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Flood Consequence Assessment AEG10137_NP19_Newport_01

Site Address: Newport Retail Park,
Spytty Road,
Newport,
NP19 4QQ

UK Experts in Flood Modelling, Flood Risk
Assessments, and Surface Water Drainage Strategies

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Site Location: Newport Retail Park, Spytty Road, Newport, NP19 4QQ

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Summary

Development Description	Existing	Proposed
Development Type	Existing Retail Car Park	The proposal includes the installation of Electric Vehicle (EV) charging facilities, comprising of 4no. chargers serving 8no. bays and associated substation and feeder pillar structures within the existing car park at Newport Retail Park.
NRW Vulnerability Classification	Less Vulnerable	Less Vulnerable
Ground Levels	The NRW LiDAR data shows the ground elevation of the site varies between approximately 6.43m AOD (metres Above Ordnance Datum) and approximately 6.67m AOD.	No Change
Level of Sleeping Accommodation	N/A ¹	N/A ¹ - No sleeping
Risk to Development	Summary	Comment
NRW Flood Zone	According to the NRW Flood Map for Planning, the entirety of the site is located within Sea Flood Zone 3 (Figure 3).	Further analysis shows that the proposed development is located outside all modelled fluvial, tidal and pluvial scenarios.
Flood Source	Tidal / Sea	
SFCA Available	South East Wales - Strategic Flood Consequence Assessment (Stage 1) (South East Wales, 2022)	
Management Measures	Summary	Comment
Ground floor level above extreme flood levels	Yes	Proposed development is located outside all modelled fluvial, tidal and pluvial scenarios; thus, is considered low risk from all analysed sources of flooding.

Safe Access/Egress Route	N/A ¹	If an NRW flood warning is active, the facilities should be closed.
Flood Resilient Design	Mitigation measures not required.	Proposed development is considered low risk from all analysed sources of flooding.
Site Drainage Plan	No	Site is impermeable and proposals will not increase the hardstanding therefore no increase in runoff.
Offsite Impacts	Summary	Comment
Displacement of floodwater	No	Proposed development is located outside all modelled fluvial, tidal and pluvial scenarios; thus, is considered low risk from all analysed sources of flooding. Thus, the proposals will not increase flood risk elsewhere through floodwater displacement.
Increase in surface run-off generation	No	The site is currently impermeable in nature, and the proposals will see no increase in hardstanding. Therefore, there will be no increase in surface water runoff generation associated with the proposed development.
Impact on hydraulic performance of channels	None	Will not impact adjacent watercourses or ditches. Nearest watercourse is circa 80m east.

¹ not required for this assessment

² data not available.

1. Introduction

- 1.1. Aegaea were commissioned by The Electric Vehicle Network to undertake a Flood Consequence Assessment (FCA) to facilitate a planning application for the proposed development. This FCA has been prepared in accordance with the requirements set out in the Technical Advice Note 15 (TAN15).
- 1.2. This FCA is intended to support a full planning application and as such the level of detail included is commensurate and subject to the nature of the proposals.

Site Overview

- 1.3. The site of the proposed development is Newport Retail Park, Spytt Road, Newport, NP19 4QQ (Figure 1).
- 1.4. It is noted that the Figure below shows the ownership boundary (blue) and the redline boundary (site). The site / redline boundary is the site-specific application boundary to inform this FCA.

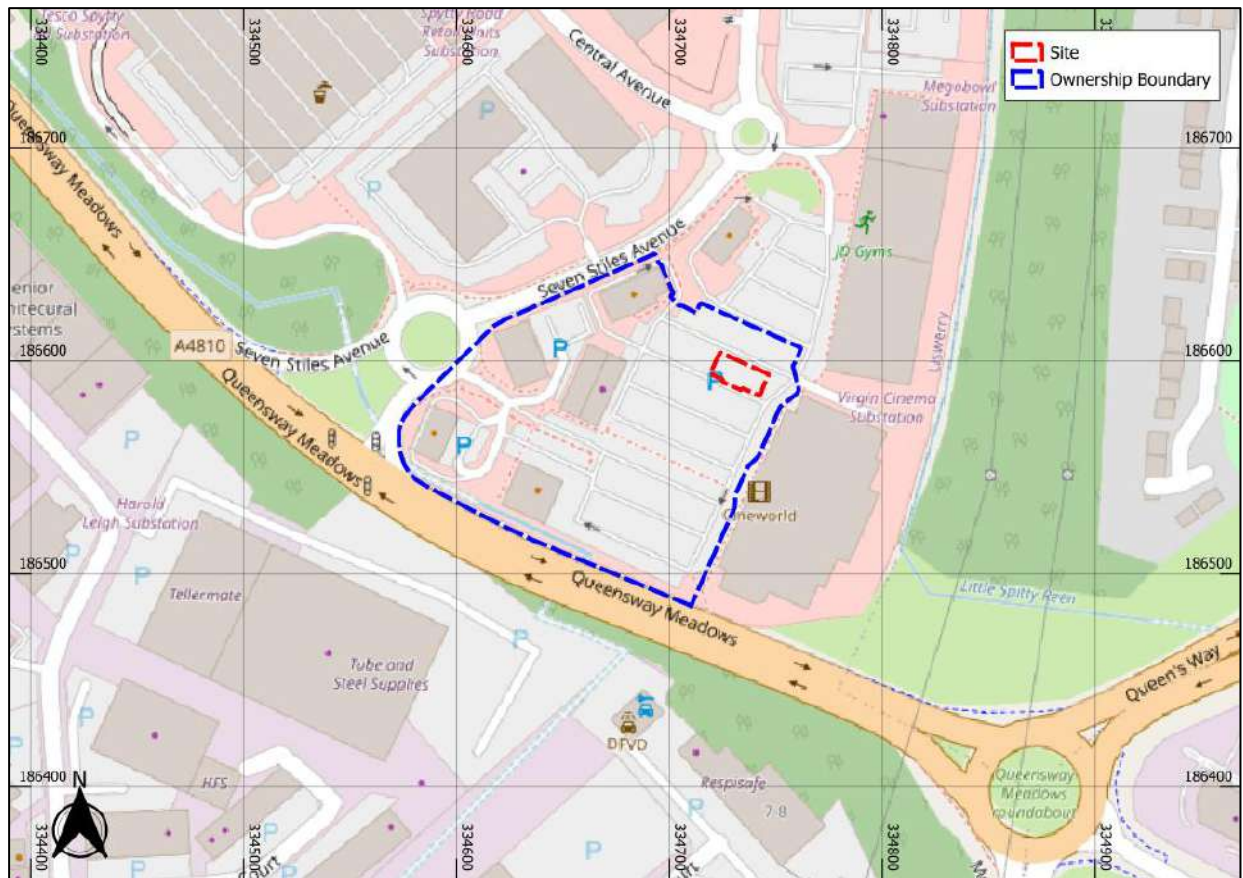


Figure 1: Site Location (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors)

- 1.5. The existing site consists of a large car park associated to Newport Retail Park. The proposals include the installation of Electric Vehicle (EV) charging facilities, comprising of 4no. chargers serving 8no. bays and associated substation and feeder pillar structures within the existing car park at Newport Retail Park. All proposed development plans can be found in Appendix A of this report.
- 1.6. In the absence of a topographical survey, Natural Resources Wales (NRW) Light Detection and Ranging (LiDAR) data Digital Terrain Model has been used to review the topography of the site (Figure 2).
- 1.7. The NRW LiDAR data shows the ground elevation of the site varies between approximately 6.43m AOD (metres Above Ordnance Datum) and approximately 6.67m AOD. It is also noted that ground levels generally slope in the eastern direction towards the watercourse identified as the 'Little Spitty Reen'.

