partnership (EDP) has assessed the likely significant effects of the Proposed Development on the landscape and visual receptors. The assessment includes a review of the baseline conditions at the EIA site and surroundings, the likely significant landscape and visual effects, the mitigation measures required to prevent, reduce or offset any significant adverse effects and the likely residual effects after these measures have been employed.
- 7.3 The site contains designations within its red line boundary, namely Open Access Land (OAL) and Public Rights of Way (PRoW). It features within several landscape character areas as identified within LANDMAP, a government platform used to define the general characteristics of different landscape areas in Wales. The key characteristics identified to be relevant and true to the site and EDP's assessment were;
- The strong river corridors that provide a green network from southern areas of recreation, up towards the Liberty Stadium;
 - Some pleasing views towards the south from Kilvey Hill, though Port Talbot Steelworks is a slight detractor within those views;
 - Dense urban development upon hillsides, particularly to the south of Kilvey Hill are present; and
 - Many sprawling residential and commercial developments are seen from Kilvey Hill, given its elevation in the landscape. Much of this lacks any real pattern or sense of place.

- 7.4 As well as similarities identified by LANDMAP's assessment, the site also differed from those adjacent character area descriptions. The first being the limited acknowledgement of the post-industrial and often neglected areas of the nearby city edges and the influence of these on the experience of the landscape. Another defining difference is the lack of acknowledgement with regards to the site/hill's cultural connections. LANDMAP identifies little by way of these, however from site visits and desktop research (as described within EDP's Site Assessment below), it is clear that Kilvey Hill in particular forms a key place for local communities to engage in a variety of activities.
- 7.5 The site's topographic context, being a generally exposed hillside, is a key attribute, within this otherwise dense and urban part of South Wales. Its rural character, whilst being so close to Swansea City, offers its users a sense of escapism, which is otherwise difficult to experience within the area. Key elements to note on the hill are the existing satellite towers at its summit, and the adjacent Cairn Nicholas solar farm to the immediate east.
- 7.6 In visual terms, the site as a whole, sits elevated within the landscape. It is visible from a variety of different points within Swansea, to the north, south and west of the site. Views from the east are somewhat limited by rolling landform/topography. Expansive views towards the Bristol Channel appear when at the hilltop or on the southern face of Kilvey Hill. Elsewhere, the coniferous woodland offers enclosure to most using the recreational routes on-site. Areas of grassland create more open expanses, particularly to the west of the application site.
- 7.7 In accordance with best practice, the landscape and visual assessment has been undertaken in line with the 'Guidelines for Landscape and Visual Impact Assessment – Third Edition (LI/EMA, 2013)' (GLVIA3) as relevant to EIA schemes.

Mitigation

- 7.8 EDP's advice, provided from the outset of the design process from a landscape, arboricultural and ecological perspective, has been to avoid the higher value areas of the site and focus direct development impacts on the lower value areas. This has resulted in minimising the incursion of the proposals into the more open (and more valuable in biodiversity terms) grassland and heathland areas and focusing features such as the luge tracks into the woodland fringes where retained trees can screen and filter the proposals.
- 7.9 The visibility of some features in certain views cannot be avoided; indeed, it is not considered appropriate to try and screen/hide a tourism facility such as that proposed which is seeking to attract visitors from beyond the immediate area. Equally, given the nature of the proposals, as well as the inherent benefits of the site, it is important that views out of the site are protected, allowing an overall significant increase in the proportion of the public able to visit the site and enjoy this visual resource. On this basis, a careful balance has been struck in positioning features such as the cable car/gondola, the restaurant and the sky swing, to reduce their overall visibility while still allowing views from them over Swansea Bay, appropriately celebrating this valued landscape.
- 7.10 The proposals include for mitigation planting through a high quality, carefully considered landscape proposal. It includes replanting of disturbed areas with a range of native species, contributing to the overall enhancement of the site's landscape through the inclusion of higher value specimens/habitats than those which are lost (e.g., replacing removed poor quality coniferous plantation woodland with mixed broad-leaved woodland and additional heath planting). Buildings and structures forming part of the proposals will also be subject to structural and ornamental planting to assist in softening their appearance and filtering/framing some views towards them.

- 7.11 As can be seen from the above points, the proposed development seeks to retain important tree specimens and avoid disturbance to valuable individuals or groups on the site where possible. The continuous dialogue throughout the design process has sought to ensure that impacts occur in the least valuable habitat types.

Impact Assessment and Significance of Residual Effects

Operational Stage

- 7.12 With the mitigation above in mind, the nett result has been assessed, taking into account the development and the measures to reduce the scheme's impact on the landscape and its users. In terms of likely effects on the landscape character, the assessment finds that while the character of the site itself would inevitably change as a result of introducing development of any kind to the hill, the **significant** effects arising from this change are limited to the application site only. The imposition of the proposed features will have a large impact on the feel of many areas within the site. The sky swing, luge track, gondola cabins, gondola top and bottom station will change the look and feel of Kilvey Hill in places. Wider effects on users outside of the site, although noted within the assessment, have not been deemed significant. The change to the landscape character will have limited consequences for those outside of the development area, and therefore has a lesser effect on these users.
- 7.13 With regards to likely effects on views and visual amenity, the assessment finds that there are potentially significant effects on public rights of way users, in particular, those using PRoWs BO467, BO466 and BO473. These pathways intersect through the site and will experience significant effects, at points, along their routes. These effects may extend outside of the application boundary for short distances but will otherwise be limited to the site and extremely close by. This is largely driven by the routes' high sensitivity and the large geographical extent the proposals will affect in the available views.
- 7.14 In terms of other effects, users of the hill's Open Access Land are the only other receptor group predicted to experience significant effects. It is acknowledged that it is only users of OAL on-site that will experience significant effects. Changes to the visual amenity further afield, on OAL has been assessed as non-significant, due to the reduced magnitude of change.

Construction Stage

- 7.15 The construction phase is often the most disruptive stage of any project. Heavy vehicles are required for the movement of spoil and tree felling etc. The installation of some of the proposals' features (stanchions for example) across the site's less accessible areas (it's steep eastern face, again for example) may require specialist heavy machinery unique to this type of development. A large workforce will be required to access the site, creating additional local impact to the site, but also to local roads and accesses. Site fencing will need to be erected for safety purposes throughout the construction phase. This critically alters the accessibility of the site during the construction stage. These activities will have influence on the site's appearance and tranquillity, though these effects are temporary.

Night-time Effects

- 7.16 No additional significant night-time effects are anticipated to arise from the scheme, given the nature of the surrounding urban area which is already heavily lit. Night-time lighting does however extend the identified significant onsite and on-hill effects into the hours of darkness (during the operational hours of the scheme).

Summary

- 7.17 The appraisal acknowledges that any development that introduces a tourism attraction of this scale into an existing elevated and naturalistic hillside site will have an effect on its landscape character. The site is recognised to be sensitive in many aspects, especially in ecological and cultural terms. Although it is difficult for proposals to avoid any change to the hill in respect to these sensitivities, the proposals are sympathetic in their approach to retain and enhance accessibility, protect cultural/historic amenities on-site and provide long term enhanced management objectives for the habitats and wildlife of the hill.
- 7.18 The site is not considered to be of such quality, value or sensitivity to warrant protection from this change and, without development will see change anyway given the age and condition of its existing woodlands. These habitats are already in decline (and were planned for removal and replacement under NRW's stewardship) and self-seeded pines are also encroaching on the open grassland areas, threatening the future of those more valuable habitats also.
- 7.19 The outcome of the assessment concludes that no significant effects will arise beyond just the site and the hill. It is also rare and unlikely that significant effects do not occur locally, where major development is planned.
- 7.20 The proposals have been carefully considered to minimise the loss of valuable habitats on site and include proposals for replanting to soften the effects the changes and mitigate the biodiversity effects. Over time, the scheme offers an opportunity to deliver significant enhancement in this regard through a gradual conversion of the poor-quality non-native coniferous woodland into a more appropriate broad-leaved native mix. Furthermore, management of the onsite grasslands will also be enhanced, stopping the ongoing spread of self-seeded woodland and enhancing this habitat for its resident wildlife. If it is possible to deliver a similar level of management and enhancement to the wider Kilvey Hill woodland/grassland through a 'Whole Hill' management approach delivered by Skyline, the Council and local community groups then this should be wholeheartedly pursued, though lies outside the bounds of this current planning application and this assessment.
- 7.21 At present, it is clear that those people who use and enjoy the site in its current condition cherish its landscape character and the views which it offers to the wider landscape. However, it has to be acknowledged that this is a relatively small cohort of mostly local people to the site.
- 7.22 The Skyline proposals offer an opportunity to open up access to the site to a significantly greater number of people, extending its appreciation and the enjoyment of its landscape character and the views it offers over the city and the bay to all its future users, including those who would presently find it inaccessible. This is considered to be a significant benefit in landscape and visual terms and tempers the overall balance of effects in favour of the proposals.

Night Time Appraisal

- 7.23 The EDP night-time appraisal evaluates the anticipated landscape and visual impacts of the proposed development on Kilvey Hill. The development's safety and decorative lighting will significantly alter the night-time character of the Site, particularly affecting users of Public Right of Way routes and Open Access Land. Despite sensitive lighting design to minimise light pollution, notable night-time effects, similar to those in the daytime, are expected within the site and its immediate context.
- 7.24 However, due to the surrounding urban environment and existing light spill, broader landscape effects are limited. The proposed lighting strategy aims to balance safety and

functionality while minimising wider impacts. The development will enhance safety and accessibility, allowing more people to enjoy panoramic views and potentially reducing anti-social behaviour.

- 7.25 The development site spans across an area within three of the four most radiant parts of Swansea County, as illustrated within the appraisal by Natural Resource Wales maps. The impact on the areas of darkest sky to the north, when considering the intervening distance, will be minimal and seen in the context of the existing Swansea skyline after dark.
- 7.26 The appraisal acknowledges the subjectivity in evaluating lighting impact and professional opinion forms a large part of this. Overall, EDP concludes that the night-time impacts will not exceed the identified daytime effects, making the development acceptable on balance, in landscape and visual terms at night.

8.0 **SUMMARY**

- 8.1 The Development has been subject to a thorough analysis of environmental constraints and opportunities and as the process evolved, measures have been incorporated into the proposals to avoid, reduce or offset environmental effects. Where this has not been possible, further mitigation measures have been proposed.
- 8.2 In conclusion, the ES has identified that the Development:
- Will provide the delivery of a world class tourism facility;
 - Ecological and landscape enhancements;
 - The integration of drainage with landscape, ecology and amenity features;
 - Offer an opportunity to open up access to the site to a significantly greater number of people;
 - Job creation both direct and indirect
- 8.3 The appraisal acknowledges that any development that introduces a tourism attraction of this scale into an existing elevated and naturalistic hillside site will have an effect on its landscape character.

**Land at Kilvey Hill and
Landore Park & Ride Facility,
Swansea**

ENVIRONMENTAL STATEMENT ADDENDUM

**VOLUME 2
CONTENTS**

CONTENTS

- Chapter 1: Introduction – no update
- Chapter 2: The EIA Process – no update
- Chapter 3: Cumulative Impact – no update
- Chapter 4: Site Context – no update
- Chapter 5: Project Description – chapter updated
- Chapter 6: Planning Policy – no update
- Chapter 7: Landscape & Visual – addendum to chapter
- Chapter 8: Summary and Conclusions – chapter updated

**Land at Kilvey Hill and
Landore Park & Ride Facility,
Swansea**

ENVIRONMENTAL STATEMENT

**VOLUME 2
CHAPTER 5: PROJECT DESCRIPTION
UPDATED JUNE 2024**

PROJECT DESCRIPTION

INTRODUCTION

- 5.1.1 The development comprises a full planning application for a new Leisure Development at Land at Kilvey Hill and Landore Park & Ride Facility, Swansea. description of development as presented to The City and County of Swansea Council as the local planning authority (LPA) on the application forms is as follows:

‘New leisure development comprising gondola stations with gondola and associated infrastructure, multi purpose visitor building including the sale of food and drink with associated outside seating and hardstanding, together with luge tracks, chairlift, skyswing, mountain bike trails, access routes, zipline and supporting infrastructure, ancillary buildings for staff and maintenance, ground profiling works, landscaping, temporary construction access and compound, drainage works, plant, highway works, demolition of park and ride terminal and associated works’

- 5.1.2 The plans referred to and included as part of the Planning Application, and which provide context for the Environmental Statement and represent the scheme proposed are as follows:

AAD Architects

- Site Masterplan
- Site Plan Bottom Station Area
- Site Plan Top Station Area and Luge Track
- Site Plan Gondola Lift
- Site Constraints Plan
- Site Restricted Area Fencing and Barriers
- Bottom Station Floor Plans
- Bottom Station Elevations
- Top Station Floor Plans
- Top Station Elevations
- Food Hall Floor Plans
- Food Hall Elevations
- Maintenance Workshop Floor Plans
- Maintenance Workshop Elevations
- MTB Floor Plans
- MTB Elevations
- Chair Lift Control Room Floor Plans
- Chair Lift Control Room Elevations
- Storage Building Floor Plans
- Storage Building Elevations
- Ziptrek Store Floor Plans
- Ziptrek Store Elevations
- Control Room Floor Plans
- Control Room Elevations
- Luge Track Start Area Canopy
- Luge Track Finish Area Canopy
- Site Section
- Skyswing Section
- Skyswing Position to Telco Signal

Ares

- Landscape Illustrative Masterplan(s)
- Landscape General Arrangement(s)
- Tree Removal and Retention Plan
- Vegetation Strategy
- Access and Circulation Plan(s)
- Artists Impressions
- Green Infrastructure Strategy
- Wayfinding and Signage Location Plan
- Artists Impressions
- Site Location Plan

5.1.3 In addition, the following documents accompany the application:

- Planning Statement
- Security Plan
- Operational Plan
- Design & Access Statement
- Ecology Survey Reports
- Arboricultural Baseline Note
- Arboricultural Impact Assessment
- Reptile Mitigation Strategy
- Landscape Visual Impact Assessment (LVIA)
- Verified Views
- Heritage Impact Assessment
- Archaeological Desk Based Assessment
- Green Infrastructure Strategy
- Woodland Management Plan
- Transport Assessment/Travel Plan
- SI/CMRA
- Noise Impact Assessment
- Air Quality Assessment
- Drainage Strategy
- Utilities Statement
- External Lighting Assessment
- LZCT Study
- Flood Consequences Assessment
- Tree Survey and Arb Impact Assessment
- Energy Assessment
- Construction Environmental Management Plan
- Pre-application Consultation Report
- Preliminary Risk Assessment

ALTERNATIVES

5.2 The alternatives considered are:

Option 1: Do nothing

5.2.1 The 'do nothing' option would involve not developing the site and therefore would not result in the delivery of the leisure development. The proposals have been considered for a number of years this option would therefore result in extensive amounts of work being made redundant.

5.2.2. The Project will function in conjunction with the other local attractions, creating a new, unique destination and visitor experience in Swansea. The Skyline project is already embedded in the next iteration of the Swansea Bay's Destination Management Plan. It forms part of the masterplan for the Hafod/Morfa area to create a new Leisure Destination. The do nothing option would therefore result in the council not achieving aims set out within vision documents and plans.

5.2.3 The 'do nothing' option was therefore discounted.

Option 2: A Leisure Development

5.2.4 A design was initially drawn up for the development of the site incorporating a proposed leisure development which comprised many of the same attractions that are contained within the final and submitted development proposals albeit on a larger and more extensive scale. The below early stage plan includes a gondola base station and lift to the top of the hill, luge runs which span a vast area of the hill, chairlift, a skyswing, zipline, mountain bike trails, food and beverage hall alongside all of the associated infrastructure. This iteration also features a more extensive redline boundary in areas to the south of the site and the woodland areas.



Figure 5.1 Alternative Option 2 Whole Site

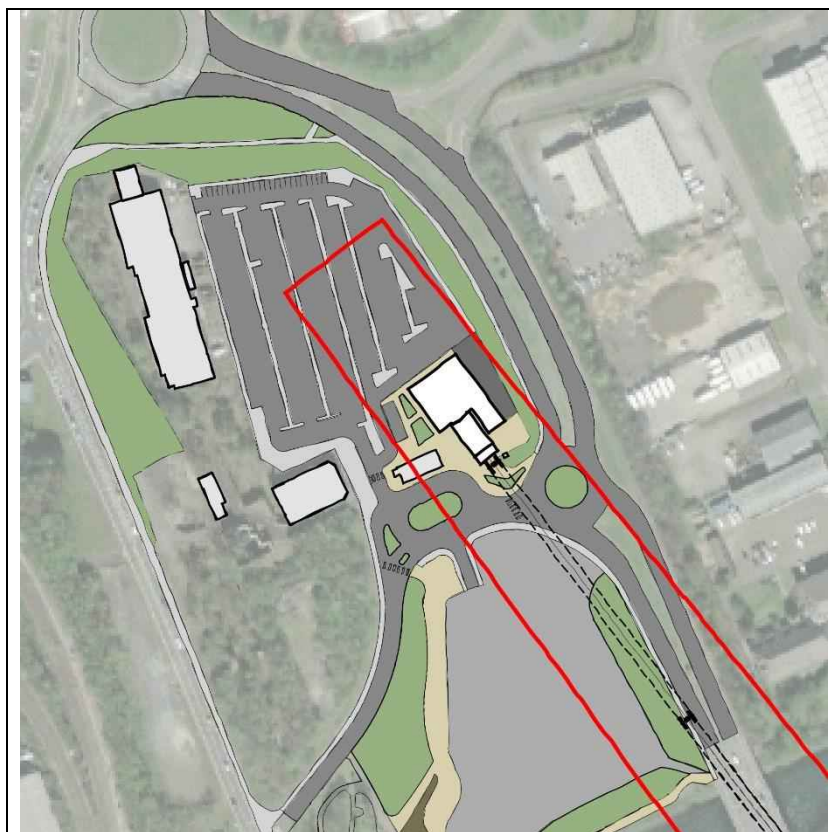


Figure 5.2 Alternative Option 2 Base Station

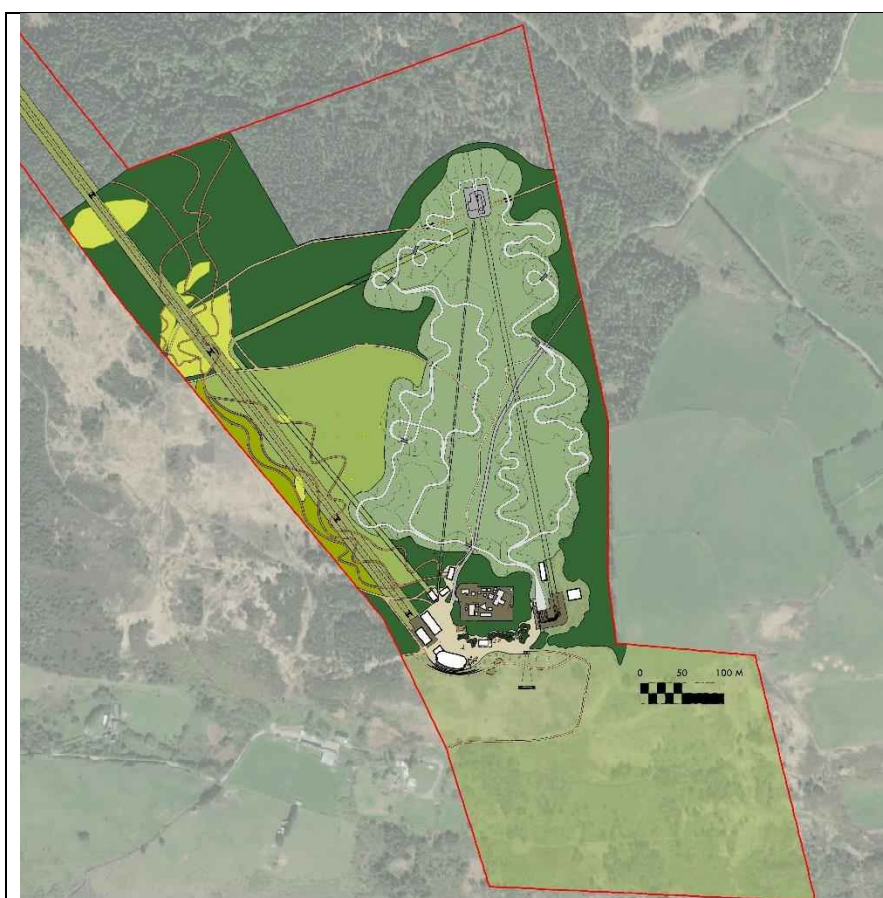


Figure 5.3 Alternative Option 2 Kilvey Hill

- 5.2.5 The above images demonstrate the scheme included 5 variations of the luge runs with extensive mountain bike trails spanning the hill and through the wooded areas.
- 5.2.6 The specialist development team reviewed Option 2 and raised comments with regards the amount of tree loss, impacts to biodiversity and visual impact. On this basis this iteration of the development proposals illustrated in Option 2 was discounted and a scheme of a reduced scale which responds to the development team's concerns was prepared, as described in Option 3.

