Department for Transport

NetworkRail

New Station Fund 3 (NSF3)

Application Form

Proposed Station Name:	Magor and Undy Walkway
Name of applicant:	Magor Action Group on Rail and Monmouthshire County Council
Date Submitted:	5 June 2020

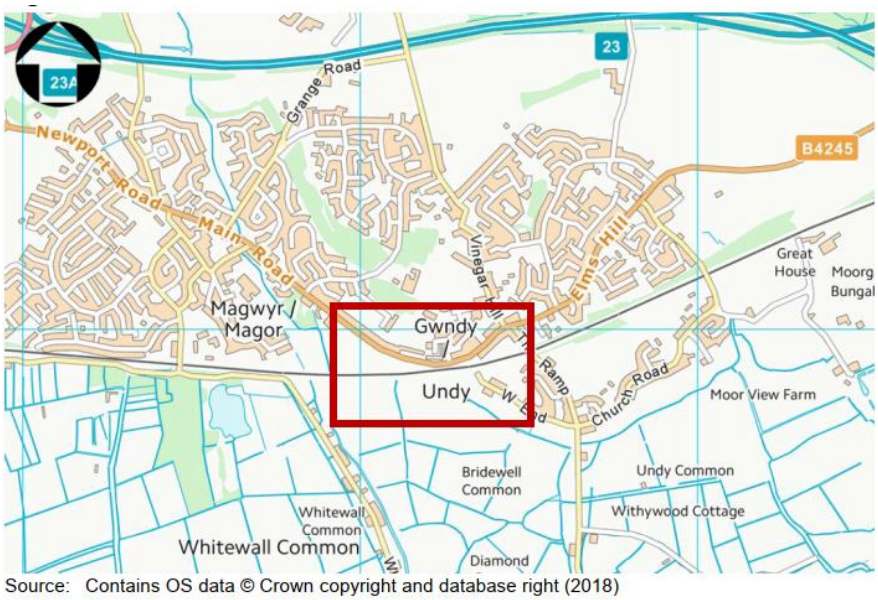
Network Rail use only:			
Date Received		Reference	

Please complete the following:

Contact Information	
1.1 Applicant organisation name:	**Magor Action Group on Rail (MAGOR) and Monmouthshire County Council (MCC)**
1.2 Applicant contact name:	MAGOR: Dawn Turner (Secretary) MCC: Christian Schmidt (Transport Projects and Programmes Manager), Roger Hoggins (Head of Strategic Projects)
1.3 E-mail:	MAGOR: dawnturner3ht@gmail.com MCC: Christian.schmidt@monmouthshire.gov.uk, rogerhoggins@monmouthshire.gov.uk
1.4 Telephone No.:	MAGOR: 07484 643454 MCC: 07471 479238, 07767 246138
1.5 Address:	MAGOR: via MCC MCC: Usk County Hall, The Rhadyr, Usk, NP15 1GA
1.6 Network Rail Investment Director / Route Enhancement Manager / Director of Route Sponsorship / Sponsorship contact name	Andy Scogings, Lead Strategic Planner, Group Strategy - Wales Route, Network Rail, 5 Callaghan Square, Cardiff CF10 5BT, andrew.scogings@networkrail.co.uk, mob: 07919 528492
1.7 Network Rail allocated Sponsor contact name:	Andy Scogings, Lead Strategic Planner, Group Strategy - Wales Route, Network Rail, 5 Callaghan Square, Cardiff CF10 5BT, andrew.scogings@networkrail.co.uk
1.8 Train Operator(s) contact name(s): *Include written evidence of support for the project from the relevant Train Operators(s).*	Dan Okey, Regional Development Manager, Admin Offices, Exeter St Davids Station, Bonhay Road, Exeter EX44NT dan.okey@gwr.com Nicholle Sarra, Rheolwr Rhanddeiliaid / Stakeholder Manager, Trafnidiaeth Cymru / Transport for Wales, Shrewsbury railway station, Castle Foregate, Shrewsbury SY1 2DQ Nichole.Sarra@tfw.wales
1.9 DfT Commercial Manager: *Please also provide evidence of written correspondence about the project to the relevant DfT Commercial Manager(s).*	Neil Priest, Station Enhancements Portfolio Manager, Rail Infrastructure North, Department for Transport 4th Floor Neil.Priest@dft.gov.uk

NOTE TO APPLICANTS: Evidencing Requirements
All bids and responses provided are required to be supported by sufficient, proportionate and robust evidence. The below table sets out the recommended minimum level of evidence required from applicants and which tabs must be completed as part of the bid submission in the accompanying Business Case Summary spreadsheet, depending on the level of funding requested from the New Stations Fund:

Bid size	Evidence required	Business Case Summary Tabs
Small bids: NSF Funding < £1m	Qualitative discussion of TAG impacts	Essential: (1) Financial Forecasts, (2) AST
Medium bids: NSF Funding £1m-5m	Monetising where possible	Essential: (1) Financial Forecasts, (2) AST Desirable: (3) TEE / PA / AMCB
Large bids: NSF Funding > £5m	WebTAG or Green Book assessment	Essential: (1) Financial Forecasts, (2) AST, (3) TEE / PA / AMCB

Project Overview	
2.1 Proposed station name and location coordinates	Include plans, maps or illustrations of the New Station Magor and Undy Walkway Station ST431868 See GRIP3 report chapter 1 (station location) and Appendix A  Source: Contains OS data © Crown copyright and database right (2018)

2.2 Station facility overview	Proposed station facilities, number and length of platforms, and works involved Magor and Undy Station is being developed as a walkway station - a station that will be accessed by the local population primarily via walking and cycling. The facility will include features normally associated with modern stations such as cycle parking, LED lighting, CCTV, bus stop and waiting facilities as well as excellent pedestrian access. The station comprises: • Two 148m single faced platforms to accommodate 6x23.7m vehicles (142.2m). • Platforms will use a modular Fibre Reinforced Platform (FRP) construction. • CCTV cameras for platforms and access routes, Help Points, Customer Information Systems (CIS), PA system and two ticket vending machines. Vehicular Access to Station – Given the purpose of the station, limited vehicular facilities are currently included within the design proposal. An area to the east of Undy Halt footbridge, currently being used as long stay parking would be repurposed to provide 5 disabled parking spaces and a drop-off area. This area has the benefit of providing the shortest travel distance to each platform for users with reduced mobility. Pedestrian Access to Station – The current design proposal incorporates a new crossing point (toucan) to the east of West End subway and Undy Halt footbridge to facilitate safe Non-Motorised User (NMU) movements in this area. Access to Platforms – Step-free access across the railway corridor will be achieved through the use of the existing West End Subway along with the construction of compliant access ramps. This will be supplemented by the existing Undy Halt footbridge which will continue to provide stepped access for crossing the railway corridor. Up Relief Platform will be accessed via a ramp connecting Main Road (B4245) to the platform and the Down Relief Platform will be accessed via a ramp located at the southern end of West End subway.

2.3 Rail infrastructure	Outline the new rail infrastructure required to facilitate the delivery of the station and proposed train services Signalling - The proposed platform arrangement is the most economical and least disruptive approach given that no major changes in signalling are anticipated. Permanent Way - A smoothing alignment design for the Down Relief may be appropriate to support the platform design, unless maintenance tamping to address this is carried out ahead of/in anticipation of this scheme. This would require minor modification to the existing track alignment before construction of the proposed station platforms. Overhead Contact System - The line has been electrified and construction of the station will require repositioning of several stanchions.
2.4 Proposed Station Facility Owner (SFO)	It is expected that the Operator and Development Partner (ODP), Transport for Wales Rail Services (TfW RS) will be the SFO.
2.5 Timetable and stopping patterns	Outline the proposed service timetable and stopping patterns at the station Based on the current timetable it is proposed that Magor and Undy would receive two trains per hour in each direction as follows: • 1 train per hour in each direction: Taunton – Weston-super-Mare – Bristol Temple Meads – Newport – Cardiff (GWR service). • 1 train per hour in each direction: Cheltenham Spa – Gloucester – Chepstow – Newport – Cardiff (TfW service) In the longer term the Welsh Government is seeking to provide turn-up-and-go frequencies on all Cardiff Capital Region Metro lines, including the Chepstow line. TfW also have aspirations for higher services frequencies on the South Wales Main Line between Cardiff and Bristol. Both could provide the opportunity for further trains to stop at Magor and Undy.

2.6	Provide evidence of the timetable modelling undertaken to support the application An operational assessment of the station was undertaken as part of the GRIP 3 work. This work has since been refreshed to take account of recent changes to the timetable and rolling stock operating services on the South Wales Main Line. The impact of the station call was determined using a RailSys version 10 model. Applying Network Rail's standard allowance and rounding, the timetable analysis suggests that the additional stop would impose an additional 2 minutes 30 seconds on each of the services using the station. Turnaround times at Cardiff for GWR services from the west country are sufficient to absorb the extra calls in both directions at the Cardiff end of the route. In respect of the Maesteg to Cheltenham services, as the timetable currently stands, there is insufficient time at either end to accommodate the additional stop. A more detailed review of the existing journey time between Maesteg and Cheltenham is to be undertaken at the next stage. This will identify whether train speeds could be increased or performance allowances reduced in order to accommodate the station without the requirement for additional rolling stock. In respect of train speeds, the assessment would consider whether exploiting the higher top speed of the Class 170 generates further additional journey time reductions that could be used to accommodate the station. The assessment described here is based on the infrastructure as of June 2020 and the current level of service provision. Magor and Undy station needs to be considered in the context of longer term plans for the South Wales Main Line. The potential to enhance the South Wales Main Line is currently being assessed by the Welsh Government and Network Rail ('Severn Tunnel Junction to Cardiff relief lines upgrade'). These changes are expected to enhance the business case for Magor and Undy whilst also providing additional operational flexibility to include calls at the station without significant performance or cost impacts.

