

A66 Northern Trans-Pennine Project
TR010062

3.4 Environmental Statement
Appendix 1.1 Evidence Plan

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Planning Act 2008

**Infrastructure Planning (Applications: Prescribed Forms and
Procedure) Regulations 2009**

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**The Infrastructure Planning
(Applications: Prescribed
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A66 Northern Trans-Pennine Project
Development Consent Order 202x

**3.4 ENVIRONMENTAL STATEMENT
APPENDIX 1.1 EVIDENCE PLAN**

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CONTENTS

1.1 Evidence Plan.....	1
1.1.1 Introduction	1
1.1.2 The A66 North Trans-Pennine Upgrade	3
1.1.3 Roles and Responsibilities	6
1.1.4 Approach to Completing the Plan.....	10
1.1.5 Audit Trail.....	14
1.1.6 Change Management.....	15
1.1.7 Wider Consultation and Engagement.....	15
1.1.8 Evidence Plan Logs	15

ANNEXES

Annex A.1	Steering Group and SEBs Focus Group – Agendas
Annex A.2	Steering Group and SEBs Focus Group – Minutes
Annex B.1	HRA Technical Working Group – Agendas
Annex B.2	HRA Technical Working Group – Minutes
Annex B.3	HRA Technical Working Group – Other Supporting Evidence
Annex C.1	EclA Technical Working Group – Agendas
Annex C.2	EclA Technical Working Group – Minutes
Annex C.3	EclA Technical Working Group – Other Supporting Evidence
Annex D.1	Road Drainage and the Water Environment Technical Working Group – Agendas
Annex D.2	Road Drainage and the Water Environment Technical Working Group – Minutes
Annex D.3	Road Drainage and the Water Environment Technical Working Group – Other Supporting Evidence
Annex E.1	LVIA Technical Working Group – Agendas
Annex E.2	LVIA Technical Working Group – Minutes
Annex E.3	LVIA Technical Working Group – Other Supporting Evidence
Annex F.1	Heritage Technical Working Group – Agendas
Annex F.2	Heritage Technical Working Group – Minutes
Annex F.3	Heritage Technical Working Group – Other Supporting Evidence

FIGURES

None

1.1 Evidence Plan

1.1.1 Introduction

Background

- 1.1.1.1 This is the Environmental Impact Assessment (EIA) and Habitats Regulations Assessment (HRA) Evidence Plan for the A66 Northern Trans-Pennine (NTP) Development Consent Order (DCO) application, proposed by National Highways.
- 1.1.1.2 The A66 NTP Project (hereafter referred to as 'the Project') covers the length of the A66 between M6 junction 40 at Penrith to the A1(M) at Scotch Corner, which is approximately 80km long (see Plate 1: Location plan of the Project and scheme locations). Sections of the A66 have been upgraded from single carriageway to dual in a number of stages since the 1970s. However, more than 30km of single carriageway remain, making the route accident-prone and unreliable. Investment in the A66 is essential to the continued development of the economy in the north of the country. Dualling between the M6 junction 40 and the A1(M) at Scotch Corner and making other improvements along its length will support local and national economic growth and development.
- 1.1.1.3 National Highways' application for a DCO to the Planning Inspectorate (the Inspectorate) is supported by a range of plans and documents, including an Environmental Statement providing the results of the EIA process and a HRA Report providing the information necessary for the 'competent authority' to determine whether there are any likely significant effects of the application on Natura 2000 sites.

The Evidence Plan Process

- 1.1.1.4 The Evidence Plan process was initially developed by the Major Infrastructure Environment Unit (MIEU) of Defra (Major Infrastructure and Environment Unit, 2012)¹ to provide a formal mechanism to agree between applicants and statutory bodies what information and evidence an applicant for a Nationally Significant Infrastructure Project (NSIP) should submit in support of an application, with a specific focus on HRA matters. The process has been implemented successfully, largely in the offshore wind sector, with some recent examples considering key aspects of EIA as well as HRA. The MIEU note has now been superseded by the Natural England advice on Evidence Plans for NSIPs as an Annex to the Planning Inspectorate's Advice Note 11 (Nature England, 2017)².
- 1.1.1.5 The Project was developed to an ambitious programme, which did not allow time to complete the formal Evidence Plan process as guided by MIEU and Natural England. However, the Project has aimed to optimise the DCO process, ensuring a focus on key issues and requirements,

¹ Major Infrastructure and Environment Unit (2012) Evidence plans for Nationally Significant Infrastructure Projects

² Natural England (2017) Evidence Plans for Habitats Regulations Assessments of Nationally Significant Infrastructure Projects

and therefore the Evidence Plan process was identified as a useful tool to aid and record engagement with key stakeholders and enhance agreements reached during the pre-application process.