Option 3: A Downscaled Leisure Development

- 5.2.7 Following a review of the development proposals a revised scheme was produced that featured similar attractions to the initial scheme albeit on a reduced scale considering the feedback given by the development team.



Figure 5.4 Alternative Option 3 Whole Site

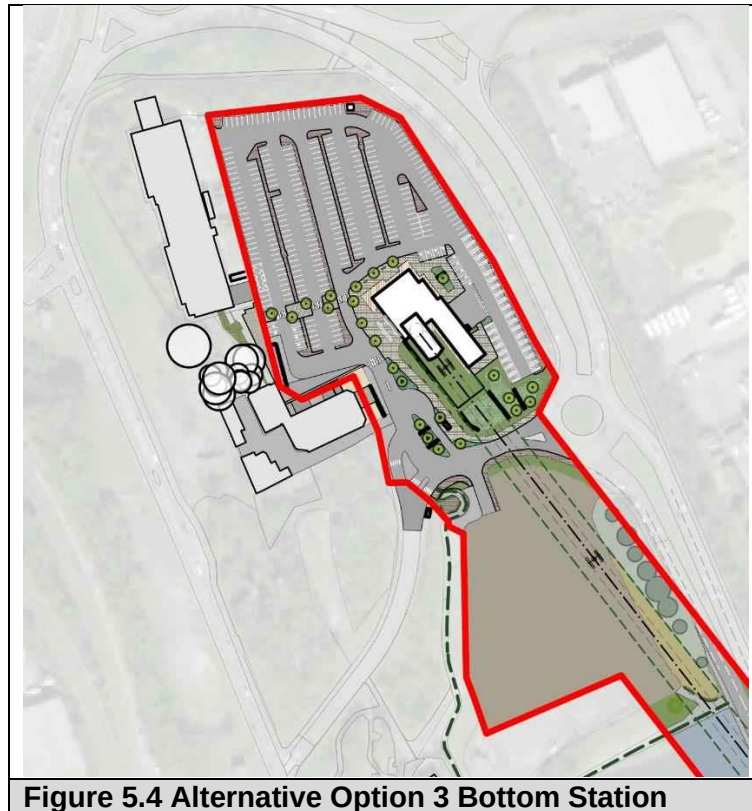


Figure 5.4 Alternative Option 3 Bottom Station

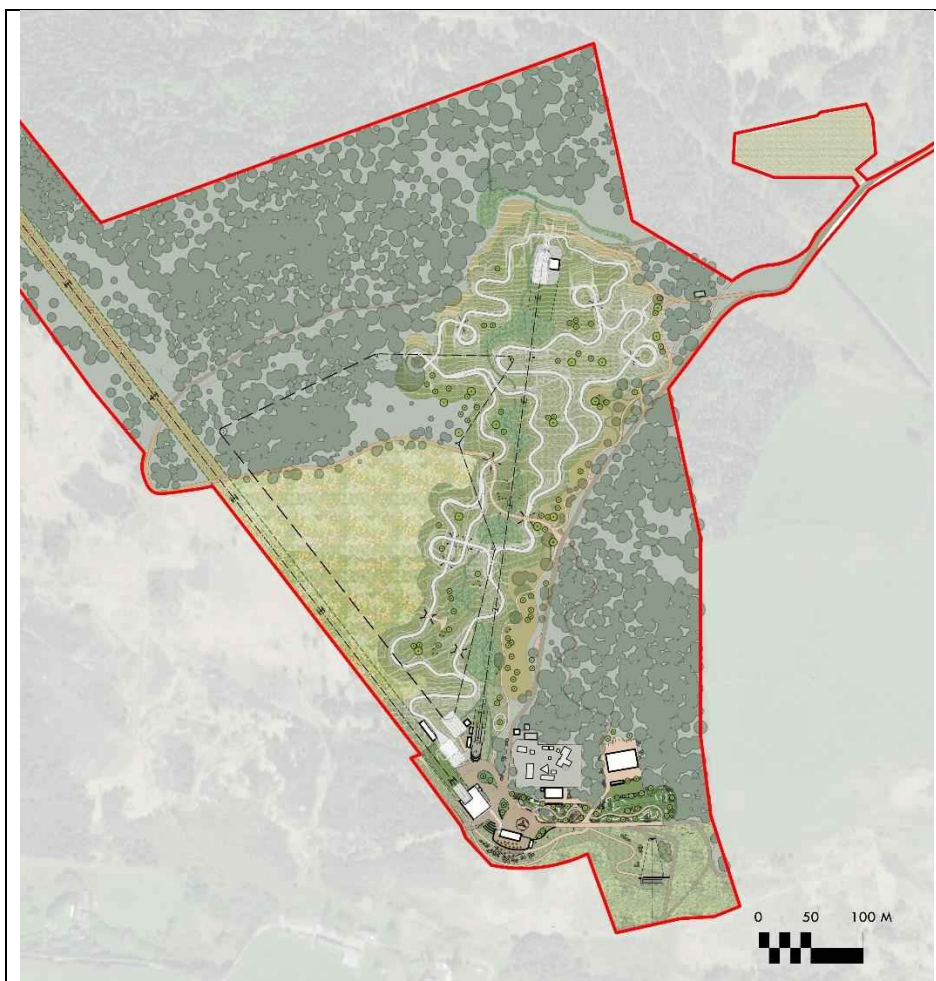
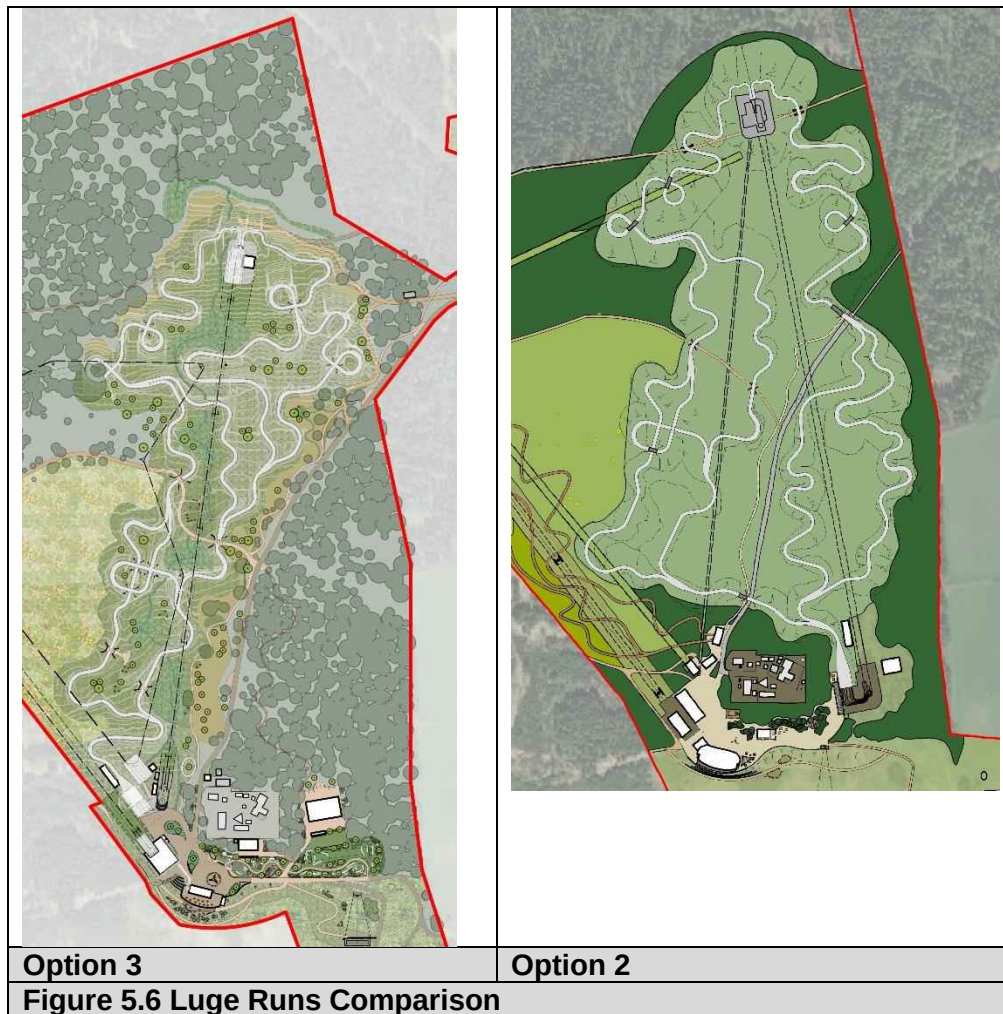


Figure 5.5 Alternative Option 3 Kilvey Hill



- 5.2.8 A decision was made to progress alternative option 3 and this received support from the specialist design team with a significantly reduced scope of the luge runs alongside a reduced scope for MTB trails. The scheme results in a significantly reduced level of tree loss, reduced ecological impacts and reduced impacts in regards to the landscape visual impact. The Option 3 scheme is considered to represent a proportionate development on Kilvey Hill which balances constraints whilst providing the necessary mitigation and enhancements to ensure that no significant environmental impact will result. Option 3 was submitted to the LPA for pre-application advice and following this a formal pre-application consultation was undertaken. Each of these stages resulted in refinements to the development proposals.
- 5.2.9 The base station area was also revised following the option 2 design review to ensure that the area was efficient considering the transport implications alongside protecting the heritage value of the nearby listed Hafod Copperwork which has recently been renovated providing a facility for Penderyn Whiskey. The revisions included relocation of the base station to achieve the most efficient highway arrangement alongside elevational changes to the base station to better reflect the context of the site and consider future opportunities in the strategic regeneration area.
- 5.2.10 The submitted Option 3 scheme includes a full planning application for a new leisure development comprising gondola stations with gondola and associated infrastructure, multi purpose visitor building including the sale of food and drink with associated outside seating and hardstanding, together with luge tracks, chairlift, skyswing,

mountain bike trails, access routes, zipline and supporting infrastructure, ancillary buildings for staff and maintenance, ground profiling works, landscaping, temporary construction access and compound, drainage works, plant, highway works, demolition of park and ride terminal and associated works.

During the development design changes have taken place to the redline which includes:

- General rationalisation at Landore Park and Ride Facility;
- Addition of the access track up to Brokeby Road / Llanerch Road;
- Addition of an area to be used for construction compound;
- Addition of mountain bike crossing point at the A4217;
- Rationalisation for areas likely to be required for ecological mitigation and enhancement;
- Addition of drainage links

5.2.11 Option 3 was considered to be the preferred alternative option. The proposals have been through extensive pre-application discussions with the Council to ensure that it meets planning policy requirements. The development would assist in the delivery of the Swansea Bay's Destination Management Plan assist the Hafod/Morfa area to create new Leisure Destination.

VISION

5.3 The vision for the application site has been outlined in the Design and Access Statement. The vision for the site is that:

"Skyline Enterprises aspire to transform the area by providing increased access to Kilvey Hill and give people the opportunity to experience either a host of exciting adventure activities or to simply enjoy its inherent natural environment and its impressive views, which currently are somewhat inaccessible to many. The main arrival point for Skyline Swansea will be located at the Landore Park & Ride area at the site of the old Hafod & Morfa Copperworks where a base station to a gondola cableway will be positioned."

5.3.1 The gondola will transport people to the top of Kilvey Hill where the activities and F&B offering will be located. The following activities will be delivered across the project.

- 8-seater detachable gondola, c. 22 cabins initially transporting 700 pph and final capacity of 1,800 pph), 1,352m in length.
- 4-seater fixed grip chairlift with c. 85 chairs initially transporting 1,200 pph and final capacity of 1,600pph, 484m in length. This is used to transport luge cart and people using the Luge
- 2 x Luge tracks and a linking track totalling 1,664m of riding experience.
- 2 x line zipline system of approx. 680m will be created to allow families and friends to ride together.
- A Sky Swing with a 5-person capsule of approx. 50m in height and a max speed of 100km/h, this will be very similar to the Sky Swing in Rotorua, New Zealand.
- A 400m² multi-purpose building with permanent F&B hall with an adjacent linked external stalls area and an area where local Food Truck & stall owners/operators will have the opportunity to set-up trucks/stalls to sell their produce. A roof top seating area will also be provided.
- Approx. 20km of MTB trails ranging from kids friendly to intermediate trails. MTB riders and bikes will be transported to the top of the Kilvey Hill via the gondola. Cycle

shelter & parking facilities will be provided as part of the proposals, both around the bottom station and at the top of the hill.

5.3.2 In addition to this, a comprehensive set of surveys and investigations were carried out to identify the opportunities and constraints at the Site. Surveys in relation to the following have informed the preparation of this ES and the planning application and have informed the final design of the scheme:

- Ecology
- Landscape and Visual
- Traffic and Transport
- Archaeology and Cultural Heritage
- Flooding and Drainage
- Noise
- Air Quality
- Arboriculture
- Ground Conditions
- Topography

5.3.3 Consultation has been undertaken as part of the statutory Pre-Application Consultation process. This process involves consultation with community, specialist and other consultees. A Pre-Application Consultation report is included in the submission and outlines how this consultation has been conducted in accordance with regulations and will seek where possible to address any concerns or amendments that may be required to the application submission.

LOCATION OF DEVELOPMENT

5.4 The application site is predominantly located at Kilvey Hill and this is where the majority of the leisure uses are proposed to be located whilst the Landore Park and Ride Facility would comprise the Gondola Station and associated car parking areas. The Gondola would elevate from the park and ride area up to Kilvey Hill crossing over the River Tawe, A4217 and Pentre Chwyth Road before moving up Kilvey Hill. Chapter 4: Site Context provides further detail regarding the application site.

5.4.1 The proposed leisure and tourism development will be located within the red line area identified on the site location plan which accompanies the planning application and which is appended in Volume 3, Appendix 4.1. The red application boundary area is **40.48 hectares** of land this includes the entirety of the redline including areas required for ecological mitigation and enhancement. The extent of the works comprising buildings and engineering operations is **15.73 hectares**.

THE QUANTUM OF DEVELOPMENT

5.5 Planning permission is sought via a Full planning application for a new leisure development comprising gondola stations with gondola and associated infrastructure, multi purpose visitor building including the sale of food and drink with associated outside seating and hardstanding, together with luge tracks, chairlift, skyswing, mountain bike trails, access routes, zipline and supporting infrastructure, ancillary buildings for staff and maintenance, ground profiling works, landscaping, temporary construction access and compound, drainage works, plant, highway works, demolition of park and ride terminal and associated works. A full review of the proposals is contained within the comprehensive DAS.

Layout

- 5.6 The Kilvey Hill site is the most involved area of the proposal which includes the top station for the gondola and chair lift, Zipline, F&B offering, ancillary buildings as well as the downhill karting tracks themselves.
- 5.6.1 A build zone comprising steep slopes, planting and Sustainable Drainage Systems (SuDS) will be crossed with walking routes, public rights of way and bike trails, and finished with a native planting palette and a woodland aesthetic.
- 5.6.2 The top of Kilvey Hill will comprise the gondola and key buildings. As an experience, it will emphasise the existing panoramic views across Swansea and the bay and allow views of the multiple activities taking place to the North with offerings of play, food and various outdoor amenity spaces close at hand.
- 5.6.2 A new surfaced landscape will connect all the proposed buildings and landscape spaces allowing circulation between them and creates a new formalised 'terrace' on the edge of the hill.
- 5.6.3 The Landore Park & Ride will site the gondola bottom station that will take visitors up Kilvey Hill. A small area will be removed to construct the gondola bottom station, ticket office, service yard and associated landscape entrance spaces.

Gondola

- 5.7 An 8-seater detachable gondola system, with 22 cabins transporting 820 people per hour plus 178 MTBph and final capacity of 1,430 people per hour plus 306 MTBph, 1,535m in length will connect the two sites. Terminal stations will be located at both Landore Park & Ride and the top of Kilvey Hill. The buildings will be contemporary yet relatively simple in appearance.
- 5.7.1 Cabins attached to the main haul rope connected to eight towers will traverse over the river Tawe up to the top of Kilvey Hill. Gondola towers are spaced to minimize their number and result in relatively little intrusive impact being required to the landscape they are integrated within.
- 5.7.2 Towers will be sensitively illuminated at night. Separate MTB carriers and cabins will be provided to take bikes and riders to the top of the hill.

Food and Beverage

- 5.8 Set at the top of Kilvey Hill is a new food and beverage building which will be sensitively and discreetly integrated within the existing topography. The building will be accessible to all and located close to the top gondola station this will be orientated to ensure ease for visitor experience.
- 5.8.1 To achieve this a new viewing terrace extends south of the existing Quaker Seat at a comparative elevation to deliver panoramic viewpoints. A modest bar is positioned to the rear of the terrace with connection to the upper entrance area of the main food hall which sits directly below.
- 5.8.2 Stairs and a lift lead down to the main food hall, a large 300m² flexible space which can be divided into smaller areas. A glazed curved facade extends across the southern elevation at this level.
- 5.8.3 The building will offer all visitors a safe, comfortable and welcoming base to spend time at the top of the hill.

Luge

- 5.9 The luge is a gravity based set of tracks with karts that are used to travel down the hill. A 4-seat chairlift system is used to transport guests and luge carts back to the start.

Zipline

- 5.9.1 The trolley is motorized allowing for both uphill and downhill riding. The Zipline will be accessible to all and young children can ride with a responsible person. The circuit will be c. 1,000m in length and will pass over the Luge tracks. The system uses a regenerative battery to help lower energy use.

Skyswing

- 5.10 A five seated capsule is hoisted 50 metres above the ground before being released to create a giant swing.

Mountain Bike Trails

- 5.11 The Mountain Bike infrastructure will include:

- Gondola-assisted access for guests and their bikes.
- An outdoor congregation/start area for bikers adjacent to the top station featuring picnic tables, a water outlet and space for a tool station.
- Bike stands at the bottom station for guests to store their bikes while they purchase tickets or use bathroom facilities
- MTB trails spanning from top gondola station to bottom station
- Once at bottom station, MTB guests will enter a designated queue area. MTB customers will then be loaded into specific MTB gondola cabins for the journey back to top station

Access and Movement

- 5.12 Existing Public Rights of Way will be retained without the need for diversion of routes. New informal woodland paths will be created to ensure that movement through the site is not impeded.

- 5.12.1 Some temporary diversions will be required during construction. Enhanced routes - once complete the area at the top of Kilvey Hill will allow for existing routes to be used again, albeit with improved surface materials, more suitable for higher footfalls and the proposals for a destination place.

- 5.12.2 It is acknowledged that horse riders currently use the hill albeit there are no formal bridleways only informal routes and designated public footpaths. The Swansea Countryside Team have provided comments on the planning application asking for bridleway dedications to link the communities across Kilvey Hill, the upgrade of sections of public footpath and associated physical works to be funded via section 106 agreement. The Countryside Access Team are proposed complete works or improvement works on the paths in the future, to aid in the maintenance of these dedicated public rights of way. As such the Skyline development will improve access on the hill for horse riding.

- 5.12.3 The bridleways will be the primary routes for horse riding across the hill and whilst the majority of areas across the development will not physically restrict horse access, as per other Skyline developments, through their operation and management Skyline have found this to be self-policing. It is unlikely that horse riders will ride their horses through the site due to potential conflicts with the public. There will be signage as part of the development to inform routes for pedestrians / bikes / horses.

**Land at Kilvey Hill and
Landore Park & Ride Facility,
Swansea**

ENVIRONMENTAL STATEMENT ADDENDUM

**VOLUME 2
CHAPTER 7: LANDSCAPE AND VISUAL IMPACT ASSESSMENT
ADDENDUM
ADDITIONAL VIEW POINT ASSESSMENT
NIGHTTIME ASSESSMENT**

Land at Kilvey Hill and Landore Park and Ride Facility, Swansea

Additional Photoviewpoint Addendum: Swansea Arena Podium

edp5125_r014a

QA: JHa/CMa_LLI/MWI_070624

1 INTRODUCTION

- 1.1 In response to Swansea City Council (SCC)'s circulated comments following the Environmental Impact Assessment (EIA) submission and specifically Environmental Statement Chapter 7 for the above development, The Environmental Dimension Partnership Ltd (EDP) have acquired and assessed an additional photoviewpoint from Swansea Arena Podium. This is contained at **Appendix EDP 1**. The recorded photoviewpoint is circa.1.9km from the site and stands at 4m above Ordnance Datum.

2 SENSITIVITY OF RECEPTORS

- 2.1 Users of the Swansea Area Podium are likely to be pedestrians on foot or on a bicycle. The podium contains amenities such as benches, play features and wayfinding/information boards for the benefit of the general public. These receptors are within an extremely urban and dense part of the city, adjacent to the busy Oystermouth Road (A4067) which passes at ground level beside them. Pedestrians at this location are influenced by the busy passing traffic, road noise and general backdrop of the city. Despite this, the facility is a place of enjoyment for the public and so a medium value is attributed to receptors in this location, coupled with a medium susceptibility to change. The overall sensitivity for users of the podium is therefore **medium**, in line with the criteria set out in with **Table EDP A2.3** of **Appendix EDP 2**.

