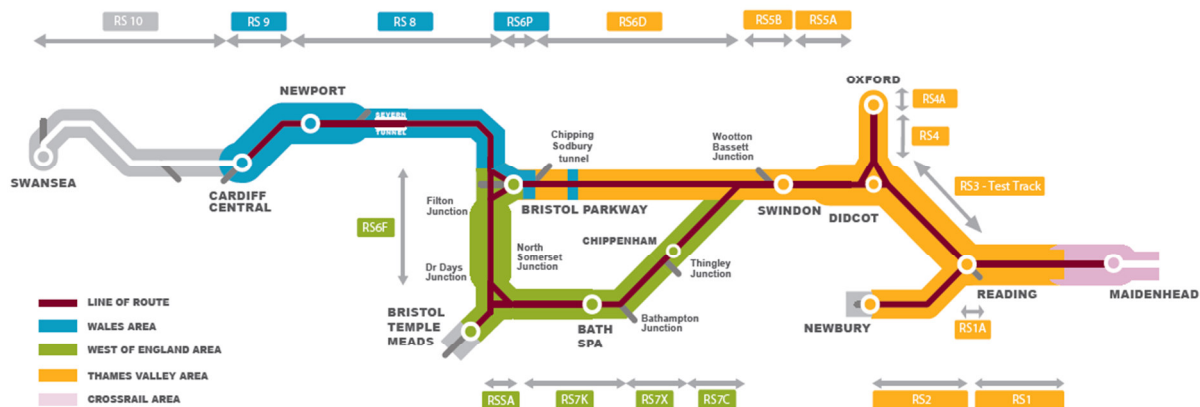


# ACHIEVING NO NET LOSS OF BIODIVERSITY ON THE GREATER WEST PROGRAMME

## *What's the Greater West Programme?*

The Greater West Programme (TGWP) includes the electrification of more than 300 miles of railway from Maidenhead to Cardiff through Bath & Bristol, and to Oxford and Newbury. Electrifying this key stretch of railway will mean faster, greener and more reliable journeys for thousands of passengers and a quieter, cleaner environment for lineside neighbours.



## *What's Biodiversity No Net Loss?*

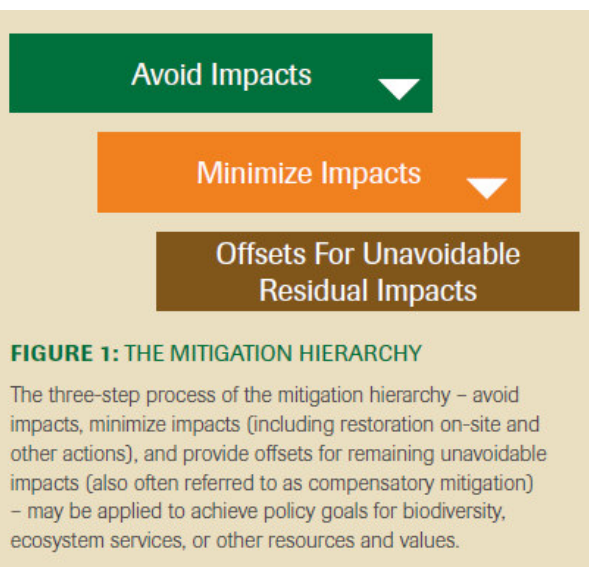
Biodiversity refers to all habitats and wildlife and include the lineside vegetation Network Rail manages to upgrade and safely operate the railway. Click [here](#) for more information about vegetation management.

On The Greater West Programme woody vegetation (consisting mainly of young semi-natural woodland that is secondary in origin, as well as some scrub) has to be cut back in order to install the foundations, masts and wires that form part of the electrification system and provide sufficient clearance to prevent damages and delays from falling trees and branches. Scrub, grass and other low-lying habitats will be allowed to grow back where trees are removed. However, while habitat cover is retained along the railway lineside, the scheme will result in an unavoidable loss of biodiversity.

