



Wylfa Newydd Project

8.29 Phasing Strategy (Track Change Version - Revision 2.0 against Revision 1.0)

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Executive Summary

The Wylfa Newydd DCO Project comprises construction works across multiple sites. This includes the Associated Developments which are required to facilitate the construction programme and mitigate the likely effects arising during construction.

This Phasing Strategy has been prepared to ~~demonstrate~~set the ~~phases of delivery of triggers by which~~ key mitigation ~~within the wider context of the indicative construction timeline.~~

~~Figure 2-1 illustrates in which mitigation delivery phase of the development the key project-wide will be delivered. Where appropriate this Phasing Strategy contains Horizon's commitment to relevant pre-delivery restrictions prior to the delivery of certain key mitigation. These commitments are made to minimise environmental effects until the key mitigation will be secured in relation to the indicative construction timeline is delivered and to provide assurances as to the timely delivery of such key mitigation.~~

Table 2-1 sets out the triggers and the pre-delivery restrictions.

1 Introduction

1.1 Purpose

~~4.1.1~~ ~~As part~~The Wylfa Newydd DCO Project includes a number of key mitigation measures to minimise the ~~approach to facilitate construction and mitigate~~ likely significant effects that may arise from the construction phase of the Wylfa Newydd DCO Project, ~~several key mitigation measures are proposed~~.

~~4.1.21.1.1~~ ~~The proposed~~, ~~These~~ key mitigation measures are incorporated into the Draft DCO as "authorised development". ~~The key~~ ~~and as such are embedded~~ mitigation ~~works are therefore embedded as part of the overall DCO Project~~.

~~4.1.31.1.2~~ This Phasing Strategy (~~'the Strategy'~~) ~~has been produced to explain the likely phases of delivery for the key mitigation. The Strategy does not set out the sequence of construction works for all elements of the DCO Project~~sets out the triggers for the delivery of the key mitigation. This Phasing Strategy is secured through Requirement PW2 in the Draft DCO. The Requirement states that Horizon should inform the Local Authority when the mitigation has commenced and when it has been delivered.

~~4.1.41.1.3~~ The key mitigation measures, ~~embedded in the DCO as authorised works for the purposes of delivering mitigation during the construction phases of the overall DCO Project~~, are as follows:

- Ecological Compensation Sites;
- the Logistics Centre at Parc Cybi;
- the A5025 Off-line Highways Improvements;
- ~~the Logistics Centre at Parc Cybi;~~
- the Park and Ride at Dalar Hir;
- the Marine Off-Loading Facility (MOLF);
- Landscape Mounds within the WNDA; and
- the Site Campus (including the Site Campus Medical Centre) at the Wylfa Newydd Development Area ('WNDA'); ~~);~~.
- ~~Landscape Mounds within the WNDA;~~
- ~~the Marine Off-Loading Facility; and~~
- ~~Ecological Compensation Sites~~

~~4.1.51.1.4~~ These key mitigation measures have been identified in the Integrated Traffic and Transport Strategy (~~Application Reference Number: 6.3.20~~), [APP-107], Workforce Accommodation Strategy (~~Application Reference Number: 8.4~~), [APP-412], the Environmental Impact Assessment Statement and the other assessments, as key mitigation to manage the effects (i.e. traffic and socio-economic) related to the Wylfa Newydd DCO Project.

~~4.1.6~~ ~~The final Phasing Strategy will be secured through a Requirement in the DCO. This will be a subsequent approval by the named authority.~~

~~4.1.7~~ This document contains:

- ~~an overview of the sequence when elements of mitigation will be secured and the approach to phasing;~~

- the mitigation secured by the draft Order (Application Reference Number: 3.1);
- a figure illustrating the key phases; and
- a table showing the interlinks between phases and key mitigation.

~~1.1.5~~ For the purposes of this Phasing Strategy, four key mitigation delivery phases have been identified. The phases represent the sequence in which key mitigation will be delivered. This is shown in figure 2-1. The figure includes, for information, the broad, high-level construction activities that will take place across ~~A description of the Site Campus, Landscape Mounds, MOLF and Ecological Compensation Sites is set out in Volume D Chapter 1 of the ES [APP-120] and the CMS [APP-136]. A description of the Logistics Centre is set out in chapter H1 of the Environment Statement [APP-355]; the A5025 Off-line Highway Improvements is set out in chapter G1 of the Environment Statement [APP-304]; and the Park and Ride is set out in chapter F1 of the Environment Statement [APP-266].~~

~~4.1.8~~ This Phasing Strategy does not set out the sequence of construction works for the Wylfa Newydd DCO Project from commencement to full operation of the Wylfa Newydd DCO Project.