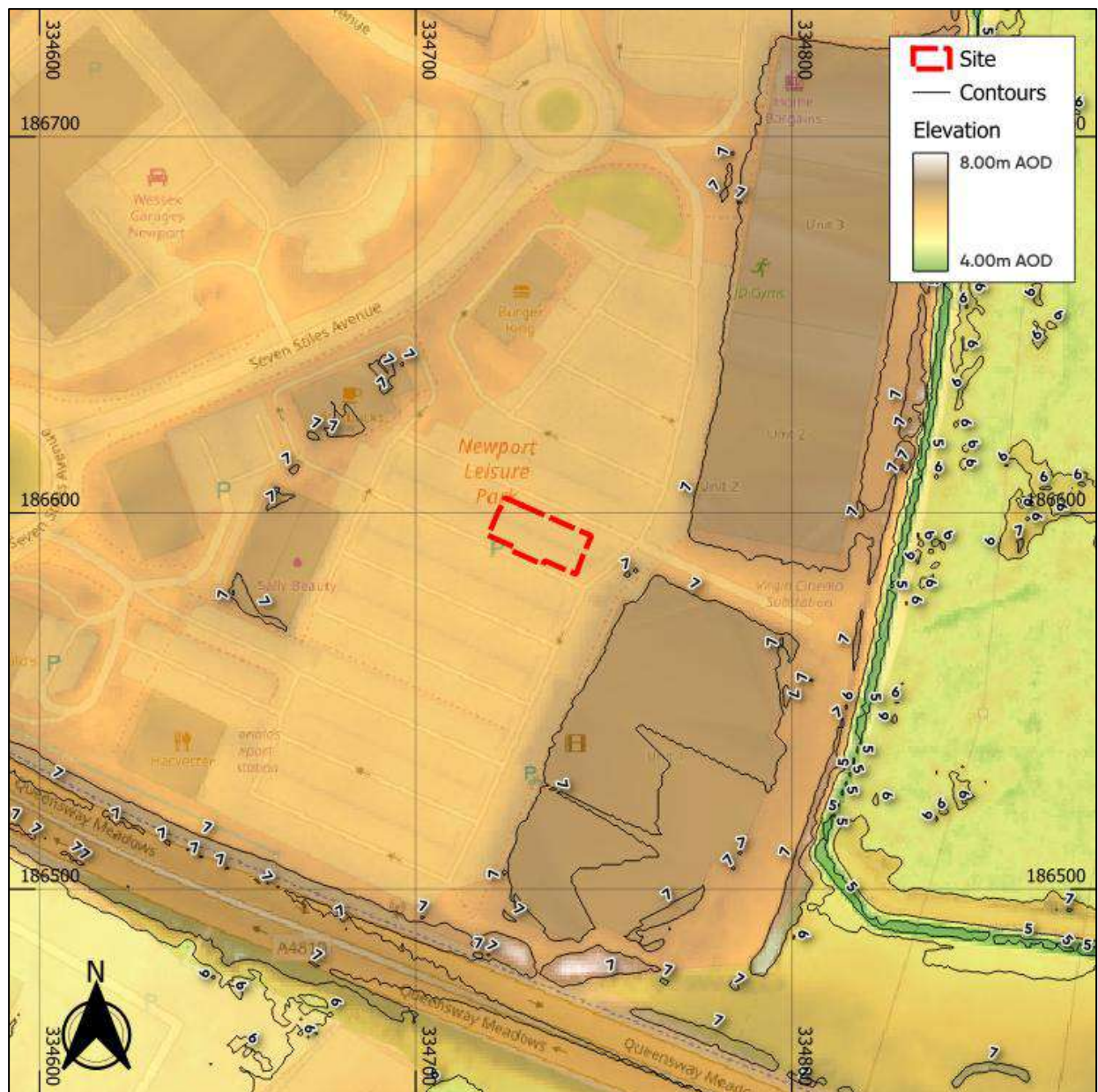


Figure 2: Site Topography (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 1.8. Newport City Council is the Local Planning Authority (LPA) for the site and also the designated Lead Local Flood Authority (LLFA). The site sits within the Natural Resources Wales's South East Wales region.

2. Planning Policy

- 2.1. Inappropriate development in a flood risk area could pose significant risk in terms of personal safety and damage to property for the occupiers of the development or for people elsewhere. The approach taken in the assessment of flood risk at the planning stage is set out in national, regional, and local planning policy and associated guidance. This section summarises the key policies and guidance relevant to the proposed development.
- 2.2. Technical Advice Note 15 (TAN15), in conjunction with Planning Policy Wales (PPW) and any local planning documentation forms the basis for assessment of flood risk in Wales and its risk mitigation and development control.
- 2.3. The NRW Flood Map for Planning (FMfP), officially replaces the Development Advice Map (DAM) and is the primary tool for the assessment of flood risk in all planning applications submitted after March 2025.
- 2.4. For a development application to be acceptable in a flood risk area, it must satisfy both the Justification Test and the Acceptability of Consequences Test. As set out in TAN15, the overall aim is as follows
 - Direct new development away from those areas which are at high risk of flooding (FMfP Zones 2 and 3).
 - Where development must be considered in flood risk areas, ensure that only development that can be justified on the basis of local need, and that can demonstrate the consequences of flooding are acceptable, is located within such areas.
- 2.5. Flood Zones in Wales are defined as follows:

Table 1: Flood Map for Planning (FMfP) Zone Classifications

FMfP Zone	Description of Flood Risk	Role within Precautionary Framework
1	Less than 1 in 1000 (0.1%) (plus climate change) chance of flooding in a given year	Applications for all types of development, change of use or conversion are acceptable in principle. Informed by a Strategic Flood Consequences Assessment, planning authorities should develop locally specific planning policies for areas at risk of flooding against which applications can be assessed.
2	Less than 1 in 100 (1%) or 1 in 200 (0.5%) but greater than 1 in 1000 (0.1%) chance of flooding in a given year, including climate change.	Planning applications in Zone 2 require careful consideration and must be consistent with the acceptability considerations set out in section 11. They must also be accompanied by a FCA which clearly describes the flood risk and the risks must be acceptable. Applications for new highly vulnerable development on greenfield land are only appropriate where the site has been allocated in adopted Development Plans. Proposals for redevelopment on brownfield land of any vulnerability will need to assist, and be consistent with, the Development Plan strategy to regenerate an existing settlement or achieve key economic or environmental objectives. Where proposals for redevelopment include residential use, local authorities should ensure that such uses do not occur at ground floor level, they will also need to be compatible with the tolerable conditions set out in section 11 and exhibit resilient flood design as described in section 13 of TAN.
3	A greater than 1 in 100 (1%) or 1 in 200 (0.5%) chance of flooding in a given year, including climate change.	Planning applications in zone 3 require the strongest justification. No new highly vulnerable development on greenfield land should be permitted in zone 3 regardless of the conclusion of any Flood Consequences Assessments and NRW will not consider these conclusions. Welsh Ministers must be notified of any such proposal a planning authority intends to approve. Other proposals will only be appropriate if they are essential to the Development Plan Strategy to regenerate an existing settlement or achieve key economic or environmental objectives. Any redevelopment proposal must be consistent with the acceptability considerations in section 11. In addition,

		proposals which include residential development must ensure that such uses do not occur at ground floor level.
Defended Zones	Areas where flood risk management infrastructure provides a minimum standard of protection against flooding from rivers of 1 in 100 or 1 in 200 from the sea (plus climate change and freeboard).	Applications for new development on Greenfield sites are not appropriate in Defended Zones unless they are allocated in development plans. On brownfield sites redevelopment proposals should not over intensify use neither should they reduce the area's ability to absorb flood water nor cause problems with flooding elsewhere. All applications should consider opportunities to incorporate flood resilient design as appropriate and any proposal involving highly vulnerable development must be compliant with the tolerable conditions set out in section 11 of TAN.