In 2014, Network Rail Infrastructure Projects (IP), division responsible for delivering railway upgrades, committed to a “measurable net positive contribution towards biodiversity in the UK”. The Greater West Programme pledged to be a pilot project to put this principle into practice and achieve No Net Loss (NNL) of biodiversity. This was a voluntary commitment, not bound to any planning obligations or client requirements.

In order to achieve this objective, The Greater West Programme is applying the Mitigation Hierarchy (see Figure 1) to prioritise avoiding and minimising impacts on biodiversity where possible, and then restoring and rehabilitating impacts on-site whilst compensating for any unavoidable impacts off site as a last resort (also known as Biodiversity Offsetting).

Network Rail IP's approach to Net Positive is based on good practice principles of biodiversity offsetting (Appendix A) because these provide a robust and challenging framework to achieve development with long-lasting net positive outcomes for nature conservation. These good practice principles have been developed by the Business and Biodiversity Offset Programme (BBOP), and by the UK government's Department for Environment, Food and Rural Affairs (Defra) for its national pilot test on biodiversity offsetting. In partnership with CIEEM and IEMA, CIRIA published in 2016 the UK's first Biodiversity Net Gain Good Practice Principles for development (click [here](#) to download a copy).



Source: Achieving Conservation And Development, The Nature Conservancy, April 2015

## What does it mean in practice?

A calculation of biodiversity units before and after electrification showed that the Greater West Programme would not achieve No Net Loss without further interventions, even after applying the mitigation hierarchy and complying with laws protecting wildlife and designated sites.

As there is limited opportunity to replant trees and restore lost habitat along the operational railway due to operational and safety risks, Offsetting was identified as the only option to achieve no overall loss of biodiversity, in other words No Net Loss.



In practice, The Greater West Programme is aiming to identify and support the delivery of habitats planting and enhancement projects on 3<sup>rd</sup> party land. In order to do so, The Greater West Programme is seeking to partner with local authorities and conservation organisations to offset the unavoidable loss of biodiversity by funding biodiversity gains elsewhere.

Over the past 18 months, we've been hosting consultation workshops and local meetings in England and Wales to present our approach to No Net Loss, to give people opportunities to ask us questions and consider if they wish to be part of our No Net Loss initiative.

Our approach to 'No Net Loss' is for local partners to have a say in decisions about where and how to achieve it, since they know what's best for nature in their patch. From our inclusive approach, we've seen significant benefits to our business, including:

- Improved reputation from building local partnerships
- Proven sustainability leadership and innovation
- Demonstrating long-lasting contributions to local communities

All too often compensation for biodiversity losses from development is undertaken in isolation, with little or no link to nature conservation strategies of the locality. We hope to change that - by partnering with stakeholders and implementing offsets that feed directly into conservation planning. Also we hope that we, as industry, together with local authorities, conservation groups, local interest groups and other stakeholders deliver "as one" on this No Net Loss commitment.

### ***What do the offsets look like?***

Our offset projects should support the same kind of biodiversity (an 'in-kind' offset), as well as being better than the original (like-for-better) so we are looking for offsets that involve creating or enhancing native, species-rich broad-leaved semi-natural woodland and scrub mosaic habitats. These projects must align with the good practice principles, and especially be:

- A contribution to a local and/or regional conservation strategy (e.g. Biodiversity Opportunity Areas, Conservation Target Areas, Living Landscapes, Green Infrastructure Plans) such as:
  - [State of the Environment Wiltshire and Swindon](#)
  - [West of England State of the Environment – Ecosystem Services](#)
  - [State of Natural Resources Report Wales \(SoNaRR\)](#)

- As local to the railway as possible
- Of real and long-term benefit for biodiversity
- An additional conservation outcome that would not have otherwise occurred:  
***Note: Offsets cannot be projects that would happen anyway, even without funding from The Greater West Programme. For example: Restoration or enhancement activities to maintain a Site of Special Scientific Interest (SSSI) in a favourable condition.***
- Undertaken in partnership and involve local communities and interest groups
- Of benefit for local communities, for example supporting 'local access to nature' projects
- Designed and delivered for the long-term, preferably in-perpetuity
- Medium to large scale, for example enhancing the condition of 5ha of woodland (e.g. through thinning, etc.) or converting 10ha of amenity grassland into woodland.