3 MAGNITUDE OF CHANGE

- 3.1 Additional Photoviewpoint EDP 1 (**Appendix EDP 1**) depicts the view from a portion of the Swansea Arena Podium. It is noted that the podium extends south-west of the building which in turn screens the majority of views towards Kilvey Hill. Within those areas where views are available, it can be seen that the Swansea Bay Copr bridge sits immediately in the foreground of the image and will often be the continued route for many users of the nearby public realm.
- 3.2 Kilvey Hill can be seen in the distance, with the existing satellite tower protruding from its summit. The location of this viewpoint is approximately 1.9km from the site. Elements of the scheme, including the top station, food hall, gondolas, stanchions and sky swing will be visible for receptors, though they will be seen in the context of the busy podium foreground and the existing infrastructure that already occupies Kilvey Hill. The overall anticipated

magnitude of change is **low**, in line with the criteria set out within **Table EDP A2.7** of **Appendix EDP 2**.

4 OVERALL LEVEL OF EFFECT

- 4.1 By combining the sensitivity of podium receptors with the magnitude of change, an overall **moderate/minor** level of effect is achieved, in line with **Table EDP A2.8** of **Appendix EDP 2**. It is also considered to be a permanent and adverse effect, though **not significant** in EIA terms.

5 ADDITIONAL CLARIFICATION POINT ON SCC FEEDBACK

Comment

“There is no discussion on the potential visual impact upon Danygraig/Port Tennant to the south east. This should be included as the sky swing is likely to be visible from open views looking north, for example, from Dan Y Graig Road and Longford Crescent.”

Clarification

- 5.1 Although **Technical Appendix 7.3: Landscape and Visual Effects During Operation** does not reference the specific assessment of Port Tennant as a residential receptor, the development, when viewed from this direction, has been assessed through a range of methods.
- 5.2 EDP have assessed the SA1 and St Thomas areas (nearby), which will contain more discernible and available views of the development site. Both were found to not retrieve significant effects.
- 5.3 Port Tennant is a dense settlement at the south-eastern-most foot of Kilvey Hill. Coniferous woodland and scrub occupy much of the southern face of the hill. Views towards the summit are often obstructed by this. The existing telecommunication tower can rarely be seen given the density of houses and built form, alongside the existing level change, particularly from Danygraig Road and Longford Crescent.
- 5.4 Original Photoviewpoints EDP 9 and 10 capture the view from either side of Port Tennant where the Wales Coastal Path passes through the area. The development (in particular the sky swing), will be seen by these highly sensitive receptors, though in the context of the existing telecommunications tower, at height from this direction.
- 5.5 By using the existing EDP assessment of nearby assets (within **Technical Appendix 7.3**), a desktop review and updated Photomontages (contained at **Appendix EDP 3**) of existing nearby sensitivities, it is EDP's opinion that the settlement of Port Tennant will **not** experience **significant** visual effects in EIA terms, as a result of development.

Appendix EDP 1

Additional Photoviewpoint



Additional Photoviewpoint EDP 1: Swansea Arena Podium

Approximate extent of site (to be read in conjunction with proposed plans)

To be viewed at comfortable arm's length

Appendix EDP 2

EDP LVIA Assessment Methodology

INTRODUCTION

- A2.1 This section provides a methodology for landscape and visual impact assessment as used by EDP.

METHODOLOGY

- A2.2 The assessment methodology for assessing landscape and visual effects prepared by EDP is based on the following best practice guidance:
- Guidelines for Landscape and Visual Impact Assessment – Third Edition (LI/IEMA, 2013);
 - An Approach to Landscape Character Assessment (Natural England 2014); and
 - Landscape Institute Technical Guidance Note (TNG) 06/19 Visual Representation of Development Proposals (17 September 2019).
- A2.3 Other reference documents used to understand the baseline position in landscape terms comprise published landscape character assessments appropriate to the site's location and the nature of the proposed development.
- A2.4 The nature of landscape and visual assessment requires both objective analysis and subjective professional judgement. Accordingly, the following assessment is based on the best practice guidance listed above, information and data analysis technique, it uses quantifiable factors wherever possible and subjective professional judgement where necessary, and is based on clearly defined terms.

Landscape Assessment

- A2.5 Landscape effects derive from changes in the physical landscape fabric that may give rise to changes in its character and how this is experienced. These effects need to be considered in line with changes already occurring within the landscape and which help define the character of it.
- A2.6 Effects upon the wider landscape resource, i.e. the landscape surrounding the development, requires an assessment of visibility of the proposals from adjacent landscape character areas, but remains an assessment of landscape character and not visual amenity.

Visual Assessment

- A2.7 The assessment of effects on visual amenity draws on the predicted effects of the development, the landscape and visual context, and the visibility and viewpoint analyses, and considers the significance of the overall effects of the proposed development on the visual amenity of the main visual receptor types in the study area.

Identifying Landscape and Visual Receptors

- A2.8 This assessment has sought to identify the key landscape and visual receptors that may be affected by the changes proposed.
- A2.9 The assessment of effects on landscape as a resource in its own right draws on the description of the development, the landscape context and the visibility and viewpoint analysis to identify receptors, which, for the proposed development may include, but not be limited to, the following:
- The landscape fabric of the development site;
 - The key landscape characteristics of the local context;
 - The 'host' landscape character area that contains the proposed development;
 - The 'non-host' landscape character areas surrounding the host character area and may be affected by the proposals (where relevant); and
 - Landscape designations on a national, regional or local level (where relevant).
- A2.10 The locations and types of visual receptors within the defined study areas are identified from Ordnance Survey maps and other published information (such as walking guides), from fieldwork observations and from local knowledge provided during the consultation process. Examples of visual receptors may include, but not be limited to, the following:
- Settlements and private residences;
 - Users of National Cycle Routes and National Trails;
 - Users of local/regional cycle and walking routes;
 - Those using local rights of way – walkers, horse riders, cyclists;
 - Users of open spaces with public access;
 - People using major (motorways, A and B) roads;
 - People using minor roads; and
 - People using railways.

Assessment of Landscape and Visual Effects

- A2.11 The assessment of effects on the landscape resource includes consideration of the potential changes to those key elements and components that contribute towards recognised landscape character or the quality of designated landscape areas; these features are termed landscape receptors. The assessment of visual amenity requires the identification of potential visual receptors that may be affected by the development. As noted, following the identification of each of these various landscape and visual receptors,

the effect of the development on each of them is assessed through consideration of a combination of:

- Their overall sensitivity to the proposed form of development, which includes the susceptibility of the receptor to the change proposed and the value attached to the receptor; and
- The overall magnitude of change that will occur - based on the size and scale of the change, its duration and reversibility.

Defining Receptor Sensitivity

A2.12 A number of factors influence professional judgement when assessing the degree to which a particular landscape or visual receptor can accommodate change arising from a particular development. Sensitivity is made up of judgements about the 'value' attached to the receptor, which is determined at baseline stage, and the 'susceptibility' of the receptor, which is determined at the assessment stage when the nature of the proposals, and therefore the susceptibility of the landscape and visual resource to change, is better understood.

A2.13 Susceptibility indicates *"the ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences"*¹. Susceptibility of visual receptors is primarily a function of the expectations and occupation or activity of the receptor. A degree of professional judgement applies in arriving at the susceptibility for both landscape and visual receptors and this is clearly set out in the technical appendices to this assessment.

A2.14 A location may have different levels of sensitivity according to the types of visual receptors at that location and any one receptor type may be accorded different levels of sensitivity at different locations.

A2.15 With reference to Box 5.1 within GLVIA3 (Page 84), **Table EDP A2.1** provides an indication of the criteria by which the overall value of a landscape receptor may be judged. Within the assessment, further reference to the Landscape Institute's 'TGN 02-21: Assessing landscape value outside national designations' may be applied where appropriate. **Table EDP A2.2** provides an indication of the criteria by which the overall susceptibility of the landscape in relation to the type of development proposed.

¹ Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, Third Edition Page 158

Table EDP A2.1: Assessment of Landscape Value

Landscape Character Area Value				
Very Low	Low	Medium	High	Very High
Undesignated countryside and landscape features; absence of distinctive landscape characteristics; despoiled/-degraded by the presence of many landscape detractors.	Undesignated countryside and landscape features; few distinctive landscape characteristics; presence of landscape detractors.	Undesignated countryside and landscape features; some distinctive landscape characteristics; few landscape detractors.	Locally designated/valued countryside (e.g. Areas of High Landscape Value, Regional Scenic Areas) and landscape features; many distinctive landscape characteristics; very few landscape detractors.	Nationally/internationally designated/valued countryside and landscape features; strong/distinctive landscape characteristics; absence of landscape detractors.
Consideration of Other Value Criteria				
Condition/Quality				
A landscape with no or few areas intact and/or in poor condition.	A landscape with few areas that are intact and/or in a reasonable condition.	A landscape with some areas that are intact and/or in reasonable condition.	A landscape with many areas that are intact and/or in a reasonable condition.	A landscape with most areas intact and/or in good condition.
Scenic Quality				
A landscape of little or no aesthetic appeal.	A landscape of low aesthetic appeal.	A landscape of some aesthetic appeal.	A landscape of high aesthetic appeal.	A landscape of very high aesthetic appeal.
Rarity and Representativeness				
A landscape that does not contain rare landscape types or features.	A landscape that contains few distinct landscape types or features.	A landscape that contains distinct but not rare landscape types or features.	A landscape that contains one or more rare landscape types or features.	A landscape that is abundant in rare landscape types or features.
Conservation Interests				
A landscape with no or very limited cultural, geological and/or nature conservation content.	A landscape with limited cultural, geological and/or nature conservation content.	A landscape with some cultural, geological and/or nature conservation content.	A landscape with rich cultural, geological and/or nature conservation content.	A landscape with abundant cultural, geological and/or nature conservation content.

Landscape Character Area Value				
Recreation Value				
A landscape with no or very limited contribution to recreational experience.	A landscape with no or limited contribution to recreational experience.	A landscape that provides some contribution to recreational experience.	A landscape that provides a good contribution to recreational experience.	A distinct landscape that forms a strong contribution to recreational experience.
Perceptual Aspects				
A landscape with prominent detractors, probably part of the key characteristics.	A landscape with landscape detractors, and is not particularly wild, tranquil or unspoilt.	A landscape with few detractors that also retains some perceptual values.	A landscape with very few detractors that has a relatively wild, tranquil or unspoilt landscape.	A wild, tranquil or unspoilt landscape without noticeable detractors.
Cultural Associations				
A landscape without recorded associations.	A landscape with few recorded associations.	A landscape with some and/or moderately valued associations.	A landscape with numerous and/or highly valued associations.	A landscape of rich and/or very highly valued associations.
Overall Judgement of Landscape Value				
Very Low value – receptor largely reflects very low value criteria above.	Low value – receptor largely reflects low value criteria above.	Medium value – receptor largely reflects medium value criteria above.	High value – receptor largely reflects high value criteria above.	Very High value – receptor largely reflects very high value criteria above.

Table EDP A2.2: Assessment of Landscape Susceptibility

Very Low Susceptibility to Change	Low Susceptibility to Change	Medium Susceptibility to Change	High Susceptibility to Change	Very High Susceptibility to Change
Pattern, Complexity and Physical Susceptibility to Change to the Proposed Development				
A simple, monotonous and/or degraded landscape with common/indistinct features and minimal variation in landscape pattern.	A landscape with an occasionally intact pattern and/or with a low degree of complexity and with few features in reasonable condition.	A landscape with some intact pattern and/or with a degree of complexity and with features mostly in reasonable condition.	A landscape with mostly patterned/-textured or a simple but distinctive landscape and/or with high value features and essentially intact.	A strongly patterned/-textured or a simple but distinctive landscape and/or with high value features intact.
Visual Susceptibility to Change to the Proposed Development				
A very enclosed landscape that contains or strongly filters views, with an absence of visual landmarks and a lack of intervisibility with designated landscapes.	A predominantly enclosed landscape that contains or filters most views, with very few views of visual landmarks or intervisibility with designated landscapes.	A partially enclosed landscape with some visual containment and filtering, possible limited intervisibility with visual landmarks and designated landscapes.	An open landscape with intervisibility and limited visual filtering or enclosure. Prominent visual landmarks may be present, and/or intervisibility with designated landscapes may occur.	An open or exposed landscape with extensive intervisibility and no or very limited visual filtering or enclosure. Prominent visual landmarks are present, and/or intervisibility with designated landscapes occurs.
Experiential Susceptibility to Change to the Proposed Development				
A landscape with prominent visual and/or aural intrusion and close relationship with large scale built development/-infrastructure. A landscape that contains many light sources and essentially suffers from widespread light pollution.	A busy landscape with frequent visual and/or aural intrusion and nearby relationship with large scale built development/-infrastructure. A landscape that contains frequent light sources and suffers from light pollution.	A partially tranquil landscape with limited visual and/or aural intrusion, some relationship with built development/-infrastructure may be present. A landscape that contains some light sources.	A tranquil landscape with limited visual and/or aural intrusion, some relationship with built development/-infrastructure may be present. A landscape that contains few light sources.	A very tranquil, wild or remote landscape with little or no sense of visual or aural intrusion. A landscape that contains very few light sources and provides dark skies.

Very Low Susceptibility to Change	Low Susceptibility to Change	Medium Susceptibility to Change	High Susceptibility to Change	Very High Susceptibility to Change
Overall Judgement of Susceptibility to Change to the Proposed Development				
Very Low susceptibility – receptor largely reflects very low criteria above.	Low susceptibility – receptor largely reflects low criteria above.	Medium value – receptor largely reflects medium criteria above.	High susceptibility – receptor largely reflects high criteria above.	Very High susceptibility – receptor largely reflects very high criteria above.

A2.16 **Table EDP A2.3** provides an indication of the criteria by which the overall sensitivity of the landscape resource is judged within this assessment and considers both value and susceptibility independently.

Table EDP A2.3: Assessment of Landscape Sensitivity

		Susceptibility of Landscape Receptor				
		Very High	High	Medium	Low	Very Low
Receptor Value	Very High	Very High	Very High/High	High	High/Medium	Medium
	High	Very High/High	High	High/Medium	Medium	Medium/Low
	Medium	High	High/Medium	Medium	Medium/Low	Low
	Low	High/Medium	Medium	Medium/Low	Low	Low/Very Low
	Very Low	Medium	Medium/Low	Low	Low/Very Low	Very Low

A2.17 For visual receptors, judgements of susceptibility and value are closely interlinked considerations. For example, the most valued views are those that people go and visit because of the available view, and it is at those viewpoints that their expectations will be highest and thus most susceptible to change.

A2.18 **Table EDP A2.4** provides an indication of the criteria by which the overall sensitivity of a visual receptor is judged within this assessment and considers both value and susceptibility independently.

Table EDP A2.4: Visual Receptor Sensitivity

Category	Visual Receptor Criteria
Very High	Designed view (which may be to or from a recognised heritage asset or other important viewpoint), or where views of the surroundings are an important contributor to the experience. Key promoted viewpoint, e.g., interpretative signs. References in literature and art and/or guidebooks tourist maps. Protected view recognised in planning policy designation. Visual receptors with a very high susceptibility to change may include those with views from residential properties, especially from rooms normally occupied in waking or daylight hours; national public rights of way, e.g., National Trails and nationally designated countryside/landscape features with public access, which people might visit purely to experience the view; and visitors to heritage assets of national importance.
High	View of clear value but may not be formally recognised, e.g. framed view of high scenic value, or destination hill summits. It may also be inferred that the view is likely to have value, e.g. to local residents. Visual receptors with a high susceptibility to change are considered to be those whose attention or interest is focussed on their surroundings and may include those with views from recreational receptors where there is some appreciation of

Category	Visual Receptor Criteria
	the landscape, e.g., golf and fishing; local public rights of way, access land and National Trust land, also panoramic viewpoints marked on maps; road routes promoted in tourist guides for their scenic value.
Medium	View is not promoted or recorded in any published sources and may be typical of the views experienced from a given receptor. Visual receptors with a medium susceptibility to change may include people engaged in outdoor sport other than appreciation of the landscape, e.g. football and rugby, or road users on minor routes passing through rural or scenic areas.
Low	View of clearly lesser value than similar views experienced from nearby visual receptors that may be more accessible. Visual receptors with a low susceptibility to change may include road users on main road routes (motorways/A roads) and users of rail routes or people at their place of work (where the place of work may be in a sensitive location). Also views from commercial buildings where views of the surrounding landscape may have some limited importance.
Very Low	View affected by many landscape detractors and unlikely to be valued. Visual receptors with a very low susceptibility to change may include people at their place of work, indoor recreational or leisure facilities or other locations where views of the wider landscape have little or no importance.

A2.19 The tables above offer a template for assessing overall sensitivity of any landscape or visual receptor as determined by combining judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape as set out at paragraph 5.39 of GLVIA3. However, the narrative in this report may demonstrate that assessment of overall sensitivity can change on a case-by-case basis.

A2.20 For example, a high susceptibility to change and a low value may result in a medium overall sensitivity, unless it can be demonstrated that the receptor is unusually susceptible or is in some particular way more valuable. A degree of professional judgement applies in arriving at the overall sensitivity for both landscape and visual receptors.

Magnitude of Change

A2.21 The magnitude of any landscape or visual change is determined through a range of considerations particular to each receptor. As set out within GLVIA3 (Page 39), the following steps are considered in defining the magnitude of change.

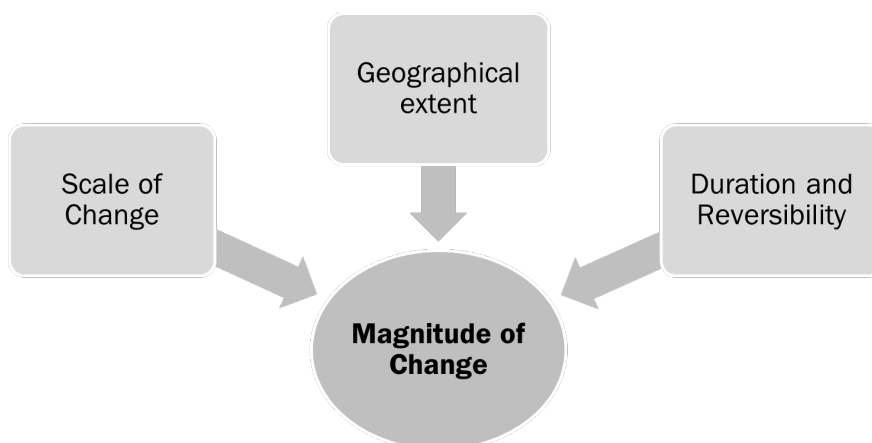


Figure EDP A2.1: Assessing the magnitude of change.

A2.22 Receptor locations from which views of the proposed development are not likely to occur will receive no change and therefore no effect. With reference to the ZTV and site survey, the magnitude of change is defined for receptor locations from where visibility of the proposed development is predicted to occur.

A2.23 **Table EDP A2.5** provides an indication of the criteria by which the size/scale of change at a landscape or visual receptor is judged within this assessment.

Table EDP A2.5: Landscape and Visual Receptor Size/Scale of Change Criteria

Category	Landscape Receptor Criteria	Visual Receptor Criteria
Large Scale 	Total loss of or major alteration to key elements/features/characteristics of the baseline condition. Addition of elements which strongly conflict with the key characteristics of the existing landscape.	There would be a substantial change to the baseline, with the proposed development creating a new focus and having a defining influence on the view.
	Notable loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that are prominent and may conflict with the key characteristics of the existing landscape.	The proposed development will be clearly noticeable, and the view would be fundamentally altered by its presence.
	Partial loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that may be evident but do not necessarily conflict with the key characteristics of the existing landscape.	The proposed development will form a new and recognisable element within the view which is likely to be recognised by the receptor.

Category	Landscape Receptor Criteria	Visual Receptor Criteria
 Small Scale	Minor loss or alteration to one or more key elements/features/characteristics of the baseline landscape. Addition of elements that may not be uncharacteristic within the existing landscape.	The proposed development will form a minor constituent of the view being partially visible or at sufficient distance to be a small component.
	Barely discernible loss or alteration to key elements/features/characteristics of the baseline landscape. Addition of elements not uncharacteristic within the existing landscape.	The proposed development will form a barely noticeable component of the view, and the view whilst slightly altered would be similar to the baseline situation.

A2.24 **Table EDP A2.6** provides an indication of the criteria by which the geographical extent of the area affected is judged within this assessment.

Table EDP A2.6: Geographical Extent Criteria

	Landscape Receptors	Visual Receptor Criteria
Largest Smallest	Large scale effects influencing several landscape types or character areas.	Direct views at close range with changes over a wide horizontal and vertical extent.
	Effects at the scale of the landscape type or character areas within which the proposal lies.	Direct or oblique views at close range with changes over a notable horizontal and/or vertical extent.
	Effects within the immediate landscape setting of the site.	Direct or oblique views at medium range with a moderate horizontal and/or vertical extent of the view affected.
	Effects at the site level (within the development site itself).	Oblique views at medium or long range with a small horizontal/vertical extent of the view affected.
	Effects only experienced on parts of the site at a very localised level.	Long range views with a negligible part of the view affected.

