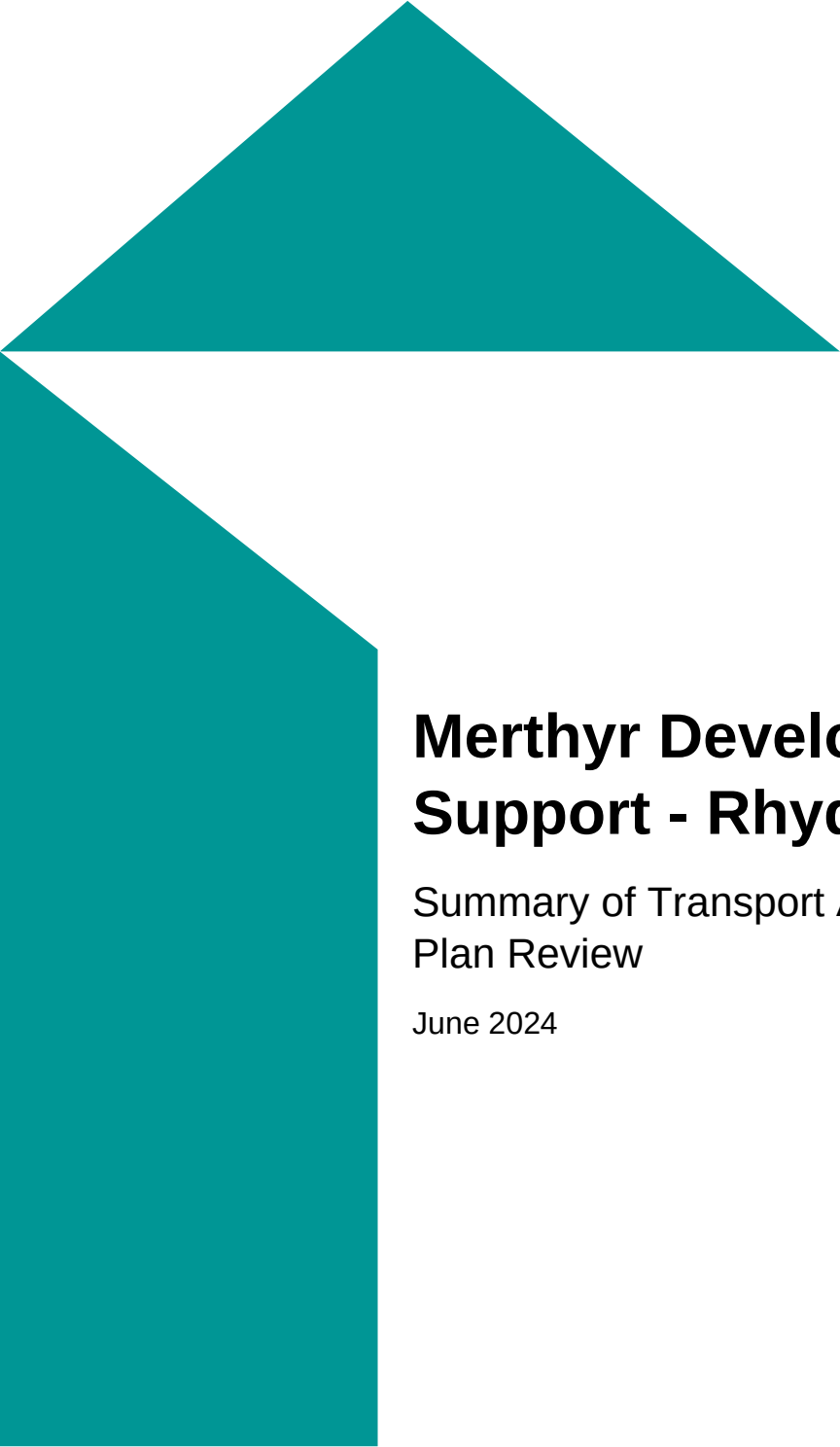




Merthyr Development Control Support - Rhydycar West

Summary of Transport Assessment and Travel
Plan Review

June 2024

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Issue and Revision Record

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1 Introduction

1.1 Overview

Mott MacDonald have been commissioned by Merthyr Tydfil County Borough Council (MTCBC) to prepare a comprehensive, independent review of the transport proposals associated with the Rhydycar West development submitted by the developer, Marvel Ltd.