***Note: Smaller projects can be delivered as part of a partnership, and organisations operating in the same geographical area are encouraged to get together in order to develop a bigger, better and more joined up project.***

If other habitats are affected, especially those of interest for nature conservation, we will fund specific offsets for those habitats. However, offsetting does not apply to highly valuable or irreplaceable ecological resources such as ancient woodland.

***Note: The Greater West Programme has not affected ancient woodlands, and will not fund projects offering to restore or enhance this habitat.***

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## ***When and how is it going to happen?***

We partnered with independent and reputable organisations to help us deliver the best outcome to biodiversity for our funding. The Trust for Oxfordshire's Environment will cover Oxfordshire and Berkshire and The Wildlife Trusts Services Ltd will cover Wiltshire, the West of England (South Gloucestershire, BaNES and Bristol) and South Wales.

Following the initial engagement, the projects selection process will take place in two stages:

- **Stage 1:** Collecting outline Offset project proposals through the Stage 1 Form, assessing these proposals against best practice principles and selecting projects qualifying for Stage 2
- **Stage 2:** Receiving and evaluating application for funding through the Stage 2 Form

At the end of this Stage 2, the applicants will be notified of the grant panel decision and funding will be released to the successful offset providers. We commit to fund the delivery of the offset project and 3 years aftercare and the offset provider commits to maintain it for the long-term. The actual budget is set on a case-by-case basis, depending on the type and amount of offset needed.

We aim to achieve No Net Loss through offset projects funding by Spring 2019 and to start delivering projects 'on the ground' from Winter 2017 onwards.

## **How to submit a project proposal?**

Request a Stage 1 Form (Appendix B) and submit your project proposal to Emmanuel Deschamps, The Greater West Programme ([NetworkRailBiodiversityNNL@networkrail.co.uk](mailto:NetworkRailBiodiversityNNL@networkrail.co.uk); 07711601208).

## APPENDIX A – NETWORK RAIL NETWORK RAIL (IP) BIODIVERSITY OFFSETTING GOOD PRACTICE PRINCIPLES

|   |   |
|---|---|
| <b>Achieve ‘Net Positive’ outcomes for biodiversity</b> | Network Rail IP’s projects are designed to achieve a ‘Net Positive’ outcome for affected biodiversity <sup>1</sup> with respect to species composition, habitat structure and key ecological functions, and people’s use and cultural values associated with that biodiversity. Net positive outcomes are in proportion to the scope of impact. Species composition refers to animals and plants, and key ecological functions are considered in accordance with guidelines issued by the Chartered Institute of Ecology and Environmental Management. <sup>2</sup>   |
| <b>Follow the Mitigation Hierarchy</b>                  | Network Rail IP undertakes all reasonable measures to first avoid and then minimise its impact on biodiversity, and then to restore or rehabilitate biodiversity on-site in accordance with Network Rail Standards for managing habitat on railway embankments. Offsetting is only considered as a last resort after appropriate prevention and mitigation measures have been taken.  |
| <b>Limit what can be offset</b>                         | <p>Some valuable habitats are extremely difficult or impossible to recreate. For example, the UK government’s Planning Policy Statement 9<sup>3</sup> recognises that, once lost, ancient woodland cannot be recreated. If, despite applying the mitigation hierarchy and legal compliance, such habitat is lost, action to mitigate the loss will be bespoke, on a case-by-case basis, decided with the relevant authorities and with recognition that the habitat cannot be re-created or that it takes decades to develop.</p> <p>If impacts occur to areas that have been given special protection under the European Union’s Habitats and Species Directive, or as Sites of Special Scientific Interest (SSSIs), Network Rail IP follows existing legal processes.</p>   |
| <b>Achieve measurable conservation outcomes</b>         | <p>Biodiversity offsets are distinguished from other forms of compensation by the requirement for measurable conservation outcomes. Network Rail IP measures biodiversity losses and gains from a project in ‘biodiversity units’, using the metric that Defra introduced for its national pilot test on biodiversity offsetting<sup>4</sup>. It also uses this biodiversity unit calculation to show how an offset achieves Net Positive.</p> <p>This metric is habitat-based, so its advantage is that it captures more than the ‘silo-species focus’ of some legal and planning systems. However, because it is habitat-based, it does not reflect other aspects of Network Rail IP’s Net Positive approach, such as ecological function or how animals use a habitat. To overcome this, Network Rail IP uses biodiversity units as one piece of information and in combination with a variety of other data on all aspects of its approach to Net Positive.</p> |

