Appendix C

Detailed Construction Method Statement - DRAFT

This Draft Detailed Construction Method Statement (DCMS) is a live document, which will be updated following consultation with Marine Scotland, to ensure all best practices are implemented. This document has been prepared to give a detailed breakdown of the works and pollution prevention measures that will be in place during each phase of the works.

The DCMS should be read in conjunction with the Marine Scotland Licence (reference TBC) and the Story Work Package Plan (currently being developed).

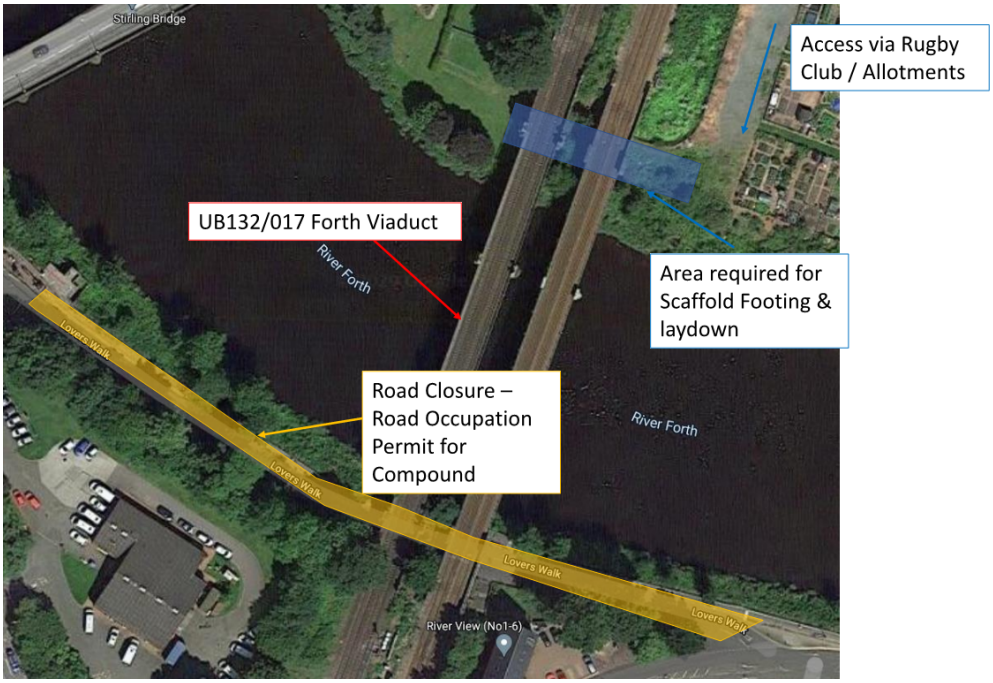
The final version of the DCMS will be submitted to Marine Scotland ahead of works commencing onsite – in line with the conditions of the Marine Licence.

1. Site Location (including grid ref. and location plan)

Figure 1: Aerial Photograph of the Site

Railway underbridge UB 132 / 017 is located at National Grid Reference NS 79824 94400. UB 132/017 is a 5-span viaduct carrying 2No. electrified tracks of the SC119 Greenhill Upper Jn to Dundee line over the River Forth, disused land and a one-way street (Lover's Walk) in Stirling.

Figure 2 below shows that Story will utilise existing areas of hardstanding for their site compound and access track to the laydown area. The laydown area will be set back from the rivers edge and will require to be de-vegged ahead of utilisation.

	 Figure 2: Proposed Location of the Site Compound and Laydown Area
2. Proposed works	**<u>Licensable Works</u>** Construction works over a structure affected by tidal conditions. Story Contracting are due to carry out structure refurbishment works on behalf of Network Rail. Proposed works will include the installation of a working scaffold platform, grit blasting and painting.
3. Construction Programme	Works are due to commence on January 2022 and will be completed by August 2022
4. Working Hours	Agreed working hours with Network Rail and the Local Authority are as follows: • Dayshift – 0730 – 1800hrs (approx. this could increase to 0700 to 1900hrs depending on progress) • Nightshift – 2200 – 0600hrs (approx. again may go 1900 – 0700hrs dependant on progress). **The construction programme is still to be finalised and as such, it is not yet known which shifts will be dayshifts and / or nightshifts.**
5. Environmental / Ecological Receptors	The Upper Forth Estuary is a transitional water body (ID: 200437), in the Scotland river basin district. It is 9.7 square kilometres in area. The water body has been designated as a heavily modified water body on account of physical alterations that cannot be addressed without a significant impact from an increased risk of subsidence or flooding.