The developer has submitted an outline planning application for a leisure development comprising:

- an indoor snowdome (up to 39,200 m²)
- a waterpark (up to 9,000 m²)
- an indoor and outdoor activity centre (up to 24,000 m²)
- hotel accommodation (up to 24,000 m² / 418 bedrooms)
- forest lodge accommodation (up to 2,000 m² / 30 units)
- car parking (up to 830 spaces) and;
- associated earthworks, access, drainage, servicing and utilities connections/infrastructure

An updated Transport Assessment (TA) and Travel Plan (TP) review was issued to MTCBC in September 2023. This report summarises the following:

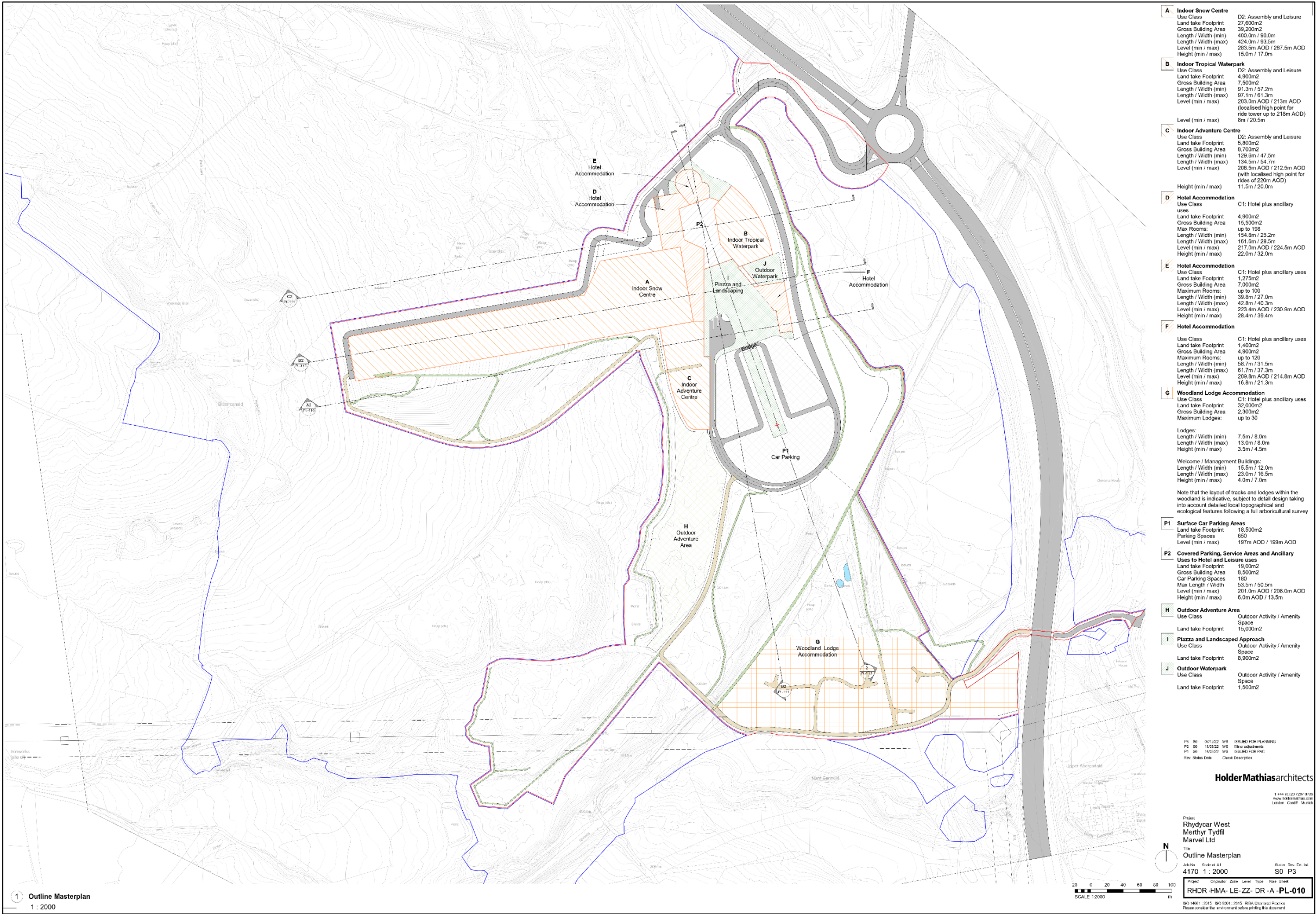
- **History of Review** – a summary of the history of the review to date, including a record of document submissions and previous recommendations regarding the Rhydycar West development.
- **Outstanding Issues** – overall conclusions and identified areas of concern from the September 2023 review.
- **Information and Meetings** – a summary of recent meetings and information provided to inform the review process as of May 2024.
- **Summary** – a series of next steps and conclusions, including further commitments identified through to May 2024.