- 1.1.1.6 National Highways has therefore decided to adopt the principles of the Evidence Plan process to guide the engagement on and development of the EIA and HRA for the Project, in relation to key areas of baseline data collection and assessment methodology. The process has been led by the Integrated Project Team (IPT) (National Highways, their delivery partners and advisors).
- 1.1.1.7 The process followed in the preparation of the EIA and HRA Evidence Plan was aimed at producing a non-legally binding agreement of matters discussed between the applicant and the relevant statutory authority(ies) and advisers, and other relevant stakeholders. This agreement aimed to cover the matters to be addressed by the impact assessments undertaken, the data used to support the assessments and the methodology to be applied. The Evidence Plan has also been extended to cover the outputs of the assessment and development of proposed mitigation, as appropriate.
- 1.1.1.8 The Evidence Plan was a working document that was developed by the parties involved on an on-going basis through the development of the EIA and HRA, continuing up to the point of application. The intention was for the process to be informed by the EIA and HRA scoping processes, and for it to inform and feed into the Statements of Common Ground (SoCG) with relevant parties. The Evidence Plan provides a record of issues discussed with the status of aspects agreed and still under discussion being outlined in the SoCG with relevant parties.

[Aims and Objectives of the A66 NTP Evidence Plan](#)

- 1.1.1.9 This EIA and HRA Evidence Plan has been prepared to address topics that are of particular relevance to the Project, and that are guided by International and National legislation or policy. It is important to note that the Evidence Plan does not cover all assessment topics or all aspects of the EIA and HRA that have been undertaken and does not replace the wider stakeholder and community consultation and engagement that was carried out for the Project. The topics selected for inclusion, and the reasons for this, are set out in section 1.1.4 below.
- 1.1.1.10 This Report presents the final Evidence Plan, which has been updated on an ongoing basis through the pre-application stage.
- 1.1.1.11 The overarching objectives of the Evidence Plan were to:
- Seek to reach agreement on evidence to be supplied with the DCO submission relating to key statutory and policy environmental considerations.
 - Supplement and consolidate, but not replace, the formal processes of EIA scoping and preparation and agreement of the SoCGs.
 - Agree, and document, the specific matters that the evidence gathering aims to address.

- Seek to reach agreement on how the evidence would be collected and analysed.
- Achieve common understanding of the challenges posed by the optimised Project programme and timescale, including when evidence would be available.
- Seek to reach agreement on approaches to assessment during earlier phases of the programme to facilitate engagement and design development where gaps in evidence exist, and how and when new evidence will be shared, reviewed and incorporated.
- To inform any points of disagreement, to also be recorded in the SoCG as these points would be the subject of ongoing discussion wherever possible to resolve or refine the extent of disagreement between parties.
- Set out a programme and framework for documenting discussions, for sharing of information and evidence, to review evidence and consultation, and for management of changes to baseline data collection and assessment methodology to inform the EIA and/or HRA.

Structure of the A66 NTP Evidence Plan

1.1.1.12 The structure of this EIA and HRA Evidence Plan is as follows:

- Section 1.1.1 – introduces the EIA and HRA Evidence Plan and objectives.
- Section 1.1.2 – describes the background to the Project and provides a brief project description.
- Section 1.1.3 – sets out the roles and responsibilities of the interested parties.
- Section 1.1.4 – describes the approach adopted in developing the plan, and key principles of the process.
- Section 1.1.5 – provides Evidence Plan logs and summarises the discussions for the various topics.

1.1.1.13 The agendas and minutes of the Steering Group meetings are provided in Annex A. The agendas and minutes of the Technical Working Group (TWG) meetings are provided in Annexes B to F.

1.1.2 The A66 North Trans-Pennine Upgrade

Background

1.1.2.1 The Project covers the length of the A66 between M6 junction 40 at Penrith to the A1(M) at Scotch Corner, which is approximately 80km long (see Plate 1: Location plan of the Project and scheme locations). The A66 is a key local, regional and national route for east/west journeys in the north of England providing vital connections for freight, tourism and businesses across the UK. The route carries high levels of freight, with 25% of the traffic being heavy goods vehicles (HGVs) compared to the national average figure of 12%. The A66 is also an important route for tourism, providing access to the North Pennines Area

of Outstanding Natural Beauty (AONB), the Yorkshire Dales and the Lake District National Park.