<sup>1</sup> Permanent loss of biodiversity resulting from the project

<sup>2</sup> Institute of Ecology and Environmental Management (2006) Guidelines for Ecological Impact Assessment in the United Kingdom.

<sup>3</sup> Office of the Deputy Prime Minister (2005) Planning Policy Statement 9: Biodiversity and Geological Conservation. Crown Copyright

<sup>4</sup> Defra (2012) Biodiversity offsetting: guidance for developers

|  |   |
|--|---|
| <b>Account for difficulty, uncertainty and risk when designing offsets</b> | Network Rail IP accounts for the difficulty to create an offset, the risk of an offset failing and the time-lag to when an offset reaches its target condition. It does so by applying compensating 'multipliers' <sup>5</sup> to biodiversity unit calculations so that a higher habitat condition and/or more offset hectares are needed to deliver the target number of biodiversity units, and by working with stakeholders to determine what level these multipliers should be.  |
| <b>Involve stakeholders in decision-making</b>                             | Network Rail IP's approach to offsetting is to partner, on an inclusive basis, with its stakeholders, including local authorities, statutory agencies, conservation organisations and local interest groups. Stakeholders are involved with decisions on the design, selection, implementation and monitoring, and in evaluating the offsets. This is especially for Network Rail IP offsets to make a contribution towards biodiversity in the UK.   |
| <b>Base decisions on sound science and knowledge</b>                       | Network Rail IP designs and implements its Net Positive work based on sound science and consideration of traditional and local knowledge.   |
| <b>Use 'in kind' offsets</b>   | Network Rail IP's offsets are designed to conserve the same type of biodiversity as that affected by the project, for example woodland loss is offset by creating woodland.   |
| <b>Only use 'out of kind' offsets in certain situations</b>                | There might be situations where the biodiversity affected is not a national or local priority, yet nearby there is biodiversity of greater importance for conservation that faces imminent threat. Only in these situations, and with agreement from stakeholders, might Network Rail IP consider an 'out-of-kind' offset - where the offset is designed to conserve higher priority biodiversity than that affected. For example, loss of low value disturbed habitat (for example characterised by ruderal <sup>6</sup> plants) might be offset by restoration of a nearby marshland that requires urgent conservation action. However, in-kind offsets are the priority. |
| <b>Offset like-for-like or like-for-better</b>                             | When habitats with a high 'distinctiveness' <sup>7</sup> are lost, Network Rail IP's offsets are designed to conserve the same high distinctiveness (like-for-like). When habitats of medium or low distinctiveness are lost, offsets are the same type of habitat but with higher distinctiveness (like-for-better) where possible. For example, loss of amenity grassland (low distinctiveness) is offset by creating species-rich grassland (medium distinctiveness).  |
| <b>Offset locally</b>  | Network Rail IP's offsets are as local to the loss of biodiversity as possible, and are designed and implemented at the local level as far as possible.   |
| <b>Design Net Positive based on landscape scale context and priorities</b> | Network Rail IP's Net Positive work (both on-site and offsets) aim to contribute towards biodiversity conservation priorities at landscape, eco-regional and/or national levels.  |