A2.25 The third, and final, factor, in determining the predicted magnitude of change is duration and reversibility. Duration and reversibility are separate but linked considerations. Duration is judged according to the defined terms set out below, whereas reversibility is a judgement about the prospects and practicality of the particular effect being reversed in, for example, a generation. The categories used in this assessment are set out below.

Duration:

- Long-term (15 years+);
- Medium to long-term (10 to 15 years);
- Medium-term (5 to 10 years);

- Short-term (1 year to 5 years); or
- Temporary (less than 12 months).

Reversibility:

- Permanent with unlikely restoration to original state, e.g. major road corridor, power station, urban extension, etc.;
- Permanent with possible conversion to original state, e.g. agricultural buildings, retail units;
- Partially reversible to a different state, e.g. mineral workings;
- Reversible after decommissioning to a similar original state, e.g. wind energy development; or
- Quickly reversible, e.g. temporary structures.

A2.26 With consideration of the judgements set out above, **Table EDP A2.7** combines these judgements to provide the overall criteria by which the magnitude of change may be judged. While not all of the criteria may apply, the size/ scale, geographical extent Criteria and the duration/reversibility of effects on receptors are taken together to form a reasoned assessment of the magnitude of change. The overall magnitude of change is derived using professional judgement.

Table EDP A2.7: The Assessment of the Overall Magnitude of Change

Category	Receptor Criteria
Very High	Total loss of, or major alteration to key elements/features/characteristics of the baseline condition. Addition of elements which strongly conflict with the key characteristics of the existing landscape. The proposed development would create a new focus and have a defining influence on the view. Landscape and visual effects are typically large in scale, resulting in a permanent and irreversible change, influencing several landscape types or character areas. Visual changes would be experienced in direct, close ranging views with changes over a wide horizontal and vertical extent.
High	Notable loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that are prominent and may conflict with the key characteristics of the existing landscape. The proposed development would be clearly noticeable, and the view would be fundamentally altered by its presence. Direct or oblique views at close range with changes over a notable horizontal and/or vertical extent. Notable landscape and visual effects may be experienced in the medium to long-term, with possible conversion to original state, at the scale of the landscape type or character area/s within which the proposal lies.

Category	Receptor Criteria
Medium	Partial loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that may be evident but do not necessarily conflict with the key characteristics of the existing landscape within the immediate setting of the site. The proposed development would form a new and recognisable element within the view which is likely to be recognised by the receptor. Visual change would be experienced in direct or oblique views at medium range with a moderate horizontal and/or vertical extent of the view affected. Effects may be partially reversible to a different state, being experienced in the medium term.
Low	Minor loss or alteration to one or more key elements/features/characteristics of the baseline landscape. Addition of elements, largely at the site level, that may not be uncharacteristic within the existing landscape. The proposed development would form a minor constituent of an oblique view, being partially visible or at sufficient distance to be a small component at medium or long range and with a small horizontal/vertical extent of the view affected. The duration of the change may be short-term, being reversible to a similar original state.
Very Low	Barely discernible loss or alteration to key elements/features/characteristics of the baseline landscape. Addition of elements, experienced on parts of the site at a very localised level, not uncharacteristic within the existing landscape. The proposed development would form a barely noticeable component of the view, often being seen as a small component in a long-range view where, although slightly altered, the change would be similar to the baseline situation. Effects may be temporary and quickly reversible to the original state of the baseline context.

Significance of Effect

A2.27 The purpose of the EIA process is to identify the significant environmental effects (both beneficial and adverse) of development proposals. Schedule 4 to the EIA Regulations specifies the information to be included in all environmental statements, which should include a description of:

“The description of the likely significant effects ...should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development”.

A2.28 In order to consider the likely significance of any effect, the sensitivity of each receptor is combined with the predicted magnitude of change to determine the significance of effect, with reference also made to the geographical extent, duration and reversibility of the effect within the assessment. Having taken such a wide range of factors into account when assessing sensitivity and magnitude at each receptor, the significance of effect can be derived by combining the sensitivity and magnitude in accordance with the matrix in **Table EDP A2.8**.

Table EDP A2.8: Level of Effects Matrix

Overall Sensitivity	Overall Magnitude of Change				
	Very High	High	Medium	Low	Very Low
Very High	Very Substantial	Substantial	Major	Major/- Moderate	Moderate
High	Substantial	Major	Major/ Moderate	Moderate	Moderate/- Minor
Medium	Major	Major/- Moderate	Moderate	Moderate/- Minor	Minor
Low	Major/- Moderate	Moderate	Moderate/ Minor	Minor	Minor/- Negligible
Very Low	Moderate	Moderate/ Minor	Minor	Minor/- Negligible	Negligible

A2.29 In certain cases, where additional factors may arise, a further degree of professional judgement may be applied when determining whether the overall change in the view will be significant or not. For example, in cases where a moderate effect is experienced by a high or very high sensitivity receptor, this may be considered to be significant. Similarly, where a moderate effect is experienced by a very low sensitivity receptor, this may not be considered significant. Where this occurs, further explanation is given within the assessment.

Definition of Effects

A2.30 Taking into account the levels of effect described above, and with regard to effects being either adverse or beneficial, the following table represents a description of the range of effects likely at any one receptor.

Table EDP A2.9: Definition of Effect

Category	Definition of Adverse Effects	Definition of Beneficial Effects
Very Substantial	Typically, the landscape or visual receptor is very highly sensitive with the proposals representing a very high adverse magnitude of change. The changes would be at complete variance with the landscape character and would permanently diminish the integrity of a valued landscape or view.	The removal of substantial existing incongruous landscape or visual elements and the introduction or restoration of highly valued landscape elements or built form which would reinforce local landscape character and substantially improve landscape condition and visual amenity.
Substantial	Typically, the landscape or visual receptor has a very high to high sensitivity with the proposals representing a very high to high adverse magnitude of change to the view or landscape resource. Changes would result in a fundamental change to the landscape resource or visual amenity.	The removal of existing incongruous landscape/visual elements and the introduction or restoration of some valued landscape or visual elements would complement landscape character and improve landscape condition and improve the local visual amenity.

Category	Definition of Adverse Effects	Definition of Beneficial Effects
Major	Typically, the landscape or visual receptor has a high to medium sensitivity with the proposals representing a high to medium magnitude of change. The proposals would represent a material but non-fundamental change to the landscape resource or visual amenity.	The removal of some existing incongruous landscape elements and/or the introduction or restoration of some potentially valued landscape elements which reflect landscape character and result in some improvements to landscape condition and/or visual amenity.
Moderate	Typically, the landscape or visual receptor has a medium sensitivity with the proposals representing a medium magnitude of change. The proposals would result in a slight but non-material change to the landscape resource or visual amenity.	Some potential removal of incongruous landscape features or visual amenity, although more likely the existing landscape and/or resource is complemented by new landscape features or built features compliant with the local landscape and published landscape character assessments.
Minor	Typically, the landscape or visual receptor has a low sensitivity with the proposals representing a low magnitude of change. There would be a detectable but non-material change to the landscape resource or visual amenity.	The proposals would result in minimal positive change to the landscape or visual resource, either through perceptual or physical change, and any change would not be readily apparent but would be coherent with ongoing change and process, and coherent with published landscape character assessments.
Negligible	Typically, the landscape receptor has a very low sensitivity with the proposals resulting in very limited loss or alteration to the landscape resource or change to the view. There would be a barely perceptible change to the landscape resource or visual amenity.	There would be a barely perceptible positive or negative change to the landscape resource or visual amenity.

A2.31 Effects can be adverse (negative), beneficial (positive) or neutral. The landscape effects will be considered against the landscape baseline, which includes published landscape strategies or policies if they exist. Changes involving the addition of large-scale man-made objects are typically considered to be adverse as they are not usually actively promoted as part of published landscape strategies. Accordingly, the assessment of landscape effects as a result of these aspects of the proposed development will be assumed to be adverse, unless otherwise stated within the assessment.

A2.32 Visual effects are more subjective as people's perception of development varies through the spectrum of negative, neutral and positive attitudes. In the assessment of visual effects, the assessor will exercise objective professional judgement in assessing the level of effects

and, unless otherwise stated, will assume that all effects are adverse, thus representing the worst-case scenario.

Appendix EDP 3

Verified Views

Skyline Swansea Luge Track

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1.0 Introduction

1.1. Verified View / Accurate Visual Representation

- 1.1.1.

A Verified View (VV) or Accurate Visual Representation (AVR) is “a still image, or animated sequence of images, intended to convey reliable visual information about a proposed development to assist the process of visual assessment”.¹
- 1.1.2.

This document applies current good practice in preparing verified views of a proposed development. Views are from what is considered to be the most representative viewpoints in the area surrounding the site.
- 1.1.3.

The current practice guides this process is informed by include:
 - The Landscape Institute's, 'Technical Guidance Note 06/19 : Visual Representation of Development Proposals'
 - 'Guidelines for Landscape and Visual Impact Assessment' Third edition April 2013, The landscape institute and Institute of Environmental Assessment and Management.
 - 'London View Management Framework', (March 2012) Published by Greater London Authority.
- 1.1.4.

When displaying images taken with a 50mm lens at A3, It is advised (within the Landscape Institute's Technical Guidance Note 06/19) that the viewing distance for the montages from eye to paper should be 'at arms length' between 50 and 55cm (Landscape Institute TGN 06/19 para 3.8.3) with a Horizontal Field of View of around 39.6°.

In this document, for practical tabled discussions, the viewing distance has been set at 30cm so that the images display a wider HFOV of 150° when printed at extended A3. Extended A3 pages to be printed at 29.7x84.1cm (at 100% scaling) so that the image size width is 80cm.

2.0 Methodology

2.1. Overview

- 2.1.1.

In preparing the verified views/photomontages, accurate photography is required, with survey information recorded, and an accurate model of the application parameters prepared. In simple terms, this allows a 'virtual' viewpoint to be constructed that accurately reflects an actual photograph, which in turn allows a wireline (representing the outline of the proposed development form) or fully rendered image of the proposed development to be accurately superimposed on the existing photograph.

2.2. Photography

- 2.2.1.

In accordance with current guidance, on-site photography records the position (as a grid reference), height of camera lens, camera used, lens type and focal length, field of view, date and time. Photographs were recorded at 1.6 metres above ground level to reflect the pedestrian eye height. Photographs are taken with a fixed 50mm focal length lens attached to a SLR camera (Canon EOS 5D MKiv).
- 2.2.2.

In assessing the impact of development on the landscape it is often necessary to record a panoramic view. A panorama made up from planar photographs is not strictly a 'true panorama' due to distortion encountered from the rectilinear projection of the lens. This is best described by looking through the viewfinder as you rotate the camera, the objects near the centre get larger as they approach the edge of the frame. Accurate 'stitching software' overcomes this effect by distorting each image into a cylindrical projection before aligning and blending, to reflect as accurately as possible the experience of the human eye.

2.3. Survey Information

- 2.3.1.

On site surveying is carried out at the same time that the photographs are taken to record the position and height (Above Ordnance Datum) of the camera and its tripod alongside a range of 6 to 10 physical reference points per viewpoint (such as telegraph poles, road signs, or in the absence of sufficient existing reference points, ranging poles). To ensure the accuracy, the surveyed data was cross-referenced against OS information as well as the topographical site survey. This data is subsequently transferred into computer modelling software to produce an accurate 'virtual' view reflecting the actual panoramic photograph. Reference points are captured by a Total Station (the surveyors on-site equipment) with an electronic distance meter (EDM) which reads slope distances from the instrument to a particular point. These points are used to align the computer image against the photography.

2.4. Scheme Parameters Modelling

- 2.4.1.

The Illustrative Landscape Masterplan on pg5 provides a layout that is reflective of how the proposed application site could be developed, and is therefore considered to be an acceptable basis for verified view production.

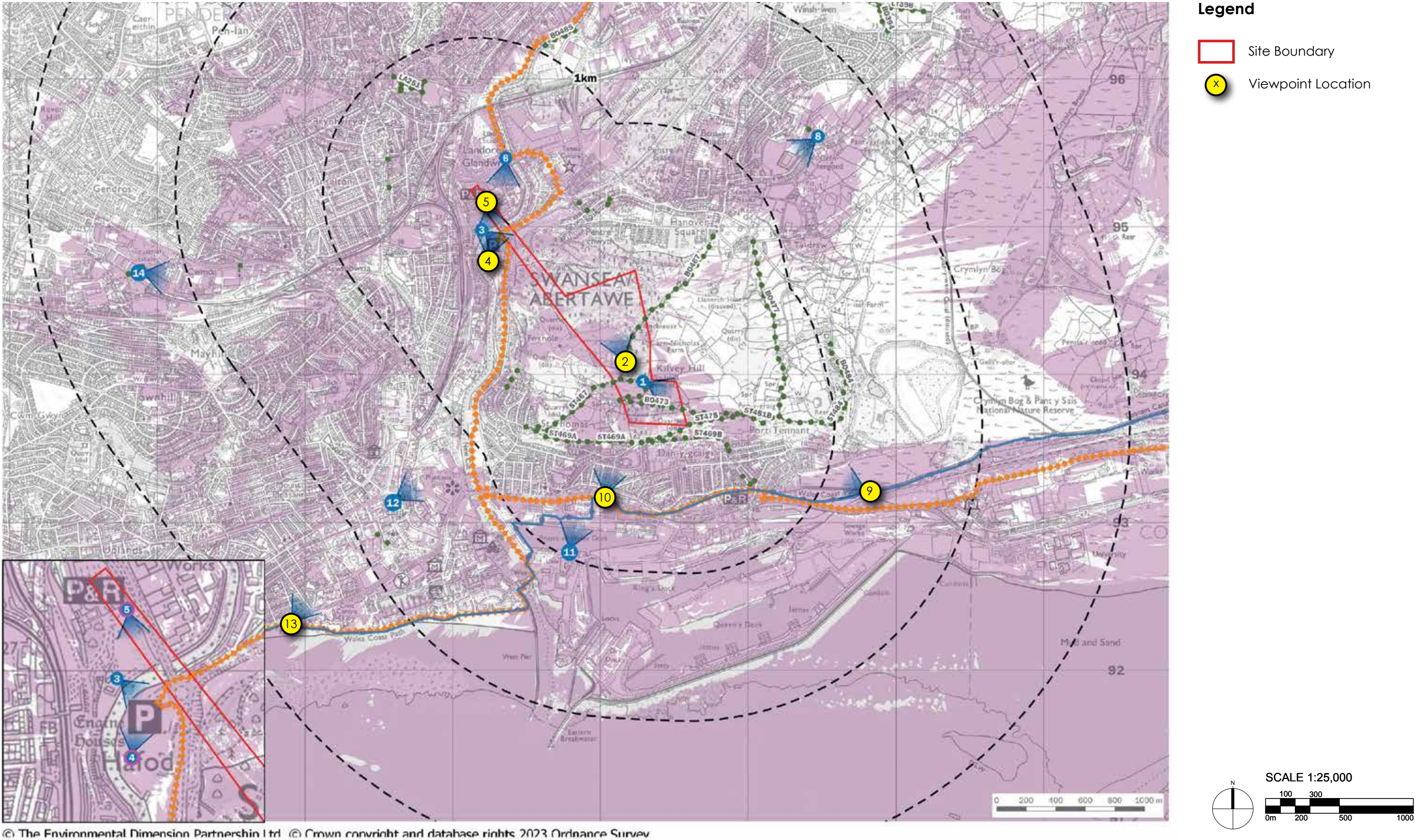
2.5. Camera Matching

- 2.5.1.

Having accurately modelled the scheme, a series of computer generated images are taken from the exact viewpoint locations and have cylindrical projection applied before photo-stitching to match the panoramic photographs, thus creating a 'virtual' panorama of the proposed development. With the virtual and photographic images overlaid with each other, common (surveyed) reference points are used to aligned both the virtual and actual images and the foreground clipping applied.

¹ London View Management Framework March 2012

3.0 Viewpoint Location Plan



4.0 Illustrative Landscape Masterplan



5.0 Viewpoint 2 - Track north from Top of the Hill



National Grid Reference:
267187.058, 194151.177

Camera:
SLR Canon EOS 5D MK IV

Lens:
Fixed 50mm

Height of Camera Lens:
177.72 AOD

Horizontal Field of View:
150 °

Date:
19.03.23

Time:
10.30



Existing Panorama

5.1 Viewpoint 2 - Existing baseline view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



5.2 Viewpoint 2 - Proposed view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



5.3 Viewpoint 2 - Proposed view at year 5

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



5.4 Viewpoint 2 - Proposed view at year 15

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



6.0 Viewpoint 4 - White Rock Heritage Park



National Grid Reference:
266254.010, 194757.247

Camera:
SLR Canon EOS 5D MK IV

Lens:
Fixed 50mm

Height of Camera Lens:
11.58 AOD

Horizontal Field of View:
150 °

Date:
19.03.23

Time:
14.19



Existing Panorama

6.1 Viewpoint 4 - Existing baseline view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



6.2 Viewpoint 4 - Proposed view (new planting not visible in this view)

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



7.0 Viewpoint 5 - Landore Park & Ride



National Grid Reference:
266192.785, 195166.226

Camera:
SLR Canon EOS 5D MK IV

Lens:
Fixed 50mm

Height of Camera Lens:
12.59 AOD

Horizontal Field of View:
150 °

Date:
19.03.23

Time:
13.14



Existing Panorama

7.1 Viewpoint 5 - Existing baseline view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



7.2 Viewpoint 5 - Proposed view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



7.3 Viewpoint 5 - Proposed view at year 5 (no further change at year 15)
Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



8.0 Viewpoint 9 - Wern Fawr Road



National Grid Reference:
268556.992, 193155.378

Camera:
SLR Canon EOS 5D MK IV

Lens:
Fixed 50mm

Height of Camera Lens:
8.87 AOD

Horizontal Field of View:
150 °

Date:
19.03.23

Time:
11.30



Existing Panorama

8.1 Viewpoint 9 - Existing baseline view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



8.2 Viewpoint 9 - Proposed view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



8.3 Viewpoint 9 - Proposed view at year 5

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



8.4 Viewpoint 9 - Proposed view at year 15

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



9.0 Viewpoint 10 - Langdon Road



National Grid Reference:
266715.782, 193023.779

Camera:
SLR Canon EOS 5D MK IV

Lens:
Fixed 50mm

Height of Camera Lens:
10.92 AOD

Horizontal Field of View:
150 °

Date:
19.03.23

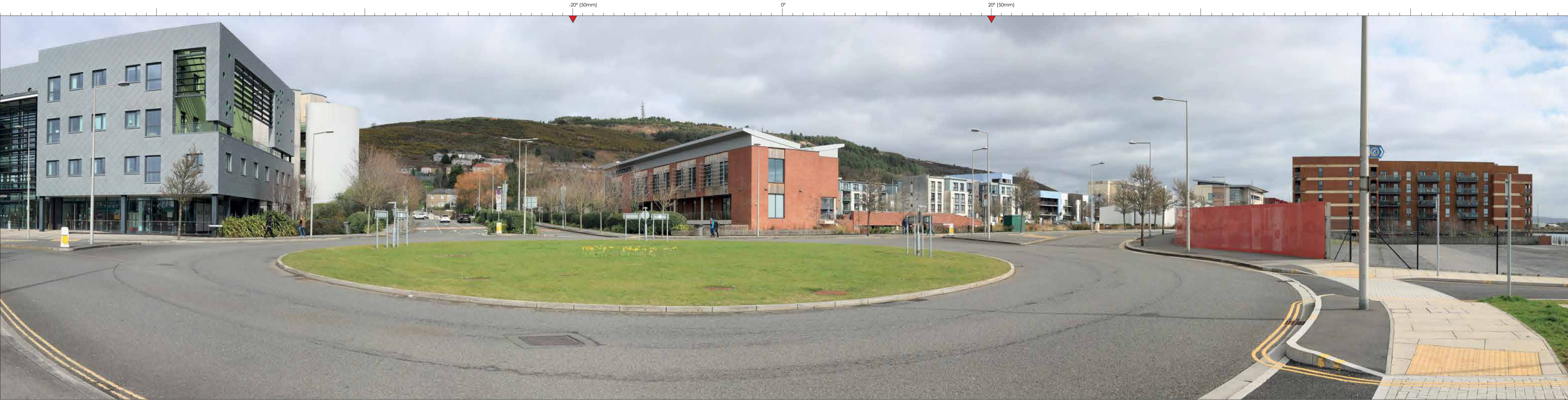
Time:
11.58



Existing Panorama

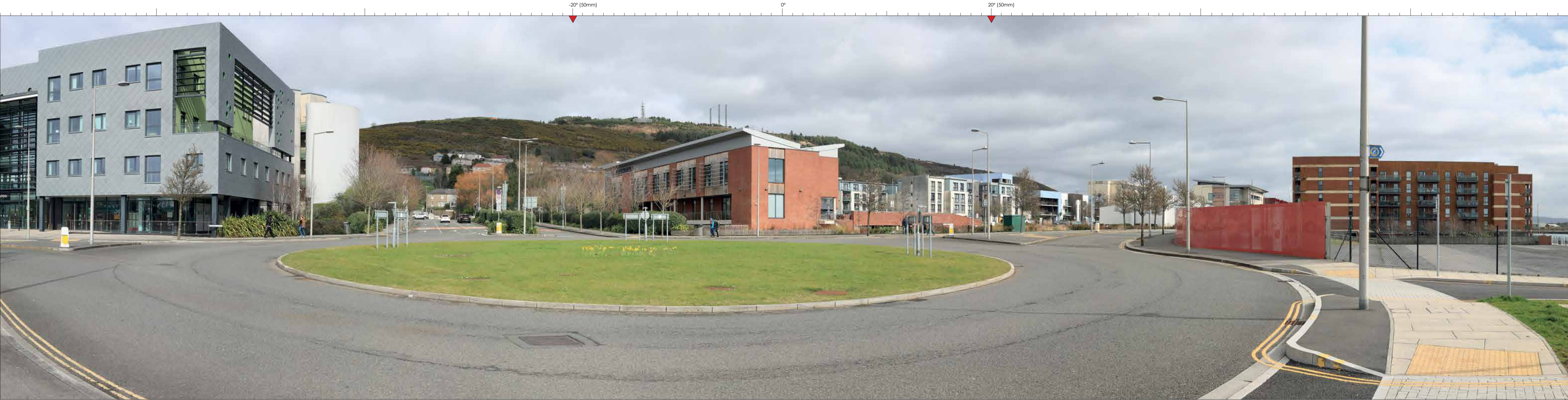
9.1 Viewpoint 10 - Existing baseline view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