1.2 Site Location

The site is located to the southwest of Merthyr Tydfil on the same side of the valley as the existing Merthyr Leisure Village and Abercanaid Industrial Estate.

The proposed main access to the site is from the A470 via the A4060 and A465 which are the responsibility of the Welsh Government. An emergency access is also proposed to the south of the site via an underpass under the A470 located north of Abercanaid.

Figure 1.1: Outline Masterplan



Source: RHDR-HMA-LE-ZZ-DR-A-PL-010-Outline Masterplan-S0-P3

2 History of Review

2.1 Overview

This section provides a summary of the TA and TP review to date. This includes a history of the commission and previous recommendations submitted to MTCBC by Mott MacDonald.

The following spans a one-and-a-half-year period between May 2022 and September 2023 and covers the key dates as below:

- **May 2022** – initial commission by client
- **September 2022** – submission of review to client
- **February 2023** – amended proposals submitted by developer
- **September 2023** – second round of review submitted to client

2.2 History of Review

2.2.1 2022

In May 2022, Mott MacDonald were commissioned by MTCBC to prepare an independent review of the Transport Assessment and Travel Plan associated with the Rhydycar West development. These transport proposals were produced by Tetra Tech on behalf of the developer, Marvel Ltd.

The proposals included an assessment of all modes of access to the site and the external measures provided by the developer to mitigate traffic impacts and improve access for visitors and staff.

The assessment also considered the extent to which the proposed development adhered to local and national planning policy, particularly in regards to Planning Policy Wales and Future Wales, taking into account the embedded transport and well-being policies set by the Wales Transport Strategy and the Well-being of Future Generations (Wales) Act.

Mott MacDonald issued a review of these proposals to MTCBC in September 2022. The following observations and recommendations were made:

- No recognition of the convoluted nature of existing active travel routes and no mitigating measures proposed.
- Operation of a secondary access under the A470 underpass considered unrealistic due to width constraints.
- Discrepancies in parking requirement calculations and trip rate estimates, including no assumptions for seasonal demand tidalites.
- Mode share assumptions considered to be unrealistic, including an unjustified reduction in rail mode share and an increase in private car share.
- The location of the site was deemed unsuitable when assessed against national planning policy in addition to unsuitable transport arrangements and environmental considerations caused by vehicular emissions). The assessment made light reference to policy matters without demonstrating how the development sought to adhere to them.

2.2.2 2023

Following the review of proposals completed by Mott MacDonald in September 2022, the developer entered a pre-application consultation process whereby draft proposals were made available for initial review by MTCBC and other stakeholders.

This gave the opportunity for the applicant to address concerns or provide additional supporting evidence. MTCBC provided feedback and Tetra Tech, on behalf of the developer, produced an amended TA and TP in acknowledgement of the recommendations within MTCBC's pre-application consultation (PAC) response. The final reports for submission were issued in February 2023.

Mott MacDonald completed a second round of review for MTCBC through to September 2023. This included a comparison between the updated and previous proposals and a fresh assessment of both the updated TA and TP to inform the second review. The following conclusions and recommendations were submitted:

- Limited improvement in recognising poor quality of active travel routes. Mitigation measures provided by developer deemed inadequate.
- Limited assessment against and adherence with local and national planning policy.
- Discrepancies in parking and trip rate estimates from previous assessment not accounted for.
- A recommended approach provided by Mott MacDonald as a part of the TA/TP review outlining the preferred methodology to calculate peak demand and mode share figures.

