Community and Environmental Services - Capital Maintenance Fund





Norfolk Trails Maintenance New Works Supporting Documents for Quote

Scheme Specific Information for:

CRM/ Works Order No:	046		
Title of Works:	Holme FP1 Boardwalk Replacement		
NCC Project Officer:	Andrew Middleton Contact No. 01603 223317		
NCC Project Code:	PQ7009	Cost Centre No:	PC3200
Quote issue date:	07 April 2022		
Quote return deadline:	04 May 2022		
Quote evaluation:	Contract award based on 50% cost / 50% quality Please ensure the quality questions are answered in full on submission of quote. Failure to provide answers and examples may result in an unsuccessful quote		



Section 1- Project details and assumed items

Start Date:	Provisional 01 June 2022 Completion Date: 29 July 2022 Pending EPS licence 29 July 2022		
Reason for works:	The coast path is currently closed to the public for health and safety reasons as the continued deterioration of the timber boardwalk has created voids and trip hazards that could cause injury to trail users.		
	This scheme will replace the timber boardwalk, create new passing places and will therefore improve access.		
	The boardwalk runs through a protected landscape with protected wildlife and therefore will require an appropriate construction methodology to minimise any impact on the local ecology.		
Description of works:	Construction of a new timber boardwalk with timber pilings to be built over the existing boardwalk (the existing boardwalk has decayed to such a state that this can be left as habitat). Approx. 470 metre length at 1.5 metre width.		
	Installation of new timber passing places/ viewpoints (extension of boardwalk timber to create a 3 metre x 1.5 metre landing area) at three locations along the length of the new boardwalk		
Assumed items:	Contract is for supply of all materials and construction of boardwalk		
	Contractor is expected to be able to source all materials to deliver the project.		
	There is no vehicle access onto the boardwalk. All materials will need to be brought to site manually.		
	An initial site visit will be required prior to construction start date with NCC and successful contractor.		
Delivered Outputs/Outcomes	New timber boardwalk 470 metre long x 1.5 metre wide with timber pilings, bearers and stringers (refer to drawing NTCMF-SURF-001A)		
	 Installation of three passing places at 3 metre x 1.5 metre created from extension of boardwalk timber to create a landing area. Removal off site of any construction waste and any old boardwalk timber that's needs removing to complete task. Minimal disturbance/impact to environment and ecology (nesting birds, natterjack toads, sand dunes). 		
Quote evaluation	Contract award based on 50% cost / 50% quality scored from the		
500 word limit per question	following assessment questions; 1) Delivery Timetable (please provide provisional programme) 15% 2) Previous experience constructing boardwalks (please provide examples) 15%		
	 3) Previous experience of working on protected / sensitive landscapes (please provide examples and example RAMS). 4) Price for supply and construction of boardwalk 		

Section 2 - Scheme Map and Scheme Specific Drawings

The following scheme specific drawings are included:

Drawing No.	Drawing Title
CMF046-001	Scheme Location
CMF046-002	Scheme Layout (boardwalk extents, access and storage areas, passing place locations, public
NTCMF-SURF-001A	access points) 1.5m Wide Boardwalk (CAD drawing)
CMF046-003	Map showing Protected Landscape Designation Zones
CMF046-004	Holme Boardwalk Public Right of Way Map
CMF046-005	Temporary Public Diversion Map

The following Appendix items are included:

Appendix	Supporting Documents/ Photographs
A1 Attached as separate document	Wild Frontier Ecology - Boardwalk at Holme Dunes, Norfolk: Natterjack Toad Updated Mitigation Method (August 2021)
A2 Attached as separate document	Habitat Regulation Assessment (HRA) - Holme boardwalk improvements (ES Oct 2021)
A3	Photo gallery of existing boardwalk condition
A4	Photo Natterjack Toad
A5	Photo examples of similar boardwalk construction
A6	Descriptors for the award of quality marks

Section 3 - Works Information

Description of works required and methodology:

Scheme works	Description/ Methodology	
Timber Boardwalk	Installation of new 470 metre length timber boardwalk, constructed over the existing boardwalk, at 1.5 metre width	
	2) Installation of three new 3 metre x 1.5 metre timber passing place platforms along the route.	
	The boardwalk runs through a protected landscape with protected and sensitive ecology. Appropriate construction method, tools and materials must be considered that complement and minimise any impact to the surrounding landscape and ecology in which the boardwalk runs through.	
	Existing Boardwalk	
	The existing boardwalk will be left in situ where possible. This will mitigate any potential disturbance to natterjack toad or other species sheltering or hibernating beneath, that could occur if the rotten timbers were removed. However, some sections of this boardwalk may need to be removed in order to create or maintain an even level along the new boardwalk surface.	
	New Boardwalk Construction	
	Timber structure with three lateral stringers supported on timber cross-bearers and timber pilings. Boardwalk deck planks to be laid to width of boardwalk.	
	Refer to drawing NTCMF-SURF-001A for CAD design for preferred boardwalk construction.	
	- New boardwalk is to be constructed over the top of the existing boardwalk at 1.5metre width (existing boardwalk is 1.2metre width).	
	- New boardwalk to follow line of existing boardwalk	
	- Timber pilings to be installed outside the extent of the existing boardwalk.	
	- It is recommended that the contractor create a jig for even piling placement.	
	 Mark the piling locations achievable for the day on the ground, an NCC appointed ecologist will inspect the top 150mm of each piling location. 	
	- No piling locations to be left open overnight and must be back filled.	
	 Back filled piling locations still required need to be re-inspected by the NCC appointed ecologist the following day prior to excavation. 	
	- Piling to be installed using a manual post rammer or dug out and tamp to depth of 700mm	

- If marram present, a manual post hole digger or post hole spade to be used to only extract the desired circumference area.
- 100x100x1700mm timber cross-bearers to be installed either side of piling using timberdrive screws and set to a height to produce even/low walking gradient.
- Timber stringers to be installed onto bearers using timberdrive screws.
- Wire mesh to be fastened securely along the centre of the boardwalk (20 gauge, 25mm hole wire mesh at 1200mm width).
- 200x47x1500mm deck planks to be fastened to stringers using two timberdrive screws at either end. 5mm gap between deck planks.
- Timberdrive screws used centrally on alternative deck planks to pick up central stringer.
- Edging to be screwed into the stringer with 25mm of edging to raise above height of deck.

Site specific challenges to installing the new boardwalk structure

1. Boardwalk under the sand

In this instance it is expected that the contractor will identify the piling location and the NCC appointed ecologist will check the location for natterjack toads. Piling location to be amended according to findings if toads are discovered.

2. Boardwalk with sections missing

In this instance it is expected that the contractor will either have to remove some of the existing boardwalk to create a single level boardwalk structure or to bridge across between sections, which may require extending heights of pilings. Either option would need to provide a safe, level walking route with minimal gradient changes. Please remember the old boardwalk is Natterjack habitat and therefore removal should be considered as a last option. Removal of any of the existing boardwalk will require supervision from NCC appointed Ecologist.

3. Banked sand dune edges

Boardwalk in some sections have high sand dune banks to the sides which may prove difficult to install or construct to the full specified 1.5m width. The sand banks cannot be excavated. In this instance the new boardwalk width can be reduced to minimum 1.2metre or elevated if required at these pinch point locations.

Boardwalk construction considerations

- Due to the location and limited access to the boardwalk, moving of materials to and around the site will involve manual handling.
- Consider manual wheel-based items to move material.

- There is no vehicle access onto the boardwalk
- No plant machinery will be able to access the boardwalk
- Works will need to be carried out by hand with a minimal use of heavy equipment
- Material can be brought and stored at the designated locations highlighted on drawing CMF046-002.
- Small ATV can be used to transport materials from NWT Reserve car park (at the end of Broadwater Road) to access the beach, or along the Environment Agency flood bank accessed from Staithe Lane to the designated storage areas
- There should be no scraping of vegetation required to install the new boardwalk. A cutback of side vegetation was completed end of February ahead of bird nesting season and in advance of the boardwalk construction to widen the construction corridor.