2.7 Passenger capacity	Demonstrate that there is available capacity for passengers to be accommodated on services which are proposed to call at the new station The effect of additional demand from Magor and Undy Station on levels of train crowding is expected to be slight. Recent changes in rolling stock deployed on the South Wales Main Line have significant increased capacity on the rail corridor between Cardiff and Newport. This also applies to the services that would call at the station. Trains now being deployed the services that would stop at Magor and Undy are as follows: • TfW Rail Services Cheltenham to Cardiff – class 170, mix of 2 and 3 carriages. • GWR Taunton to Cardiff – class 43/165/166 – mix of 2, 3 and 4 carriages.
2.8 Service subsidy	Demonstrate that no service subsidy is required **OR;** if subsidy is required, demonstrate how subsidy will be met for the first three years As set out in the Economic and Financial Case, the station is expected to deliver an overall increase in net rail fare revenue that would strongly outweigh the costs of operating the station. As noted in response to 2.6, further work is required to establish whether the additional stop can be accommodated without a significant increase in the costs of operating services. If this is the case, then the station would reduce overall subsidy costs. In the long term, assuming upgrades to the South Wales Main Line are delivered to increase capacity, then it is likely that the station would have an overall positive financial impact.
2.9 Rolling stock requirements	Where new services are to be introduced, demonstrate that adequate rolling stock is available and can be secured for the new service At this stage it is assumed that no additional rolling stock will be required. More detailed timetable analysis is required before it can be established with certainty that the station can be accommodated without the requirement for additional rolling stock.

2.10 Impact on other passenger services	Outline and provide evidence of the impact of the proposed station on other services and how these impacts will be minimised Under the current proposals, the platforms at Magor and Undy Station would face the relief lines. Therefore, services calling at the station would divert from the main lines to the relief lines between Severn Tunnel Junction and Magor. The existing signalling allows for trains to call at the station whilst allowing through services on main lines to bypass the stopping services. As a result, there would be no resultant pathing problems for faster inter-city or inter-urban trains.
2.11 GRIP Stage	Current Network rail GRIP Stage status of the proposed station. Provide evidence of the development work completed. Provide evidence of progress made to take the project through further GRIP stages if applicable GRIP 1, 2, 3 have been completed. The cost estimate for the station are based on the GRIP 2 study and would be updated should the project progress to the next stage of development.

Other relevant project information

1. Business Case Summary Spreadsheet – attached
2. Updated Operational Assessment Technical Note – attached
3. Diversity Impact Assessment – attached
4. Strategic Outline Business Case (Mott MacDonald, July 2018):

   www.magorstation.co.uk/wp-content/uploads/2020/06/Magor-and-Undy-Station-SOBC-revB.pdf (or under www.magorstation.co.uk > Documents)
5. Initial Demand Forecast & Economic Appraisal (Mott MacDonald, March 2017):

   www.magorstation.co.uk/wp-content/uploads/2017/07/Mott-Magor-GRIP-3-Demand-Econ-v2.pdf
6. GRIP stage 3 Option Selection Report (Mott MacDonald, July 2018):

   www.magorstation.co.uk/wp-content/uploads/2020/06/Magor-and-Undy-GRIP-3-Option-Selection-Report-Rev-02.pdf
7. Appraisal Summary Table (AST) (Mott MacDonald, April 2018):

   http://magorstation.co.uk/wp-content/uploads/2020/06/Appendix-A-Magor-and-Undy-AST.pdf
8. An analysis of current and future train use by Magor and Undy residents (Paul Turner, 2016):

www.magorstation.co.uk/wp-content/uploads/2016/06/An-analysis-of-current-and-future-train-use-by-Magor-and-Undy-_final.pdf

9. Magor Station – Integrated Transport Report (Chris Waller, University of the West of England, 2016):

   www.magorstation.co.uk/wp-content/uploads/2016/06/Magor-Station-Report-Draft-3.pdf

10. GRIP stage 1 Output Definition (Mott MacDonald, March 2016):

    www.magorstation.co.uk/wp-content/uploads/2016/04/GRIP1_final.pdf

11. GRIP stage 2 Technical Feasibility (Mott MacDonald, April 2016):

    www.magorstation.co.uk/wp-content/uploads/2016/04/GRIP2_final.pdf

12. EG0 Safety Verification Categorisation Application (Mott MacDonald, May 2018):

    http://magorstation.co.uk/wp-content/uploads/2020/06/373743-WTD-BTL-CSM-0001-EG0-Safety-Verification-Categorisation-Application-FINAL.pdf

13. EG3/4 Preliminary System Definition (Mott MacDonald, May 2018):

    http://magorstation.co.uk/wp-content/uploads/2020/06/373743-WTD-BTL-CSM-0002-EG3-4-Preliminary-System-Definition-FINAL.pdf

14. The Case for Magor Station – summary for the Network Rail Wales Investment Panel meeting 13 November 2019 (Magor Group):

    www.magorstation.co.uk/wp-content/uploads/2019/05/The-case-for-Magor-jan19.pdf

15. Monmouthshire Local Transport Plan:

    www.monmouthshire.gov.uk/local-transport-plan/

16. Rail network enhancements pipeline: autumn 2019 update:

    www.gov.uk/government/publications/rail-network-enhancements-pipeline-autumn-2019-update)

Strategic Case

The Strategic Case should set out a clear rationale for the scheme, supporting the need for investment. You should consider the objectives of the new or re-opening station are and why a new or re-opening station is considered the best way of meeting local transport objectives and addressing transport issues in the area.

Set out the strategic case for the project, citing policies and strategies of the promoting organisation and third parties. The case should be clearly made as to why a new or-re-opened station is the best way to achieve the policy objectives stated.

3.1 Current transport issues and challenges	Outline and explain the transport issues and challenges faced in the area Magor and Undy is located in South Monmouthshire, on a major transport corridor between Cardiff and Newport to the west and the Greater Bristol conurbation to the east. Gloucester and Cheltenham are located to the north east. The settlement has experienced a high level of new housing with further development planned. Whilst the area is recognised in the Monmouthshire Local Development Plan (2011 – 2021) as a key employment site, the proximity to the key employment centres of Bristol, Cardiff and Newport (and to a lesser extent Cheltenham and Gloucester) means that substantial out-commuting is a major feature of transport in the area. Travel to work data indicates that 80% of all commuting journeys to/from Magor and Undy are made by car, in contrast to the county and Welsh average of 74%. The main single carriageway road through Magor and Undy (the B4245) is currently at saturation point with 11,000 vehicles per day using this route. Traffic on the B4245 has a significant impact on quality of life in the village due to its environmental impact (noise and air quality) and the severance it creates. The M4 towards Cardiff and Newport is subject to severe congestion at several times of the day and has poor resilience. Proposals for an M4 relief road are not financially deliverable at this present time and the Welsh Government has set up a commission that is currently exploring options to improve transport along the M4 corridor and reduce congestion. In the absence of a new relief road, major upgrades to the public transport network are likely to be required as part of any strategy to address congestion on the M4. Public transport alternatives from Magor and Undy are limited. The nearest railway station is Severn Tunnel Junction, located 2.5 miles away. Approximately 25% of Severn Tunnel Junction users live in Magor and Undy, the majority of which arrive by a car (‘Magor Station What If?’ 2013 survey data). Severn Tunnel Junction station has limited park and ride provision. Existing parking is at capacity and overspill parking onto

	neighbouring residential streets such as Station Road in Rogiet are common. Local bus services generally link South Monmouthshire and Newport only. Whilst there are direct bus services to Newport, Caldicot and Chepstow, the direct link with Bristol is facing withdrawal by the operator.
3.2 Target population	Explain the size and characteristics of the target population and detail what is known about their needs, current behaviours and attitudes The catchment area for the station are the communities of Magor and Undy, with a population of over 6,100 (2018 estimates). The Monmouthshire Local Development Plan (2011 – 2021) has allocated two strategic sites in Magor and Undy which will provide 550 new dwellings. Planning permissions on sites have been granted and are currently being constructed as of May 2020. The station is forecast to attract approximately 125,000 passengers per annum in the opening year to approximately over 220,000 passengers per annum after a 15-year period. The majority of these journeys will be new to the railway network, with only 10% abstraction of demand from the existing Severn Tunnel Junction station.
3.3 SMART objectives	Identify SMART (Specific, Measurable, Attainable, Relevant, Time-bound) objectives for the project The following objectives have been set for the scheme as laid out in the Strategic Outline Business Case: • Cater for the travel needs of an increasing population in Magor and Undy without putting undue pressure on the surrounding road network, including the B4245 and Station Road in Rogiet. • Improve public transport connectivity between Magor and Undy, the cities of Newport, Cardiff and Bristol, and the national rail network to enhance access to employment and services. • Promote use of sustainable transport options among the residents of Magor and Undy. • Promote active travel among residents of Magor and Undy. • Support the development of local businesses, community development projects and tourism potential. • Reduce pressure on car parking capacity at Severn Tunnel Junction