~~4.1.9~~~~1.6~~ To clarify, the indicative construction timeline for the whole Wylfa Newydd DCO Project is set out in chapter A2 of the Environmental Statement (Application Reference Number: 6.1.2). The Strategy should also be read alongside the ~~The Construction Method Statement (Application Reference Number: 6.4.17), which ("CMS") [APP-136] describes in greater detail the strategic construction programme, indicative detailed construction phases, activities and techniques that will could be undertaken for construction of the Wylfa Newydd Development Area Development (WNDA Development). While, This Phasing Strategy should be read alongside the CMS. The indicative construction years shown on figure 2-1 are only indicative, Horizon will endeavour to secure timeline for the sequence Wylfa Newydd DCO Project is set out in chapter A2 of this mitigation through the broad phases outlined in figure 2-1.~~ Environmental Statement [APP-056].

~~4.1.10~~ The key purpose of this Phasing Strategy is to provide assurance as to when the key mitigation will be delivered. It ensures that development will not be able to progress until pre-requisite mitigation is delivered. Table 2-1 provides the justifications for the timings of each key mitigation.

~~4.1.11~~ In accordance with the DCO Requirements, construction of the WNDA Development will be undertaken in general accordance with the CMS. This is to enable an element of flexibility in the precise construction methodology employed by the Contractor at the time of construction. The phases in this Strategy are based on the CMS phases; however, are more high-level in nature in line with the purpose of this Strategy.

~~4.1.12~~ The Strategy should also be read alongside the *The Wylfa Newydd Code of Construction Practice* ("CoCP") and sub-CoCPs (Application Reference Number: 8.6 to 8.12). The Wylfa Newydd CoCP, together with location-specific sub-CoCPs, set out how construction activities will be managed and controlled in order to deliver the mitigation commitments as set out in the ES as well as

~~other assessment processes undertaken (e.g. Shadow Habitat Regulations Assessment).~~

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2 Wylfa Newydd DCO Project - "Key Mitigation" Delivery Phasing Indicative Construction Timeline and Trigger Definitions

2.1 Phasing sequence

2.1 Indicative Construction Timeline

2.1.1 Figure 2-1 below sets out the ~~four~~ indicative ~~phases for~~ construction timeline. It illustrates the ~~delivery of key mitigation described in section 1.1.1 key~~ Project milestones, including First Nuclear ~~Concrete Construction~~ (FNC) and Commercial Operation Date (COD), and the indicative construction timeline for the DCO Project (as set out in the Construction Method Statement) ~~are~~ [APP-136]. This is provided for information. ~~Table 2-1 below provides the justification for the timely delivery of each key mitigation.~~