New Passing Place / Viewing Platform Construction

- This will follow the same construction design as the boardwalk and will allow general passing and opportunities to step aside.
- Proposed location of passing places are shown on drawing CMF046-002.
- Platforms to be constructed from the boardwalk timber with full length 3m planks, where possible (boardwalk 1.5m width + platform 1.5m width at a 3m length, effectively a 9m² area).
- Stringer, cross bearers and timber piling construction as per boardwalk design for passing place platform foundations.
- No scraping or vegetation clearance will be required for the construction of these platforms.

The boardwalk design is NCC preferred construction and has been so that contractors have a clear idea of what the outputs of this project are.

NCC would welcome feedback from contractors on materials specified. The materials NCC would like to see used are those which will prolong the lifetime of the structure and which are suitable for use in this coastal environment.

NCC would need confirmation from the contractor that all materials used on site are from sustainable sources.

Section 4 - Site constraints

Identified site constraints that may impact on schedule of works or site health and safety should be considered and any impact on delivery should be included with quote.

Site Constraint	Description	Mitigation
Route highly used by pedestrians	Public safety / Restricting public access	The boardwalk is currently closed to the public although still has significant footfall on the route. When carrying out the works on site it is expected that the contractor will erect a more permanent barrier (heras fencing or similar) to prevent public access onto the boardwalk. which will provide a safer environment for carrying out these works. A TTRO is already in place and will cover construction period. The TTRO notice and legal order must be displayed on public facing side of security fencing (documents will be supplied by NCC). A temporary diversion route is in place to divert trail
		users away from the closed section.
Contractor access to site	End on construction No vehicle access No plant on boardwalk	Due to the linear nature of the boardwalk and the difficulty with access to site the construction of the boardwalk will have to be delivered from an end approach.
	Manual handling	NCC have agreed access to the boardwalk and storage areas with Norfolk Wildlife Trust Reserve and the National Ornithology Association (NOA) to the north shown on drawing CMF046-002. The Environment Agency have agreed access over the flood bank to the southern end of the boardwalk accessed from Staithe Lane.
		NWT have agreed compound, storage and access from the car park up to Holme FP13 where it may be possible to ferry materials using a small ATV to transport up to storage area to the side of the boardwalk ramp (at the NOA bird hide)
		Materials can also be driven to close proximity of the boardwalk via beach and specific dune access tracks. Discussion with NWT reserve manager will be required to confirm these routes.

		No vehicles or plant will be able to access or be used along the boardwalk extents. Therefore materials and equipment will need to be carried for storage areas to the boardwalk sections.
		All deliveries to site are to be managed by contractor and need to minimise impacts in the local area and disruption to NWT and NOA operations and their visitors.
Limited storage locations	Limited accessibility and protected landscape status mean there a few suitable locations for storage of materials	Storage has been agreed with the NWT reserve for materials delivered and stored to the car park at the visitor centre, off Broadwater Road. Exact location for delivery drop offs and storage are within the car park will need to be prearrange with the NWT reserve manager in advance of start date.
		Additional storage locations identified are shown in drawing CMF046-002. These locations are on open spaces with minimal impact on the sand dune / marram grass.
		Materials at these storage locations will have to be manually carried to the boardwalk.
		Materials are not to be stored on the sand dunes or on top of the marram grass.
Protected landscape restrictions	Special site designations	Refer to map CMF-003-002 for protected landscape designation zones Site of Special Scientific Interest (SSSI) Wetland of International Importance (RAMSAR) Special Areas of Conservation (SAC) Special Protection Area (SPA)
		No driving in the dune habitat other than the agreed NWT routes along the beach and onto the appropriate dune tracks
		Contractor to use designated storage areas for materials.
		Contractor to use appropriate equipment and materials to minimise any impact on the environment.
		Construction is restricted to corridor of boardwalk
Ecology	Protected species and bird nesting	Natterjack toads (European Protected Species) and ground nesting birds are present on this site.
	birds	Bird nesting restrictions will apply as per the Wildlife & Countryside Act 1981
		Construction to follow mitigation measures set out to minimise any impacts on the local ecology. Further guidance in <u>Section 6a.</u>

Section 5 - Trees and Vegetation

Highlight any tree work or vegetation clearance required by contractor or confirm if all clearance will be coordinated pre-construction. Highlight any tree issues, TPOs, root protections areas if applicable.