- 2.6. The land use vulnerability classifications are presented in Table 2. The proposed development is classified as 'Less Vulnerable'.

Table 2: Land Use Vulnerability Classifications

Development Category	Type
Highly vulnerable development	All residential premises (including hotels and caravan parks), schools and childcare establishments, colleges and universities, hospitals and GP surgeries, especially vulnerable industrial development (e.g. power stations, chemical plants, incinerators), and waste disposal sites. Emergency services, including ambulance stations, fire stations, police stations, command centres, emergency depots and buildings used to provide emergency shelter in time of flood
Less vulnerable development	General industrial, employment, commercial and retail development, transport and utilities infrastructure, car parks, mineral extraction sites and associated processing facilities, excluding waste disposal sites, public buildings including libraries, community centres and leisure centres (excluding those identified as in Highly Vulnerable category and emergency shelters), places of worship, cemeteries, equipped play areas, renewable energy generation facilities (excluding hydro generation).
Water compatible development	Boatyards, marinas and essential works required at mooring basins, development associated with canals, flood defences and

Development Category	Type
	management infrastructure, open spaces (excluding equipped play areas) and hydro renewable energy generation.

Assessment/Acceptability of Flooding Consequences Test

- 2.7. Paragraph 11.3 of TAN15 states:

Whether a development should proceed or not will depend upon whether the consequences of flooding can be safely managed, including its effects on flood risk elsewhere.

- 2.8. Tolerable Conditions as set out in Section 11.9-11.15 of TAN15 are detailed below:

Tolerable conditions: managing consequences in an extreme flood event

11.9 The flood free thresholds outlined above relate to very serious but not the most extreme flood events (with the exception of thresholds for emergency services). During extreme flood events there is recognition that it may not be possible to keep all development flood-free. In these circumstances it is imperative that flooding does not endanger life, therefore it needs to be demonstrated that conditions within the development during an extreme event will be tolerable.

11.10 Figure 6 below indicates the tolerable flood depth and velocity conditions for highly vulnerable and less vulnerable development when assessed against the 0.1% extreme flood event, including an allowance for climate change.

11.11 Mitigation and flood resilience measures are not sufficient justification to permit a development if the tolerable conditions are exceeded during an extreme flood event. High velocities and/or depths of floodwater pose a potential risk to life, may cause structural damage to buildings and could impact on human health and wellbeing.

Types of new development	Maximum depth of flooding (mm)	Maximum velocity of flood waters (metres/sec)
Highly vulnerable development	600	0.15
Less vulnerable development Infrastructure associated with highly vulnerable development e.g. car parks, access, paths and roads Water compatible development (limited to those built elements of development that may be occupied by people)	600	0.3

11.12 The above figures are tolerances below which new development may be acceptable. Each site, however, must be considered individually, and a judgement taken in the context of the circumstances which could prevail at that site. Emergency services developments are not shown because they must be flood-free in a 0.1% event, as set out in Figure 5. For emergency services developments other than command centres or hubs, the conditions for highly vulnerable development should be applied.

11.13 When deciding if the consequences of an extreme flood event can be acceptably managed, planning authorities should refer to relevant policies and actions identified in their Development Plan and by Risk Management Authorities in local contingency plans. This is of particular relevance to emergency access and evacuation requirements.

11.14 Flooding causes danger when either the water is deep or it is moving quickly. It is particularly dangerous when both occur at the same time. The flood hazard matrix at Figure 7 below can help planning authorities assess how hazardous a flood event may be to different people. The matrix can be used to assess the levels of danger inside and outside buildings located in flood risk areas, by plotting the expected water depths and velocities during the flood event.

11.15 The planning authority should consider all potential and likely users of any proposed development when assessing whether the development can be considered to provide a safe environment during an extreme flood event. If a safe environment cannot be provided, the planning application should be refused. The matrix shows that flood events involving deep and fastmoving water are dangerous to all, including the emergency services. It would not be appropriate to approve any type of development that could experience this degree of danger during an extreme flood event.

- 2.9. The site is located within Flood Zone 3 on the NRW Sea Flood Map for Planning and within a TAN15 Defended Flood Zone, benefitting from formal flood defences that provide a minimum standard of protection against tidal flooding up to the 1 in 200 year event. Review of NRW datasets identifies tidal flood defences along the River Usk.
- 2.10. The proposed development comprises the installation of EV charging points and associated works and is therefore classified as Less Vulnerable development in accordance with the TAN15 vulnerability classification.
- 2.11. The FCA demonstrates that the site is flood free in all modelled present day and climate change scenarios and thus is well below the maximum tolerable threshold for less vulnerable development (0.6m). In addition, it is noted that the site is situated in a TAN15 Defended Flood Zone.
- 2.12. In accordance with Section 11.3 of TAN15, the assessment demonstrates that
- the development will not increase flooding elsewhere;
 - the consequences of flooding can be safely managed.
- 2.13. On this basis, the overall consequences of flooding are considered within tolerable conditions as set out in TAN15.

3. Consultation and Review

Consultation

- 3.1. Aegaea hold on record a copy of the updated Newport model (2022). This has been analysed in Section 4, in order to determine the fluvial/tidal flood risk to the site.

Documents and Online Mapping

- 3.2. Local Governments and Lead Local Flood Authorities provide documents which contain data and policies on flood risk and new development in their areas. These documents are introduced and briefly summarised below. For the purposes of this FCA, these documents have been reviewed for relevant information and any relevant data is discussed within the appropriate sub heading of this report.
- 3.3. The following sources of information have been reviewed for this assessment:
- Flood Map for Planning on the Natural Resources Wales website <https://naturalresources.wales/flooding/flood-map-for-planning>
 - The Technical Advice Note 15¹ (TAN15) (2025).
 - British Geological Survey - Geology of Britain Viewer (British Geological Society, 2017)².
 - Geoindex Onshore (British Geological Survey, 2024)³
 - Local Development Plan 2011-26 (Newport City Council, 2015)⁴

¹ <https://www.gov.wales/sites/default/files/publications/2025-03/technical-advice-note-15-development-flooding-and-coastal-erosion.pdf>

² <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/>

³ <https://www.bgs.ac.uk/geological-data/map-viewers/>

⁴ <https://www.newport.gov.uk/sites/default/files/media/media-documents/Adopted%20Local%20Development%20Plan%202011-2026.pdf?>

- Update to the preliminary flood risk assessment report (Newport City Council, 2017)⁵ and Preliminary Flood Risk Assessment (Newport City Council, 2011)⁶
- South East Wales - Strategic Flood Consequence Assessment (Stage 1) (South East Wales, 2022)⁷
- Local Flood Risk Management Strategy (Newport City Council, 2014)⁸

Preliminary Flood Risk Assessment (PFRA)

- 3.4. The PFRA, published in 2011 and followed by the update in 2017, is a high-level appraisal of flood risk across Lead Local Flood Authority Newport City Council. The flood risk from all sources, including fluvial, surface water, groundwater, and surcharged sewers is evaluated. It is the basis upon which the Local Flood Risk Management Strategy is produced.
- 3.5. The PFRA summarises historical flood incidents in Newport City Council. The site is not recorded as having been affected by any flood event.