	<u>Designated Sites</u> The western side (upstream end) of the structure lies on the boundary of the River Teith SAC. This SAC is designated from River Lamprey, Brook Lamprey, Sea Lamprey and Atlantic Salmon. The River Forth RAMSAR, SPA and SSSI is located over 5km downstream of the structure. <u>Ecological Appraisal</u> An Ecological Appraisal was undertaken in August 2020 (attached as Appendix A) [redacted] Ecologists recommendations will be addressed ahead of works commencing onsite. [redacted]
6. Licences / Consents Required	Marine Scotland Construction Projects Licence No other licences / consents are anticipated at present.
7. Management Documents to be Produced / Referenced	Ahead of works commencing, Story will also prepare an internal Environmental and Social Management Plan (ESMP) and a Site Waste Management Plan. The ESMP will address all of the environmental risks associated with the works and will provide an Environmental Incident Response Procedure. To avoid, minimise and reduce adverse effects to the receptors, the construction phase management plans will follow guidance contained within to mitigate likely significant impacts during the construction phase, all works associated with the construction of the Development would be undertaken with due regard to the guidance contained within the CIRIA Document C650 Environmental Good Practice on Site as well as Guidance for Pollution Prevention (GPPs), specifically, GPP 5: Works and maintenance in or near water. Additionally, works will adhere to the standard set out in SEPA's Pollution Prevention Guidelines (PPGs) / Guidance for Pollution Prevention (GPPs). Specific documents to refer to: PPG 7: Safe storage - The safe operation of refuelling facilities; GPP 22: dealing with spills; GPP 1: Understanding your environmental responsibilities - good environmental practices; PPG 6: Working at construction and demolition sites GPP 21: Pollution incident response planning and GPP 22: Dealing with Spills.
8. Flooding / Poor Weather Contingency	Ahead of works commencing, the Site Manager will review the weather forecast on a regular basis. Works may be postponed if poor weather conditions are forecast. The site manager will register for flooding alerts from SEPA for the River Forth. In the event of an alert, works will cease and all materials will be moved to the laydown area.

	At the end of each shift, all equipment and material will be removed from the scaffold. These will be relocated to the laydown area (set back from the railway line. The Site Manager (or another nominated individual) will have responsibility for ensuring that this is undertaken at the end of every shift.
9. Pre-works & Mobilisation (include map of proposed site set up)	All site operatives will be briefed in the contents of this Detailed Construction Method Statement (DCMS) , ESMP and the conditions of the Marine Scotland Licence (reference TBC) prior to works commencing and will sign the briefing sheet. All site operatives will receive a site induction and regular environmental tool box talks as outlined in the Projects Environmental & Social Management Plan (ESMP). Site clearance will take place outside of the breeding bird season (where possible) and devegetation will be undertaken using brushcutters and chainsaws where appropriate. It is the intention for Story to minimise the amount of devegetation required. Where devegetation of larger trees is required, these will be logged and offered to the landowner. Branches and shrubbery will be chipped and either spread within the Network Rail Boundary or will be removed from site to an appropriate waste licensed facility. If green waste is to be chipped or spread to land, the appropriate Waste Management Exemptions will be applied for prior to the activity being undertaken. It is not anticipated that the INNS on site will need to be disturbed. All site operatives will be briefed on their presence. If their disturbance is required to facilitate the works, then an INNS Management Plan will be developed and if necessary, a specialist contractor will be employed to manage the species onsite. Story are planning to access the worksite via rail and new access tracks are not anticipated. At the end of the works any disturbed land will (anticipated to be the laydown area only) be reinstated to its original condition. Any additional materials or waste will be removed from site in accordance with the Site Waste Management Plan. Ahead of works commencing, Network Rail / Story will inform all 3rd party users of their intention to undertake the works. This will include, statutory stakeholders including Marine Scotland, Forth Fisheries Trust, as well as residential and commercial premises within 200m of the work location.
10. ECoW	Story's Environmental Engineer will carry out the role of ECoW onsite for the duration of the works. The role will involve weekly visits to ensure that environmental good practice is maintained and to review records. The ECoW will ensure that all site operatives are briefed and will ensure compliance with any consents. The ECoW will also monitor that construction works are being carried out in line with the project's Environmental and Social Management Plan (ESMP), DCMS and any Marine Scotland licence conditions. ECoW site visit inspection reports will be recorded on Story's in-house reporting system; Alcumus, with any actions identified via the system being allocated to individuals onsite to resolve. It will be the ECoW's responsibility to determine the appropriateness of all the pollution prevention measures onsite and to adapt or specify measures appropriate to site conditions.