<sup>5</sup> Defra introduced these multipliers as part of its pilot test on biodiversity offsetting (refer to Defra (2012) Biodiversity Offsetting: guidance for offset providers)

<sup>6</sup> A plant that colonises and thrives in disturbed areas

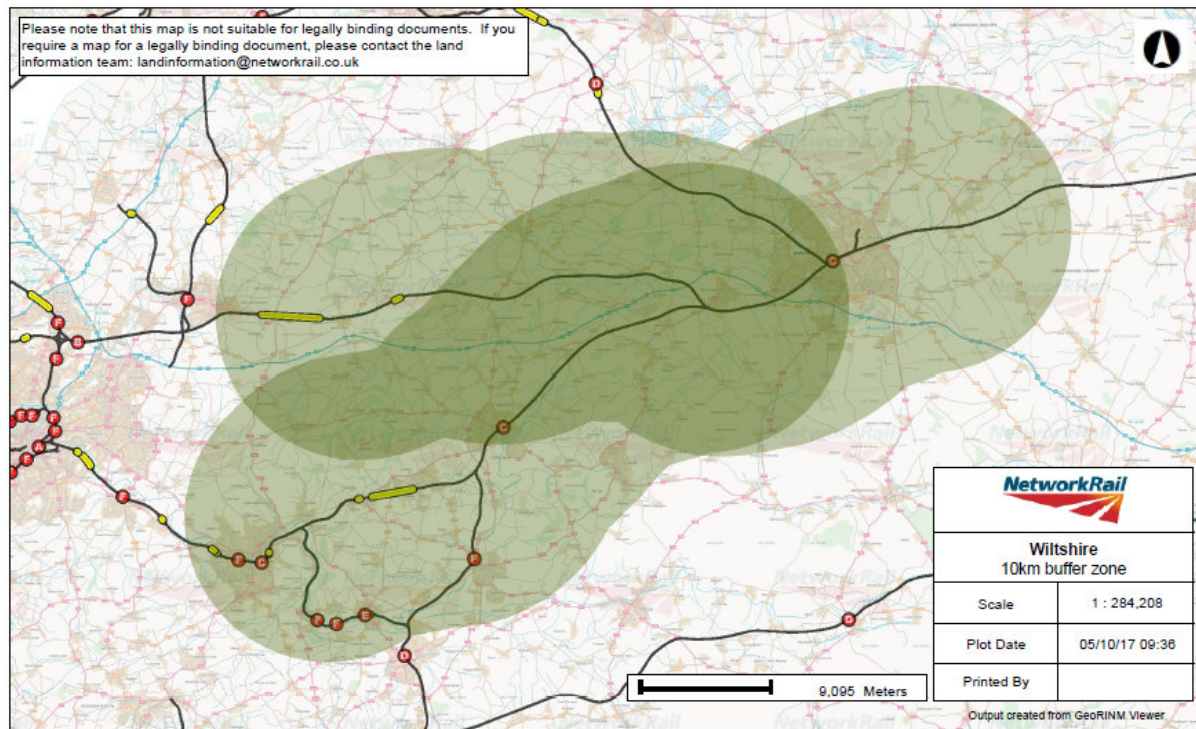
<sup>7</sup> Refer to Glossary of Terms



|  |   |
|--|---|
| <b>Offsets must achieve ‘additional’ conservation benefits</b> | Network Rail IP’s offsets are designed to achieve conservation outcomes above and beyond what would have occurred if the offset had not taken place (i.e. not deliver something that would have happened anyway).   |
| <b>Deliver real benefits for biodiversity</b>                  | Network Rail IP’s offsets are designed to expand and restore habitats (not just protect the extent and condition of what is there) and contribute to enhancing ecological networks by creating more, bigger, better and joined areas for biodiversity <sup>8</sup> where possible and in proportion to the scope of impact.   |
| <b>Deliver long-term benefits</b>                              | IP’s offsets are designed and implemented: <ul style="list-style-type: none"> <li>• to secure offset outcomes for at least as long as the development’s impacts last and, where possible, in perpetuity</li> <li>• with consideration to other development and land use so that offsets do not displace impacts on biodiversity from one location to another (leakage)</li> <li>• with monitoring and evaluation of the Net Positive outcome, and prompt responses when problems are identified to correct and learn from them</li> </ul> |
| <b>Be good value for money</b>                                 | The IP Unit within Network Rail is responsible for major renewal and enhancements to railway infrastructure. Its remit includes delivering capital investment in infrastructure as efficiently as possible, with the best possible value secured for every pound spent. The Unit’s Net Positive work adheres to this principle of efficient, value for money delivery.  |
| <b>Offset in an equitable manner</b>                           | Network Rail IP designs and implements its offsets in an equitable manner, fairly sharing the responsibilities, input into decision-making and the costs and benefits of an offset among all stakeholders involved.   |
| <b>Act transparently</b>                                       | Network Rail IP designs and implements its offsets, and communicates the results in a transparent and timely manner. This includes giving clarity on offset calculations and decisions to select offsets.   |

<sup>8</sup> As discussed in Lawton, J. H. *et al* (2010) Making Space for Nature: a review of England’s Wildlife Sites and Ecological Network. Report to Defra.