Strategic Flood Consequence Assessment (SFCA)

- 3.6. The SFCA, published in 2022, provides the evidence base for the Local Planning Authority Newport City Council Local Plan and guidance for consideration when determining planning applications. The SFCA seeks to place new development into areas of lower flood risk taking into account current flood risk, future flood risk, and the effect a proposed development would have on the risk of flooding.
- 3.7. The SFCA mapping provided by Newport City Council has been used throughout production of this report as a source of information, particularly pertaining to historical flood incidents.

⁵ <https://www.newport.gov.uk/documents/Council-and-Democracy/Civil-Contingencies/Addendum-PRFA-Review-2017.pdf?>

⁶ <https://naturalresources.wales/evidence-and-data/research-and-reports/flooding-reports-evidence-and-data/river-basin-district-preliminary-flood-risk-reports/?>

⁷ https://rctcbc.oc2.uk/docfiles/8/Strategic%20Flood%20Consequences%20Assessment%20SFCA%202022_1.pdf?

⁸ <https://www.newport.gov.uk/sites/default/files/media/media-documents/Easy%20read%20version%20-%20Newport%20Local%20Flood%20Risk%20Management%20Strategy%20v5.pdf?>

Local Flood Risk Management Strategy (LFRMS)

- 3.8. The Local Flood Risk Management Strategy sets out roles and responsibilities for flood risk management, assesses the risk of flooding in the area, where funding can be found to manage flood risk, and the policies, objectives, and actions of the Lead Local Flood Authority.
- 3.9. The Newport City Council LFRMS is used within this report to identify any flood management infrastructure and historical incidences of flooding.

4. Sources of Flood Risk

Fluvial

- 4.1. NRW's Flood Map for Planning identifies areas at risk of flooding from both fluvial (river) and tidal (coastal) sources.
- 4.2. Flooding from watercourses arises when flows exceed the capacity of the channel, or where a restrictive structure is encountered, resulting in water overtopping the banks into the floodplain.

Main Rivers and Ordinary Watercourse

- 4.3. The nearest watercourse is identified to be the 'Little Spitty Reen' which is situated approximately 80m east of the site according to OS mapping.
- 4.4. However, the fluvial / tidal flood risk in the area is derived from the River Usk, which is situated approximately 2.1km west of the site.

NRW Rivers Flood Map for Planning

- 4.5. According to the NRW Rivers Flood Map for Planning, the entirety of the site is located within Flood Zone 1, indicating a low probability of flooding arising from fluvial processes (Figure 3). Flood Zone 1 represents areas with an annual probability of flooding of less than 0.1% (1 in 1000 year) from the sea.

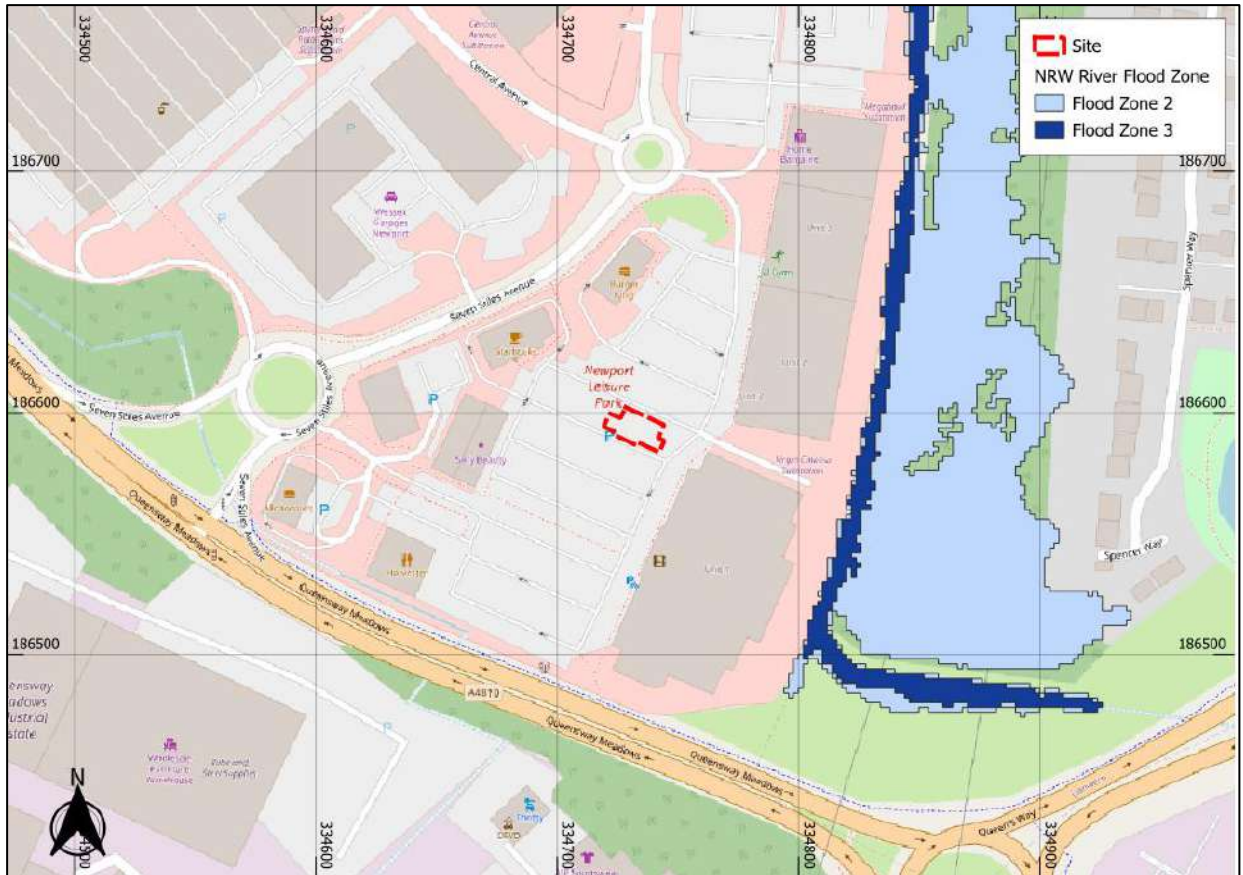


Figure 3: NRW Sea Flood Map for Planning (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Historical Fluvial Flooding

- 4.6. According to the NRW Historic Flood Map (Figure 4), there is no record of historical flooding at the site.