3 Outstanding Issues

3.1 Overview

This section complies and summaries the outstanding recommendations made by Mott MacDonald to inform the decision-making process for MTCBC regarding the Rhydyar West development, as of the September 2023 review.

3.2 Outstanding Issues

Following the review completed by Mott MacDonald in September 2023, and the subsequent recommendations, the ensuing series of issues were left unaddressed:

- Whole site reliant on single access with no clarity on the acceptability of the 'emergency' access – the definition of 'emergency' use and views of emergency services have not been established. The existing configuration of the underpass under the A470 is unsuitable for both emergency and general traffic due to the presence of a 'pinch point' under the bridge and unsuitable paving conditions that fall outside of the development's boundaries.
- Proposed upgrades to the Active Travel network but no details provided – walking/cycling routes from Merthyr town centre are convoluted and currently in poor condition, in addition to poor accessibility for disabled users. There is a potential for pedestrians to walk down the A4102 road, which is unsuitable and has no pedestrian access, resulting in a safety risk.
- The proposals mention operating a shuttle bus between the rail and bus station and the development but without details on timetable, fares, availability to staff etc.
- Major shortcomings in the trip rate calculations – grouping all the activities together and assuming the same patterns for every week of the year, downgrading expectations of rail mode use based on capacity despite Welsh Government commitments to the South Wales Metro, journey time and frequency improvements. Mode share calculations also fall short of policy targets.
- No disaggregation between staff and customer travel assessments despite recognition that the catchments, arrival and departure peaks and duration of stay would be markedly different.
- No link between the trip rates and the parking demand based on typical group size, duration of stay etc.
- Poor adherence to national planning policy (including Planning Policy Wales and Future Wales) due to the unsustainable location of the site adjacent to the A470.

3.3 Access Arrangements

The access arrangements to the site were assessed and deemed to be inadequate. The TA proposes one main access point from the A470, with an emergency access via Dragon Parc, following an existing route under the A470 via an underpass.

The assessment deemed that the route was inadequate (in terms of width, passing points, lighting etc) and would clash with existing bridleway that uses the same route. It was also determined that the route was not wide enough to safely accommodate large emergency vehicles, with an average width between 3.5 and 4 metres in most places.

Similarly, access by sustainable modes was deemed to be poor. For active modes, most of the route between the town centre and site does not directly follow the A4102 road to the proposed site access and there are no footways on this section. There is a potential for pedestrians to walk down the A4102 road, which has no pedestrian access, resulting in a safety risk. The

condition of the footways were also deemed to be convoluted and inaccessible to users with disabilities due to the paving conditions and convoluted nature of the route.

3.4 Parking

An updated parking assessment was provided to Mott MacDonald in January 2024. The largest change to these figures was the inclusion of a 15% reduction in trips due to cross-visitation between multiple attractions and reflected in car park calculations.

Using these updated figures, the maximum number of cars estimated within the car park at any given time is assumed to be 613 on a weekday, and 773 on a Saturday. With the cross-visitation factor removed, the maximum numbers reach 705 and 889 respectively.

Whilst the broad cross-visitation factor is accepted, actual cross-visitation will impact the number of entries and exists significantly more than on-the-ground parking. Parking spaces will largely be occupied throughout a visitors stay, in which case any new visitors will result in the car park going over capacity.

It is assumed, therefore, that the parking requirements and calculations need further considerations. The calculation provided does not consider the likely demand from other factors including staff or peak events. It is felt that when these factors are taken into account, the parking demand will exceed the supply of 830 quoted within the initial TA.

The TA does not address this point or identify any overspill parking areas for these considerations, in which case it is assumed that there is a risk of on-street parking, parking at other sites (such as Merthyr Leisure Village) nearby being occupied, or illegal parking on site causing a safety risk and congestion within the development.

3.5 Policy Contribution

3.5.1 Transport Policy

An assessment has been made as to how well the site proposals, as outlined in the Transport Assessment and Travel Plan, contribute towards Welsh Government policy and the commitments to sustainable travel targets outlined by the Llwybr Newydd – the Wales Transport Strategy (WTS) and Planning Policy Wales (PPW).