1.1.2.2 Sections of the A66 have been upgraded from single carriageway to dual in a number of stages since the 1970s. However, more than 30km of single carriageway remain, making the route accident-prone and unreliable. Drivers face congestion, delays at key junctions and substandard access to jobs and leisure locations.

1.1.2.3 Investment in the A66 is essential to the continued development of the economy in the north of the country. Making the entire route dual carriageway will support local and national economic growth and development.

Project Description

1.1.2.4 The Project includes upgrading the existing single lane sections of the A66 to dual two lane all-purpose roads with 120 km per hour (kph) design speed and a speed limit of 70 mph. The Project also includes amendments to existing junctions and accesses within these sections, and improvements to the terminal junctions.

1.1.2.5 The existing A66 has been split into a number of schemes that are shown on Plate 1: Location plan of the Project and scheme locations. The scheme names are listed below, and further details about the individual schemes are available in the Environmental Statement (ES).

- M6 Junction 40 to Kemplay Bank (junction improvement and underpass beneath existing roundabout)
- Penrith to Temple Sowerby (dualling and junctions)
- Temple Sowerby to Appleby (bypass)
- Appleby to Brough (dualling and junctions)
- Bowes Bypass (bypass)
- Cross Lanes to Rokeby (dualling and junctions, bypass)
- Stephen Bank to Carkin Moor (dualling and junctions, bypass)
- A1(M) Junction 53 Scotch Corner (junction improvement).