Works to take place along the boardwalk corridor adjacent to the sand dune network.

Side vegetation cutback and clearance has been completed end of February 2022 in advance of the boardwalk works.

No trees or tree roots within schemes extents.

It is not anticipated that there will be any further clearance required to construct the boardwalk. However, if any vegetation clearance is required at start of construction or during delivery then this can be supervised by NCC appointed Ecologist to minimise disturbance and to ensure the protection of natterjack toads or ground nesting birds.

Reports to be issued with contract to awarded contractor; (delete if not applicable);

Arboriculture Report

N/A

Vegetation/ Tree clearance plan

N/A

Section 6a - Environment/ Ecology

Highlight any special site designations and mitigation requirements that may impact on construction.

Protected Landscape

Holme next the sea sits within the North Norfolk Area of Outstanding Natural Beauty (AONB)

The site is within a protected landscape;

- North Norfolk SSSI,
- National Nature reserve.
- RAMSAR site
- Wash and North Norfolk Coast SAC
- Special Protection Area

Natterjack Toads

Natterjack toads are <u>listed</u> as rare and most threatened species.

On this site there are natterjack toads which are a designated and protected as European protected species (EPS) and have a identified Conservation status

- They are protected in the UK under the Wildlife and Countryside Act, 1981.
- Priority Species under the UK Post-2010 Biodiversity Framework.
- Listed as a European Protected Species under Annex IV of the European Habitats Directive.

European protected species (EPS) receive protection under The Conservation of Habitats and Species Regulations 2017.

It is an offence to:

- deliberately kill, injure, disturb or capture them
- deliberately take or destroy their spawn
- damage or destroy their breeding sites and resting places
- possess, control or transport them (alive or dead)

It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly:

- disturb natterjack toads while they occupy a structure or place used for shelter or protection
- obstruct access to a place of shelter or protection

In order to carry out the boardwalk works an EPS licence is required. NCC will arrange and pay for this licence and will ensure this is in place for the contractor in advance of any construction works.

NCC have appointed an external ecological specialist in order to undertake a natterjack survey on site and apply for the EPS licence. This is likely to be complete by May 2022. The findings will provide up-to-date information to NCC and their contractors as to where the protected species are and will also assist in scoping the project to minimise impacts on the protected species.

Wild Frontier Ecology has advised on best practice for carrying out the above works, and produced a Mitigation Method Statement (attached as Appendix A1 document).

NCC will arrange and pay for the external ecological specialist to act as clerk of works to provide both advice to contractors prior to starting the process of construction and at required stages throughout the delivery.

Nesting Birds

Sensitive bird nesting sites are adjacent to the boardwalk build.

Anticipated start date in June 2022 will coincide with the bird nesting season (March-August inclusive). There is suitable habitat in the sand dune network to support ground nesting birds and it is likely that there may be nesting birds in the vicinity of the construction corridor.

Under the Wildlife and Countryside Act 1981, as amended (section 1), it is an offence to remove, damage or destroy the nest of any wild bird while the nest is in use or being built.

A cut back of side vegetation along the boardwalk was completed February 2022 in advance of the works to reduce the risk of birds nesting adjacent to the boardwalk works.

The National Ornithology Association (NOA) is to be consulted onsite prior to start date to highlight any specific areas where there are nesting birds within the boardwalk extents, as they will be monitoring the nesting birds in the area.

Sand Dunes and Marram Grass

Minimal disturbance of sand dune and marram grass. Work is restricted to the boardwalk corridor so there should be minimal impact to the surrounding dunes as result of these works.

Storage of timber and materials should not be stored over the marram grass.

No driving in the dune habitat other than the agreed NWT routes along the beach and onto the appropriate dune tracks

Boardwalk Construction

The construction of the boardwalk over the existing boardwalk (which will remain in-situ) will raise the boardwalk slightly and will minimise impacts on the existing habitats. It may even give added shelter to the original boardwalk timbers and any hibernation features.