Whilst the reports have referred to policy aspirations, the development proposals lack significant provisions to meet these targets. This includes:

- An overall sustainable mode share assessment of 10% (5% rail, 3% bus and 2% Active Travel), significantly lower than the WTS targets of 45% by 2040.
- A parking strategy which is misaligned with Planning Policy Wales (PPW). The development relies significantly on private car use and does not follow the urban design principles outlined by PPW to support modal shift to walking, cycling and public transport.
- High reliance on private car use will result in an increase in vehicular emission levels (NOx and PM) and not contribute towards Net Zero Wales.

The development falls short on local policy aspirations set by MTCBC, including the MTCBC Decarbonisation Plan 2023-2030, the South East Wales Valleys Local Transport Plan and the MTCBC Local Development Plan. These policies commit to the encouragement of sustainable travel and to significantly reduce carbon emissions from transport.

3.5.2 Planning Policy

The assessment also considered the adherence with and acknowledgement of relevant national planning policy, including those defined within Planning Policy Wales – Edition 12 and Future Wales: The National Plan 2040.

In addition to the shortcoming in transport arrangements as outlined in **Section 3.5.2**, the assessment demonstrates a poor lack of adherence with, and in some cases conflicts to, Planning Policy Wales and Future Wales.

This is reflected in the unsuitable location of the site on the west side of the A470, with a singular main access for all traffic accessing the site likely to cause disruption on the local and trunk road network at peak times. There is limited acknowledgement of potential growth in demand and how the site seeks to sustainably manage this.

There are also limitations to public transport access to the site, limiting the scope of travel to the site by sustainable means. This contravenes the good design principles outlined in Planning Policy Wales, with ease of access to the site limited in most regards.

3.6 Sustainability and Carbon

A separate carbon assessment has been completed by Mott MacDonald to summarise the work undertaken to assess and mitigate the carbon emissions of the development. In addition to the vehicular emissions outlined in **Section 3.5**, it is assumed that there will be a level of adverse environmental impacts from the construction, repair and maintenance, general operation of the site and end-of-life decommissioning.

The assessment concluded negligible effects for operational energy expenditure, minor adverse impacts for construction and major adverse impacts for operational transport.

The operational transport assessment estimated emissions for two isolated years across the travel categories: local, regional and national. Using the traffic flow data from the TA and the average distance assumptions for these categories, the total vehicle kilometres have been estimated and as such the emissions.

Total annual emissions for 2025 (considering 15% Electric Vehicle (EV) usage) are estimated at 61,450 tCO₂e, whilst for 2031 (considering 43% EV usage) total annual emissions are estimated at 50,249 tCO₂e. The difference between the two years is due to the increased EV uptake reducing emissions balanced by the increased traffic volumes increasing emissions.

Mitigation measures provided by the TA include the provision of a shuttle bus, engagement with sustainable transport modes and provision of education for transport initiatives, however these are deemed as inadequate to address the operational transport emissions significantly when assuming the high private car use reported in the TA is maintained.

Operational transport mitigation is assessed at high level, despite this being the biggest contributor of emissions from the project. It is appreciated that there is a level outside of the control of the Applicant to mitigate against these emissions but more details on the measures would be beneficial.

4 Information and Meetings

4.1 Overview

A series of communication and meetings have occurred since the second review through to March 2024. This includes information that has been shared between Mott MacDonald, MTCBC and Tetra Tech (on behalf of the developer) in order to inform the review process. In addition, a series of meetings have been held in relation to the Rhydycar West development.

This section collates and summarises these sources of information in **Section 4.2** below and have been used to inform the **Conclusions and Next Steps** at the end of this report.

4.2 Record of Information and Meetings

Table 4.1 provides a record and dates of external meetings and information provided by MTCBC and the developer up until May 2024. This list is not exhaustive and spans the period between the submission of the second review in September 2023 up until the present.

Table 4.1: Record of Information and Meetings

Date	Type	Summary
November 2023	Meeting	Discussion on trip generation and parking demand estimates.
January 2024	Information	Technical note received by Tetra Tech on the potential volume of peak time users at the snow dome and other facilities and the associated parking requirements.
January 2024	Meeting	A discussion on additional transport information provided in support of the Rhydycar West development.