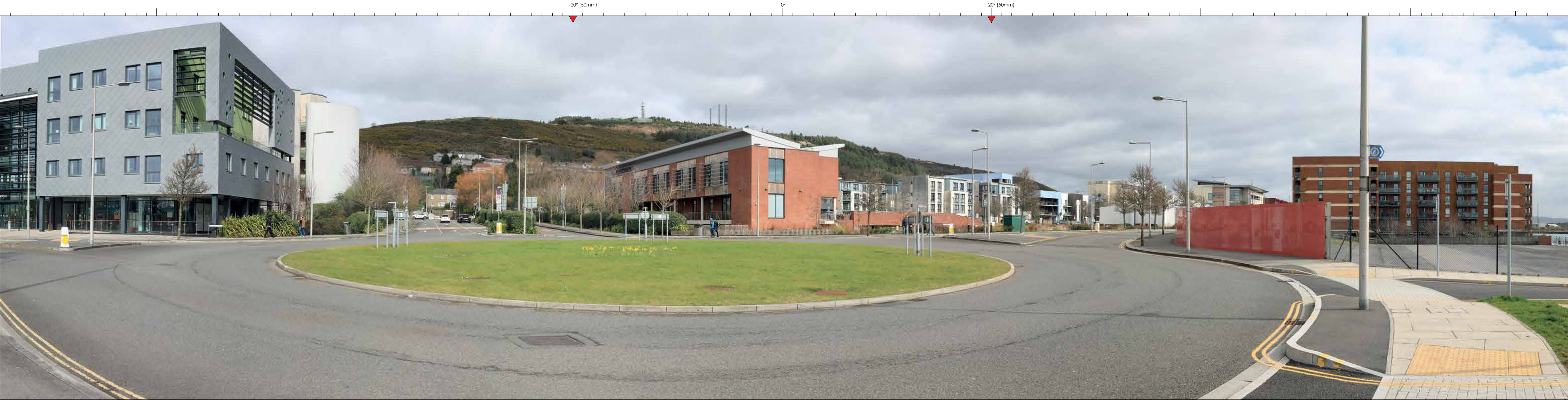
9.2 Viewpoint 10 - Proposed view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



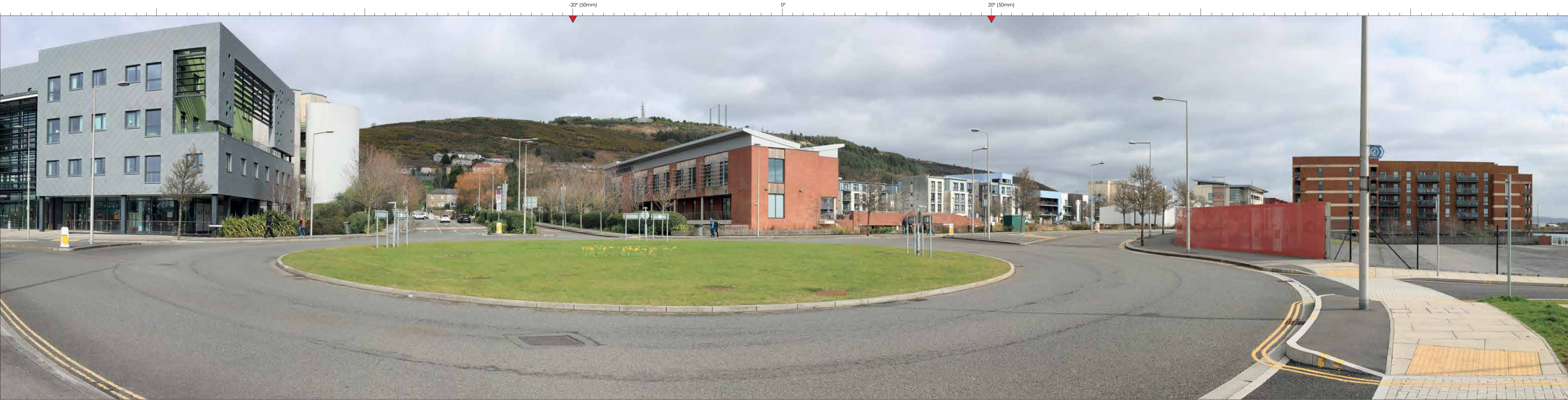
9.3 Viewpoint 10 - Proposed view at year 5

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



9.4 Viewpoint 10 - Proposed view at year 15

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



10.0 Viewpoint 13 - A4067/Swansea Beach walkway



National Grid Reference:
264851.206, 192316.086

Camera:
SLR Canon EOS 5D MK IV

Lens:
Fixed 50mm

Height of Camera Lens:
10.95 AOD

Horizontal Field of View:
150 °

Date:
19.03.23

Time:
12.41



Existing Panorama

10.1 Viewpoint 13 - Existing baseline view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



10.2 Viewpoint 13 - Proposed view

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



10.3 Viewpoint 13 - Proposed view at year 5

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



10.4 Viewpoint 13 - Proposed view at year 15

Viewing Distance at **30cm** - This is the distance from eye to paper to gain a true representation of the image.



Land at Kilvey Hill and Landore Park and Ride Facility, Swansea

Landscape and Visual Addendum: Night-time Appraisal

edp5125_r015a

QA: JHa/MDu_GLe/MWI_070624

1 INTRODUCTION AND CONTEXT

- 1.1 At the request of Swansea City Council (SCC), The Environmental Dimension Partnership Ltd (EDP) has undertaken an appraisal of the development site after dark. This addendum investigates the likely night-time appearance/effects on the site and wider landscape before, during and after development.
- 1.2 In the prior submission of Environmental Statement (ES) Chapter 7, Section 7.9 (Landscape) acknowledges that the development will bring about changes to both the night-time character of the site as well as views to and from the hill and lower Landore Park and Ride area. It was noted that the scheme will comprise both safety/security lighting as well as decorative lighting (used within operational hours), necessary to light the tracks and other aspects of the development, suitable for a large tourist attraction such as this.
- 1.3 The chapter continues to explain that it is EDP's understanding that the lighting of such facilities utilises very sensitive and carefully considered design, using appropriate lamps and deflectors to ensure light spill and light pollution are minimised. These precautions are partly to protect the wildlife of the site and partly to minimise night-time effects on Landscape Character and Visual Amenity.
- 1.4 Notwithstanding this, within the report, it is acknowledged that the anticipated night-time effects (during operational hours) on the site will echo those experienced in the daytime. As such, it is anticipated that there will be significant effects on the character of the site and the overall character of Kilvey Hill. Additionally, it is envisaged that on-site public users will experience a significant effect to their visual amenity, whether on the Public Right of Way (PRoW) routes or within the Open Access Land (OAL).
- 1.5 Beyond this, the section concludes that significant landscape and visual effects are likely to be limited to receptors on Kilvey Hill, given the heavily urbanised surroundings and visual envelope which are intensely lit through a range of contributors. While the lighting of the Skyline facilities may be visible in views from around the city, this was not considered to give rise to significant night-time effects.
- 1.6 This addendum continues to explore the baseline position of the site after dark as well as any arising effects on character and visual amenity following development.

2 LANDSCAPE CHARACTER (BASELINE): SITE CONTEXT AFTER DARK

- 2.1 Kilvey Hill is assessed within **Technical Appendix EDP 7.1** as being high sensitivity. It is identified as being a high-quality landscape resource with clear amenity value to the local community. However, it is subject to limited management of its predominantly non-native tree stock and contains detractors such as existing telecommunication and energy infrastructure alongside anti-social activity.
- 2.2 The primary existing light source within the site is the pilot light on top of the summit's telecommunication tower. Whilst it is crucial for aviation, it also provides the people of Swansea with instant legibility to the Swansea skyline, and in effect, the location of Kilvey Hill. The site holds many of its qualities and characteristics after dark, such as expansive outward views from the summit, encompassing views across Swansea Bay and the Bristol Channel. **Image EDP 2.1** below shows this view from one of the available vantage points.



Image EDP 2.1: View west from Kilvey Hill Summit at dusk.

- 2.3 As dusk sets, Swansea City and beyond illuminates along the coast, creating an atmospheric view for the few users of Kilvey Hill, and specifically PRow B0467 at this time of night. Whilst the views of Swansea remind pedestrians that they're not far from dense urban form, users of the hill (and footpath) may attribute a sense of remoteness to the area in the daytime. Darkness at the hill changes this characteristic somewhat to an unsafe and intimidating setting, without surveillance. The frequency of users on the PRow route also reduces after dark given the above night-time characteristics. Whilst **Technical Appendix 7.1** does not assess the character of the site at night, this addendum can conclude that it is no more sensitive after dark.

3 VISUAL AMENITY (BASELINE): SITE CONTEXT AFTER DARK

- 3.1 This section is supported by **Appendix EDP 1** (Night-time Photoviewpoints). Photography, namely **Night-time Photoviewpoints EDP A, B, 2, 5 and 10**, were recorded between the hours of 22:00pm and 01:00am on 29 and 30 May 2024 respectively.
- 3.2 The application site contains and is surrounded by a large range of receptor groups, from pedestrians on PRow and Coastal Path routes to cyclists and vehicular users of high-speed carriageways. Users of the PRow network, particularly B0467 (on site) already experience close range and extensive views of the site. The route descends from the top of Kilvey Hill to the construction access road, previously enhanced for the neighbouring solar farm. Throughout the route, areas of Swansea's suburbs are visible and illuminated at night in the distance. **Night-time Photoviewpoint EDP 2** illustrates a typical view north-west towards the distant settlements of Morriston and Llangyfelach. In the foreground of the images are darker, more natural areas of Kilvey Hill, where the mostly coniferous plantation woodland breaks up available views outwards. For the most part, this is a steep, transitional route without many open and obvious views out, heavily surrounded by vegetation.
- 3.3 **Night-time Photoviewpoint EDP 5** shows a view from the site's northern portion, at Landore Park and Ride. This image illustrates the heavily urban surroundings with major roadways, and street lighting drawing the eye within the image. Kilvey Hill sits within the backdrop of the image, however, due to the radiance of the road network, it is difficult to distinguish.
- 3.4 The alternative side of the site, near SA1, usually allows for clear views up towards the summit of Kilvey Hill. After dark, however, as shown in **Night-time Photoviewpoint EDP 10** (taken from the Wales Coastal Path), all that is perceptible of the hill is the red pilot light which sits upon the telecommunication tower. The hill is otherwise not clearly discernible, due to foreground light along Fabian Way.
- 3.5 Included within the council's feedback was the request for an additional viewpoint, from the Swansea Arena podium. EDP have since captured this view, which is contained within addendum (report reference: edp5125_r014), however, relevant to this appraisal was this view at night-time. **Night-time Photoviewpoint EDP B**; the Swansea Arena is found within the city centre, one of the most densely built and lit up areas of Swansea. Visible within the view are the Copr Bay bridge and Swansea Bay Arena. The local Tesco and associated retail area can be seen from the podium. As the image portrays, major road and public realm lighting illuminate this part of Swansea to a point where Kilvey Hill is unrecognisable in the distance. However, the pilot light mentioned above stands within the very distant backdrop of the image and signifies the position of Kilvey Hill within the surrounding context.

Natural Resources Wales' Dark Skies and Light Pollution Study

- 3.6 Natural Resources Wales (NRW) have undertaken a Dark Skies and Light Pollution study covering the entirety of Wales. It classifies each area under a spectrum of radiance levels.

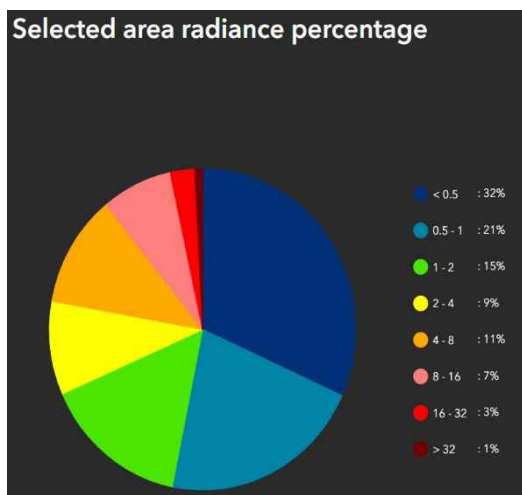


Image EDP 3.1: Swansea Area Radiance Percentage Key - Wales Dark Skies (arcgis.com).

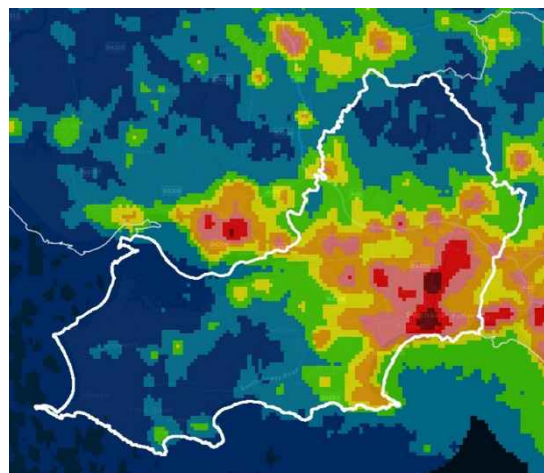


Image EDP 3.2: Swansea Local Planning Authority (LPA) Area Marked on NRW Dark Skies Map - Wales Dark Skies (arcgis.com).

- 3.7 Whilst the scale of **Image EDP 3.2** above is large, the LPA unitary boundary illustrates the range of light pollution levels across the county. The site, which sits within an area spanning three of the four most radiant areas of Swansea is surrounded and influenced by the urban setting of the city.
- 3.8 Of relevance to this appraisal is how well the application site is seen from the 'darkest' of areas, which occupy 32% of Swansea's landscape. **Night-time Photoviewpoint EDP A** has been taken from a rural road west of Upper Lliw Reservoir (and from within darkest radiance threshold). It is the closest point of 'dark blue' as shown above to the site and measures 9.3km from the site's most northern tip. The photoviewpoint shows the influence of Swansea's suburbs, south of the M4, at night-time. Despite being in a rural area of 'dark sky', the influence of Swansea City and its surrounding suburbs is unmistakable in the landscape. The site, which sits in the far distance of the image can only be recognised by the pilot light at the top of the telecommunications tower. This light is elevated but when experienced at such a great distance, it forms a minute element of the night-time landscape.

4 PROPOSED LIGHTING STRATEGY

- 4.1 A proposed lighting strategy has been undertaken by Ramboll for the new leisure development, contained at **Appendix EDP 2**. This document sets out the parameters for any forthcoming designs and to have regard for the following principles:
- Provide a level of lighting on-site that meets the client's brief, and requirements set out within the relevant British Standards;
 - Provide safe conditions across the site;
 - Reduce any adverse impact of the installation on neighbouring areas; and
 - Reduce any adverse impact on the local environment, particularly nearby wildlife sites, protected species and their habitats.

4.2 Lighting proposals for the site's facilities are contained at **Appendix EDP 2**.

Operational Hours

4.3 This appraisal considers night-time effects in line with the worst-case scenario, however, as with most developments of this kind, these are limited to opening hours and daytime effects.

4.4 The table below illustrates the proposed opening hours for summer, winter and shoulder seasons with respect to each different element of the scheme.

Table EDP 4.1: Indicative Seasonal Opening Hours

Attraction	Summer Opening	Winter Opening (plus shoulder seasons with daylight saving)
Sky Swing	9am – 9pm (or darkness)	9am – 7pm
Luge Runs	9am – 10pm	9am – 7pm
Zipwire	9am – 9pm (or darkness)	9am – 7pm
Cable Cars	9am – 12am	9am – 12am (weekdays earlier)
Food Hall	9am – 12am	9am – 12am (weekdays earlier)
Mountain Biking Trails	Unlit and open to the public – run as long as people feel safe to do so.	Unlit and open to the public – run as long as people feel safe to do so.
Entire facility inc. for Staff leaving	7am – 1am	7am – 1am
Typical opening hours confirmed in 'Business Profile Report'	9am – 11pm, 7 days p/week, 365 days p/year. Note: seasonal variation in operating hours will apply.	

4.5 Noting the above, the scheme (and subsequent lighting) will implement control measures for operation. Assets such as the sky swing and zipwire will not run after dark in the summertime. Luge runs will proceed until 10pm with cable cars and the food hall operating until 12am. Most pertinent to this appraisal will be the wintertime operational hours where although closing times will be earlier, daylight hours are greatly reduced, and the scheme will be in operation after dark. The table below confirms the typical sunrise and sunset hours equinox and solstice events.

Table EDP 4.2: Indicative Sunrise/Sunset Times Throughout Any Given Year

Event (Approx. Date)	Approx. Sunrise	Approx. Sunset	Approx. Hours of Daylight
Spring Equinox (20 March)	06:15am	18:26pm	12hr11min
Summer Solstice (21 June)	04:58am	21:39pm	16hr41min
Autumn Equinox (22 September)	06:59am	19:11pm	12hr12min
Winter Solstice (21 December)	08:16am	16:06pm	7hr50min

- 4.6 By using **Tables EDP 4.1** and **4.2**, it is clear that the operation of the proposed development will occur vastly within daylight hours. Where the shortest days do occur, near winter solstice, operations of the most prominent elements of the scheme at night (such as the luge runs) will cease at 7pm. This leaves only a small window of overlap where the scheme will be fully lit, when compared to the overall operational hours of the attraction.

5 DISCUSSION OF EFFECTS

Effects on Landscape Character After Dark

- 5.1 The proposed development would bring about a large change to the character of the site and Kilvey Hill itself. The introduction of an attraction such as this will alter some of the key landscape characteristics of the hill. Illuminated luge tracks, gondolas, cable cars and a food hall will bring a built and vibrant disturbance to what is currently a quiet, secluded, but relatively hostile place after dark. Certain qualities of the hill's landscape character will remain, such as the panoramic views across Swansea Bay from Kilvey Hill's summit. The proposed development would in many ways enhance the accessibility of these views through improved access, for many more people to enjoy. Naturally, although the night-time character of the hill will alter, the attractions and the larger presence of people within the site will create a new and vibrant atmosphere. Despite these positive impacts, it is still envisaged that the change to the site character will result still in **significant** adverse effects in landscape terms, after dark.
- 5.2 Further afield, within the site's surrounding context, the proposed impacts are not anticipated to alter the character greatly from what is existing. The industrial and commercial character surrounding the site as well as the nearby residential settlements will not change post-development. Significant effects will not occur on the character of the site's wider context, however.
- 5.3 Construction effects, if continued through to darkness, would share the levels of impact yielded within operation, albeit in a staged approach. The character of the site will be significantly impacted through noise and lighting, though this will be a temporary effect. A construction method statement will regulate the operational hours of the build, which will include minimal activity after dark, compared to the daytime.

Effects on Visual Amenity After Dark

- 5.4 The development of Kilvey Hill in the context of this application will bring about change to many receptors in visual terms. The greatest impact will be those using PRoW routes through the site as well the existing OAL. Similarly to the daytime effects contained within **ES Chapter 7**, PRoW B0467 is likely to host large changes in visual terms, which is considered **significant**. For PRoW routes B0466 and B0473, however, **no** significant effects are anticipated after dark, due to the northern aspect of Kilvey Hill, where proposed development is less illuminated and visible compared to in the daytime.
- 5.5 Beyond users of B0467, no significant effects are anticipated for nearby receptors for a range of reasons, whether it be through a lack of intervisibility through existing landform/landscape fabric or pre-existing lighting impacts through urban form. It is not anticipated that there will be any significant impacts to Wales Coastal Path and National Cycle Route users as well as pedestrians within nearby vehicles and residential dwelling groups, mainly due to the ranging elevation and existing urban form (and light) adjacent to the site.
- 5.6 **Night-time Photoviewpoint EDP A** indicates a view from an area of 'dark sky' 9.3km north of Swansea. Despite being a sensitive night-time receptor, effects brought about by development at this point are negligible. It can be seen within the photoviewpoint that when looking towards the site, the light pollution across many of Swansea's suburbs dominates views from this direction. In the far distance, the pilot light from the satellite tower (at Kilvey Hill summit) can be seen and forms a miniscule element of the view. Proposals may be visible in the far distance, however, would be seen in the context of the illuminated patterns found at a similar distance, which are discernible in front of the hill. No significant night-time effects were found for receptors within any of the 'dark sky' locations. Additionally, it should be noted that receptors at this location may value the immediate landscape for its darkness, and therefore may also appreciate distant illuminated views towards Swansea which strengthen the understanding and sense of place experienced within the darker skies area.