3.4 Strategic and operational benefits	Demonstrate the high-level strategic and operational benefits of providing a new station Given the local geography of the area, the majority of the demand is expected to come from the Magor and Undy area, most of which is within a 1 km walking distance of the station. Broadly, the benefits of the station can be summarised as follows: • Improved access to the rail network for the residents of Magor and Undy • Cater for population and new housing development • Reduced journey times to the major centres of Bristol (approximately 30 mins), Cardiff (25 mins) and Newport (9 mins) • Better connectivity to destinations west of Magor and Undy. The current settlement is located close to Junction 23A of the M4, and travel by rail involves a journey 2.5 miles east to Severn Tunnel Junction • Lower car use and congestion on the single carriageway B4245 through Magor and Undy • Increased active travel and associated physical fitness benefits given the station walkway proposal
3.5 Economic growth	Demonstrate how the new station would link to economic growth aspirations and help to stimulate economic activity The station will contribute towards economic growth at a local and regional level. The new station would deliver a range of economic benefits to the local area. It would greatly enhanced transpot links between Magor and Undy and the urban centres described above, improving access to employment for local residents. It would also help to support new development in the local area. The existing Monmouthshire Local Development Plan has identified the existing employment site to the west of Magor as protected and as earmarked approximately 5,575 square metres of employment space as part of the adopted Local Development Plan. Furthermore, by reducing congestion on the main road through the village, the station would make local services more attractive to residents and visitors. The station would also improve transport conditions at a regional scale which would bring further economic benefits. There are longstanding congestion issues on the M4 around Newport and Cardiff, as well as on the M5 and M32 in and around Bristol. Alongside other measures, the station would help to reduce reliance on car journeys and thus make a positive contribution to the improved operation of the highway network. Reducing congestion on this corridor will improve the functioning of the labour market and increase economic interactions between Bristol, Newport and Cardiff.

	Reducing congestion will make the region more attractive for new investment.
3.6 Route Strategy alignment	Demonstrate how the scheme aligns with overall strategies for the route (including Route Utilisation Strategies and/ or Route Studies) and other committed rail improvement programmes The station is included within three documents: • Welsh Route Study (2016) – as a new station proposal for further consideration. • Welsh Government National Transport Finance Plan (2015) – also for further consideration as a new station proposal. • Welsh Government South Wales Metro Phase 2 Programme (2016) – as a potential new station. As noted, 'Severn Tunnel Junction to Cardiff relief lines upgrade', is a project included in the Rail Network Enhancement Pipeline (RNEP). It is understood that Network Rail has developed a Strategic Outline Business Case for the proposals. This project is a further development of the concept originally set out in the 2016 Route Study. Alongside other capacity enhancements, enhancing the relief lines would enable improved service frequencies on the South Wales Main Line. This would further strengthen the business case for Magor and Undy station by facilitating an improved mix of fast and stopping services which would ensure that Magor and Undy Station could be accommodated with reduced impact on through passengers.
3.7 Wider transport and government objectives	Demonstrate how the scheme contributes to wider transport and government objectives The station is well-aligned with a range of UK and Welsh Government policy objectives. The Department for Transport's Transport Investment Strategy sets the strategic direction for transport investment within the UK. It identifies four aims for the transport network: • Create a more reliable, less congested, and better-connected transport network that works for the users who rely on it • Build a stronger, more balanced economy by enhancing productivity and responding to local growth priorities • Enhance our global competitiveness by making Britain a more attractive place to trade and invest • Support the creation of housing. The station would improve connections to the transport network and support wider housing and development ambitions in Monmouthshire

	The project is also aligned with the UK Government's rail strategy – Connecting People: A Strategic Vision for Rail (2017) – and the focus on ar expanded network. In particular, the project contributes to the aims of 'rebalancing the economy', 'creating more homes' and 'forging new links between places, spurring development and economic growth'. The Welsh Government's overarching transport objectives are set out in the Wales Transport Strategy. The proposed station strongly supports the following outcomes: • Improve access to education, training and lifelong learning • Improve access to shopping and leisure facilities • Improve access to employment opportunities • Improve connectivity within Wales and internationally • Improve the efficient, reliable and sustainable movement of people • Reduce the contribution of transport to greenhouse gas emissions It also contributes to the following outcomes: • Improve access to healthcare • Encourage healthy lifestyles • Improve the actual and perceived safety of travel • Reduce the contribution of transport to air pollution and other harmful emissions • Improve the impacts of transport on the local environment The station is also closely aligned with the Welsh Government's statutory Well-Being of Future Generations Act. The act requires public bodies to think about the long-term impact of their decisions. In particular the station would make a positive contribution towards three of the well-being goals se out in the act: a more prosperous Wales, a healthier Wales and a Wales of Cohesive Communities.
3.8 Local and regional objectives	Demonstrate how the scheme contributes to local and regional objectives and fits with current local and regional projects The proposed station is included in Monmouthshire's Local Transport Plan (2015). The Plan includes the prioritised programme for a five-year period between 2015 and 2020, but also medium- and longer-term aspirations for the period between 2020 and 2030. The scheme is well aligned to the following objectives set out in the plan: • To improve access for all to employment opportunities, services, healthcare, education, tourism and leisure facilities • To improve the interchange within and between modes of transport • To improve the quality, efficiency and reliability of the transport system • To achieve a modal shift towards more sustainable forms of transport for moving both people and freight It also contributes to the following objectives:

	• To improve awareness of public transport and active travel opportunities • To reduce traffic growth, traffic congestion and to make better use of the existing road system • To reduce significantly the emission of greenhouse gases from transport • To promote sustainable integrated travel and to make the public more aware of the consequences of their travel choices on climate, the environment and health The proposed station is supported by the Cardiff Capital Region.
3.9 Third party objectives	Demonstrate how the scheme contributes to the objectives of any third party organisations The local community's Magor and Undy Community Hub (MUCH) charity are looking to develop a community centre on the site adjacent to the preferred site for Magor Undy Walkway Station. The vision is to incorporate some station facilities within the community centre. The objective is to establish a unique wholly community-owned walk, cycle and public transport approach to station access.
3.10 Measuring success	Outline and explain what will constitute success for the project and how it will be measured Four measures of success have been identified and matched against the objectives of the scheme. The measures are: • Reduction in Magor and Undy residents driving to Severn Tunnel Junction station – linked to objectives 1 and 6. Source: Magor and Undy post-opening passenger survey. • Increase in Magor and Undy residents walking or cycling as part of their journey – linked to objective 4. Souce: Magor and Undy post-opening passenger survey. • Increase in public transport mode share – linked to objectives 2 and 3. Source: ONS Travel to Work Statistics. • Number of community development projects enabled by the scheme – linked to objective 5. Source: MCC monitoring.
3.11 Constraints and dependencies	Demonstrate how the project has been developed around constraints and dependencies, with consideration any other programmes and projects which are underway Set out the key constraints that may hinder the development, delivery and ongoing operation of the project The South Wales Main Line through Magor and Undy has recently benefitted from a major upgrade as a result of electrification works. Local

	services have been boosted by the introduction of newer rolling stock with improved capacities such as the TfW class 170s and GWR class 165/166s. Further enhancements to the South Wales Main Line – the relief lines upgrade – are in the process of being examined. As noted, further operational analysis will be undertaken to determine how the constraints of the current timetable can be overcome.
3.12 Other potential solutions identified	Outline and explain any other potential solutions which have been considered and the justification/ process of how construction of the new station became the best solution. This should include reference to other mode-based options The following options were considered: 1. A dedicated bus/minibus service between Magor, Undy and the railway station at Severn Tunnel Junction, with buses timed to meet the trains. 2. Changes to existing bus services so that buses serving Magor and Undy meet the trains at Severn Tunnel Junction. 3. General enhancements to local bus services to improve access to employment centres and transport interchanges. 4. A new pedestrian and cyclist route linking Magor and Undy to Severn Tunnel Junction Station. 5. An organised car share scheme among residents of Magor and Undy, to reduce the number of cars travelling to the station. 6. Open a new station to serve Magor and Undy. 7. Increase the car parking provision at Severn Tunnel Junction station. The three bus-based options would bring benefits and would have a low level of deliverability risk. Nevertheless, the options carried a high level of financial risk arising from the ongoing requirement for subsidy. The option involving a new pedestrian and cycle link to Severn Tunnel Junction would bring benefits relating to active travel but is unlikely to bring a step change in modal shift. The assessment of increased parking at Severn Tunnel Junction pointed to increased traffic flows in Magor and Undy and was ruled out on the basis of adverse and air pollution. It was concluded that a new station at Magor and Undy would have the greatest positive benefits, encourage sustainable journeys and modal shift.
3.13 ‘Do-Nothing’ scenario	Outline and explain the implications of not constructing the station, and the issues with this 'Do-Nothing' scenario

	Given the population of Magor and Undy will increase, the number of people commuting by car will also rise. The main impacts of doing nothing are expected to be: • Continued reliance on car use • Further increase in travelling by car to access the rail network at Severn Tunnel Junction • Adverse impacts on both the local (B4245) and strategic (M4) highway networks • Further strain on the limited park and ride provision at Severn Tunnel Junction station, with adverse overspill parking impacts on the streets of neighbouring residents • Greater adverse impacts on local air quality and increase in greenhouse gas emissions • Missed opportunities to promote active travel with resulting health benefits • Missed opportunities to improve access employment and services
3.14 Previous funding attempts	Outline and explain any previous attempts to secure funding for this project and provide details of the reasoning why those attempts proved to be unsuccessful The Magor Group and MCC submitted a bid for funding under the New Station Fund 2, but was unsuccessful. Feedback from the DfT indicated that the proposal was seen to have a solid business case but was not developed as far as some other bids.
3.15 Sustainable transport	Demonstrate how the scheme will encourage the use of sustainable transport modes (cycles, buses, electric vehicles etc.) by passengers when travelling to the station. The branding of this station as a 'walkway' station would be a first for the national rail network with a focus on discouraging vehicle journeys where possible. The location of the station at the heart of Magor and Undy means it is accessible by foot and cycle across the area. Given there is 80% out-commuting by car from Magor and Undy, there is considerable scope for modal shift. It is also important to note that there will be no additional car parking for commuters at the station with the exception of disabled parking and pick up / set down facilities. Therefore, encouraging sustainable transport is central to the design of the station.
3.16 Passenger disruption	Demonstrate how disruption to existing services on the line will be minimised, including what plans would be put in place to reduce possessior time

	The proposed station would be constructed on the outside of the up and down relief lines of the South Wales Main Line and so the level of construction impacts will be minimised. Nevertheless, there will be some disruption arising from the construction works to adjacent structures. There is some opportunity to make use of existing night-time possessions to carry out some of the works, however it is anticipated that some abnormal possessions (those outside of the planned possessions) will also be required to complete the scheme.