## APPENDIX B – GREATER WEST PROGRAMME RAILWAY LINE WITHIN WILTSHIRE (WITH 10KM BUFFER ZONE)

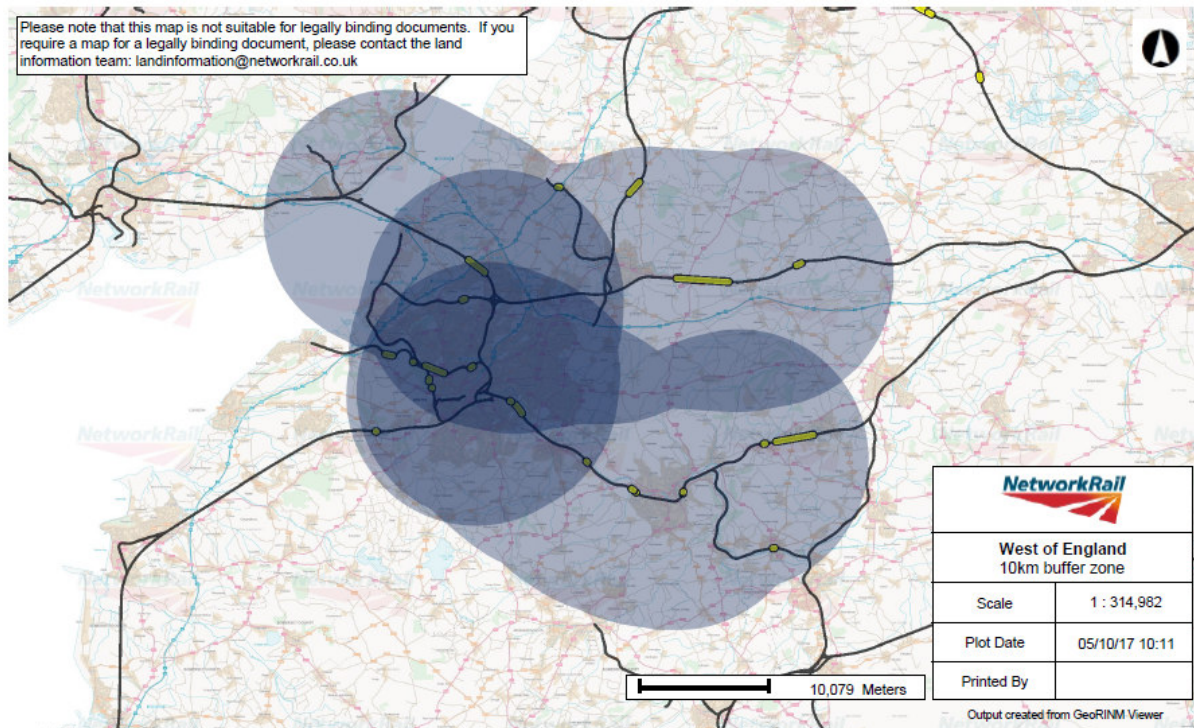


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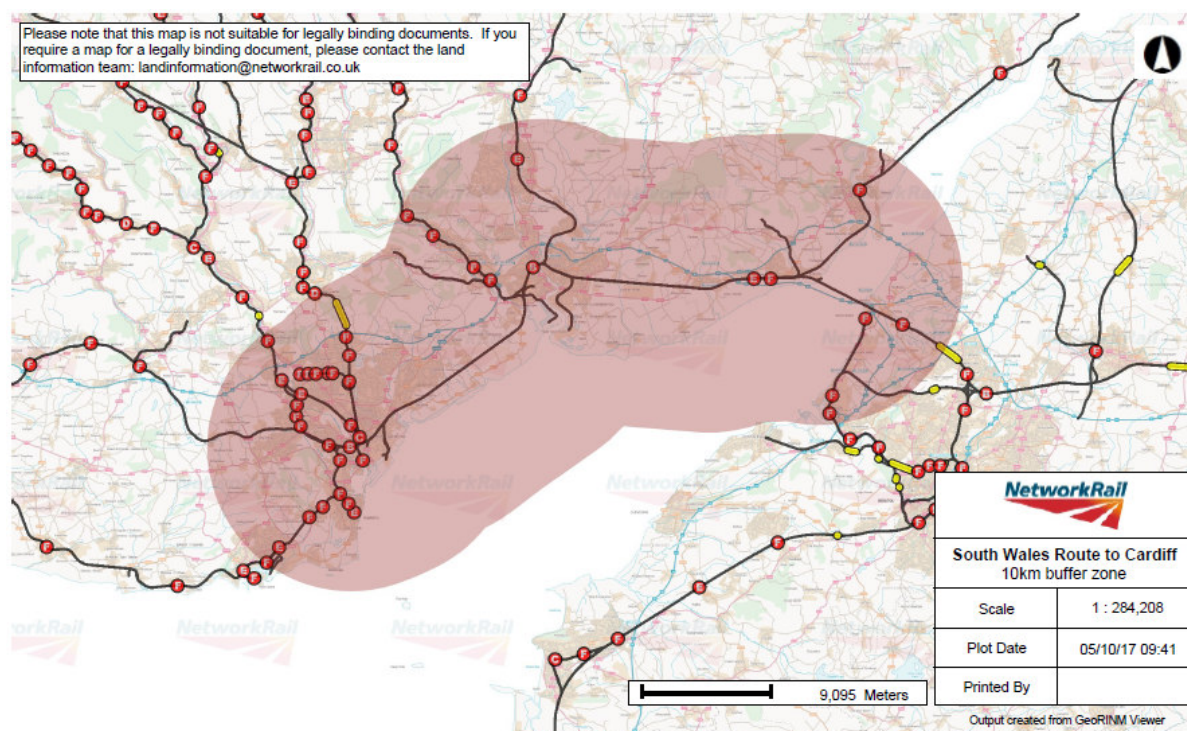
## APPENDIX C – GREATER WEST PROGRAMME RAILWAY LINE WITHIN WEST OF ENGLAND (WITH 10KM BUFFER ZONE)



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## APPENDIX D – GREATER WEST PROGRAMME RAILWAY LINE WITHIN SOUTH WALES (WITH 10KM BUFFER ZONE)