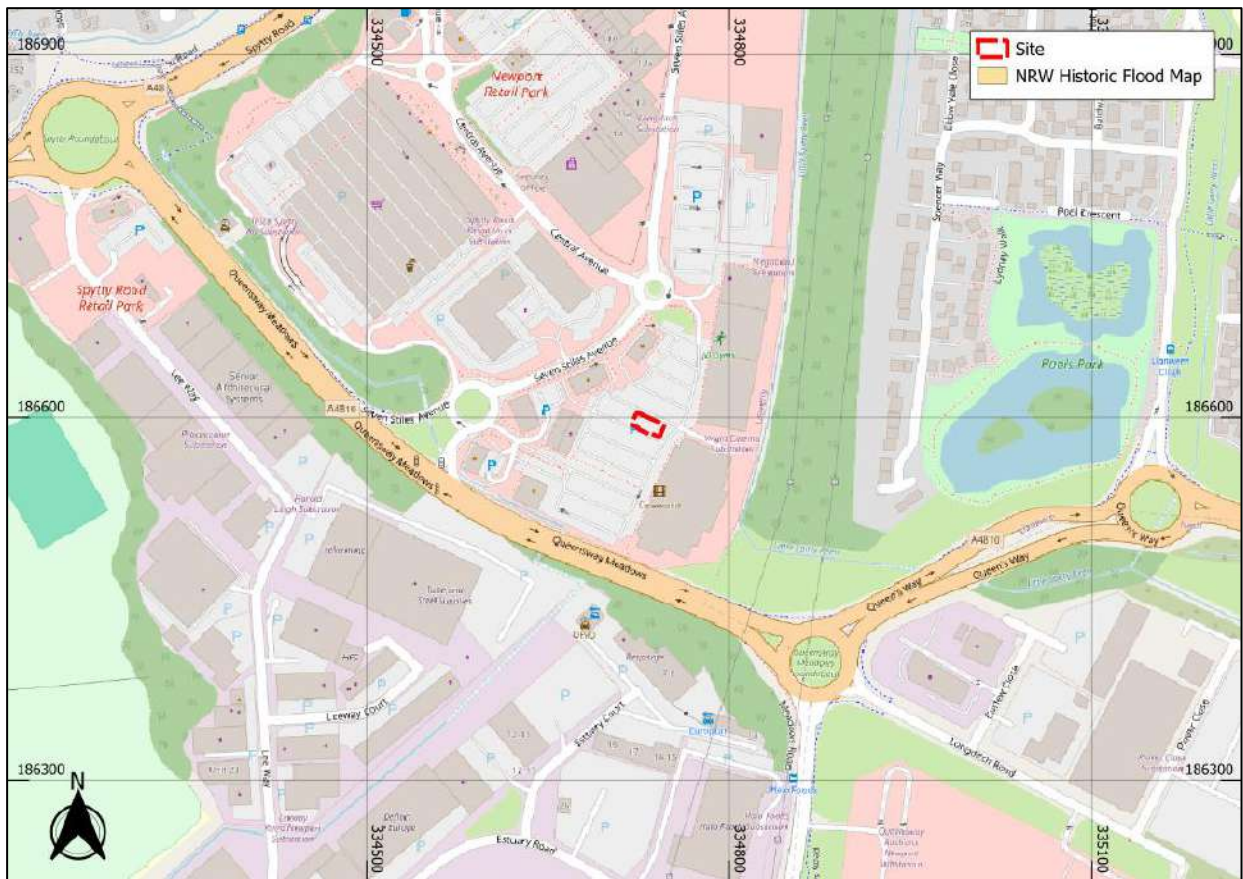


Figure 4: NRW Historic Flood Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Fluvial Flood Risk Summary

- 4.7. As per the NRW Rivers Flood Map for Planning, the entirety of the site is situated within Flood Zone 1 and has not experienced any previous flood events.
- 4.8. Thus, the fluvial flood risk to the proposed development is considered to be low.

Tidal

- 4.9. Tidal flooding occurs when a high tide and high winds combine to elevate sea levels. An area behind coastal flood defences can still flood if waves overtop the defences or break through them. Tidal flooding can also occur a long way from the coast by raising river levels. Water may overtop the river bank or river defences when tide levels are high.

NRW Rivers Flood Map for Planning

- 4.10. According to the NRW Sea Flood Map for Planning, the site is located within Flood Zone 3, indicating a high probability of flooding arising tidal processes. Flood Zone 3 represents areas with an annual probability of flooding of greater than 0.5% (1 in 200 year) from the sea (Figure 5).
- 4.11. The site is also located within a TAN15 Sea defended flood zone, meaning it benefits from flood defences that provide protection up to a 1 in 200-year standard of protection. Review of NRW's Flood Defence Structures dataset indicates that there are flood defences in the form of a tidal embankment present along the banks of the River Usk. The crest height, condition and standard of protection are not recorded.
- 4.12. Despite this, the proposed development - the installation of EV chargers - constitutes a 'Less Vulnerable' land use under TAN15. The proposed development also sits within a Defended Flood Zone of which TAN15 notes that the presence of formal flood defences does not guarantee that land in the Defended Zone will remain free from flooding in the future, they lower the risk of exposure to flooding. TAN15 further mentions that LDPs should seek to avoid intensification of uses in Defended Zones and replacement building or redevelopment schemes should be broadly the same scale as existing uses. Given the proposals consist of less vulnerable development and are of the same nature as the existing arrangement, the development is considered to be acceptable and the development can be designed and operated safely for its lifetime.
- 4.13. Given the low vulnerability classification and the absence of any recorded historical flooding at the site, the proposed development is considered acceptable within a Defended Flood Zone.



Figure 5: NRW Sea Flood Map for Planning (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Newport Hydraulic Model (2022)

- 4.14. The Newport Hydraulic model includes a range of defended and undefended scenarios and return periods, extending up to the defended 1 in 1,000 year (0.1% AEP) tidal event for present-day conditions.
- 4.15. The Newport model has been updated to a 2021 baseline and incorporates formal flood defences across Newport, including the Crindau and Caerleon defence schemes. This is considered the most appropriate data available to assess the flood risk to the development.

Present Day Scenarios

- 4.16. According to the Newport Model, the site remains unaffected in the present day modelled 1 in 30-year, 1 in 200-year and 1 in-1000 year defended tidal events (Figure 6).