Figure 2-1 Key mitigation delivery phasing

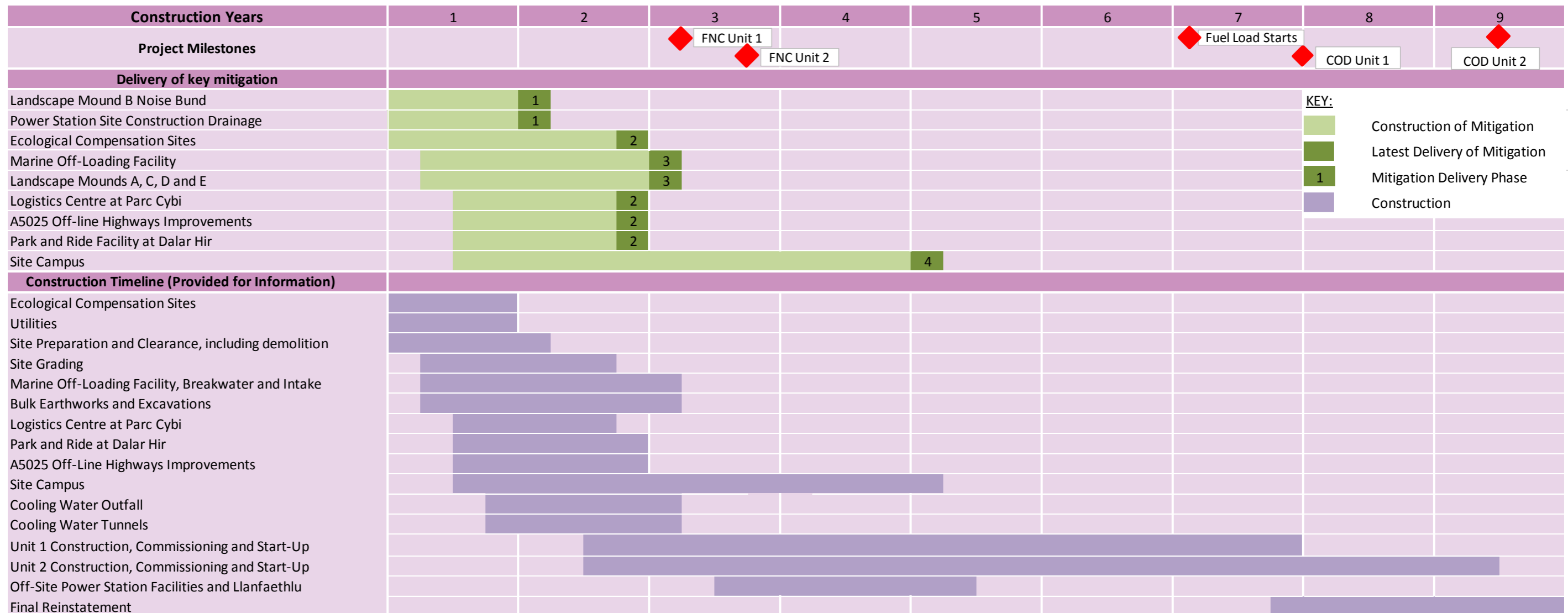


Figure 2-1 Indicative Construction Timeline

Construction Years	1	2	3	4	5	6	7	8	9
Project Milestones			◆ FNC Unit 1	◆ FNC Unit 2			◆ Fuel Load Starts	◆ COD Unit 1	◆ COD Unit 2
Construction Timeline (Provided for Information)									
Ecological Compensation Sites	[Bar spanning years 1-3]								
Utilities	[Bar spanning years 1-2]								
Site Preparation and Clearance, including demolition	[Bar spanning years 1-2]								
Site Grading	[Bar spanning years 1-3]								
Marine Off-Loading Facility, Breakwater and Intake	[Bar spanning years 1-3]								
Bulk Earthworks and Excavations	[Bar spanning years 1-3]								
Logistics Centre at Parc Cybi	[Bar spanning years 1-3]								
Park and Ride at Dalar Hir	[Bar spanning years 1-3]								
A5025 Off-Line Highways Improvements	[Bar spanning years 1-3]								
Site Campus	[Bar spanning years 1-5]								
Cooling Water Outfall	[Bar spanning years 1-3]								
Cooling Water Tunnels	[Bar spanning years 1-3]								
Unit 1 Construction, Commissioning and Start-Up	[Bar spanning years 2-8]								
Unit 2 Construction, Commissioning and Start-Up	[Bar spanning years 2-9]								
Off-Site Power Station Facilities and Llanfaethlu	[Bar spanning years 3-5]								
Final Reinstatement	[Bar spanning years 7-9]								

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Mitigation will be secured by the draft DCO (Application Reference Number: 3.1).

2.2 Key Triggers and Pre-Delivery Restrictions

2.1.22.2.1 Table 2-1 provides a summary of the purpose and timing of sets out the trigger for each key mitigation measure. Descriptions of Where appropriate this Phasing Strategy contains Horizon's commitment to relevant pre-delivery restrictions prior to the delivery of certain key mitigation. These commitments are made to minimise environmental effects until the key mitigation is delivered and to provide assurances as to the timely delivery of such key mitigation. Reasons for each mitigation can be found in the Mitigation Route Map (Application Reference Number: 8.14). [REP2-038].

Table 2-1 Key mitigation summary Mitigation Triggers

Key mitigation	Reason for mitigation	Timing for Delivery phase (Triggers)	Timing Pre-delivery Restriction
<u>Ecological Compensation Sites</u>		To be commenced during the first two dry seasons following DCO commencement.	N/A
<u>Logistics Centre at Parc Cybi</u>		To be delivered prior to the first nuclear construction date for Unit 1.	N/A
<u>A5025 Off-line Highway Improvements</u> Power Station Site Construction Drainage	To manage run-off; and To manage flows and meet water quality thresholds (Environmental Quality Standards).	To be delivered prior to the first nuclear construction works at the Power Station Site date for Unit 1.	Prior to the A5025 Off-line Highway Works Improvements opening to traffic, Horizon will not exceed 22 hourly max HGV movements each way at Valley, it will not exceed 160 daily max HGV movements each way at Valley and it will not exceed 2,500 monthly max HGV movements each way at Valley.
<u>Park and Ride Facility at Dalar Hir</u>		To be delivered prior to the first nuclear construction date for Unit 1.	N/A