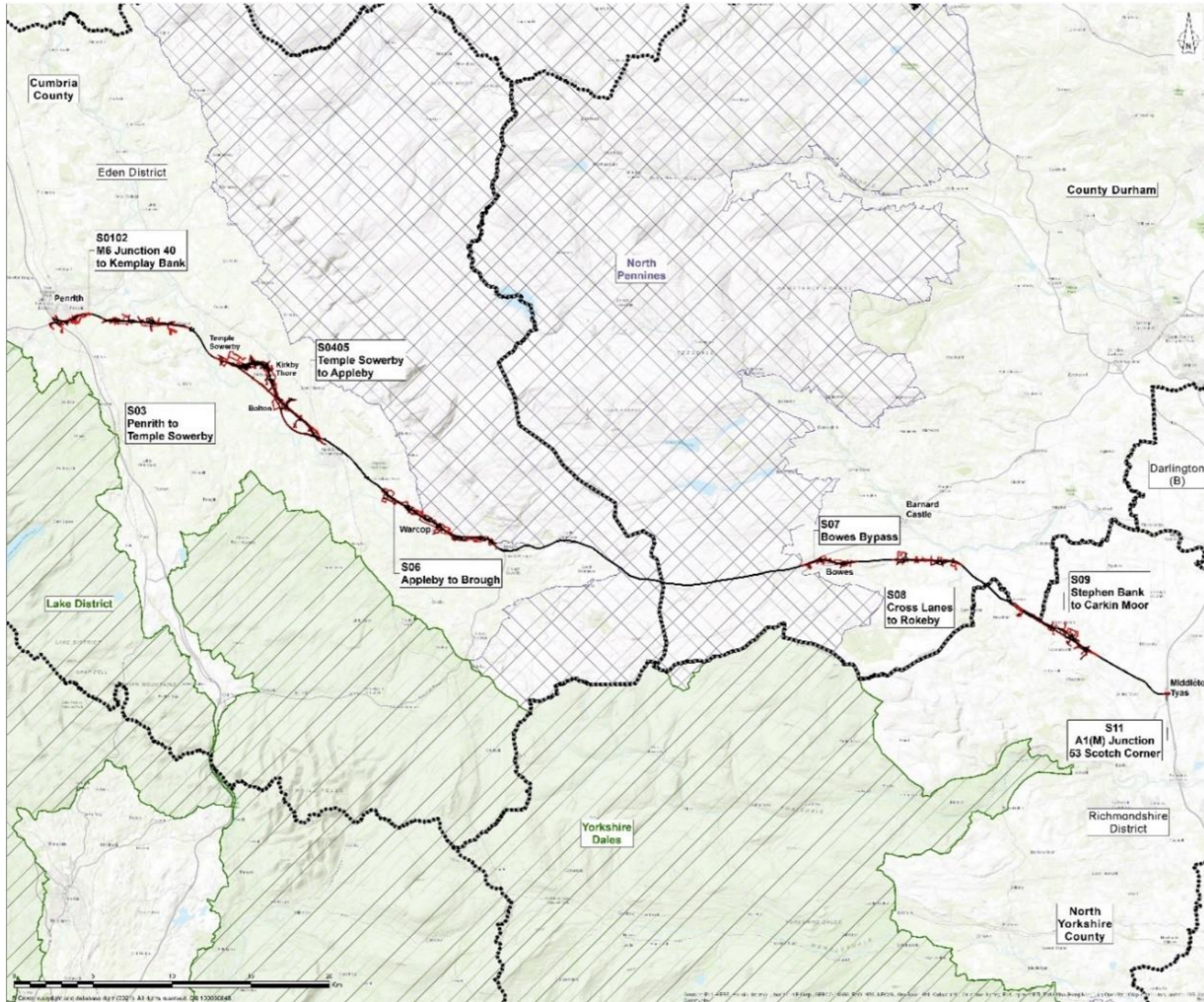


Plate 1: Location plan of the Project and scheme locations

1.1.3 Roles and Responsibilities

Introduction

- 1.1.3.1 The roles and responsibilities of the organisations involved in the development of the Evidence Plan for the A66 NTP are highlighted below and summarised in Table 1: EIA and HRA Evidence Plan key contacts invited to join the TWGs .

Development Team – Integrated Project Team

- 1.1.3.2 The Integrated Project Team (IPT) comprises the applicant (National Highways) and its appointed advisors for the HRA and EIA (AmeyArup and Pinsent Masons).

Evidence Plan Stakeholders

- 1.1.3.3 A number of key stakeholders were identified for participation in the development of the Evidence Plan. These are a group of relevant Statutory Environmental Bodies (SEBs), Local Authorities and non-statutory bodies who have overseen the Evidence Plan process and have been invited to contribute via the TWGs, described in section 1.1.4 below:

- Statutory Environmental Bodies
 - Environment Agency
 - Historic England
 - Natural England
- Local Authorities
 - Cumbria County Council
 - Durham County Council
 - North Yorkshire County Council
 - Eden District Council
 - Richmondshire District Council
- Non-statutory bodies
 - North Pennines AONB Partnership.

- 1.1.3.4 The Inspectorate was engaged in the process and given the opportunity to comment on the draft Evidence Plan without becoming a party to the agreement.

Integrated Project Team (National Highways and their Partners)

- 1.1.3.5 Key actions for the IPT throughout the Evidence Plan process were to:
- Draft and implement the Evidence Plan recognising that it was a ‘live’ document that may need to be adapted as the Project developed due to new Project or environmental information.
 - Collect, analyse, review and share evidence with participating technical stakeholders at appropriate intervals. Update the stakeholders on modifications to the Project.
 - Use reasonable endeavours to provide all reports, documents etc for TWG meetings in a timely manner, to allow review/comment by stakeholders within agreed time periods.

- Organise meetings of the TWGs and the overseeing organisations (listed in para 3.3.1) on a regular (circa monthly) basis.
- Work with the stakeholders to resolve as many issues as possible at the pre-application stage and set out the issues, using the Evidence Plan and evolving SoCG as a mechanism to do this (as recorded in Section 5 of this plan, Evidence Plan logs).
- Update and finalise the Evidence Plan and use it to inform the TWG meetings, the EIA and HRA for the DCO application.

Planning Inspectorate

- 1.1.3.6 The role of the Planning Inspectorate was to review and comment on the draft Evidence Plan and any updated version(s) and to provide advice in respect to the Planning Act process, as appropriate; and if necessary, and when requested, to seek to facilitate agreement of the Evidence Plan.

Natural England

- 1.1.3.7 The key actions for Natural England were to:
- Advise on which internationally and nationally designated/important sites and features needed to be considered in the Evidence Plan (including the status of any potential changes to designated features), including advice on conservation objectives and status/condition to inform the HRA.
 - Discuss and agree the Evidence Plan with the IPT, ensuring that evidence requirements were proportionate to the potential impacts of the Project.
 - Identify and provide any relevant public domain information they had access to in order to inform the Evidence Plan/impact assessments. Provide expert input into relevant TWG meetings.
 - Assess and review evidence provided by the IPT, give written feedback on progress to agreed timescales. Work with the IPT to resolve as many issues as possible during the pre-application period, to agreed timescales, including through the SoCG.