6 CONCLUSION AND SUMMARY

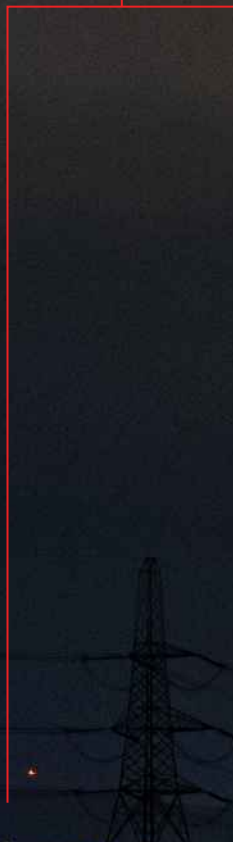
- 6.1 This appraisal conducted by EDP in response to SCC's feedback has evaluated the anticipated night-time impacts of a proposed development on Kilvey Hill. The proposals, which include both safety and decorative lighting, will significantly alter the night-time character of the site at close range, especially impacting users of PRoW routes and the OAL. Despite the sensitive lighting design aimed at minimising light spill and pollution, the development is expected to cause notable night-time effects, similar to those discovered in daytime, within the site and Kilvey Hill's immediate context.
- 6.2 However, due to the surrounding urban environment, broader landscape make-up and existing light spill of nearby Swansea suburbs, wider night-time effects are expected to be limited. NRW's Dark Skies and Light Pollution study found that the site sits within three of the four most 'radiant' areas of Swansea County. Some of Swansea's darkest landscape is, however, found 9.3km to the north of the site. The effect of development at Kilvey Hill, at

such a distance and in the context of Swansea's heavily lit city and suburbs, is found to have little to no impact on receptors in this area.

- 6.3 The proposed lighting strategy aims to balance safety and functionality while minimising wider lighting impacts on receptors. Operational opening hours will reduce when full night-time effects will be experienced and can be carefully controlled. While the development will result in significant change to elements of character and visual amenity on-site at night-time, the development brings with it many benefits after dark due to the proposed change in use. The proposals will enhance the safety and accessibility for users after dark, allowing many more people to enjoy the panoramic night-time views across Swansea Bay and beyond. The presence of people and lighting throughout areas of the hill could reduce the opportunity for anti-social behaviour and should encourage the use of the hill across a wider timeframe.
- 6.4 It should be emphasised that proposals and their appearance (especially at night-time), are subjective. A range of opinions will be held regarding the lighting design, colours and appropriateness of the scheme in its setting. Furthermore, and on the theme of subjectivity, Guidelines for Landscape and Visual Impact Assessment Third Edition recognises that a significant portion of the assessment process attributes itself to professional opinion. This has been applied in the context of this appraisal process.
- 6.5 To conclude, it is EDP's opinion that night-time impacts will **not** surpass those experienced within the daytime (contained within ES Chapter 7) and although the scheme may increasingly draw the eye at night-time, the downgraded sensitivity of receptors after dark counteracts this. EDP therefore consider the scheme acceptable in landscape and visual terms after dark.

Appendix EDP 1
Night-time Photoviewpoints
(edp5125_d040 03 June 2024 JFr/JHa)

Approximate extent of site



To be viewed at comfortable arm's length. Accuracy within the limits of photostitching software at low light levels.



the environmental
dimension partnership

Registered office: 01285 740427
www.edp-uk.co.uk
info@edp-uk.co.uk

Grid Coordinates: **267093, 204484**
Date and Time: **29/05/2024 @ 23:22**
Projection: **Planar**
Visualisation Type: **1**

Horizontal Field of View: **39.6°**
Height of Camera: **1.6m**
Make, Model, Sensor: **Sony A7 II, FFS**
Enlargement Factor: **100% @ A3**

Direction of View: **S**
Distance: **9.3km**
aOD: **254m**
Focal Length: **50mm**

date
drawing number
drawn by
checked
QA
03 JUNE 2024
edp5125_d040
JFr
JHa
RBa

client **Skyline Enterprises Ltd**
project title **Land at Kilvey Hill and Landore Park and Ride Facility, Swansea**
drawing title **Night-time Photoviewpoint EDP A**

Approximate extent of site



To be viewed at comfortable arm's length. Accuracy within the limits of photostitching software at low light levels.



the environmental
dimension partnership

Registered office: 01285 740427
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Grid Coordinates: 265537, 192589
Date and Time: 29/05/2024 @ 22:28
Projection: Planar
Visualisation Type: 1

Horizontal Field of View: 39.6°
Height of Camera: 1.6m
Make, Model, Sensor: Sony A7 II, FFS
Enlargement Factor: 100% @ A3

Direction of View: NE
Distance: 1.9km
aOD: 4m
Focal Length: 50mm

date
drawing number
drawn by
checked
QA
03 JUNE 2024
edp5125_d040
JFr
JHa
RBa

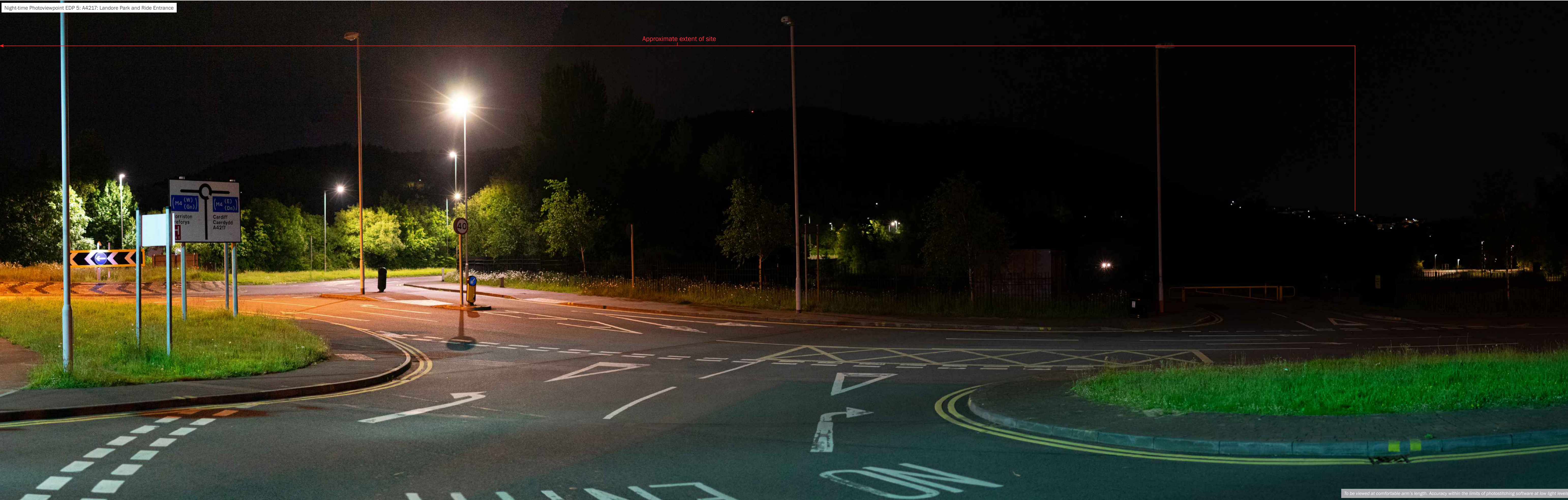
client Skyline Enterprises Ltd
project title Land at Kilvey Hill and Landore Park and Ride Facility, Swansea
drawing title Night-time Photoviewpoint EDP B



Night-time Photoviewpoint EDP 2: PRoW B0467

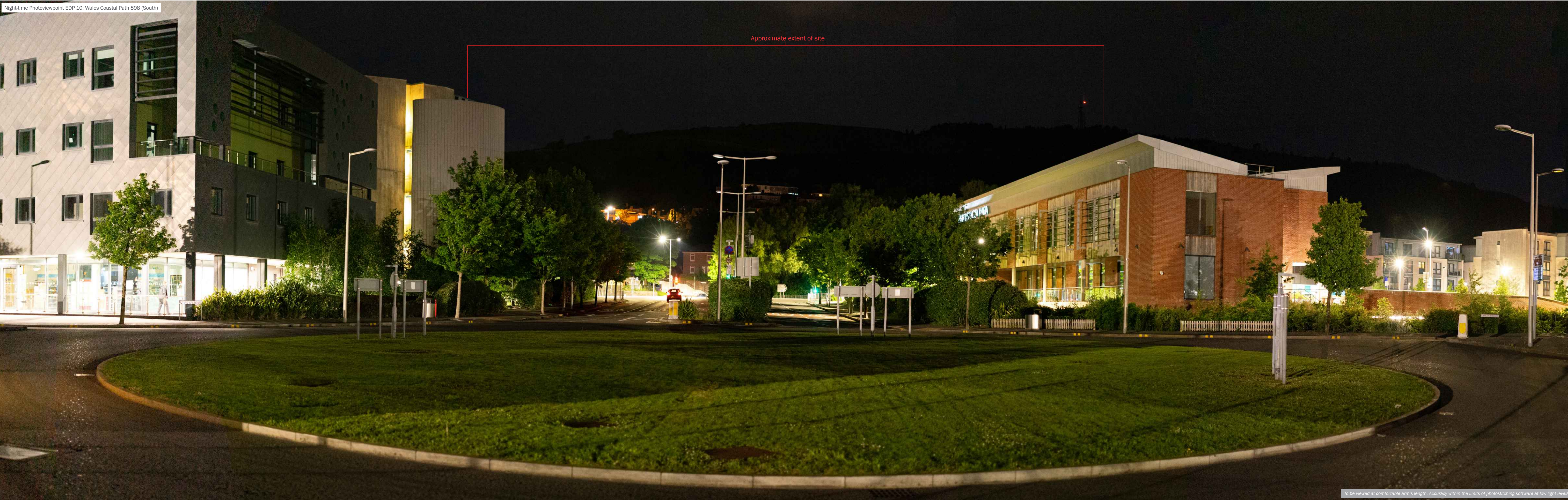
Approximate extent of site

To be viewed at comfortable arm's length. Accuracy within the limits of photostitching software at low light levels.



Night-time Photoviewpoint EDP 5: A4217: Landore Park and Ride Entrance

To be viewed at comfortable arm's length. Accuracy within the limits of photostitching software at low light levels.



Appendix EDP 2

External Lighting Assessment

Intended for
Skyline Swansea

Document type
Report

Date
April 2023

Document no:
SSL-RAM-XX-XX-RP-E-00001

SKYLINE SWANSEA EXTERNAL LIGHTING ASSESSMENT

SKYLINE SWANSEA EXTERNAL LIGHTING ASSESSMENT

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Version **1.4**
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Prepared by ---
Checked by ---
Approved by ---
Description **External Lighting Assessment**

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1	14/02/23	OO	SP	MW	First issue
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3	20/04/23	DW	SP	MW	Third issue
4	14/07/23	DW	SP	MW	Fourth Issue
5	14/08/23	DW	SP	MW	Fifth Issue

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1. EXECUTIVE SUMMARY

New leisure development comprising a gondola station at the park and ride site, with gondola and associated infrastructure transporting visitors to the top of Kilvey Hill, where a new food and beverage offering, together with leisure activities and supporting infrastructure and associated works.

This report has been prepared to accompany an full planning application for the lighting design for the Skyline Swansea development has been provided to ensure that this full planning application has had regard for the following principles, which can inform detailed design and reserve matters stage:

- Provide a level of lighting on site that meets the clients brief, and requirements set out within the relevant British Standards.
- Provide safe conditions across the site.
- Reduce any adverse impact of the installation on neighbouring areas.
- Reduce any adverse impact on the local environment, particularly nearby wildlife sites, protected species and their habitats.

This report shall be submitted to the client and Swansea Council Environment and Lighting department for review and subsequent updates to the lighting design shall follow to meet their requirements.

This report has taken into consideration the following documents: – 221207 – Draft Ecology Report and 230131 – Woodland Management Strategy.

2. EXTERNAL LIGHTING

2.1 Introduction

The overall objective of the scheme has been to minimise the lighting impact, whilst maintaining health and safety considerations both in terms of its location and the ecological interest of the area.

As part of the design development, the following design considerations as to how the scheme might evolve at reserve matters stage:

- Energy Efficiency
- Light Pollution
- Light Spill
- Security
- Aesthetics

To provide an energy efficient solution, we would propose that all external luminaires are of an LED type. This would reduce energy consumption and maintenance intervals.

Lighting for the car park, waiting and circulation areas detailed below should be designed in accordance with BS EN 13201-1 and considering BS EN 12464-2 requirements. The Institution of Lighting Professionals (ILP) 'Guidance Note for The Reduction of Obtrusive Light' should be observed.

At detailed design stage lighting columns should be specified at a height of 4 metres and a combination bollards and upward light fitting in parts of the circulation areas of the premises. Landore Park and Ride Car Park shall be provided with TRT Aspect Lighting Columns to be in accordance with the adoptable standard. The luge tracks shall be designed with a (colour display) spotlight mounted on a 1 metre pole. The gantry support for the gondola shall have upward spotlight highlighting the structure and shall be designed to minimise the light spill beyond the tracks and the chairlift gantry structure.

This report uses an illustrative layout to demonstrate how a scheme of lighting might be implemented. The final lighting scheme shall be developed further following the review and comments from the client and local environmental council.

The maintenance factor used in the modelling is in accordance with BS EN 12464-2 requirements.

Light spill from buildings is not included within this analysis as the layout of the premises is indicative. This is to be considered at a later stage of the design with relevant thresholds achieved (less than 0.5 lux beyond the boundary of the site footprint). Considerations should include design details on buildings, reduction in extent of glazing and the use of automated black out blinds or low transmittance glazing.

3. ASSESSMENT

3.1 Lighting Level Criteria

Lighting is proposed to be provided to the carpark and sitewide of the Skyline Swansea premises and for the lighting level on the horizontal plane, the guidance within BS EN 13201-1 and BS EN 12464-2:2014 has been used. For the calculation and average illuminance of 20lux with a uniformity of 0.4 has been utilised for the roadways, 10lux with a uniformity of 0.4 for the cycleways and 5lux with a uniformity of 0.25 for the walkways. Section 5.1.4 in the table below shall be taken into account at any junction between the carpark and the main roads.

Table 5.1 — General requirements for areas and for cleaning at outdoor work places

Ref. no.	Type of area, task or activity	$\bar{E}_m$ lx	U_o —	R_{GL} —	R_a —	Specific requirements
5.1.1	Walkways exclusively for pedestrians	5	0,25	50	20	
5.1.2	Traffic areas for slowly moving vehicles (max. 10 km/h), e.g. bicycles, trucks and excavators	10	0,40	50	20	
5.1.3	Regular vehicle traffic (max. 40 km/h)	20	0,40	45	20	At shipyards and in docks, R_{GL} may be 50
5.1.4	Pedestrian passages, vehicle turning, loading and unloading points	50	0,40	50	20	
5.1.5	Cleaning and servicing	50	0,25	50	20	All relevant surfaces

Figure 1 - Table excerpt from BS EN 12464-2.

3.1.1 Luminaires

Luminaire Type

Luminaires will be low energy LED and low intensity fittings. Column and wall luminaires have been selected with low ULR where possible and be directional to provide lighting only on the footpath and road ways. Luminaires have been selected for the following merits:

- Be low Kelvin colour; and
- Directional light distribution selected on areas intended to be lit; and
- Be Low intensity LED; and
- In accordance with Swansea's Council Adoptable Lighting Standard where applicable.

Reference of Skyline Luge luminaires should be made to Luminaire Schedule included within this document.

3.2 Lighting pollution

3.2.1 Lighting pollution and proposed vertical calculation surfaces

To safeguard and enhance the night-time environment it is necessary to control obtrusive light (also known as light pollution), which can present physiological and ecological problems to surroundings and people.

We have applied the limits and guidance within (ILP) 'Guidance Notes for The Reduction of Obtrusive Light' (extract below).

Where the site is located, we will assume an E2 zone (rural area). The limit on illuminance on vertical plane is no greater than 5 Lux. We have had no indication of a curfew allowance and therefore the scheme should aim for the normal pre-curfew limits to the boundary of the development.

Table 3 (CIE 150 table 2): Maximum values of vertical illuminance on properties.						
Light technical parameter	Application conditions	Environmental zone				
		E0	E1	E2	E3	E4
Illuminance in the vertical plane (E_v)	Pre-curfew	n/a	2 lx	5 lx	10 lx	25 lx
	Post-curfew	n/a	<0.1 lx*	1 lx	2 lx	5 lx

Table 2: Environmental zones

Zone	Surrounding	Lighting environment	Examples
E0	Protected	Dark (SQM 20.5+)	Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places
E1	Natural	Dark (SQM 20 to 20.5)	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc.
E2	Rural	Low district brightness (SQM ~15 to 20)	Sparsely inhabited rural areas, village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well inhabited rural and urban settlements, small town centres of suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night-time activity

Notes:

1. Where an area to be lit lies on the boundary of two zones the obtrusive light limitation values used should be those applicable to the most rigorous zone.
2. Rural zones under protected designations should use a higher standard of policy.
3. Zone E0 must always be surrounded by an E1 Zone.
4. Zoning should be agreed with the local planning authority and due to local requirements a more stringent zone classification may be applied to protect special/specific areas.
5. SQM (Sky Quality Measurements) referenced by the International Dark-Sky Association (IDA), the criteria for E0 being revised in mid 2019 but not retrospective.
6. Astronomical observable dark skies will offer clearer views of the Milky Way and of other objects such as the Andromeda galaxy and the Orion Nebula.
7. Although values of SQM 20 to 20.5 may not offer clear views of astronomical dark sky objects such as the Milky Way, these skies will have their own relative intrinsic value in the UK.

3.2.2 Proposed vertical calculations – Luge Tracks & Food Hall Circulation Area

To test the impact of the obtrusive light levels, we provided vertical calculation surfaces in red as shown in the figure below. The scheme is an full planning application, the following has been based on an indicative layout to demonstrate how the scheme could be appropriately lit.

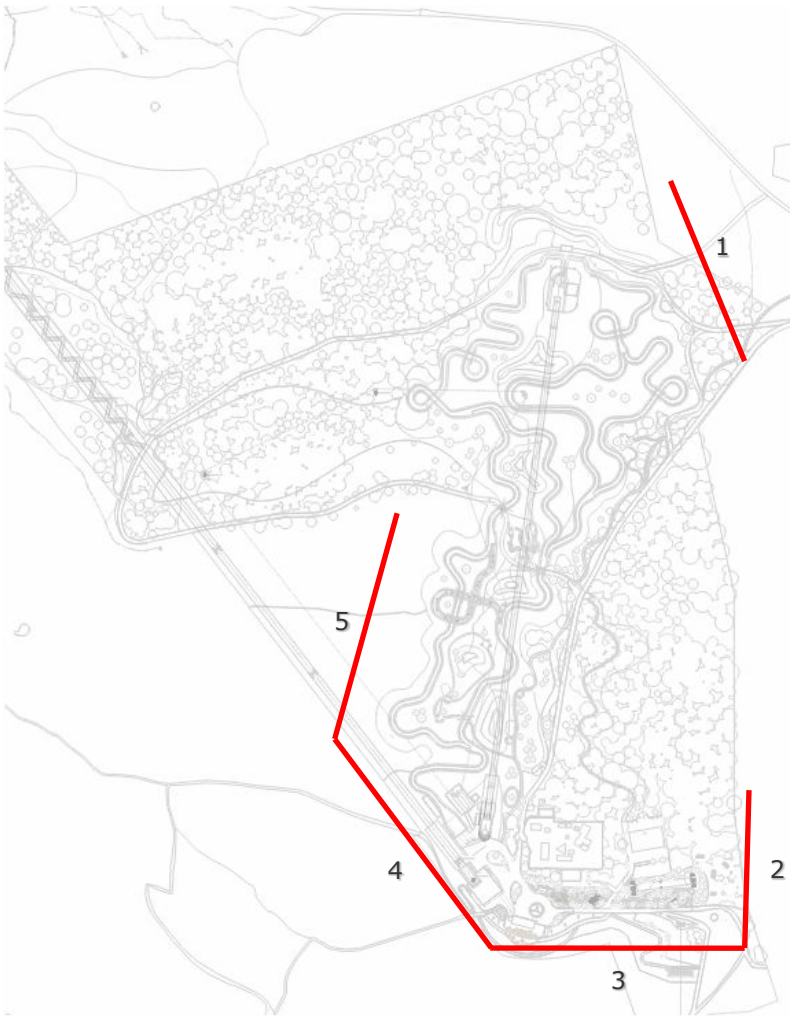


Figure 2 – Top Station Site Wide Calculation Surfaces

Surface Designation	Height	Width	Position in rapport with the boundary line
Vertical Surface 1	10m	160m	-
Vertical Surface 2	10m	150m	-
Vertical Surface 3	10m	200m	-
Vertical Surface 4	10m	200m	-
Vertical Surface 5	10m	140m	-

Table 1 – Top Station Calculation Surface

3.2.3 Proposed calculations – Car Park & Bottom Station Circulation Area

To test the impact of the obtrusive light levels, we provided vertical calculation surfaces in red as shown in the figure 3.1. The scheme is an full planning application, therefore the following has been based on an indicative layout to demonstrate how the scheme could be appropriately lit.