4.2.1 November 2023

Following the meeting on 21 November 2023 with the Rhydycar West development team, it was agreed that Tetra Tech would provide further background information on the trip generation and parking demand estimate for the snow dome aspect of the development.

Tetra Tech provided links to the previously referenced Swindon snow centre Transport Assessment submitted to the Swindon planning authority. Whilst the snow slope element of the Swindon development has yet to be constructed, the Transport Assessment drew on survey/record data from existing snow centres at Milton Keynes and Castleford. These were used to calculate trip generation, mode shares and parking demand at peak times for the proposed Swindon operation. It should be noted that this type of information was requested during our initial review of the Rhydycar application and was not provided prior to this meeting.

It demonstrated that many of the concerns raised the initial 2022 review of the Rhydycar development were addressed by the Swindon applicant. It was made apparent that any reassessment of Rhydycar West based on the Swindon data would materially affect the peak period parking demands and potentially the wider highway impacts. The following details were itemised:

- The Swindon application examines the size of the proposed slope relative to the potential volume of peak time use as well as the possible maximum safe user limits.

- The Swindon application separately assesses each element of the development (snow centre, residential, retail etc) before all the results are aggregated. Whereas the Rhydycar approach sums the annual patronage estimate for the main elements (snow centre, swimming activities and outdoor facility) and assumes that each will operate in the same way throughout the year.
- The Rhydycar application assumes a 'flat' line demand for the snow centre throughout the year whereas the Swindon application is based on a monthly profile using data from existing facilities. This shows that typically demand can be expected to be significantly higher in the winter months compared to the summer.

4.2.2 January 2024

A technical note was submitted by Tetra Tech on 18 January 2024 which provided additional details on the potential volume of peak time users at the snow dome and other facilities and the associated parking requirements.

This was discussed and explained further at a meeting held on 23 January 2024, after which assisting information on the Therme Manchester application was received.

After a number of subsequent discussions regarding evidence sources, calculation methodology, underlying assumptions and management 'commitments', the following conclusions were reached and submitted to MTCBC by Mott MacDonald:

- Whole site reliant on a single access with no clarity on the acceptability of the 'emergency' access.
- Agreement to commit to a free shuttle bus for staff and customers – but no detail provided in terms of frequency and capacity of service.
- Upgrades to the walk/cycle route but no details provided.
- Evidence base from other similar existing centres provided (Swindon and Therme Manchester).
- Recalculation of trip assessments utilising the new evidence allowing for seasonal fluctuations.
- Calculation of car park demand based on group size, duration of stay etc, drawn from the new evidence.
- Proposal to manage the car park through advance booking arrangement.
- No separate assessment of staff travel other than car parking would be 'controlled' via staff travel plan.
- Reduction of trips by 15% to reflect cross-visitation, but the parking duration figures were not updated to reflect this.
- Limited information on staff movements and parking arrangements.

5 Conclusion

5.1 Final Considerations

It is recognised that the developer has made a number of subsequent reassumptions following the outcomes of meetings outlined in **Section 4**. There is a marked commitment to the recalculation of trip and parking assessments provided in the original submissions.

However, the operation of the car park remains a concern with the potential for 'overflow' onto the local road network or neighbouring developments (such as Merthyr Leisure Village) during peak periods.

There is also a significant concern over the impact of operational transport carbon emissions associated with the project. It is appreciated that there is a level outside of the control of the Applicant to mitigate against these emissions but more details on the measures would be beneficial.

5.2 Conclusion

The proposed development is considered unacceptable in highway safety terms as it fails to demonstrate the following:

- Clear considerations for parking demand based on accurate trip generation data.
- Sustainable site access for visitors, staff and emergency vehicles that would not disrupt traffic on the local and trunk road networks.
- Attractive options for sustainable modes, as public transport and Active Travel links are convoluted and, with the exception of the shuttle bus service, rely on external factors such as bus and train operators.
- Poor environmental considerations, to address the adverse environmental impacts from the construction, repair and maintenance, general operation of the site and end-of-life decommissioning.
- Alignment with significant national transport and planning policies (WTS, PPW and Future Wales).