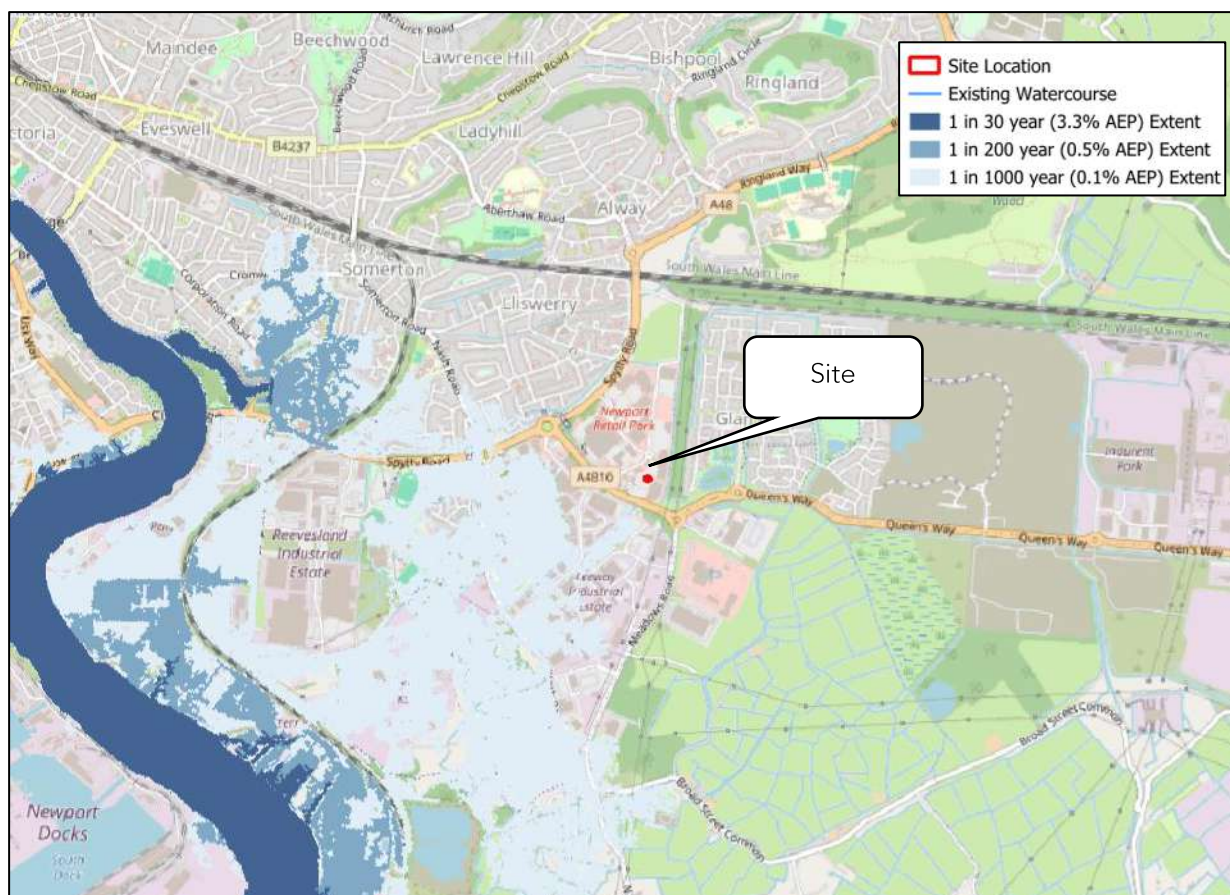


Figure 6: Newport Model (2022) present day flood extents (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Climate Change Scenarios

- 4.17. Climate change within the Newport model is represented through future epochs. Two future time horizons are provided: 75 years (2096) and 100 years (2121) beyond the 2021 baseline.
- 4.18. As the proposed development is EV charging units, the 75-year development lifetime has been assumed for the purposes of this FCA, which is considered to be an overestimate of the actual lifetime of the development. Accordingly, the defended 75-year climate change epoch outputs from the Newport model have been adopted as the future flood risk scenario.
- 4.19. The model includes climate change sea level rise allowances up to the 2096 epoch – which is a large overestimation of the actual lifetime of the development. However, this event has been assessed as a large conservative estimation event.

- 4.20. Based on the defended outputs from the Newport model, the site is shown to remain unaffected in the modelled 1 in 200-year tidal flood event under the 2096 climate change epoch (Figure 7).



Figure 7: Newport Model (2022) climate change 2121 epoch flood extents (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 4.21. As such, the risk of flooding from tidal sources is considered to be low.

Canals

- 4.22. The Canal and River Trust (CRT) generally maintains canal levels using reservoirs, feeders, and boreholes and manages water levels by transferring it within the canal system.

4.23. There are no canals in the vicinity of the site as per the UK CRT Network mapping⁹ and therefore the risk of flooding from canals is considered low.

Surface Water and Small Watercourses

4.24. Pluvial flooding (surface water flooding) can occur during prolonged or intense storm events when the infiltration potential of soils, or the capacity of drainage infrastructure is overwhelmed leading to the accumulation of surface water and the generation of overland flow routes.

4.25. According to the Flood Map for Planning published by NRW, flood zones are defined based on the annual exceedance probability (AEP) of flooding from surface water and small watercourses:

- Flood Zone 1 (Low Probability): Land having a less than 0.1% annual exceedance probability (AEP) of flooding from surface water or small watercourses (less than 1 in 1000 annual chance), including an allowance for climate change.
- Flood Zone 2 (Medium Probability): Land having a 0.1% to 1.0% AEP of flooding from surface water or small watercourses (between a 1 in 1000 and 1 in 100 annual chance), including an allowance for climate change.
- Flood Zone 3 (High Probability): Land having a greater than 1.0% AEP of flooding from surface water or small watercourses (greater than a 1 in 100 annual chance), including an allowance for climate change.

4.26. According to NRW's Flood Map for Planning, the entirety of the site lies within Flood Zone 1 for surface water and small watercourses, indicating a very low probability of flooding from this source (Figure 8).

⁹ <https://canalrivertrust.org.uk/canals-and-rivers>

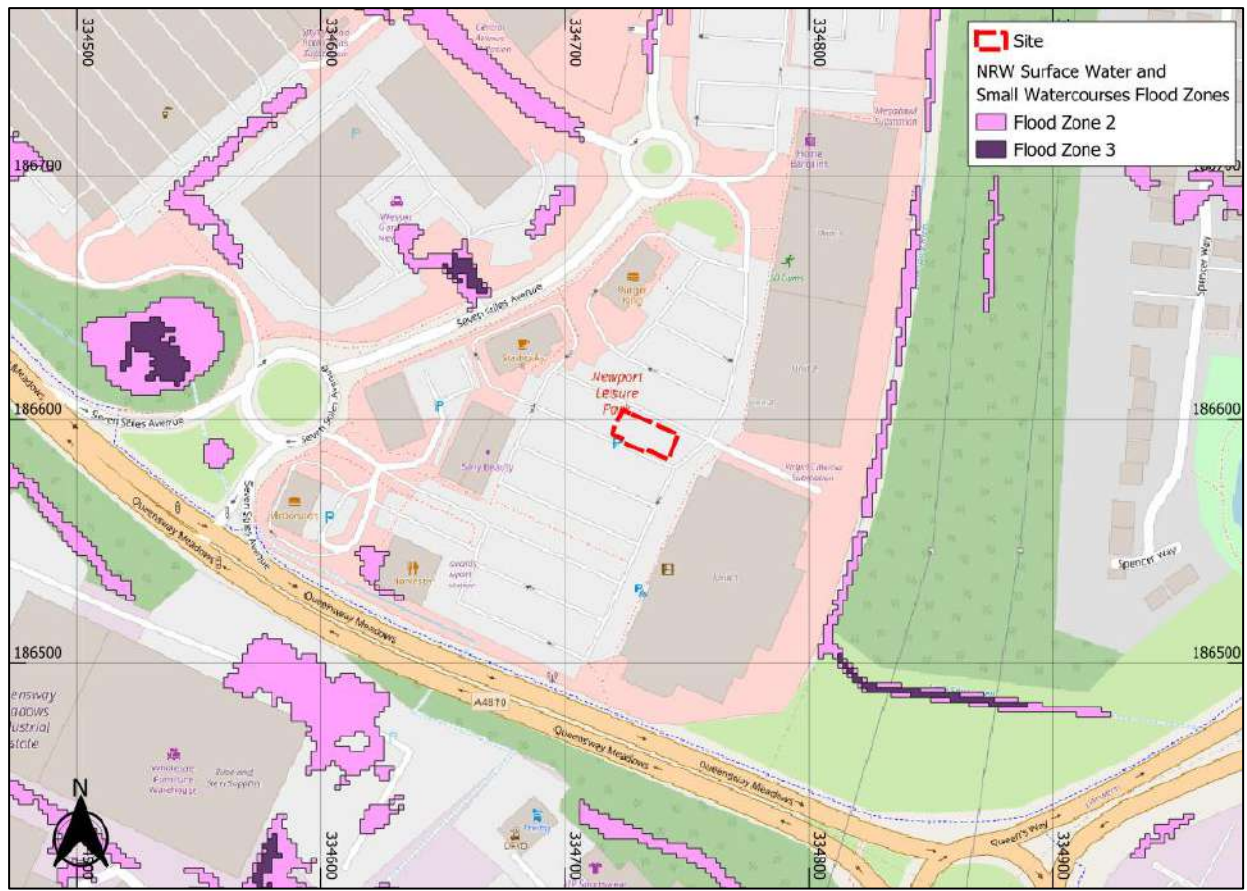


Figure 8: NRW Surface Water and Small Watercourses Flood Zones (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Surface Water and Small Watercourses - Summary

- 4.27. Review of NRW's Flood Map for Planning, indicates that the entirety of the site is located in Flood Zone 1 and is at very low risk from surface water and small watercourse flooding.
- 4.28. Based on the above, the site and proposed development are at low risk of flooding from surface water and small watercourses.