Other useful information to support the Strategic Case

As noted, a commission is currently examining opportunities and options to tackle congestion and resilience issues on the M4 around Newport, refer to: https://gov.wales/south-east-wales-transport-commission.

The commission was set-up after the decision of the Welsh Government not to progress the M4 relief road at present. Improved and new stations together with enhanced rail services form part of the potential opportunities.

Economic and Financial Cases

The Economic Case is used to identify the key economic impacts of the scheme, and its overall value for money. This includes consideration of the passenger demand forecasts and the assumptions made in the modelling. The Financial Case is used to present evidence of the scheme's affordability including revenue impacts, outturn and maintenance costs.

The Business Case Summary spreadsheet should be completed to capture financial, economic and wider impact data. Your responses to the below questions should be supported by the data provided in the spreadsheet. Based upon the amount of NSF funding requested, table on Page 3 outlines the tabs in the spreadsheet that you must complete as a recommended minimum.

4.1 Benefit Cost Ratio (BCR)	Enter the calculated BCR for the New Station An economic appraisal of the station was completed in July 2018. The results of the 'core scenario' are provided. At this stage, given uncertainties relating to the preferred timetable options, the economic appraisal excludes both positive impacts on rail fares and impacts on train service operating costs. Results are expressed in 2010 prices and values. • Present Value Benefits: £11.8m • Present Value Costs (excluding rail fare and operating cost impacts): £7.2m • Net Present Value (excluding rail fare and operating cost impacts): £4.7m • Benefit-Cost Ratio (excluding rail fare and operating cost impacts): 1.65 •
Costs (enter costs in 2019/20 prices)	
4.2 Total Project Capital Cost	Enter the total project capital cost to the nearest £1000, and outline how the funding will be spent. The capital cost estimate for the scheme stands at £7.630m in 2019/20 prices. This is based on the GRIP 2 cost estimate of £7.007m (2016 prices, excluding inflation) uprated to 2019/20 prices.
4.3 Total Funds requested from NSF3	Enter the details and the total to the nearest £1000 (permitted to be up to 75% of total capital costs) Funding requested amounts to 75% of the capital cost for the scheme, or £5.772m.

4.4 Total funds to be provided through identified third party sources	Enter the total third party funding to the nearest £1000. Outline the sources of the funds and provide evidence that funding has been committed. Match funding would come from the Cardiff Capital Region / Welsh Government Metro Plus Phase 2 Programme and/or the Metro Enhancement Framework programme. Metro Plus is an existing programme of 10 capital schemes of up to £3m each across the 10 local authorities of the Cardiff Capital Region that support the proposed CCR Metro. On 27 February 2020 the CCR Transport Authority agreed to a Phase 2 Programme, which will again comprise of 10 capital schemes of up to £3m each. Should the NSF application be successful, then Magor Station will become MCC's Metro Plus Phase 2 project. The proposed station is also expected to be part of the Newport – Chepstow Metro Enhancement Framework programme that is currently being developed by Transport for Wales. Development of the plans to date have benefited from Welsh Government grant. The proposed Community Centre, facilities and walking & cycle access (not part of the £7m cost) are planned to be delivered through Section 106 contributions, Welsh Government active travel funding and other sources
4.5 Annual operations, maintenance and repair costs	Enter the details and the total to the nearest £1000. Costs should sustain the asset for the agreed asset life **The NSF3 cannot be used to finance the operation or maintenance costs of the station** The operating and maintenance costs of the station would be met by Transport for Wales. For the purposes of the business case allowance has been made for £50,000 per annum. This is based broadly on the Long-Term Station Charge for stations of a similar size. The economic appraisal allows for renewals costs (of 20% of initial capital outlay).
4.6 Annual Operational Costs for Train Services	Enter the details and the total to the nearest £1000 **The NSF3 cannot be used to finance the net operating cost of the train service** – the applicant must demonstrate that the proposed train service covers its net operating cost from newly generated revenue **OR;** the promoter must agree **and provide confirmation as part of this application** to fund the net funding shortfall for the first three years, after which the service must cover its net operating cost from newly generated revenue

	Impacts on the costs of operating rail services have been excluded from the economic assessment at this stage. For the purposes of the economic appraisal, the working assumption for fare revenues is that the train operating companies (TOCs) would break even – the additional revenues gained would cover their additional costs, with no additional profit gained or additional subsidy requirement. As noted, there are several options for accommodating the station call within the current timetable. Each of the options involve different trade-offs between train performance, revenue and operating costs. Therefore, the impact on train operating costs cannot be estimated with certainty at this stage. The value for money case for the station should also take account of the impact of proposed enhancements to services on the South Wales Main Line (facilitated by upgrades to the relief line). In these circumstances, it is possible that Magor and Undy station could be accommodated without any significant implications for train performance and operating costs. Should the project progress to the next stage, a more detailed assessment will be undertaken that will seek to identify a preferred timetable option agreed by operators and Network Rail. The financial and economic assessments will then be updated to reflect this option.
4.7 Assumptions	Outline and explain all assumptions made when developing the project / operating / service costs The project cost estimate is taken from the GRIP 2 assessment of the station. The key assumptions used in the preparation of the cost estimate are as follows: • Possession working has been included in the rates where required and train/freight operating company (TOC/FOC) compensation costs have been included within the estimate as 5% of direct costs and contractor preliminaries. • New signalling and changes to existing signalling layouts are assumed not to be required as there are no issues with signal sighting. • Existing line side cables will need to be relocated to allow for new platform construction. • Overhead line electrification structures in the vicinity of the station will need to be relocated. • A new station Distribution Network Operator (DNO) connection will need to be installed for electric power. • Tracks will need to be lifted, shifted and re-cant through the platform area to optimise alignment. • Track drainage will need to be diverted through the platform footprint. • Telecommunications equipment will be provided at the station, including a public address system, customer help points on each

	platform, customer information system on each platform and at station entrance, and CCTV. • Modular platforms will be provided with two waiting shelters on each ticket vending machines, lighting, drainage, and perimeter fencing. • Cycle parking and disabled parking will be provided, but there would be no standard car parking. • Improvements will be made to the existing subway and it will be modified to provide step free access via new passenger ramps. • Minor amendments will be required to the footway, layby, bus stops and crossing refuges on the B4245 outside the new station. As noted, station operating, and maintenance cost assumptions have been based on the Long-Term Station Charge for stations of a similar size.
4.8 Contingency funding	Outline and explain the contingency funding required and costs identified through the risk assessment process Pending a formal Quantitative Risk Analysis (QRA) an allowance of 30% has been included to cover project risks and cost and scope uncertainty. For the purposes of the economic appraisal, an additional 25% Optimism Bias adjustment has also been included on the capital costs, including future capital renewals, to account for the observed tendency for scheme promoters to underestimate project costs. Optimism bias has not been included in the capital cost given in 4.2 and used to calculate the funding request.
4.9 Other key dependencies	Outline and explain any other dependencies which could impact on the cost plan (for example, other works required to upgrade the line) A key cost risk relates to the condition of the existing subway. The GRIP3 study confirmed the need to modify the existing right of way subway as not meeting both rail and highway standards in providing access to the station. Full structural inspection and assessment will be undertaken at GRIP 4 to confirm condition of existing structure prior to developing detailed design.
4.10 Station costs	Demonstrate how soon after the opening of the station will it become self-financing (including the costs from services) The station is expected to generate net revenue (adjusting for abstraction and the ramp up of demand) of approximately £540,000 (2019/20 prices) in the opening year. This would strongly outweigh the ongoing costs of operating and maintaining the station. This assumes that there are no impacts on the costs of operating services associated with timetable changes required to accommodate the additional stop.