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Key mitigation	Reason for mitigation	Timing for Delivery phase (Triggers)	Timing Pre-delivery Restriction
<u>Marine Off-Loading Facility</u> <u>Landscaped Mound B Noise Bund</u>		To create noise barriers that be delivered prior to the first nuclear construction plant would work behind; and To reduce adverse visual effects on the surrounding area; date for Unit 1.	To be delivered prior to main construction works at the Wylfa Newydd Development Area. Prior to the A5025 Off-line Highway Works Improvements opening to traffic, Horizon will not exceed 22 hourly max HGV movements each way at Valley, it will not exceed 160 daily max HGV movements each way at Valley and it will not exceed 2,500 monthly max HGV movements each way at Valley.
Ecological Compensation Sites <u>Landscaped Mounds A</u>		<u>Construction Mound - To create new and enhance existing areas of rich fen habitat be delivered prior to compensate for the effects of first nuclear construction date for Unit 1.</u> <u>Operation Mound - To be delivered at the WND A end of final reinstatement.</u>	2N/A To be delivered during the first two dry seasons following DCO grant.
<u>Landscaped Mound B Noise Bund</u> <u>Logistics Centre at Parc Cybi</u>		<u>Construction Mound - To enable delivery be delivered on or before 10 months of construction.</u> <u>Operation Mound - To be</u>	To be delivered prior to the indicative first nuclear concrete date for Unit 1. If the noise bund is not delivered on time Horizon will not be able to exceed the noise levels committed to in the CoCP i.e. Horizon cannot exceed 62dB LAeq,1-hour for more than eight weeks in a year at each relevant receptor.

¹ Please note "Landscape mounds will continue to change through construction as material is added and taken away as required."

Key mitigation	Reason for mitigation	Timing for Delivery phase (Triggers)	Timing Pre-delivery Restriction
		<p>delivered at the Wylfa Newydd Project;</p> <p>To reduce traffic on the local road network;</p> <p>To reduce the potential traffic related effects on local communities;</p> <p>To reduce the potential traffic related effects on businesses;</p> <p>To reduce the potential traffic related effects on visitors;</p> <p>To reduce air quality related effects; and</p> <p>To reduce noise related effects.</p> <p>end of final reinstatement.</p>	
<p><u>Landscape Mounds</u> C A5025 Off line Highways Improvements</p>		<p>To enable delivery of the Wylfa Newydd Project;</p> <p>To mitigate potential traffic related effects;</p> <p>To mitigate noise related effects;</p> <p>To mitigate air quality related effects;</p> <p>Highway improvements along the A5025 between Valley and the Power Station Site will result in the bypassing of the communities of Valley, Llanfachraeth and Llanfaethlu;</p>	<p><u>2N/A</u></p> <p>To be delivered prior to the indicative first nuclear concrete date for Unit 1.</p>

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Key mitigation	Reason for mitigation	Timing for Delivery phase (Triggers)	Timing Pre-delivery Restriction
		<p>Provide a realignment of the highway through Gefn Coch; and</p> <p>An increase in the highway width along the sections of the A5025 between these villages.</p> <p><u>Construction Mound - To be delivered prior to the first nuclear construction date for Unit 1².</u></p> <p><u>Operation Mound - To be delivered at the end of final reinstatement.</u></p>	
<u>Landscape Mounds D</u>		<u>Operation Mound - To be delivered at the end of final reinstatement.</u>	N/A
<p>Park and Ride Facility at Dalar Hir Lan</p> <p><u>dscap</u></p> <p><u>e Moun</u></p> <p><u>ds E</u></p>	<p>To enable delivery of the Wylfa Newydd Project;</p> <p>To mitigate traffic related effects on the local road network;</p> <p>To significantly reduce the number of car movements on the A5025;</p> <p>To reduce noise and vibration</p>	<p><u>2</u></p> <p><u>Construction Mound - To be delivered prior to the indicative first nuclear concrete construction date for Unit 1³.</u></p> <p><u>Operation Mound - To be delivered at the end of final reinstatement.</u></p>	N/A

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² Please note "Landscape mounds will continue to change through construction as material is added and taken away as required."

³ Please note "Landscape mounds will continue to change through construction as material is added and taken away as required."