11. Proposed Monitoring	The Worksite The work site is to be fully encapsulated and therefore it is not anticipated that there will be any direct pathway from the worksite to the River Forth. However, there is a risk that when the encapsulation is being cleaned or disassembled that fines could enter the River Forth. All fines will be contained in a suitable container, prior to being removed from site. Robust housekeeping measures will be in place throughout the works. The encapsulation will be inspected by the Site Manager (or a suitably qualified person) on a daily basis to ensure that it is robust and fit for purpose. The Site Compound / Laydown Area Prior to commencing any works onsite Story will identify appropriate water quality monitoring locations. These identified locations will be visually monitored throughout the works and will be located upstream and downstream of the works and will also concentrate on site drainage and refueling locations associated with the site compound (and laydown area if appropriate) etc. Story will also identify water quality triggers, which could indicate a pollution event, which may warrant further investigation. Water quality triggers will include but not be limited to discolouration, foam and hydrocarbon on the surface of the water. On a daily basis, Story will undertake daily visual inspections of the River upstream and downstream of the works. Findings from these visual inspections will be recorded, held onsite and will be made available for inspection if requested by SEPA. Visual inspections will be completed by the Story Environmental Engineer. If during the visual monitoring a water quality trigger is noted, then water samples will be collected and will be sent to a laboratory for analysis. The samples will then be compared against baseline samples to determine if water quality deterioration has occurred. If a pollution event is suspected and/or identified it will be dealt with in accordance with Story internal Environmental Incident Response Plan (FORM/415B Environmental Management Plan (NWR-Works) Revision 1, September 2017) and will comply with the incident response conditions as outlined in the Marine Licence.
12. Detailed Phasing for Licensable Construction Activities including proposed mitigation	A detailed work package plan will be developed and will be appended to this DCMS as Appendix B, four weeks ahead of works commencing onsite. However at the time of writing the following phases of work are anticipated: • Detailed schedule of steelwork defects with prioritisation of repairs and proposed repair details designed to provide RA8@65mph. • Detailed schedule of all substructure elements and masonry approach spans with prioritisation of repairs and proposed repair details using Network Rail Standard Details where possible. • Replacing 4 No. rocker bearings at High Mileage abutment of the bridge and application of anti-corrosive treatment to the exposed parts of all remaining bearings.