It is anticipated that the south end of the existing car park is where major upgrade of the car park lighting will be carried out. A detailed survey shall be recommended to determine the extent of car park lighting to be upgraded. Our calculation used luminaires compatible to council specification for the adoptable parking areas.



Figure 3.1 – Bottom Station Vertical Calculation Surfaces

Surface Designation	Height	Width	Position in rapport with the boundary line
Vertical Surface 1	10m	75m	5m
Vertical Surface 2	10m	55m	5m
Vertical Surface 3	10m	25m	5m
Vertical Surface 4	10m	40m	5m
Vertical Surface 5	10m	75m	5m
Vertical Surface 6	10m	75m	5m

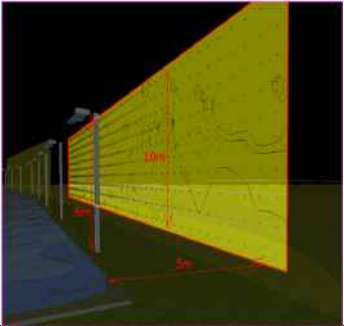
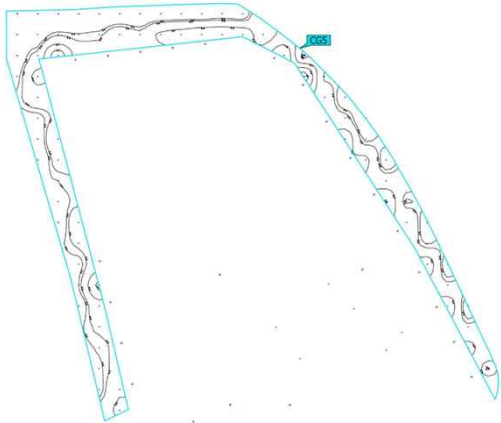


Table 2 – Top Station Calculation Surface

3.2.4 Proposed horizontal calculation – Car Park & Bottom Station Circulation Area

To test the impact of the obtrusive light levels, we provided horizontal calculation surface covering the outside boundary area as indicated below in the figure 3.2.



Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
OUTSIDE PERIMETER Perpendicular illuminance	3.04 lx	0.13 lx	11.4 lx	0.043	0.011	CG5

Figure 3.2 – Bottom Station Horizontal Surface Area (Calculated Values)

3.2.5 Proposed vertical and horizontal calculations – Gondola Gantry

To test the impact of the obtrusive light levels, we propose 1No. vertical calculation surfaces (in red) and the horizontal calculation surfaces as shown (in blue) in the figure below. A section between a single Gondola gantry and a 10 meter site boundary has been utilised in the assessment to demonstrate light spill shall be kept with the value recommended by ILP.

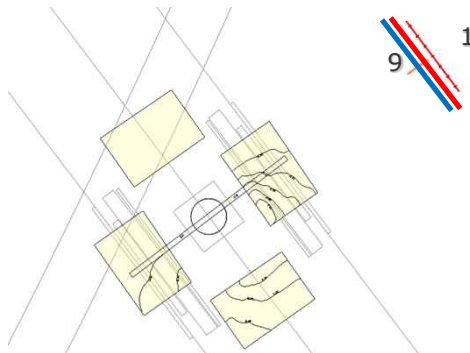


Figure 4 – Gondola Gantry Calculation Surfaces

Surface Designation	Height	Width	Position in rapport with the boundary line
Vertical Surface 1	10m	20m	10m

Table 3 – Top Station Calculation Surface

3.3 Vegetation

Existing or proposed vegetation has conservatively not been included in the lighting assessment.

4. RESULTS

4.1 Top Station

4.1.1 Vertical Surface 1

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
1.46	31.8	0.000	0.00

4.1.2 Vertical Surface 2

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
0.19	3.58	0.014	0.074

4.1.3 Vertical Surface 3

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
0.17	2.65	0.013	0.076

4.1.4 Vertical Surface 4

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
0.79	5.02	0.11	0.14

4.1.5 Vertical Surface 5

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
0.98	1.87	0.65	0.66

4.2 Bottom Station

4.2.1 Vertical Surface 1

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
3.53	21.6	1.29	0.37

4.2.2 Vertical Surface 2

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
3.72	12.1	0.91	0.24

4.2.3 Vertical Surface 3

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
2.67	6.64	1.02	0.38

4.2.4 Vertical Surface 4

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
2.72	7.93	0.51	0.19

4.2.5 Vertical Surface 5

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
3.02	9.1	0.70	0.23

4.2.6 Vertical Surface 6

Average Lux Level	Maximum Lux Level	Minimum Lux Level	Uniformity
3.93	12.2	0.63	0.16

5. SUMMARY OF RESULTS

From the calculation output the development can achieve a maximum value of 40.2 lux at any of the boundaries, considering gradients of land. In many cases the value will likely be much less.

These low light levels have been achieved by ensuring the areas are not over lit, and utilising quality luminaires with controlled light "throw". All columns have been orientated to minimise light spill on the adjacent and nearby boundaries.

To ensure bat foraging routes are maintained along the boundary line, luminaires have been placed away from the site boundary along with low level light post for Luge tracks and 4-meter lighting column for the circulation areas to minimise the artificial upward lights which could cause glare.

Whilst lighting for ecology, the design intent also shows that it is feasible to achieve the lighting levels required by British standards for the safe passage of visitors.

6. CONCLUSION

The light spill on all horizontal and vertical surfaces will be minimal, and as stated above, will be reduced further by the addition of any plants and additional arboriculture / horticulture and necessary luminaire accessories for limiting obtrusive light.

No lighting controls have been implemented in the lighting model, but the addition of photocells (dusk to dawn sensors, as well as time clocks) will further control the light if deemed necessary at detailed design stage.

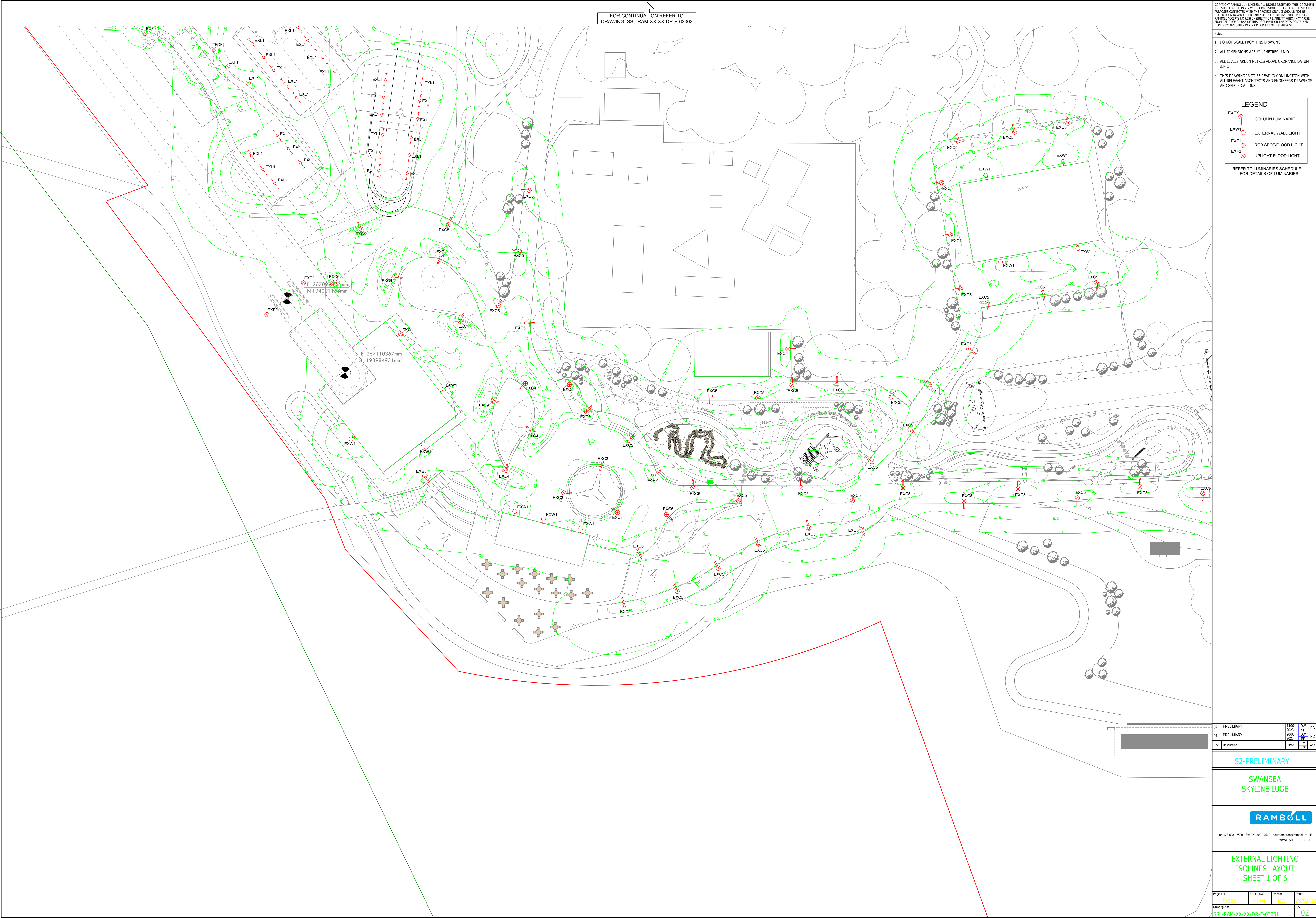
Luminaires may also be dimmed at certain times to comply with more stringent targets as required.

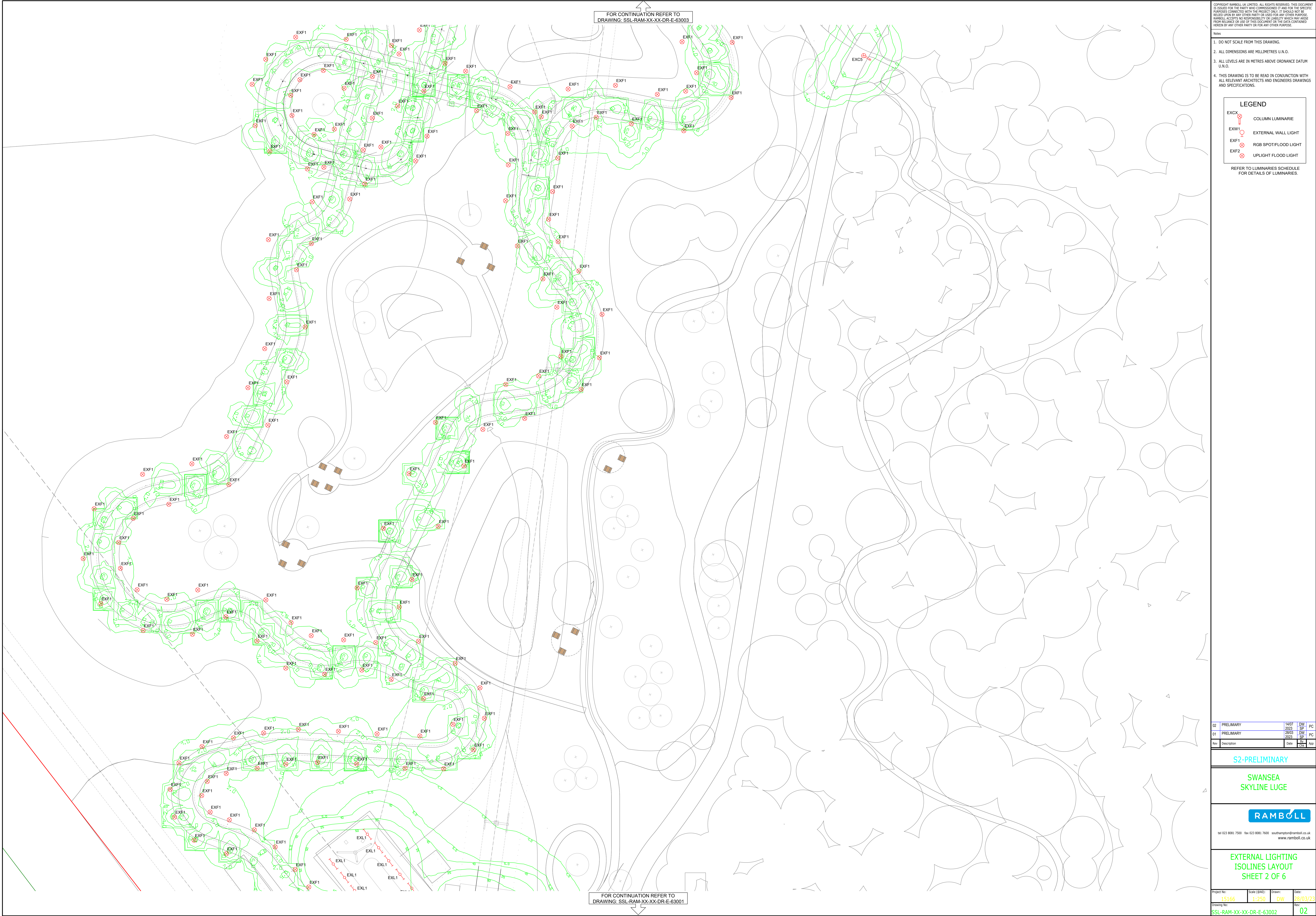
The luminaires proposed have no upward light component and have the option of rear lamp shields which can also be fitted post-installation as proprietary products.

During detailed design, the lighting columns luminaires to the Top of the hill and Food Hall circulation areas shall as required be recommended to have lamp shields where necessary to ensure backward light spill onto the woodlands is minimised insofar as is possible. This is to be reviewed and agreed with the ecologist to ensure that impact on the bats foraging route is mitigated.

The principles of design described within this report highlights how the scheme can be designed to minimise lighting impacts on ecological sensitive areas and surrounding landscape whilst maintaining safe road and visitors circulation areas.

7. APPENDIX 1 – EXTERNAL LIGHTING ISOLINE DRAWINGS





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LEGEND

EXCX COLUMN LUMINARIE

EXW1 EXTERNAL WALL LIGHT

EXF1 RGB SPOT/FLOOD LIGHT

EXF2 UPLIGHT FLOOD LIGHT

REFER TO LUMINARIES SCHEDULE FOR DETAILS OF LUMINARIES.

02	PRELIMINARY	14/07/2023	DW	PC
01	PRELIMINARY	28/03/2023	DW	PC
Rev	Description	Date	By	App

S2-PRELIMINARY

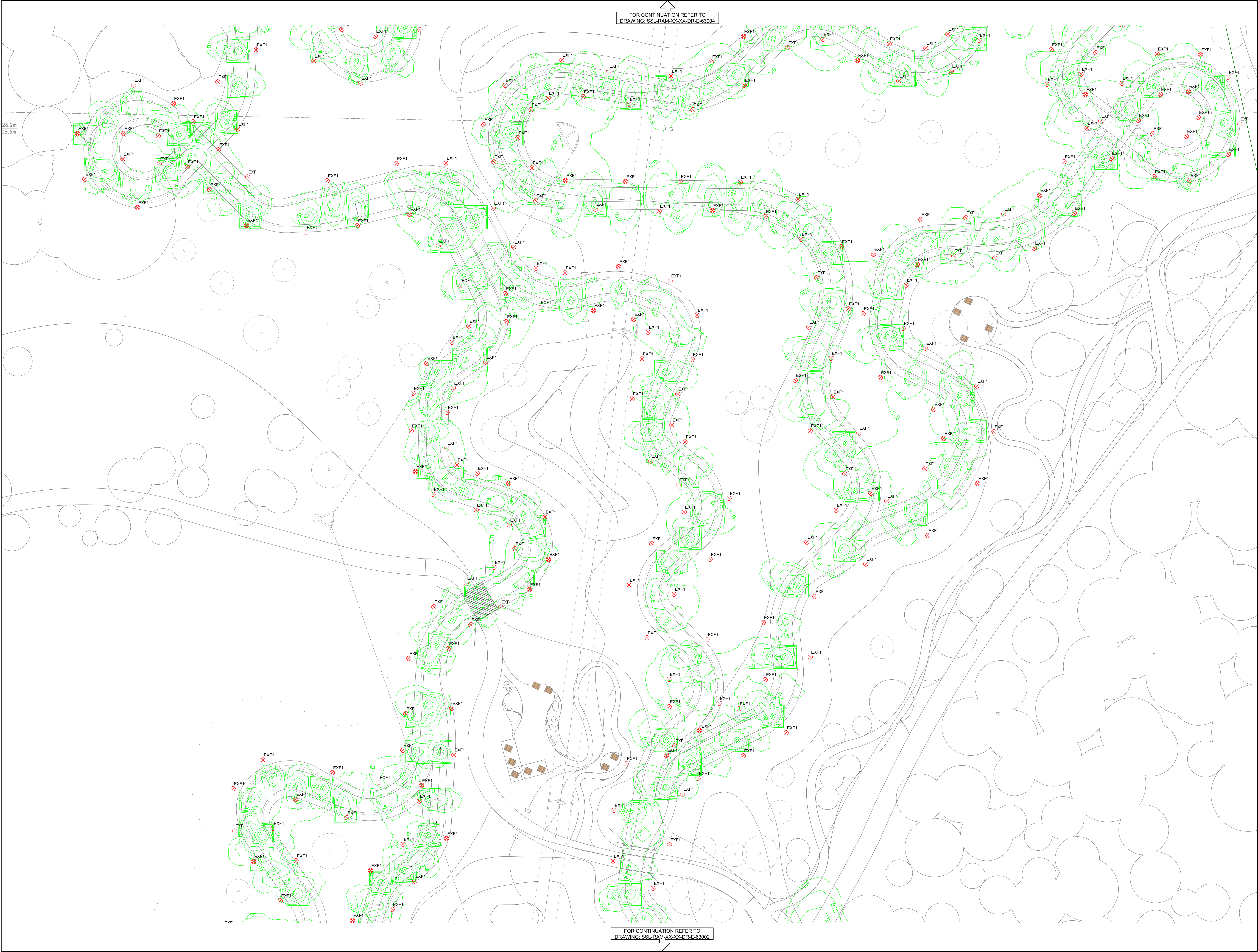
SWANSEA
SKYLINE LUGE

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EXTERNAL LIGHTING
ISOLINES LAYOUT
SHEET 2 OF 6

Project No:	Scale (BAS):	Drawn:	Date:
15166	1:250	DW	28/03/23
Drawing No:	SSL-RAM-XX-XX-DR-E-63002		Rev: 02



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LEGEND

EXCX

COLUMN LUMINAIRE

EXW1

EXTERNAL WALL LIGHT

EXF1

RGB SPOT/FLOOD LIGHT

EXF2

UPLIGHT FLOOD LIGHT

REFER TO LUMINARIES SCHEDULE FOR DETAILS OF LUMINARIES.