Passenger Demand Forecasts	
4.11 Annual Demand for new station	Outline and evidence the annual passenger demand for the new station over the first 20 years of operation as a minimum **Approach** Demand forecasts for Magor and Undy have been estimated using a 'gravity' model method. Gravity models use existing rail demand data, service quality (frequency, destination, fare) information, competing mode data (for car and bus), and population and socio-economic data for areas around stations to forecast flows. The UK rail industry's Passenger Demand Forecasting Handbook (PDFH) suggests a gravity model approach for assessing proposed new stations on existing rail lines, where a range of possible destinations are being served. Services from Magor and Undy would be expected to serve Cardiff Central, Newport, Bristol Temple Meads, Gloucester, and Cheltenham directly, which makes a gravity model approach appropriate. The assessment was undertaken in 2018 and assumed a station opening year of 2021. Whilst this timescale is no longer realistic, the precise year of opening is a relatively minor factor and therefore no adjustment to the 2018 forecasts have been applied. **Assumed Service Pattern** It is assumed that Magor and Undy is served by two trains per hour (tph) per direction. The passenger rail services that are assumed to call at Magor and Undy station are: • 1tph per direction: Taunton – Weston-super-Mare – Bristol Temple Meads – Newport – Cardiff (the existing GWR service). • 1 tph per direction: Cheltenham Spa – Gloucester – Chepstow – Newport – Cardiff (the existing TfW RS service) **Impacts on Through Passengers** It is assumed that rail services and passengers already on-board services that call at the new station will incur a total journey time increase of 2.5 minutes. **Catchment Area and Station Choice** There will be no parking provision at the new station and no all day on-street parking within an acceptable walking distance. However, it will be possible to drop car passengers off at the station. Given that no car parking will exist at the new station, the catchment area for the station largely comprises residents living in (and a small number of commuters into) Magor and Undy. Residents will be able to walk / cycle to the station or can be dropped off by another car driver (or potentially a community bus service). Other park and ride users, including some from within the Magor and Undy catchment area, will need to continue to use Severn Tunnel Junction station.

The gravity model takes account of demand abstracted from Severn Tunne Junction. Abstracted demand relates to passengers from within the Magor and Undy catchment area who would, in the absence of the station, choose to drive to Severn Tunnel Junction.

Housing Growth

New residential and employment developments will increase demand for rail services. The most significant development sites in Magor and Undy during current Local Development Plan period include 550 dwellings across Rockfield Farm and Vinegar Hill, to the north of Undy and adjacent to the M4. These sites lie within the catchment area for the station and are either currently under construction or have planning permission. Linear growth is assumed from no dwellings at these sites in 2016 to full build-out by 2026.

At least 1,000 new dwellings are proposed in Local Development Plans for the southern part of Monmouthshire and Forest of Dean District areas. This means that any parking demand released at Severn Tunnel Junction (by users of the new station at Magor who used to drive and park at Severn Tunnel Junction) is likely to be backfilled by a combination of new residents and suppressed demand. It is assumed that the backfilled demand is from people who would otherwise have driven all the way to Bristol, Newport or Cardiff.

Exogenous Demand Growth

A PDFH compliant exogenous growth forecast has been applied for the first 15 years from the opening year. Thereafter, demand growth is capped.

Benchmarking

The results of the demand modelling have been benchmarked against comparable stations in South Wales and in the nearby Forest of Dean District of Gloucestershire. The comparable stations have similar population and location characteristics, serving stand-alone settlements that are within 10 miles of another station that has higher service levels. The benchmarking exercise – set out in the Strategic Outline Business Case for the station – demonstrates the plausibility of the Magor and Undy forecasts.

Results – Magor and Undy Passenger Demand

The final passenger forecasts for Magor and Undy Station are shown in the table below. Note that these estimates take account of the ramping up of demand (further described in response to question 4.14). The estimates represent 'gross' passenger demand at Magor and Undy and are not adjusted for abstraction from neighbouring stations or reductions in demand for through services.

Year	Magor and Undy Passengers (Entries and Exits)
1	125,572
2	156,642
3	179,721

		4	194,075
		5	198,971
		6	203,399
		7	205,341
		8	207,282
		9	209,224
		10	211,165
		11	213,107
		12	215,048
		13	216,990
		14	218,931
		15	220,873
		16	222,814
		17	222,814
		18	222,814
		19	222,814
		20	222,814

4.12

Annual Demand - 'new to rail'

Enter the % of annual passenger demand that is 'new to rail'

As noted in response to question 4.11, the demand model takes account of the fact that some passengers using Magor and Undy would otherwise have travelled to Severn Tunnel Junction. The proportion of Magor and Undy passengers who are 'new to rail' (rather than transferring from Severn Tunnel Junction) represents approximately 10% of total Magor and Undy passengers.

Passenger demand adjusted for station choice over the first 20 years of operation is provided in the table below.

Year	Magor and Undy Passengers (Entries and Exits)	Magor and Undy Passengers Adjusted For Station Choice	% 'New to Rail'
1	125,572	113,389	**10%**
2	156,642	141,444	**10%**
3	179,721	162,284	**10%**
4	194,075	175,246	**10%**
5	198,971	179,666	**10%**
6	203,399	184,087	**9%**
7	205,341	185,637	**10%**
8	207,282	187,187	**10%**
9	209,224	188,737	**10%**
10	211,165	190,287	**10%**
11	213,107	191,837	**10%**
12	215,048	193,387	**10%**
13	216,990	194,937	**10%**
14	218,931	196,487	**10%**
15	220,873	198,037	**10%**
16	222,814	199,588	**10%**

17	222,814	113,389	**10%**
18	222,814	141,444	**10%**
19	222,814	162,284	**10%**
20	222,814	175,246	**10%**

4.13

Annual Demand - 'abstracted from other services'

Enter the % of annual passenger demand that is 'abstracted from other services'

The MOIRA model has been used to calculate changes in demand on through services. As noted in response to question 4.11, a 2.5-minute time penalty has been applied to services stopping at Magor and Undy. In the long term, abstraction from other services represents approximately 19% of Magor and Undy entries and exits. This proportion is higher in the short term because of differences in the ramp up factors applied to Magor and Undy demand and abstracted demand.

The impact on demand on through services for the first 20 years of operation is shown in the table below.

Year	Magor and Undy Passengers (Entries and Exits)	Impact on through travellers (demand 'abstracted from other services')	% of demand abstracted from other services
1	125,572	-25,149	**-22%**
2	156,642	-27,349	**-19%**
3	179,721	-28,528	**-18%**
4	194,075	-29,172	**-17%**
5	198,971	-29,817	**-17%**
6	203,399	-30,462	**-17%**
7	205,341	-31,159	**-17%**
8	207,282	-31,857	**-17%**
9	209,224	-32,554	**-17%**
10	211,165	-33,252	**-17%**
11	213,107	-33,949	**-18%**
12	215,048	-34,647	**-18%**
13	216,990	-35,345	**-18%**
14	218,931	-36,042	**-18%**
15	220,873	-36,740	**-19%**
16	222,814	-37,437	**-19%**
17	222,814	-37,437	**-19%**
18	222,814	-37,437	**-19%**
19	222,814	-37,437	**-19%**
20	222,814	-37,437	**-19%**

4.14

Peak Demand Forecast

Passenger demand forecasts should allow for a 'ramp-up' of demand after opening and identify and explain the date from when full demand will be achieved

The following ramp up assumptions have been applied to the demand forecasts for Magor and Undy:

- Opening year – 70%
- Year 2 – 85%
- Year 3 – 95%
- Year 4 – 100%

The following ramp-up assumptions have been applied to the 'through traveller' demand impacts:

- Opening year – Commuter = 85%, Other Journey Purposes = 100%
- Year 2 – Commuter = 95%, Other Journey Purposes = 100%
- Year 3 – Commuter = 100%, Other Journey Purposes = 100%

The final demand forecasts are provided in the table below. Demand has been capped from year 16, at which point gross passenger demand at Magor and Undy is approximately 223,000 trips and the overall net impact on rail demand (accounting for demand abstracted from neighbouring stations and impacts on through services) is approximately 162,000.

Year	Magor and Undy Passengers (Entries and Exits)	Net Impact on Demand
1	125,572	88,240
2	156,642	114,095
3	179,721	133,756
4	194,075	146,073
5	198,971	149,849
6	203,399	153,625
7	205,341	154,478
8	207,282	155,330
9	209,224	156,183
10	211,165	157,035
11	213,107	157,888
12	215,048	158,740
13	216,990	159,593
14	218,931	160,445
15	220,873	161,298
16	222,814	162,150
17	222,814	162,150
18	222,814	162,150
19	222,814	162,150
20	222,814	162,150

<table>
<tr><td>4.15
Wider benefits</td><td>Demonstrate any benefits for other stations/services within the local area, as a result of the new station opening

As noted, it is estimated that approximately 10% of rail trips to/from Magor and Undy relates to passengers from the Magor and Undy catchment area who would otherwise have travelled to Severn Tunnel Junction to use rail services. The vast majority of those passengers would drive to Severn Tunnel Junction. Therefore, Magor and Undy station would release some of the parking spaces at the already saturated Severn Tunnel Junction park and ride station. This would enable more commuters in the wider Severnside and south-west Gloucestershire areas to park and thus increase the overall rail demand for the routes. Providing bus service access to the new station and creating a joined-up transport system that does not currently exist in the Severnside area.</td></tr>
<tr><td>4.16
Passenger trip type</td><td>Demonstrate the type of trips that are expected to be made from the new station. Detail about likely ticket choices and destinations for travel may be presented

Trips by Trip Purpose
Trips by purpose have been estimated by applying the mapping from ticket type to trip purpose set out in PDFH. The ticket type splits are based on the comparator stations. Trips by purpose are set out below for 2024:

• Commute – 35%
• Business – 14%
• Other – 51%

Trips by Destination
The table below provides a forecast of passenger destinations, based on the outputs of the gravity model. New demand for rail services at Magor and Undy is expected to be influenced particularly by people travelling to Newport and Cardiff, amounting to almost 60% of passenger throughput. Passenger numbers to Bristol are constrained in the gravity model because only one train per hour is assumed to be provided, compared to a minimum of two trains per hour from Severn Tunnel Junction.