	• Provision of condition-led repair detail for addressing the cracking in compression elements. • Provision of new corrosion protection system to all exposed metalwork, which is to provide a service life of 25 years in a C4 high environment painted to match the colour of adjacent structure (Holly Green 14C39). • Replacement of all underslung walkway elements with new GRP walkway system designed to accommodate loading of 5kN/m2 and include appropriate edge protection. • Spot replacement of defective timbers in trackside walkway. • Review drainage and water management system over structure and propose repairs and reinstatement of defective drainage. • De-vegetation of 5m envelope (within Network Rail boundary) of the structure. Roots to be treated to prevent regrowth. All blasting, painting and steelworks shall be carried out within the fully sealed & encapsulated section of the scaffold. Floodlighting of construction areas close to the watercourse will be avoided where possible and if unavoidable (due to health and safety implications), directional lighting will be adopted (through the use of shields, hoods or limiting the height of lighting columns).
	<u>Reinstatement of Works Areas</u> The laydown area will be re-landscaped and returned to its original profile and any locations with bare soil will be covered in bio-degradable geotextile, pinned and reseeded.
13. Marine Scotland Licence Conditions	**Section to be updated on receipt of Licence**
14. Environmental Risks Associated with the Works	• Run off into the River Forth or drains from exposed areas (particularly the laydown area). • Fuel spills entering the River Forth and/or drains • Plant debris entering the River Forth • Silt run off from stripped areas (laydown areas only) • Flooding washing away equipment in the laydown area. • Contamination of the River Forth through dust / fines during grit blasting. • Degradation of the environment with waste materials • Paint / chemicals entering the River Forth. • Disturbance of protected species and fish during the works.
15. Pollution Prevention	During the works, Story will employ the following pollution prevention techniques to address the environmental risks associated with the works.

	Site clearance for the Laydown area	• Silt fencing installed at work areas (dug in at ground level) and next/adjacent to the Forth /drains to remove silt from run-off. • Refuelling and oil storage carried out in line with GBR 26 and 28 and STORY's procedures • Avoid unnecessary vegetation clearance. • Where possible maintain a buffer zone of vegetation on the bank of the watercourse. • Clear all vegetation required to facilitate the works outside of the breeding bird season, where possible. • Plant debris removed from watercourses / drains on completion of or netting installed to prevent debris falling into waterbodies. • The laydown area will be set back from the edge of the river, to allow for flooding.
	Dust / Fines	• Work areas will be fully encapsulated. • Daily inspection of encapsulated areas and corrective actions implemented asap, following the identification of a defect. • Daily cleaning of work area. • Robust housekeeping techniques. • All fines / dust to be captured / contained and removed from site in accordance with Project Site Waste Management Plan.
	Stockpiles	Not anticipated
	Silt	• Robust silt mitigation will be implemented on site. During the initial site preparation works prior to the start of construction, there will be a requirement for the implementation of temporary measures to ensure controlled management of runoff draining from the construction site. Runoff from the construction site would not be allowed to drain directly into the Forth and would be filtered and attenuated using a variety of measured alone or in combination including: Sediment traps; Settlement ponds and temporary storage areas; Silt Busters or other proprietary treatment measures; Sediment barriers such as silt fences, and earth bunds (used and positioned in appropriate locations) and cut off ditches etc. • Plant materials (debris, residue, any other forms of pollution on site) must not be allowed to pass into any watercourse or the road drainage system (i.e. drains and gullies).
	Waste	• Working areas will be inspected on a daily basis.

		• All waste will be stored in the site compound, in segregated, labelled skips, as per the Site Waste Management Plan. • Waste materials will be removed from site on a regular basis. • Disposal of waste will be undertaken in accordance with the Waste Management Licensing Regulations. • All fines arising during the grit blasting operation will be placed in a sealed container and will be stored in the site compound until the containers are removed from site in accordance with the Site Waste Management Plan.
	Biosecurity	• All plant and equipment to be washed before being used onsite. • Areas of Himalayan Balsam and Giant Hogweed to be identified by an ecologist, buffered with signage installed. All site operatives to be briefed on the location of the INNS. • It is not anticipated that the INNS will need to be disturbed, however if required and INNS Management Plan will be developed, and specialist contractors employed to ensure the works do not result in the spread of these species. • Staff to be briefed on biosecurity protocols. • Clean operatives boots / equipment before commencing onsite (with Virkon solution or similar disinfectant) to prevent the spread of INNS, pests or diseases.
	Refuelling	• Designated refuellers only and a designated refuelling area should be sought if required. • Refueling in line with Story refueling procedure, CAR GBRs and GPPs. • No refueling within 10m of the Forth or any drains. • All plant and equipment will have spill kits. Spill kits should be quickly accessible to capture any spills should they occur. • Additional spill kits present at the site compound. • All personnel trained in spill response procedure. • All plant well maintained. • Daily inspection of plant. • When not in use, all fuel and chemicals will be stored in a suitably bunded container as per Story refueling procedure, CAR regulations GBR 26 and 28. • Fuel bowsers should be stored on an impermeable and fully bunded surface at least 10m away from drains and watercourses. • Generators and the static plant may have the potential to leak fuel and/or other hydrocarbons. Generators and plant with a capacity of greater than 200 litres should have an