Key mitigation	Reason for mitigation	Timing for Delivery phase (Triggers)	Timing Pre-delivery Restriction
	<p>related effects; and To reduce air quality related effects</p>		
<p><u>Site Campus Loading Facility</u></p>	<p>Marine Off</p>	<p><u>To be delivered in time for peak construction.</u></p>	<p>To enable <u>ensure</u> the delivery of the Wylfa Newydd Project; <u>trigg</u>er, Horizon <u>would</u> deliver the <u>Site Campus</u> in the following <u>three</u> phases:</p> <p>To reduce freight movements by road including HGVs;</p> <p>To reduce <u>Deliv</u>er the <u>number</u> <u>first</u> <u>1,000</u> beds of Abnormal Indivisible Loads by road;</p> <p>To enable construction materials (and bulk materials) <u>Si</u>te Campus <u>prior</u> to be transported by sea;</p>

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Key mitigation	Reason for mitigation	Timing for Delivery phase (Triggers)	Timing Pre-delivery Restriction
			<ul style="list-style-type: none"> To reduce the amount <u>exceedance</u> of additional traffic; <u>2,200 Non-Home Based workers</u> To reduce noise effects at residential receptors; and To reduce the number of HGVs and reduce NO2, PM10 and PM2.5 concentrations; <u>Deliver further 1,000 beds prior to exceedance of 4,200 Non-Home Based workers and</u>

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Key mitigation	Reason for mitigation	Timing for Delivery phase (Triggers)	Timing Pre-delivery Restriction	
			<ul style="list-style-type: none"> Deliver the final 2,000 beds prior to exceedance of 6,700 Non-Home Based workers 	
	Landscape Mounds A, C, D and E	<p>To create noise barriers that construction plant would work behind; and</p> <p>To reduce adverse visual effects on the surrounding area;</p>	3	To be delivered prior to the indicative first nuclear concrete date for Unit 1.
Site Centre	Campus Medical	<p>To enable delivery of the Wylfa Newydd Project;</p> <p>To reduce adverse effects on local housing;</p> <p>To reduce traffic related effects associated with daily commuting to and from the Wylfa Newydd Development Area; and</p> <p>Reduce the need for off-site vehicle movements at shift changes that would otherwise occur. Phase 1 of the Site Campus (i.e. deliver the first 1,000 beds of Site Campus prior to exceedance of 2,200 Non-Home Based workers) to include a Centre at the Site Campus</p>	4N/A	To be delivered in time for peak construction.

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Key mitigation	Reason for mitigation	Timing for Delivery phase (Triggers)	Timing Pre-delivery Restriction	
	<u>appropriate to the number of patients on site.</u>			

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~~2.1.3 The key details of the WNDA Development is set out in Volume D Chapter 4 of the ES (Application Reference Number: 6.4.1) and the CMS (Application Reference Number: 6.4.17). A description of the Logistics Centre is contained in chapter H1 of the Environment Statement (Application Reference Number: 6.8.1), the A5025 Off-line Highway Improvements is contained in chapter G1 of the Environment Statement (Application Reference Number: 6.7.1), Park and Ride is contained in chapter F1 of the Environment Statement (Application Reference Number: 6.6.1), the Off-Site Power Station Facilities is contained in chapter E1 of the Environment Statement (Application Reference Number: 6.5.1).~~

2.3 Definitions of Triggers

2.3.1 The definitions of the triggers give clarity about when these elements of mitigation will be delivered during the construction programme. Horizon is committed to delivering this mitigation to reduce any significant effects and ensuring appropriate time frames and triggers, in relation to the indicative Construction Timeline, exist to ensure that the Strategy is enforced. Table 2.2 highlights these definitions:

Table 2-2 Definition of Triggers

<u>Trigger for Mitigation Delivery</u>	<u>Definition of Trigger</u>
<u>To be delivered prior to the first nuclear construction date for Unit 1.</u>	<u>The date of the first irreversible construction (usually pouring of the structural concrete) for buildings with nuclear safety significance.</u>
<u>To be delivered in time for peak construction.</u>	<u>This is defined as a time by which the Wylfa Newydd DCO Project reaches the peak number of workers (i.e. 9,000 workers) that was an assumption to the ES assessment.</u>
<u>To be delivered at the end of final reinstatement.</u>	<u>This means at the end of final reinstatement (as shown on Figure 2.1 of the CMS [APP-136])</u>
<u>To be delivered on or before 10 months of construction.</u>	<u>This means the delivery of the mitigation on or before the 10th month of construction after DCO commencement (excluding SPC works).</u>
<u>Definition of 'the first two dry seasons'</u>	<u>This means Horizon should provide notification that this mitigation has commenced during the first two dry seasons following DCO commencement.</u>

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