<table>
<tr><th>Origin/Destination</th><th>% of Journeys to/from Magor and Undy</th></tr>
<tr><td>Westbound</td><td></td></tr>
<tr><td>Newport</td><td>20%</td></tr>
<tr><td>Cardiff & Vale of Glamorgan</td><td>39%</td></tr>
<tr><td>S Wales valleys</td><td>1%</td></tr>
<tr><td>Marches line & N Wales</td><td>2%</td></tr>
<tr><td>Other - West</td><td>5%</td></tr>
<tr><td>Destination - Eastbound</td><td></td></tr>
</table>
</td></tr>
</table>

	Chepstow / Lydney / Gloucester / Cheltenham: 24% Bristol and Bath area: 6% Other - England: 3% Total: 100%
4.17 Data sources and assumptions	Outline and explain the data sources used and assumptions made in the calculation of passenger demand forecasts The following data sources have been used: • Existing station demand (for comparator and affected stations) – ORR Station Usage Data (2016/17) • Origins/destinations of comparator station passengers – MOIRA • Catchment area residential / commercial properties – OS Address Base data • New residential development – Newport / Monmouthshire / Forest of Dean Local Development Plans • Trip purposes and ticket types – MOIRA • Fare revenue – MOIRA • Exogenous Growth Input Parameters – TEMPRO / TAG Databook • Appraisal Parameters – TAG Databook
Revenue Forecasts	
4.18 Annual Passenger Revenue for new station	Outline and evidence the annual passenger revenue to the nearest £1000 over the first 20 years of operation as a minimum The table below shows the revenue impact of the station taking into account station choice. The revenue estimates are adjusted for the ramping up of demand. In 2019/2020 prices, station revenue amounts to approximately £718,000 per annum. This increases to approximately £1,314,000 per annum by year 16, beyond which both demand and fares levels have been capped.

Year	Magor and Undy Fare Revenue Adjusted For Station Choice (2019/20 Prices)
1	£718,167
2	£897,690
3	£1,031,945
4	£1,116,411
5	£1,146,563
6	£1,176,716
7	£1,190,448
8	£1,204,181

		9	£1,217,913
		10	£1,231,646
		11	£1,245,378
		12	£1,259,111
		13	£1,272,844
		14	£1,286,576
		15	£1,300,309
		16	£1,314,041
		17	£1,314,041
		18	£1,314,041
		19	£1,314,041
		20	£1,314,041

4.19

Annual Passenger Revenue - 'new to rail'

Enter the % of annual passenger revenue that is 'new to rail'

As for the demand forecasts for the station, based on the outputs of the gravity model, it is expected that around 90% of passenger revenue will be new to rail and 10% abstracted from neighbouring stations. Revenue estimates provided in response to question 4.18 are already adjusted such that they represent only those passengers that are 'new to rail'.

4.20

Annual Passenger Revenue - 'abstracted from other services'

Enter the % of annual passenger revenue that is 'abstracted from other services'

The table below shows the reduction in revenue resulting from impacts on through passengers and the overall net effect of the station on rail fare revenue. The impact on through services reduces the revenue impact of the station by approximately 25% in the opening year, reducing to approximately 20% in the longer term.

Year	Magor and Undy Fare Revenue Adjusted for Station Choice (2019/20 Prices)	Impact on Through Traveller Fare Revenue	Net Impact on Rail Fare Revenue	% Abstracted from Other Services
1	£718,167	-£176,228	£541,939	-25%
2	£897,690	-£191,617	£706,072	-21%
3	£1,031,945	-£199,874	£832,071	-19%
4	£1,116,411	-£204,403	£912,007	-18%
5	£1,146,563	-£208,933	£937,630	-18%
6	£1,176,716	-£213,463	£963,253	-18%
7	£1,190,448	-£218,369	£972,079	-18%
8	£1,204,181	-£223,275	£980,906	-19%
9	£1,217,913	-£228,181	£989,733	-19%
10	£1,231,646	-£233,087	£998,559	-19%
11	£1,245,378	-£237,993	£1,007,386	-19%
12	£1,259,111	-£242,899	£1,016,212	-19%

	13	£1,272,844	-£247,805	£1,025,039	-19%
	14	£1,286,576	-£252,711	£1,033,865	-20%
	15	£1,300,309	-£257,617	£1,042,692	-20%
	16	£1,314,041	-£262,523	£1,051,518	-20%
	17	£1,314,041	-£262,523	£1,051,518	-20%
	18	£1,314,041	-£262,523	£1,051,518	-20%
	19	£1,314,041	-£262,523	£1,051,518	-20%
	20	£1,314,041	-£262,523	£1,051,518	-20%

4.21 Car parking revenue	Outline and explain the revenue forecasts for money generated from car parking at the new station As a walkway station, no car parking revenue is expected. The design of the station includes provision of a drop-off area and disabled parking although it is not expected that any charges would be applied.
4.22 Other revenue sources	Outline and explain the revenue forecasts for money generated from other facilities at the new station There are opportunities to locate retail facilities at the proposed the community centre hub that would be attractive to station users. However, the revenue earned from these income streams would go back into the community. Thus, helping to contribute to the costs of running the community centre. Estimated income to be £25,000 per annum. No other revenue sources have been included in the financial appraisal of the station.
4.23 Reducing the costs of operating the railway	Outline and explain any project / innovative approaches reducing the costs of operating the railway and quantified benefits In respect of the design of the station, the GRIP 3 assessment recommends and assumes modular platform construction which would reduce construction timescales and costs and would mean that the platforms could be altered more easily if track alignment changes in the future. A modular Fibre Reinforced Platform (FRP) system would offer lower maintenance costs than steel or traditional/cross-wall construction. Proposed access arrangements – use of existing footbridges or subways rather the construction of a new footbridge, and the use of ramps rather than lifts – would reduce ongoing maintenance costs.
4.24 Other impacts	Provide overview of any other impact appraisal for the new station e.g. environmental impacts, time saving benefits, VOC benefits, reduction in road veh/km, socio-demographic etc. The following benefits of the station have been monetised as part of the economic appraisal of the project:

	• Reduced travel times, vehicle operating costs and parking costs for passengers who would otherwise have travelled to Severn Tunnel Junction by car; • Reduced travel times and costs for passengers who would otherwise have travelled to Severn Tunnel Junction by bus; • Reduced travel times for passengers who would otherwise have cycled to Severn Tunnel Junction; • Reduced transport costs for 'new' users; • Journey time 'dis-benefits' for through travellers; • Benefits of reduced car use (congestion, accidents, noise, air quality, greenhouse gas emissions); • Changes in indirect taxation. There are a range of benefits that have not been monetised but should also be taken into account when considering the overall value for money of the project. These are: • Improvements in highway congestion not directly captured by the overall reduction in car mileage. In particular, the potential to reduce traffic on the B4245 through Magor represents an important potentia benefit of the project. Existing traffic levels on the B4245 create peak time congestion issues but also creates severance through the village and impacts negatively on quality of life locally; • Improved reliability of transport for users of the station that would previously have travelled by a less reliable mode of transport (car or bus); • Improved journey quality for new rail users who would otherwise have travelled by car or bus; • Improvements in health and physical activity encouraged by the presence of the walkway station; • Improve access to services for residents of Magor and Undy and the 'option value' of the new station.
Other useful information to support the Economic and Financial Cases	
Further details of the economic and financial cases are provided in: • The Strategic Outline Business Case for Magor and Undy Station • The accompanying economic and financial spreadsheet.	

Commercial Case

The Commercial Case should set out the procurement strategy of the new station, clearly aligning this to the GRIP process.

Risks should be identified and plans put in place to ensure their appropriate management. Contract management should outline key handover and lease dates to ensure the successful handover of the project to the Station Facility Owner (SFO).

Procurement and Contracts	
5.1 Procurement Strategy	Outline and explain a robust contracting and procurement strategy, explaining how this meets the objective of achieving value for money. This should be aligned with the GRIP process The scheme to be procured is a conventional rail station and infrastructure project. The delivery of the station could be led by either Network Rail or Transport for Wales (TfW). Under the former approach, Transport for Wales would commission Network Rail to deliver the station. Network Rail would apply its standard procurement processes based on drawings and cost plans agreed with Monmouthshire County Council and TfW. Once completed, the station would be handed over to Transport for Wales who would operate and maintain the station. Should the station be delivered by TfW, there would be two primary procurement routes available. TfW could instruct the Operating and Delivery Partner (ODP) to deliver the station directly under the conditions of the existing contract. Alternatively, TfW could procure the works from one of the Infrastructure Development Partners (IDPs) appointed to TfW's STRIDE (Sustainable Transport Infrastructure Delivery) framework. Non-rail works, including amendments to local road layout and disabled parking could be delivered by Monmouthshire County Council, who would appoint a contractor through a standard procurement route.
5.2 Delivery Contract	Outline and explain the type of delivery contract defined. The reasons for choosing the approach should be clearly stated The precise form of the delivery contract would be determined by Network Rail or Transport for Wales and would follow the standard approach of the relevant organisation. The approach is therefore dependent on the procurement strategy that is followed.
Risk Management	

5.3 Project Risks	Outline and explain the development, construction and operational risks associated with delivering this project. A risk register should be in place with key risks quantified A risk assessment has been undertaken as part of the GRIP 3 study. Full details are provided in the GRIP 3 report. Key risks identified are as follows • Approvals – Network Rail GRIP 3 approvals will be sought before commencement of GRIP 4. • Available Information – Analysis undertaken at GRIP 3 will be updated such that it is based on the most up to date examination reports, track model, and as-built drawings. • Unforeseen Conditions – Further investigation of ground conditions and buried services will be undertaken at the next stage. • Funding/Business Case – Programme risks linked to funding and business case approvals. • Condition of Existing Subway – The GRIP3 study confirmed the need to modify the existing right of way subway as not meeting both rail and highway standards in providing access to the station. Condition of the existing subway may impact choice of access solution. Full structural inspection and assessment will be undertaken at GRIP 4 to confirm condition of existing structure prior to developing detailed design. • Protected Species – Phase One Habitat survey and further ecology surveys are planned to enable presence of protected species to be accommodate in design and construction programme. • Timetable risks – A more detailed review of the Measteg-Cheltenham service will be undertaken to determine the best way of accommodating the stop at Magor and Undy. Potential performance and rail operating cost risks.
5.4 Risk Management and Reporting	Explain the plan for the management and reporting of risk, including how the financial risks will be managed throughout the delivery phase. The approach to risk management and reporting would need to be determined by Network Rail or Transport for Wales depending on the preferred approach to delivery.
5.5 Risk Transfer	Outline and explain any risk transfer processes which will be in place supported by incentives (positive or negative) that promote the intended outcomes The approach to risk transfer would need to be determined by the delivery body as part of a detailed procurement strategy.