All works need to be carried out in accordance with the consent conditioning from Natural England and European Protected Species (EPS) licence. These documents will be provided to successful contractor on award of the contract.

Prior to starting works a toolbox talk will be provided by a NCC appointed ecologist to highlight ecological constraints and provide process for managing and mitigating impacts on the existing wildlife / habitat on site.

Local stakeholders at Norfolk Wildlife Trust and National Ornithology Association to attend initial site meeting with NCC and contractor prior to start of works to confirm site accesses and mitigation of any site risks/constraints.

NWT and NOA reserve managers to be kept in communication throughout scheme duration.

Reports to be issued with contract to awarded contractor; (delete if not applicable);

Habitat Regulation Assessment (HRA)

- Yes
- Ecology Toolbox Talk to be provided to on first day of works

Yes

• Wild Frontier Ecology: Natterjack Toad Mitigation Method

Yes

Section 6b - Post Construction Biodiversity Improvements

Ecological enhancements required by contractor;

None		

Section 7 - Site Waste Management Plan

Requirements for waste generated from scheme

Anticipated waste	None
	Existing boardwalk is to remain in-situ.
	The new boardwalk is to be constructed over the top.

Item	Waste Description	Waste Type	Waste Status	Quantity
1.1	Boardwalk	Timber	Green	TBC

Waste requirements	No construction waste (including timber removed from the original boardwalk) to be left on site post construction
	All construction waste to be remove offsite and appropriately disposed of by contractor
	Skip location, if required, at NWT car park to be agreed with reserve manager.

Section 8 - Other Applicable Site Information

Additional requirements to be considered with quote;

Item	Description
Contractor compound and welfare	NCC have agreed with NWT for compound area within a section of the car park. Exact location to be prearranged between contract and NWT reserve manager.
	No onsite amenities along scheme extents.
	Contractor to provide own welfare unit, or alternatively an agreement could be met with NWT for use of facilities. However, this would need to be agreed between contractor and the NWT Reserve Manager
Communication	It is expected that the contractor will liaise closely with NWT and NOA officers throughout to arrange access around the site and storage areas to minimise any disruption to the operation of the NWT and NOA reserves and their visitors.
	NCC will provide contact details for NWT and NOA officers will be provided to successful contractor to make site access and storage arrangements.
	Officers from NWT and NOA will be present at the initial preconstruction site meeting with the appointed contractor and NCC.
	Contractor is expected to display public site notices (e.g. 'footpath closed for boardwalk repairs') and to display TTRO legal order notice and the diversion route both ends of the closed section of boardwalk
Contractor to carry our works and	Contractor to ensure appropriate risk assessments and
manage site	method statements are in place prior to works on site.
	Contractor must be able to provide documents on request to NCC prior to construction start date
Scheme completion	Scheme to be monitored and inspected on completion
	by Norfolk County Council Norfolk Trails Project Officer to agree project outputs have been completed and sign off works.
Utilities	Overhead or underground services

Section 9 - Traffic Safety and Management

Scheme will/ will not require any traffic management.

Public and Private Roads and other ways affected by the works:

Description of road(s) affected by works	Type of Traffic Control/ Management (include details of Mandatory Temporary Speed Limits)	Special Facilities or Requirements (Pedestrian / Equestrian / or Other)
Holme FP1 &	Full Road closure (TTRO)	No access for public onto closed
Holme FP13		section of the path.

Further Information

Restrict public access at all times during construction period.

Contractor to secure site with Heras fencing, or similar, at the public access points at both ends of the boardwalk. Ensure that access to the NOA bird hides is still available.

NCC have a waymarked diversion route in place (see attached map **CMF046-005** for further details).

TTRO has been coordinated and paid for by NCC. This will cover the construction period.

Contractor to ensure that TTRO Legal Order Notices are visible to the public at both ends of scheme extents. To be securely attached to the contractor security barrier/fencing.