02	PRELIMINARY	14/07/2023	DW	PC
01	PRELIMINARY	28/03/2023	DW	PC
Rev	Description	Date	By	App

S2-PRELIMINARY

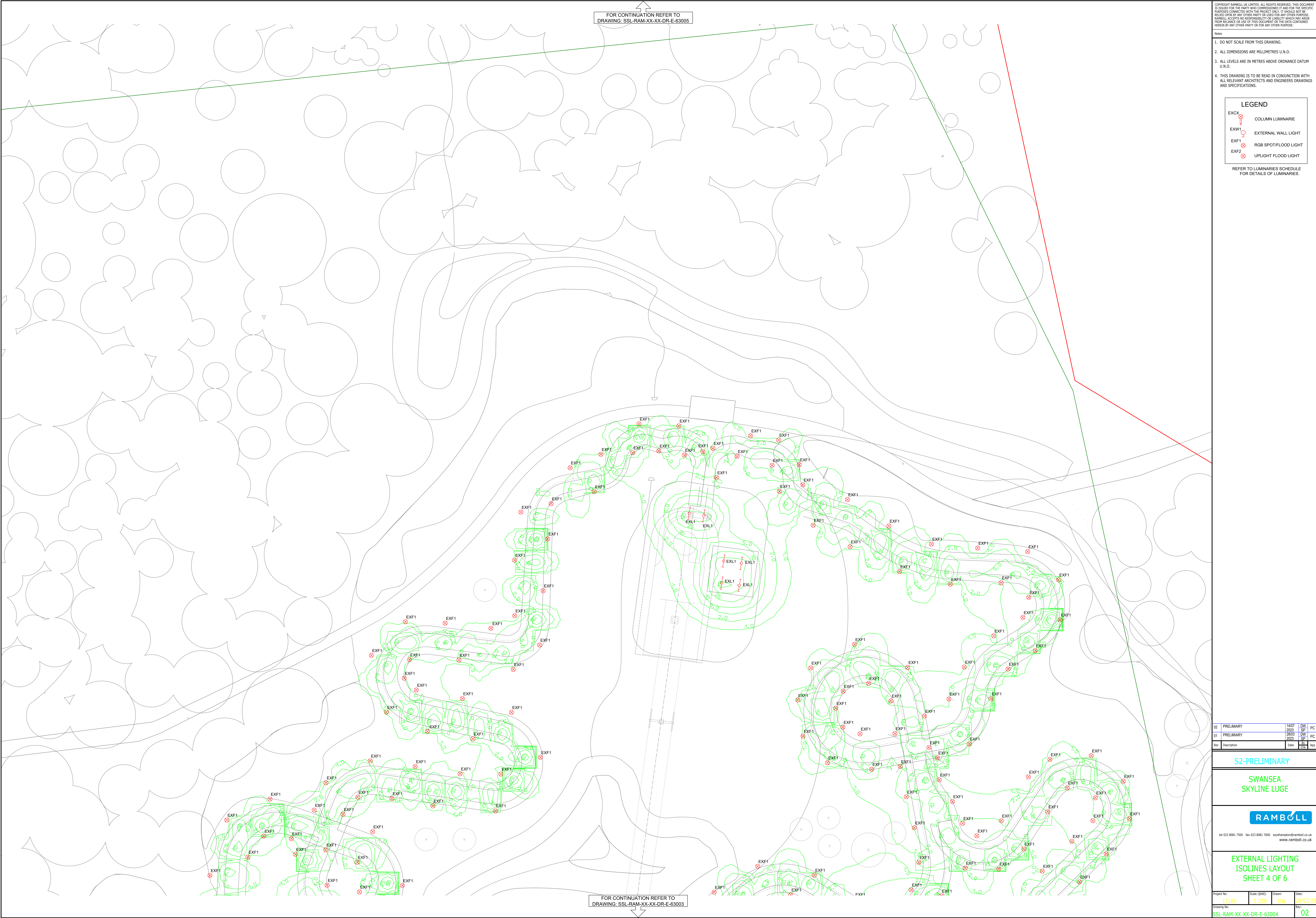
SWANSEA
SKYLINE LUGE

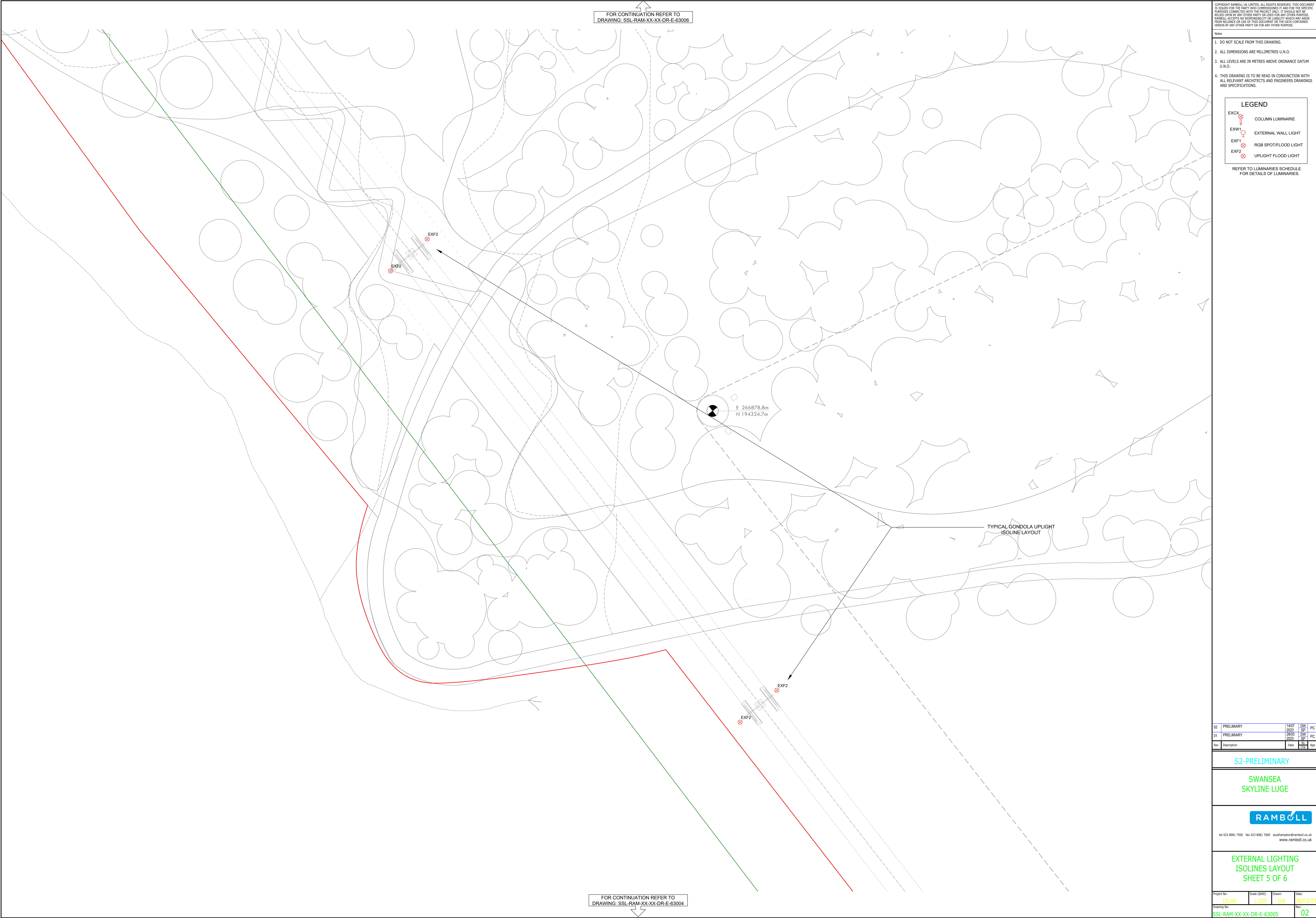
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EXTERNAL LIGHTING
ISOLINES LAYOUT
SHEET 3 OF 6

Project No:	Scale (BAS):	Drawn:	Date:
15166	1:250	DW	28/03/23
Drawing No:	SSL-RAM-XX-XX-DR-E-63003	Rev:	02





FOR CONTINUATION REFER TO
DRAWING: SSL-RAM-XX-XX-DR-E-63006

FOR CONTINUATION REFER TO
DRAWING: SSL-RAM-XX-XX-DR-E-63004

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LEGEND	
EXC1	COLUMN LUMINAIRE
EXW1	EXTERNAL WALL LIGHT
EXF1	RGB SPOT/FLOOD LIGHT
EXF2	UPLIGHT FLOOD LIGHT

REFER TO LUMINARIES SCHEDULE FOR DETAILS OF LUMINARIES.

02	PRELIMINARY	14/07/2023	DW	PC
01	PRELIMINARY	28/03/2023	DW	PC
Rev	Description	Date	By	App

S2-PRELIMINARY

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EXTERNAL LIGHTING
ISOLINES LAYOUT
SHEET 5 OF 6

Project No:	Scale (B/A):	Drawn:	Date:
15166	1:250	DW	28/03/23
Drawing No:	SSL-RAM-XX-XX-DR-E-63005	Rev:	02



FOR CONTINUATION REFER TO
DRAWING: SSL-RAM-XX-XX-DR-E-63005

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LEGEND

EXC2	COLUMN LUMINAIRE
EXW1	EXTERNAL WALL LIGHT
EXF1	RGB SPOT/FLOOD LIGHT
EXF2	UPLIGHT FLOOD LIGHT

REFER TO LUMINARIES SCHEDULE FOR DETAILS OF LUMINARIES.

03	PRELIMINARY	14/08/2023	DW	PC
02	PRELIMINARY	14/07/2023	DW	PC
01	PRELIMINARY	28/03/2023	DW	PC
Rev	Description	Date	By	App
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EXTERNAL LIGHTING
ISOLINES LAYOUT
SHEET 6 OF 6

Project No:	Scale (B&W):	Drawn:	Date:
15166	1:250	DW	28/03/23
Drawing No:		Rev:	
SSL-RAM-XX-XX-DR-E-63006		03	

8. APPENDIX 2 – LUMINAIRE SCHEDULE



Intended for:
SKYLINE SWANSEA

Project no.
1620015166

Date
24 March 2023

SKYLINE SWANSEA

LUMINAIRE SCHEDULE

Revision History

Revision	Date	Purpose / Status	Document Ref.	Comments
01	03/04/23	FIRST ISSUE	SSL-RAM-XX-XX-SH-E-00001	-
02	14/07/23	SECOND ISSUE	SSL-RAM-XX-XX-SH-E-00001	-

Prepared By Darren Wheeler	Reviewed By Sammie Pope	Approved By Sammie Pope
Engineer - Electrical	Electrical Engineer	Director

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Twenty3
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Southampton
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Luminaire Ref.	Location	Model	Lamp	Description	Image
EXC2	Carpark	TRT Lighting Aspect 32 LED	LED	Power: 40W Lumen output: 5210 Luminaire efficacy: 130 lm/W Colour T: 4000 k IP 66 IK 08 Dimensions: 6Meter Column 618mm D x 351mm W x 203mm H Colour: Mid Grey	
EXC3	Bottom Station Pathways	TRT Lighting Aspect 32 LED	LED	Power: 26W Lumen output: 3549 Luminaire efficacy: 136.5 lm/W Colour T: 4000 k IP 66 IK 08 Dimensions: 6Meter Column 618mm D x 351mm W x 203mm H Colour: Mid Grey	
EXC4	Top Station Central Realm	TRT Lighting Aspect 32 LED	LED	Power: 35W Lumen output: 5208 Luminaire efficacy: 148.8 lm/W Colour T: 4000 k IP 66 IK 08 Dimensions: 6Meter Column 618mm D x 351mm W x 203mm H Colour: Mid Grey	

Luminaire Ref.	Location	Model	Lamp	Description	Image
EXC5	Carpark	TRT Lighting Aspect 32 LED	LED	Power: 10W Lumen output: 1073 Luminaire efficacy: 107 lm/W Colour T: 4000 k IP 66 IK 08 Dimensions: 4Meter Column 618mm D x 351mm W x 203mm H Colour: Mid Grey	
EXC6	Carpark	TRT Lighting Aspect 32 LED	LED	Power: 15W Lumen output: 1476 Luminaire efficacy: 98.4 lm/W Colour T: 4000 k IP 66 IK 08 Dimensions: 6Meter Column 618mm D x 351mm W x 203mm H Colour: Mid Grey	
EXF1	Luge Tracks	Unilamp Medium ALPHA Square	LED RGB 46Degree Beam	Power: 9W Lumen output: 948 Luminaire efficacy: 102 lm/W Colour T: 2700 k IP 66 IK 07 Dimensions: 248mm H x 143mm W x 46mmD	

Luminaire Ref.	Location	Model	Lamp	Description	Image
EXF2	Gondola Gantry	DW Windsor Fire 9	LED Narrow 350mA	Power: 19W Lumen output: 1510 Luminaire efficacy: 79 lm/W Colour T: 2700 k IP 66 IK 09 Dimensions: 212mm H x 175mm W x 106mmD	
EXW1	Throughout External Wall Above Final Exists	Thorn Piazza II LED	LED	Power: 15W Lumen output: 1815 Luminaire efficacy: 121 lm/W Colour T: 3000 k IP 65 IK 10 Dimensions: 381 x 196 x 305 mm	
EXL1	Beneath Canopies	Thorn Aquaforce Pro	LED	Power: 35.2W Lumen output: 4530 Luminaire efficacy: 129 lm/W Colour T: 3000 k IP 65 IK 08 Dimensions: 1100 x 92 x 90 mm	

Notes:

1. This Luminaire Schedule shall be read in conjunction with the Specification and Lighting Layouts.
2. The catalogue references in this schedule are for information only. The Contractor will ensure that the references are correct before ordering. No claim relating to incorrect references will be allowed.
3. The Contractor shall ensure that all appropriate connecting pieces, light sources, suspensions, accessories etc. are provided with each fitting in order to form a complete installation. Accessories will be colour matched to the luminaire body.
4. Where denoted by the letter "E" on the drawings, luminaire is emergency and is supplied via emergency gear and battery.
5. Source lamps with a colour temperature of 4000K unless stated otherwise.
6. Where luminaires are installed in suspended ceilings, the Electrical Contractor shall be responsible for advising the manufacturer of the ceiling type to ensure correct fit and compatibility.

**Land at Kilvey Hill and
Landore Park & Ride Facility**

ENVIRONMENTAL STATEMENT

VOLUME 2

CHAPTER 8: SUMMARY AND CONCLUSIONS

8.0 SUMMARY AND CONCLUSIONS

- 8.1 This Environmental Statement has been prepared on behalf of Skyline Swansea to accompany a full planning application submitted to The City and County of Swansea Council (CCS) in respect of a proposed leisure development. The planning application description is as follows:

New leisure development comprising gondola stations with gondola and associated infrastructure, multi purpose visitor building including the sale of food and drink with associated outside seating and hardstanding, together with luge tracks, chairlift, swingswing, mountain bike trails, access routes, zipline and supporting infrastructure, ancillary buildings for staff and maintenance, ground profiling works, landscaping, temporary construction access and compound, drainage works, plant, highway works, demolition of park and ride terminal and associated works

- 8.2 This Chapter summarises the findings of the Environmental Impact Assessment (EIA) for the construction and operation of the proposed development, which has been deemed as necessary for the extent of the proposed development which is the subject of this planning application.
- 8.3 A screening opinion was originally requested from The City and County of Swansea Council in accordance with Regulation 6(2) of The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017. On the 3rd February 2023 a scoping opinion in relation to the development was received from The City and County of Swansea Council's Planning Department.
- 8.4 The key technical issues identified which are the subject of this Environmental Impact Assessment are as follows:
- Landscape and Visual Impact
- 8.5 The assessment described in this Environmental Statement (ES) relates to the design of the scheme as it stands in May 2021. The ES is published in three volumes:
- Volume 1: Non-Technical Summary
 - Volume 2: Written Statement; and
 - Volume 3: Appendices to Written Statement
- 8.6 The Environmental Impact Assessment was managed by Asbri Planning Ltd. with guidance from an expert consultant team comprising EDP.
- 8.7 The technical chapter (Chapter 7) have benefitted from thorough and appropriate assessment to an agreed scope. Each respective assessment has resulted in the identification of potential impacts, the implementation of necessary mitigation and an assessment of those residual impacts which remain.

Landscape and Visual Impact

- 8.8 **Chapter 7** assesses the likely significant effects of the proposed development on Landscape and Visual Impact.
- 8.9 The chapter firstly outlines the sensitivity of receptors in the area. Both Swansea West and East are wholly urban area comprising a number of communities in conjoined settlements. Limited landscape receptors of value and limited susceptibility to the

proposed development. The river Tawe is more sensitive but is heavily influenced by existing urban form to either side and with low susceptibility to the development proposed. Kilvey Hill has high-quality landscape resource with clear amenity value to the local community (limited value to the wider community of Swansea), but suffers from limited management, predominantly non-native tree stock, existing telecommunications and energy infrastructure and anti-social activity (which periodically threatens the character of the whole of the hill through arson).

- 8.10 The site's visual and sensory character: the site's visual and sensory characteristics will change from their current state. Areas such as the car park, adjacent to the bottom station will be minimally altered, in that it will remain a car park and entrance to the amenities of the hill, however a base station (bottom gondola) will bring additional built form to what is currently there. A large building to accommodate the public and their transportation on the top of the hill will be introduced into what is currently a level car park.
- 8.11 Areas such as the top of the hill will, unsurprisingly, be visually altered as a result of the proposals. The area will largely retain its hilltop features. Much of its vegetation and access routes will remain. However, through the development of the café, top gondola station etc, it will see the loss of certain trees, shrubs and grassland, where the building footprints are proposed. Additionally, a large area of hardstanding, stepped level changes and man-made platforms will change the visual and sensory aspects following their imposition. A key point, however, to mention, is that the top of Kilvey Hill features two large telecommunication masts and several associated buildings with fences, visible from all around Swansea. Although slim in structure, they establish a built form influence on the hilltop, detracting from the rural surroundings and thus, de-sensitising the hilltop somewhat. The visual and sensory aspects of the landscape (especially towards the heart of the site, where the tracks will run) will be impacted upon, given that the 'woodland' character will be altering slightly, through some removal to accommodate the luge route, chairlift and zip wires. This will not change the character entirely given that the access road already passes through this part of the site, however the tranquillity of the area will be impacted and the introduction of concrete tracks, inevitably will alter the visual appearance of the site, albeit softened with new planting.
- 8.12 The site is not considered of such quality, value or sensitivity to warrant protection from this change and, indeed, without development will see change anyway given the age and condition of its existing woodlands. These habitats are already in decline (and were planned for removal and replacement under NRW's stewardship) and self-seeded pines are also encroaching on the open grassland areas, threatening the future of those more valuable habitats also.
- 8.13 The site's landscape/townscape context will also be influenced by the proposed changes, but is already characterised and dominated by urban form and influences which largely de-sensitise receptors to the effects of the scheme. Even to the east of the site, where there is a gap in the otherwise encircling urban area, the recently constructed solar farm adds significant built form into the landscape.
- 8.14 No significant effects have been identified to extend beyond the bounds of the hill itself – only those visiting the hill will be affected by the proposals to any significant extent, with its character and internal views undoubtedly changed by the proposed scheme and views notably altered by the imposition of features such as the cable-car gondolas, the luge tracks, zip wires, Sky Swing and restaurant.
- 8.15 The proposals have been carefully considered to minimise the loss of valuable habitats

on site and include proposals for replanting to soften the effects the changes and mitigate the biodiversity effects. Over time, through proposed long-term management, the scheme offers an opportunity to deliver significant enhancement in this regard through a gradual conversion of the poor quality non-native coniferous woodland into a more appropriate broad-leaved native mix. Furthermore, management of the onsite grasslands will also be enhanced, stopping the ongoing spread of self-seeded woodland and enhancing this habitat for its resident wildlife. If it is possible to deliver a similar level of management and enhancement to the wider Kilvey Hill woodland/grassland through a 'Whole Hill' management approach delivered by Skyline, the Council and local community groups then this should be wholeheartedly pursued, though lies outside the bounds of this current planning application and this assessment.

- 8.16 The Skyline proposals offer an opportunity to open up access to the site to a significantly greater number of people, extending its appreciation and the enjoyment of its landscape character and the views it offers over the city and the bay to all its future users, including those who would presently find it inaccessible. This is considered to be a significant benefit in landscape and visual terms and tempers the overall balance of effects in favour of the proposals.
- 8.17 EDP's night-time appraisal evaluates the anticipated landscape and visual impacts of the proposed development on Kilvey Hill. The development's safety and decorative lighting will significantly alter the night-time character of the Site, particularly affecting users of Public Right of Way routes and Open Access Land. Despite sensitive lighting design to minimise light pollution, notable night-time effects, similar to those in the daytime, are expected within the site and its immediate context.
- 8.18 However, due to the surrounding urban environment and existing light spill, broader landscape effects are limited. The proposed lighting strategy aims to balance safety and functionality while minimising wider impacts. The development will enhance safety and accessibility, allowing more people to enjoy panoramic views and potentially reducing anti social behaviour.
- 8.19 The development site spans across an area within three of the four most radiant parts of Swansea County, as illustrated within the appraisal by Natural Resource Wales maps. The impact on the areas of darkest sky to the north, when considering the intervening distance, will be minimal and seen in the context of the existing Swansea skyline after dark.
- 8.20 The appraisal acknowledges the subjectivity in evaluating lighting impact and professional opinion forms a large part of this. Overall, EDP concludes that the night-time impacts will not exceed the identified daytime effects, making the development acceptable on balance, in landscape and visual terms at night.

Summary

- 8.21 The Development has been subject to a thorough analysis of environmental constraints and opportunities and as the process evolved, measures have been incorporated into the proposals to avoid, reduce or offset environmental effects. Where this has not been possible, further mitigation measures have been proposed.
- 8.22 In conclusion, the ES has identified that the Development:
- Will provide the delivery of a world class tourism facility;
 - Ecological and landscape enhancements;

- The integration of drainage with landscape, ecology and amenity features;
- Offer an opportunity to open up access to the site to a significantly greater number of people;
- Job creation both direct and indirect

8.23 The appraisal acknowledges that any development that introduces a tourism attraction of this scale into an existing elevated and naturalistic hillside site will have an effect on its landscape character.