5.6 Marginal Risk	Outline and explain who is taking any marginal risk, including on planning consent, demand, revenue availability and integration risk It is expected that TfW (and ultimately the Welsh Government) would bear risks relating to construction costs. Risks relating to rail revenues and operating costs would also be borne by TfW. During the period of the current grant agreement, the allocation of revenue risks between TfW and the operator (ODP) TfW Rail Services. Risks relating to the costs of non-rail works would be borne by Monmouthshire County Council.
Station Ownership	
5.7 Station Facility Owner (SFO)	Outline who shall become the Station Facility Owner It is envisaged that TfW Rail Services would be the Station Facility Owner.
5.8 Asset transfer date	Outline and explain the date from when the Station Facility Owner shall take control of the station Based on an indicative programme, it is considered that the construction of the station could be completed by mid-2023 enabling handover to TfW in 2023 in advance of opening at the end of 2023 or early in 2024.
Other useful information to support the Commercial Case	

Management Case

The Management Case sets out the mechanisms to be used to deliver the project, evidencing that it can be delivered in engineering, operational and planning terms and that it has the full support of Network Rail and other key stakeholders.

This section should detail the management put in place to ensure the successful development, delivery and ongoing operation of the station. A clear description of responsibilities needs to be made clear in terms of the ongoing operation, maintenance and repairs to the station.

Land and Planning	
6.1 Land requirements	Demonstrate that all land or access rights required to complete the project are available. Where required, details of land agreements should be provided The station would be built on land owned by Network Rail and Monmouthshire County Council, though a small strip of privately-owned land may be required for new ramps to the existing underpass. The main access to the station and the Community Centre would be on MCC land. The highways modifications have considered two locations for the disabled drop off point. The location to the east of West End subway would provide the shortest travel distance to each platform for users with reduced mobility and therefore is the preferable solution. However, this option would require additional land to be purchased. If this is not possible, locating the drop-off point to the west of the station would be a viable alternative. A land ownership plan is provided in the GRIP 3 report.
6.2 Planning status	Outline and explain the planning status and detail any planning consent/conditions in place for the construction of a new station at the proposed site? Magor and Undy station will require planning approval. A planning application will be made through the Local Planning Authority (Monmouthshire County Council), under the Town and Country Planning Act 1990. Pre-application advice will need to be sought from Monmouthshire County Council to determine the exact requirements of the application. The application is expected to require scheme drawings, an environmental statement (including Transport Assessment), and a design and access statement. Discussions with MCC's Head of Planning and site visits with planning officers suggest that no problems are expected. As noted, the proposed station is included in the Council's statutory Local Transport Plan.

Project Management	
6.3 Project management plan	Outline and explain the project management plan for the project, including key milestones and deliverables, relating to GRIP Stages. Also detail the responsibilities in terms of operation, maintenance and repairs to the station. Attach a full project plan. The programme developed at GRIP 3 has been updated to provide the following indicative project milestones: • GRIP 3 Sign-Off – **Late 2020** • Outline Business Case completion – **Early 2021** • GRIP 4 (Single Option Development) completion – **Mid 2021** • GRIP 5 (Detailed Design) completion – **Early 2022** • Full Business Case (FBC) completion – **Early/Mid 2022** • Construction commences – **Mid 2022** • Construction substantially complete – **Mid 2023** • GRIP 6/7 (Construction, Test and Commission, Handover) completion – **Mid/Late 2023** • Station Open to Passengers – **End 2023/Early 2024** • GRIP 8 (Close Out) - **2024**
6.4 Date for site works commencement	Should funding be secured, it is expected that construction could commence by mid-2022.
6.5 Date for Substantial Completion of site works	Works would be substantially complete by mid-2023.
6.6 Date for the start of services calling at the station	It is envisaged that services could commence calls at the station at the December 2023 timetable change.
6.7 Project delivery programme – constraints and dependencies	Outline and explain constraints and dependencies which influence the project delivery programme. There should be evidence that consideration has been given to other programmes and projects which are underway. The primary risk to the programme relates to the availability of funding required to close out GRIP 3 and commence detailed design.

	Further programme risks align with the broader project risks and include: • Agreement of the approach to delivery and procurement; • Securing land ownership; • Commencement of appropriate ecology surveys to facilitate planning consents; • Agreement of the future timetable and approach to mitigating timetable risks (related primarily to the Maesteg – Cheltenham services) Should proposals for the enhancement of the relief lines be progressed, the timing of these works and any implications for the construction programme for the station would need to be resolved.
Resource Planning	
6.8 Resource plan	Include a resource plan with appropriate roles identified for the stage of the project A full resource plan will be developed during GRIP 4 and would be the responsibility of the delivery body.
Other useful information to support the Management Case	

Stakeholders and Engagement

7.1 Stakeholder management plan	Identify all key stakeholders involved in the project. Outline key details of the stakeholder management plan and attach full plan to application. Evidence should be provided of engagement with these stakeholders and their support for the project

	What is the involvement of any other train or freight operating companies affected by the project? Are third parties able to claim any form of compensation as a result of the NSF3 project? Key stakeholders include: Local residents, local businesses, the local schools, the Three Fields Trust, Magor with Undy Community Council, Monmouthshire County Council, local Welsh Assembly Members, the local Member of Parliament, as well as the Welsh Government and Transport for Wales, and industry stakeholders including Network Rail, TfW Rail Services, Great Western Railway and Cross Country Trains. The Magor Group has held regular promotional events, co-hosted with Monmouthshire County Council (MCC), and attended by business owners and representatives, councillors, rail industry officials and local government officers, and is producing regular updates for stakeholders. For information on such activities can be found at www.magorstation.co.uk.
7.2 Community engagement	Give details of how this scheme will benefit the local community in terms of work experience placements and apprenticeships offered during construction and once the station is operational. Set out how this project will benefit the local community in both the development and construction phase around offering opportunities for work placement and apprenticeships and then ongoing once the station is in operational use. There are three points to make with regard to community engagement. Firstly, as can be seen from evidence mentioned elsewhere in this application, there is substantive community support for new station and have been actively involved in pulling together the case. The case being, in the main; improved public transport, reduction in environmental impact and general benefits in terms of ease of commuting and assistance to local business and tourism. Secondly, the building of a community hall/hub close to the site of the proposed station is a community-led initiative and very much recognises the potential for mutual benefit of the two projects in establishing the case for each. Most important though is the third point: There is a great opportunity for involvement and employment during the construction of the community hub and the 'walkway station' in terms of the complementary design of both entities and the construction and maintenance of the structures and the surrounding grounds. It is believed that the maintenance and operation of the station could be vested in the group known as 'Magor and Undy

	Community Hub' which could provide employment to ensure effective and efficient delivery of a service to promote and deliver access to the rail network and to maximise incomes for the rail operators and the community itself with the aim of making the whole enterprise self-sustaining. The following services are envisaged; • Rail ticket sales in the hub • Café /bar and restroom facilities for rail travellers • WiFi area • Live train information • Information services to provide access to buses, taxis, and active travel routes and local places of interest • Maintenance of the secure areas for bicycles and mobility scooters • Eco-friendly electric vehicle, charging points • Venue for functions and events
7.3 Stakeholder Support	Demonstrate that the proposed station and timetable is supported by NR (support from Route Enhancements Manager), DfT (support from Commercial Manager(s)) and the incumbent Train Operating Company (TOC) Key stakeholders – Welsh Government, Network Rail and operators – have been engaged throughout the GRIP process. The previous operator of the Wales and Borders rail franchise were engaged during GRIP 3. Further engagement with TfW Rail Services will be required in respect of rail operations and station design.
7.4 Communications plan	Outline key details of the communications plan ensuring a time-based plan is in place for proactive communications and media enquiries. Attach the full communications plan. A full communications plan will be developed during GRIP 4. The MAGOR Group is continually keeping all local stakeholders informed and up-to-date. See www.magorstation.co.uk. Monmouthshire County Council is coordinating progress and communication through its Strategic Transport Group, which includes representatives of the MAGOR Group.
7.5 Diversity Impact Assessment	Provide details of your Diversity Impact Assessment for the project (see Appendix A for the Diversity Impact Assessment template) The completed Diversity Impact Assessment is included with this application.
Other useful information	

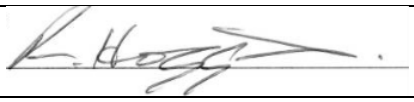
Independent Validation

8.1 Station capital and operational costs	Provide evidence that capital and operational costs have been independently verified and validated Capital cost estimates were developed by Mott MacDonald during GRIP 2. Should funding be made available, the cost estimate will be updated such that it is based on the GRIP 3 design. The updated estimates will be subject to independent verification.
8.2 Service planning and timetables	Provide evidence that the proposed service and timetables have been independently verified and validated by Network Rail As noted, further detailed operational assessment is planned in order to identify the preferred approach to accommodating the stop in the timetable. Issues relate primarily to the TfW services. The preferred approach and the final timetable would be agreed by affected operators and Network Rail.
8.3 Passenger demand and revenue forecasts	Provide evidence that capital and operational costs have been independently verified and validated Passenger demand forecasts were produced by Mott MacDonald and detailed of the methodology and assumptions employed are provided in the Strategic Outline Business Case.