Section 10 – Appendix

A1 Attached as separate document	Wild Frontier Ecology - Boardwalk at Holme Dunes, Norfolk: Natterjack Toad Updated Mitigation Method (August 2021)
A2 Attached as separate document	Habitat Regulation Assessment (HRA) - Holme boardwalk improvements (ES Oct 2021)
A3	Photo gallery of existing boardwalk condition
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Appendix A3 Photo gallery of existing boardwalk condition











Appendix A4 Photo Natterjack Toad

Can be identifed by the distinctive yellow line marking along the toads back





Appendix A4
Photo examples of similar boardwalk construction





Appendix A5

Descriptors for the award of quality marks

Descriptors for the award of quality marks		
The mark to be awarded is that for which the descriptors most closely match the tenderer's response		
An excellent response that is realistic, appropriately detailed and specific. There is no material weakness and:		
 the approach embodies accepted good practice in all material respects and offers excellent levels of (as appropriate) functionality, performance, environmental performance, ease of use and other relevant characteristics; 		
 the response is tailored to the requirement wherever relevant and, where relevant, to specific circumstances; 	5	
 all material aspects of the question are fully answered, and the approach described fully meets all material aspects of the requirement; 		
 where relevant the proposal is ambitious in terms of outcomes, and sets out a convincing, coherent and evidence-based approach to achieving the outcomes claimed; and 		
 where relevant, the organisation, qualification and experience of staff assigned to performing the contract are excellent. 		
A good response that is realistic, appropriately detailed and specific and with only minor weaknesses, where:		
 the approach generally embodies accepted good practice and offers good levels of (as appropriate) functionality, performance, environmental performance, outcomes, ease of use and other relevant characteristics; 		
 the response is generally tailored to the requirement where relevant and, where relevant, to specific circumstances; 	4	
 all material aspects of the question are fully answered, and the approach described meets the material aspects of the requirement, with no or minor exceptions; 	7	
 where relevant the proposal seeks to deliver a good level of outcome, and sets out a convincing, coherent and evidence-based approach to achieving the outcomes claimed; and 		
 where relevant, the organisation, qualification and experience of staff assigned to performing the contract are good, with only minor deficiencies 		

 A satisfactory response that is realistic in all material respects, and that is at least sufficiently detailed and specific to give general clarity about what is to be delivered and how. There are some weaknesses, but: the approach does not materially conflict with accepted good practice and generally offers acceptable levels of (as appropriate) functionality, performance, environmental performance, ease of use and other relevant characteristics; most material aspects of the question are fully answered, and the approach described meets the material aspects of the requirement, with no or minor exceptions; while the response may be somewhat generic, it is not inappropriate to the specific circumstances or too high-level to give reasonable clarity and confidence; where relevant the proposal seeks to deliver acceptable outcomes, and sets out a reasonably convincing, coherent and evidence-based approach to achieving the outcomes claimed; and where relevant, the organisation, qualification and experience of staff assigned to performing the contract are generally acceptable. 	3
 A rather deficient response where: there is insufficient detail or specificity to be clear, wholly or for material aspects of the requirement, what is to be delivered and how; material parts of the question are not answered, or material parts of the response are unrealistic or the approach described, in some material respects, appears not to meet the requirement; the approach described appears, in some material respects, not to deliver expected levels of (as appropriate) functionality, performance, environmental performance, ease of use or other relevant characteristics; the approach conflicts with accepted good practice in some material respects; the approach is in material part inappropriately generic or a poor fit with the specific circumstances or context; the approach is rather unambitious in terms of outcomes or the approach to achieving the claimed outcomes is somewhat unconvincing; and/or where relevant, the organisation, qualification and experience of staff assigned to performing the contract do not reach the expected levels in some material respects. 	2
An inadequate response that is in part or in aggregate sufficiently unrealistic as to cast serious doubts over deliverability or efficacy or very materially lacking in detail or specificity or where, individually or in aggregate, there are very material weaknesses.	1
No response or a response with insufficient content to allow meaningful evaluation or a fundamentally unrealistic response or a clearly unacceptable response where the weaknesses, individually or in aggregate, are fundamental. If any question receives a score of '0', the entire submission will be rejected.	0