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**APPENDIX E – OUTLINE OFFSET PROJECT PROPOSAL (STAGE 1 FORM)**

| Questions  | Answers  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|-------------------------------------|--------------------|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <b>What is the title of your proposed project?</b>   |  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Where is your proposed project?</b><br>Please provide a map showing the location of the site(s)   | <b>Nearest postcode:</b><br><br><b>Local Authority:</b><br><br><b>Grid Ref:</b>  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>What's the idea?</b> (maximum 500 words)<br>Please provide a summary of the aims of your biodiversity offset and the specific activities you would undertake to achieve these. We need to know what you wish to achieve and what practical work you will carry out.   |  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>What's on the offset site?</b><br>Only on the site of your offset, please list each habitat that is currently there (e.g. woodland, grassland, scrubland, etc.), its size (in hectares) and briefly describe its condition (add more rows to the table as necessary). | <table border="1"> <thead> <tr> <th>Existing Habitat on the Offset Site</th><th>Size (in hectares)</th><th>Short description</th></tr> </thead> <tbody> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </tbody> </table> | Existing Habitat on the Offset Site | Size (in hectares) | Short description |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Existing Habitat on the Offset Site  | Size (in hectares)   | Short description                   |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |                                     |                    |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**What's the proposed offset?**

Please list all the habitats to be created or enhanced, their size and approximate number of years it would take to reach the intended condition and/or status (add more rows to the table as necessary).

| Habitat to be created or enhanced | Size (in hectares) | Approx. number of years to reach the intended target condition |
|-----------------------------------|--------------------|--|
|                                   |                    |  |
|                                   |                    |  |
|                                   |                    |  |
|                                   |                    |  |
|                                   |                    |  |

**What's its benefit for nature conservation?**

Please describe how your project will make a real difference to nature conservation by contributing to the local and wider conservation priorities (e.g. Habitats of Principal Importance, Conservation Target Area, etc.) whilst creating more, bigger, better and joined areas for biodiversity?

**Is this an additional outcome for nature conservation?**

Please confirm that this project is not required under an existing agreement (e.g. consents or planning condition) and describe why it would not happen in the foreseeable future without NR involvement. If there is a statutory obligation (e.g. SSSI) on the site, explain why this work is over and above that which is required.

|   |  |
|---|--|
| <p><b>Who owns and uses the land, how is it used, is it protected and does it have public access?</b><br/>Please confirm land purchase would not be required and an agreement is in place to use the land (e.g. lease, licence), or how you would secure such an agreement.<br/>Also confirm any protective status assigned to the site where the offset would be situated (eg; AONB, Local Wildlife Site).</p> |  |
| <p><b>Who would be delivering the project?</b><br/>Please provide details of the organisation that would receive and manage funding with examples of similar projects this organisation has delivered.</p>  |  |
| <p><b>Would this project be delivered by more than one organisation under a partnership arrangement?</b><br/>If relevant, please provide details of the partnership and the organisations it comprises.</p>   |  |
| <p><b>Are there opportunities for the local community to be involved (volunteers, etc.)?</b><br/>Please describe any existing and proposed volunteer engagement on this offset.</p>   |  |
| <p><b>Who would be responsible for long-term management?</b><br/>Please describe how long term maintenance would be managed and funded.</p>   |  |



|  |                           |                                   |
|--|---------------------------|-----------------------------------|
| <p><b>Estimated budget</b><br/>Please provide an estimated cost for the delivery and 3 years aftercare of the offset. Please clarify if part-funding is being sought from other sources.</p>                 |                           |                                   |
| <p><b>What would be the proposed timetable of works?</b><br/>Please include an anticipated start date and completion date; taking into consideration how seasons or weather could affect this timetable.</p> |                           |                                   |
| <p><b>Submitted by:</b> _____</p>  | <p><b>Role:</b> _____</p> | <p><b>Organisation:</b> _____</p> |
| <p><b>Contact details (address, telephone, email):</b> _____</p>   |                           |                                   |