Reservoirs

- 4.29. Large waterbodies or reservoirs that have walls built above the surrounding ground level pose a risk of flooding. Walls could fail due to old age, accident, or because excess flood water has been added to the reservoir. Although a breach is unlikely the consequences would be significant, leading to rapid inundation of the downstream floodplain.

- 4.30. The NRW Flood Risk Assessment map indicates that the site is located within the modelled breach extent of the Llandegfedd Reservoir.
- 4.31. NRW indicate that reservoir flooding is extremely unlikely to happen. There has been no loss of life in the UK from reservoir flooding since 1925. All large reservoirs must be inspected and supervised by reservoir panel engineers. As the enforcement authority for the Reservoirs Act 1975 in Wales, we ensure that reservoirs are inspected regularly and essential safety work is carried out.
- 4.32. Therefore, the risk of flooding from reservoirs is considered to be low.

Groundwater

- 4.33. Groundwater flooding occurs in areas where underlying geology is permeable, and water can rise within the strata sufficiently to breach the surface.
- 4.34. The British Geological Survey's (BGS) mapping shows superficial deposits of Tidal Flat Deposits, comprising clay and silt. The bedrock underlying the site is Mercia Mudstone Group comprised of mudstone. The tidal flat deposits are generally of low permeability and may promote shallow perched groundwater and waterlogging following prolonged rainfall.
- 4.35. There are no historical BGS boreholes within 100m of the site.
- 4.36. A review of the 2022 SFCA confirms that no mapped groundwater flood risk datasets are available for the study area. The SFCA identifies groundwater flooding as a localised and generally minor flood risk across Newport. The SFCA notes limited recorded evidence of groundwater flooding and does not identify groundwater as a significant or controlling flood risk mechanism within the area.
- 4.37. Given the absence of historic groundwater flood incidents, groundwater flooding is not considered a significant source of flood risk. Furthermore, there are no proposed basements or changes to the foundations or fabric of the existing building.
- 4.38. Based on the information reviewed, the risk from groundwater to the development is considered to be low.

Sewers

- 4.39. Foul or surface water sewers can be a cause of flooding if the drainage network becomes overwhelmed, either by blockage or due to local development beyond the designed capabilities of the drainage system.
- 4.40. The Newport PFRA (2011) shows records of historic flooding events from surface water incidents and sewer flooding provided by Dwr Cymru Welsh Water (DCWW).
- 4.41. Data provided indicates a total of 78 locations across the council area that have suffered from historical sewer flooding. The PFRA indicates that the site has not been historically impacted by sewer flooding. Furthermore, the 2011 PFRA states that *'none of the records suggests flooding from sewer sources has significant consequences at this strategic scale'*.
- 4.42. The development is therefore considered to be at low risk of flooding from sewers.

5. Flood Risk Mitigation

All Assessed Sources of Flooding

- 5.1. Based on the analysis conducted in Section 4 of this report, the risk of flooding from all assessed sources including tidal, fluvial, canal, pluvial, reservoir, groundwater and sewer is considered to be low.
- 5.2. Therefore, mitigation measures are not required for the proposed EV charging units or associated works.

Increase to Flood Risk Elsewhere

- 5.3. The proposed development is situated outside all modelled fluvial, tidal and pluvial flood extents. Thus, the development will not increase flood risk elsewhere through floodwater displacement.
- 5.4. Furthermore, the site is currently completely impermeable, and the proposals shall see no increase in impermeable area. Therefore, there will be no increase in runoff generation from the development.

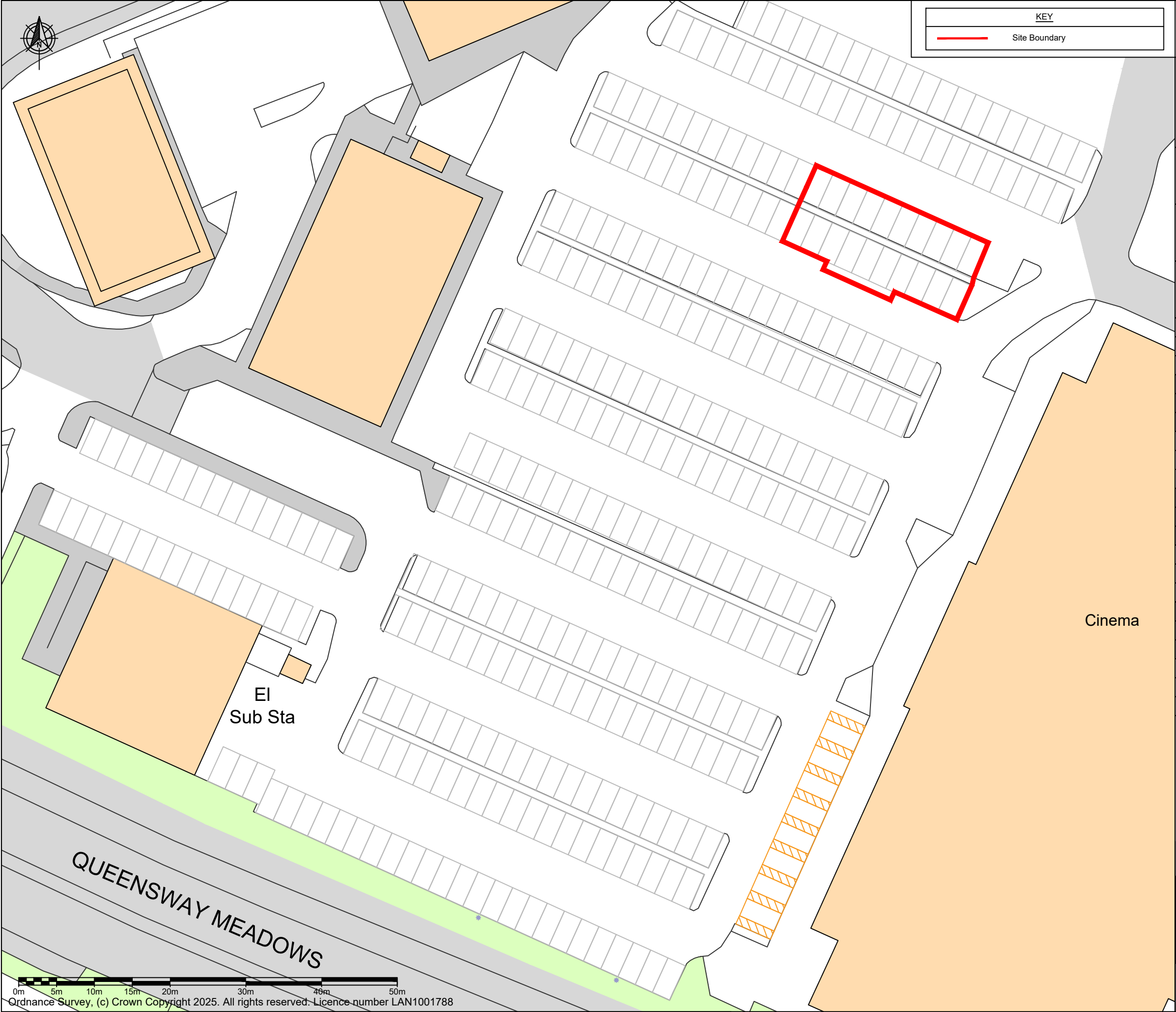
6. Conclusions

- 6.1. This FCA has been undertaken with reference to the requirements of TAN15 with respect to the development at Newport Retail Park, Spyttý Road, Newport, NP19 4QQ. It has been written to support a planning application and prepared with due consideration to the nature of the proposed development to provide the appropriate level of detail.
- 6.2. An assessment of the risk of flooding from all sources has been undertaken and is summarised in the table below:

Source of Flooding	Flood Risk Summary
Fluvial Pluvial Tidal Reservoirs Groundwater Sewers Canals	The site is considered to be at low risk from all assessed sources of flooding.