		internal secondary containment system (otherwise referred to as a bund) with a capacity of 110% of the plant's maximum container volume. If generators or plant with a capacity of fewer than 200 litres do not have secondary containment systems (i.e. not bunded) then drip trays should be supplied beneath the equipment with sufficient capacity to contain 110% of the plant's maximum container volume. • During refuelling of smaller mobile plant, a funnel should be used and drip trays in place. Care should be taken to reduce the chance of spillages. • The ground/stone around the site of a spill should be removed, double bagged and taken off site as special contaminated waste. • All spills should be logged and reported in line with the Marine Licence and the Incident Response Procedure within the ESMP. In the event of any spills into the water environment, all works MUST STOP, and the incident be reported to the project manager and the Story Scotland environmental advisor.
	Chemical & fuel storage (including paint)	• Storage of COSHH material, oil and fuel containers, and any other materials should be at least 10m away from any watercourses, drains and/or waterbody. • Spill kits will be present on site and staff should know how and when to use them. • All plant and equipment should be regularly inspected for any signs of damage and leaks. A checklist should be present to make sure that the checks have been carried out; • All site drains, springs and waterways that could be affected by site works will be identified by the site manager. • Where storage of plant material is required next to gullies and drains, these must be blocked with heavy-duty plastic or similar. • Painting of the structure will take place within the encapsulation. • Paint to be removed from the structure when it is not in use.
	Noise / Light	• All works will comply with BS 5228 +A1:2014 Code of practice for noise and vibration control on construction and open sites. • Appropriate mufflers and silencers will be fitted to plant and equipment. • No idling of engines. • Story will liaise with the Forth Fisheries Trust regarding other mitigations that can be employed to reduce noise disturbance on aquatic species. This may involve avoiding

		time periods where fish are particularly active (dusk and dawn) for grit blasting / steel repairs. • Ecologist recommendations implemented to avoid disturbance on protected species. • Lighting plan to be developed as per the ecologist's / Forth Fisheries Trust to prevent and disturbance to fish or protected species.
	Leaking or vandalised equipment	• The site compound will be manned 24/7. If site operatives are not present, the site will be locked with a security guard in place. • Plant/equipment will be removed to the site compound when not in use. • All plant and equipment will have spill kits. • Additional spill kits present at the site compound. • All personnel trained in spill response. • All plant, equipment either removed from site on a daily basis or stored in a secure location.
16. Incident Response	If a spillage, emergency spill kits (granules, pads, mats and booms) will be used to contain the spillage. The spill will be contained, and the supervisor will be notified. Spill kits are located within the site compound and at appropriate intervals on the scaffold encapsulation. In the case of any potential silty water arising, all materials required to deliver the above mitigations will be made available to reduce flow and acts as filters. Spillages need to be prevented from entering the unnamed watercourses. Booms and absorbent pads will be used in the watercourse around any spillage as well as downstream of any spillage. The locations of emergency spill kits and mitigation measures will be detailed in task briefings. If a spillage cannot be contained and is likely to enter the unnamed watercourse and/or drains it is essential that the local SEPA office, Marine Scotland and water authority are informed. All spillages will be reported by the Project Manager and will be managed in accordance with STORY's procedure for Environmental Incident Responses Plan – FORM 428. **Note: at the time of writing, all SEPA offices are closed due to the ongoing Covid Restrictions. In the event of an Environmental Incident contact the SEPA Pollution hotline on 0800 80 70 60 and visit https://www2.sepa.org.uk/EnvironmentalEvents to submit an incident report.** The emergency spillage procedure will be displayed in the site compound, and all site personnel will receive a briefing on emergency procedures at the induction and in toolbox talks throughout the project.	