Declaration

In making this application, I agree:

- that the information provided by me in this application is to the best of my knowledge correct
- that this application does not form or imply any contract to provide funding
- to allow Network Rail and the Department for Transport to undertake enquiries on this application to satisfy themselves of its completeness and accuracy
- the project does not form part of, nor conflict with, Network Rail's commitments as part of the Network Rail's current CP6 delivery plan, or form part of a TOC's franchise commitments. The project does not replace or form part of another existing commitment to the DfT or Network Rail.

Signed:	
Name in full:	**Roger Hoggins, Head of Strategic Projects, Monmouthshire CC**
Applicant organisation:	**Magor Action Group On Rail and Monmouthshire County Council**
Date:	**5 June 2020**

Please return this completed form along with supporting information by Friday 5 June 2020 to Network Rail at the following e-mail address: Newstationsfund@dft.gov.uk

Supporting documentation must be submitted in word and/or excel format as applicable, not in PDF format. A signed version of the application form should be submitted in PDF format along with a word copy.

Glossary of terms

"Appraisal Summary Table / AST" a requirement of WebTAG

"WebTAG" DfT's Appraisal Guidance – WebTAG provides information on the role of transport modelling and appraisal

"Transport Economic Efficiency / TEE" a requirement of WebTAG

"PA" Public Accounts table a requirement of WebTAG

"Analysis of Monetised Costs and Benefits / AMCB a requirement of WebTAG

"Station Facility Owner / SFO" the Train Operating Company that enters into a station lease with Network Rail

"Train Operating Company / TOC" the operator of passenger and freight trains which has entered into an Access Agreement with Network Rail

"Governance for Railway Investment Projects / GRIP" which is a Network Rail standard for the development and implementation of works on Network Rail managed infrastructure

Diversity Impact Assessment (DIA)

Project:

Document No.	
Route/Function	
Issue Date	
Suitability Code (IP Only) [Suitability code for this document in accordance with BS1192 and NR Standards]	

Security Classification Public

Document History

Version No.	Date	Reason for Issue

Document Approval and Sign-off

	Name and position	Signed	Date
DIA Owner			
Prepared by			
Superuser [Quality assurance check. You will find at list of superusers on MyConnect. If you don't have a local superuser please send your DIA for quality assurance to DiversityImpactAssessment@networkrail.co.uk]			
Senior Manager [Sign-off should be by someone who can approve policy, programme or budget changes.]			

Project-related Documents

Document No.	Document Title	Relevant Section(s)

Overview: what's in this document

Diversity Impact Assessment (DIA) Types

Select the type of DIA from the following list

- ■ 1 **The Built Environment**, or the procurement of works e.g. crossings & bridges, including maintenance, stations, offices/depots and other staffed buildings
- ■ 2 **Events**, including conferences, training courses and public consultations
- ■ 3 **Policies & Standards**, development, revision and withdrawal of standards, policies and associated guidance including for design.
- ■ 4 **Information Technology (IT)**, IT design, development and enhancement projects
- ■ 5 **Change Programmes** – Better Everyday
- ■ 6 Procurement of goods and/or services

Step 1: Clarifying Aims

Q1. What are the aims of this project/piece of work?

Please read the Q1 guidance in 'Guidance: how to complete the Network Rail DIA form'

Q2. Could this work impact on people?

☐ **No (Please go to Q3)**

☐ **Yes**

If yes, briefly explain how this work could affect people (considering our duty to promote equality, tackle discrimination and foster good relations between groups)

Q3. Decide if a DIA is required

After completing questions Q1 and Q2, decide if you need to complete the rest of this DIA.

If there are no impacts on people (employees, contractors, lineside neighbours or passengers) the remainder of the DIA is not required.

Decision	Author	Superuser	Date
	Name, position and signature e.g. James Smithson, project assistant	Name, position and signature e.g. Sally Richardson, Super user (Projects Sponsor)	
■ **No, DIA not required (End here)** N.B. Retain in Project file			
■ Yes, DIA **required** Proceed to Step 2: The Evidence Base			

Step 2: The Evidence Base

Q4. Record the data you have gathered about the diversity of the people potentially impacted by this work

e.g. from the 2011 national census or from HR Shared Service.

You should also include any research on the issues affecting inclusion in relation to your work.

Consider the following protected characteristics:

- **Disability** (including those with physical, mental and hidden impairments as well as **carers** who provide unpaid care for a friend or family member who due to illness, disability, or a mental health issue cannot cope without their support)
- **Age**
- **Pregnancy/maternity**
- **Race**
- **Religion or belief**
- **Gender**
- **Sexual orientation**
- **Marriage/Civil Partnership**
- **Gender reassignment**

Q4. Data you have gathered about the diversity of the people potentially impacted by this work

Please read the Q4 guidance in 'Guidance: how to complete the Network Rail DIA form'

Step 3: Impact

Q5. Given the evidence listed at 'Step 2: The Evidence Base', what potentially negative impacts could this work have on people with protected characteristics?

Please read the Q5 guidance in 'Guidance: how to complete the Network Rail DIA form'

Q5a. Please select all the protected characteristics your work could potentially have a negative impact on

- ☐ **Disability**
  e.g. the impact of a new online process on dyslexic staff, or the impact of changes to how passengers get to a platform on someone who cannot use stairs
- ☐ Age
  e.g. the impact of changes to long-service benefits on younger and older staff, or the impact of a long alternative route to close a level crossing on an older person with long-term health issues.
- ☐ Pregnancy/maternity
  e.g. the impact of team relocation on a woman who is on maternity leave, or the increase in height of a footbridge over the railway
- ☐ Race
  e.g. the impact of psychometric testing on the recruitment of people who don't have English as a first language, or the gentrification of an area following station redevelopment that makes retail outlets too expensive for local businesses
- ☐ Religion or belief
  e.g. the impact of a new expenses policy on meal times or the closure of a level crossing between a community and its place of worship
- ☐ Gender
  e.g. the impact of a local decision to adopt arbitrary 'core hours' on women who are more likely, but not always managing childcare issues, or the impact of changes in parking policies on women who are more likely to start work later due to childcare issues
- ☐ Sexual orientation
  e.g. the impact of a decision to invite partners to an away day on a gay man who hasn't disclosed his sexual orientation, or the secondment of a lesbian member of staff to a project in a country where this would be a risk to life/human rights
- ☐ Marriage/civil partnership
  e.g. the impact of the extension of private health care to spouses

Gender reassignment

e.g. the impact of a decision to not let staff use taxis for late night events in high risk areas may adversely affect people who have had, or are undergoing, gender reassignment

Q5b. Explain the potential negative impact

Please state the characteristic and give an explanation

Q6. What could you do to ensure your work has a positive impact on diversity and inclusion including supporting delivery of the Diversity and Inclusion strategy?

Step 4: Consultation

Q7. How has consultation with those who share a protected characteristic informed your work?

Please read the Q7 guidance in 'Guidance: how to complete the Network Rail DIA form'

Groups consulted	What issues were raised in relation to one or many of the protected characteristics (Q5)?
List the groups you have consulted or reference previous relevant consultation (This could include our staff networks, the Built Environment Access Panel, local faith leaders etc)	

Groups consulted	What issues were raised in relation to one or many of the **protected characteristics (Q5)?**
List the groups you have consulted or reference previous relevant consultation (This could include our staff networks, the Built Environment Access Panel, local faith leaders etc)	

Q8. Record any consultation you have had with Network Rail teams who are delivering work that might overlap with yours.

This will ensure that our solutions are joined up.

Step 5: Informed Decision-Making

Q9. After completing Steps 1–4, what is your decision?

Please select one of the following (for most DIAs this will be option 1) and provide a rationale.

Please read the Q9 guidance in 'Guidance: how to complete the Network Rail DIA form'

- ☐ **1 Change the work** to mitigate against potential negative impacts found
- ☐ **2 Continue the work** because no potential negative impacts found
- ☐ **3 Justify and continue the work** despite negative impacts (please provide justification)
- ☐ **4 Stop the work** because discrimination is unjustifiable and there are no obvious ways to mitigate

Q9b. Rationale for decision

Step 6: Action Planning

Q10. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at 'Step 3: Impact' or through consultation?

Please read the Q10 guidance in 'Guidance: how to complete the Network Rail DIA form'

Action	By when?	By whom?

Action	By when?	By whom?

Action	By when?	By whom?

Review this DIA

Step 7: Publication

- Please retain copies of this and all completed DIAs in a suitable shared repository.
- Customer-related DIAs may be published on our website.

Appendix: continuation sheets

Question number:

Additional/continued response

Continuation sheet

Question number:

Additional/continued response