- 6.3. This Flood Consequence Assessment should be submitted as part of the planning application to satisfy the requirements under TAN15.

Appendix A - Development Proposals



PROJECT NAME

NEWPORT - NEWPORT RETAIL PARK

ADDRESS

Spytty Road
Newport
NP19 4QQ

DRAWING TITLE

BLOCK PLAN

DRAWING NO.

EVN1730_04

SCALE
(@A3)
1:500

DRAWN
BY
HR

REV.

A

REV.	DESCRIPTION				
A	Issued for comment				
DATE	04/03/26	REV. BY	HR	APP. BY	PH
REV.	DESCRIPTION				
DATE		REV. BY		APP. BY	
REV.	DESCRIPTION				
DATE		REV. BY		APP. BY	
REV.	DESCRIPTION				
DATE		REV. BY		APP. BY	
REV.	DESCRIPTION				
DATE		REV. BY		APP. BY	
REV.	DESCRIPTION				
DATE		REV. BY		APP. BY	

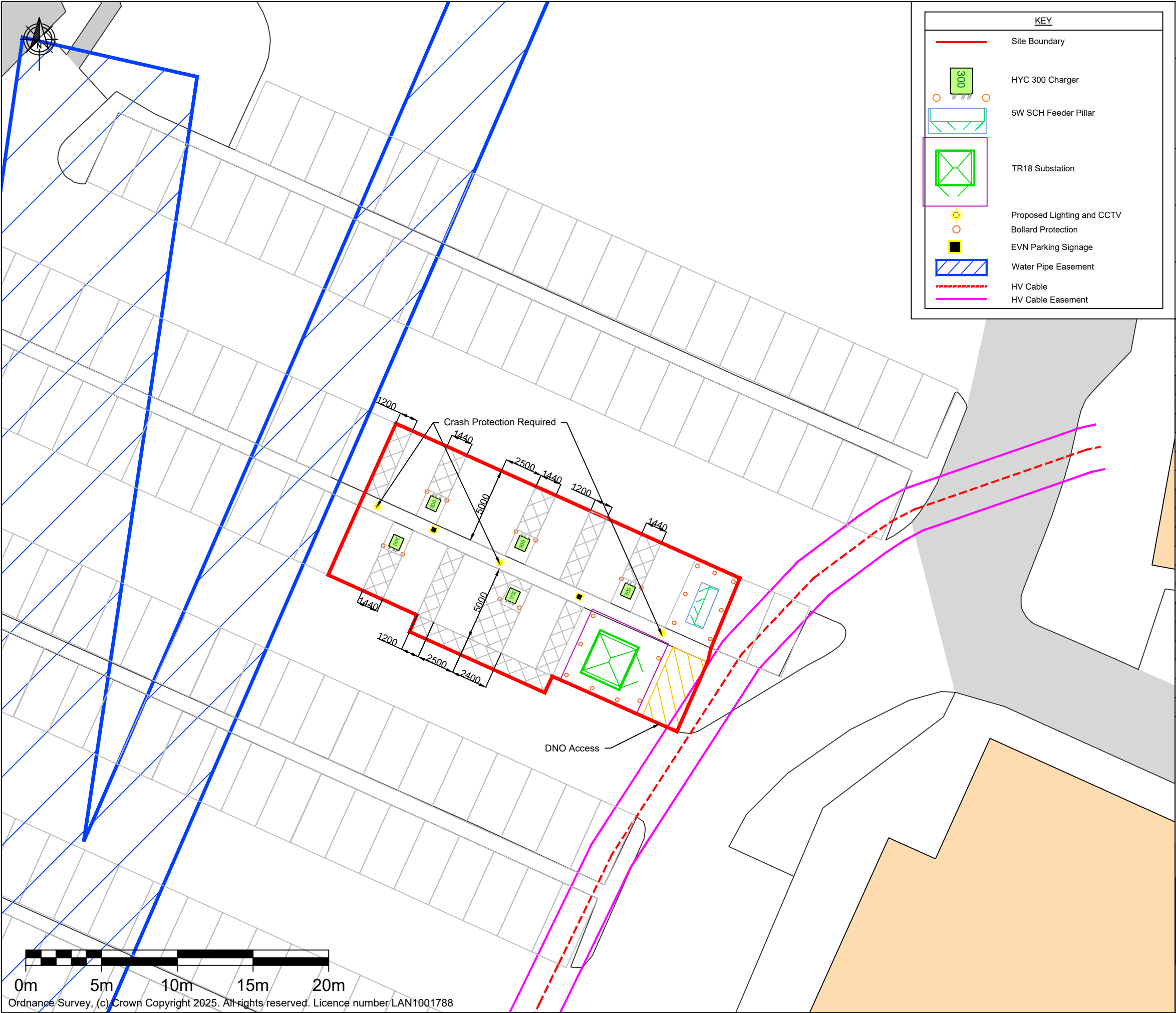
NOTES

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Site Area: 287sqm

the EV network

The EV Network, 84 Brook Street, London
W1K 5EH
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KEY	
	Site Boundary
	HYC 300 Charger
	5W SCH Feeder Pillar
	TR18 Substation
	Proposed Lighting and CCTV
	Bollard Protection
	EVN Parking Signage
	Water Pipe Easement
	HV Cable
	HV Cable Easement

PROJECT NAME

NEWPORT - NEWPORT RETAIL PARK

ADDRESS

Spytty Road
Newport
NP19 4QQ

DRAWING TITLE

SITE LAYOUT

DRAWING NO.

EVN1730_01

SCALE
(@A3)

1:250

DRAWN
BY

HR

REV.

F

REV.	DESCRIPTION				
A	Issued for comment				
DATE	24/07/25	REV. BY	HR	APP. BY	PH
REV.	DESCRIPTION				
B	Layout updated following utility search				
DATE	13/11/25	REV. BY	HR	APP. BY	PH
REV.	DESCRIPTION				
C	Layout updated following LL feedback				
DATE	02/12/25	REV. BY	HR	APP. BY	PH
REV.	DESCRIPTION				
D	Layout updated following CPO feedback				
DATE	03/02/26	REV. BY	HR	APP. BY	PH
REV.	DESCRIPTION				
E	Construction details added				
DATE	13/02/26	REV. BY	HR	APP. BY	DS
REV.	DESCRIPTION				
F	Layout updated to 10 EV bays				
DATE	04/03/26	REV. BY	HR	APP. BY	PH
REV.	DESCRIPTION				
DATE		REV. BY		APP. BY	

NOTES

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DRAFT

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