Environment Agency

- 1.1.3.8 The key actions for the Environment Agency were to:
- Advise on important surface and groundwater features that needed to be considered in the Evidence Plan, including advice on Water Framework Directive (WFD) objectives and status, and important ecological features.
 - Discuss and agree the Evidence Plan with the IPT, ensure that evidence requirements were proportionate to the potential impacts of the Project.
 - Identify and provide any relevant public domain information they had access to in order to inform the Evidence Plan/impact assessments. Provide expert input into relevant TWG meetings.
 - Assess and review evidence provided by the IPT, give written feedback on progress to agreed timescales. Work with the IPT to

resolve as many issues as possible during the pre-application period, to agreed timescales, including through the SoCG.

Historic England

1.1.3.9 The key actions for Historic England were to:

- Advise on which nationally designated resources to consider in the Evidence Plan and provide guidance on professional best practice.
- Discuss and agree the Evidence Plan with the IPT, ensure that evidence requirements were proportionate to the potential impacts of the Project.
- Identify and provide any relevant public domain information they had access to in order to inform the Evidence Plan/impact assessments. Provide expert input into relevant TWG meetings.
- Assess and review evidence provided by the IPT, give written feedback on progress to agreed timescales. Work with the IPT to resolve as many issues as possible during the pre-application period, to agreed timescales, including through the SoCG.

Local Authorities (as listed above)

1.1.3.10 The key actions for the Local Authorities were to:

- Identify and provide any relevant public domain information they had access to in order to inform the Evidence Plan/impact assessments. Advise on other relevant plans and projects for in-combination assessment within their jurisdiction.
- Provide local knowledge/expertise to assist the Evidence Plan TWGs in preparing the Evidence Plan. Provide expert input into relevant TWG meetings.
- Assess and review evidence provided by the IPT, give written feedback on progress to agreed timescales. Work with the IPT to resolve as many issues as possible during the pre-application period, to agreed timescales, feeding into the Local Impact Reports and SoCG.

Non-statutory bodies – North Pennines AONB Partnership

1.1.3.11 The North Pennines AONB Partnership, while not a statutory consultee, were included in the Evidence Plan process as the organisation responsible for the management of the North Pennines AONB, a key receptor for the Project, and therefore considered to be an important stakeholder for those schemes that could affect the AONB. In addition, Natural England requested that the North Pennines AONB Partnership be included in all stakeholder discussions regarding the AONB.

1.1.3.12 The key actions for the North Pennines AONB Partnership were to:

- Identify and provide any relevant public domain information they had access to in order to inform the Evidence Plan/impact assessments. Advise on other relevant plans and projects for in-combination assessment within their jurisdiction.

-
- Provide local knowledge/expertise to assist the Evidence Plan TWGs in preparing the Evidence Plan. Provide expert input into relevant TWG meetings.
 - Assess and review evidence provided by the IPT, give written feedback on progress to agreed timescales. Work with the IPT to resolve as many issues as possible during the pre-application period, to agreed timescales, including through the SoCG.

Table 1: EIA and HRA Evidence Plan key contacts invited to join the TWGs

Organisation	Technical Working Group membership
Environment Agency	HRA, Ecological Impact Assessment (EclA), Water and Road Drainage
Historic England	Heritage
Natural England	HRA, EclA, Landscape and Visual Impact Assessment (LVIA)
Local Authorities – Representatives from: Cumbria County Council, Durham County Council, North Yorkshire County Council, Eden District Council, and Richmondshire District Council	HRA (Cumbria County Council and Eden District Council only), EclA, LVIA, Heritage, Water and Road Drainage
Non-statutory bodies – North Pennines AONB Partnership	LVIA
IPT - National Highways	All
IPT – Delivery Partner	All
The Inspectorate	All

1.1.4 Approach to Completing the Plan

Process

- 1.1.4.1 The Evidence Plan has been developed and delivered through a Steering Group and a number of TWGs.
- 1.1.4.2 The Evidence Plan has been used as a live document and has been revised and updated to record meetings and progress, and to highlight issues where agreement has been reached and any outstanding issues, as outlined in the Natural England guidance². This final version sets out the process of engagement and the issues discussed; the final position of agreements and those issues still under discussion are outlined in the SoCG for the relevant parties.

Evidence Plan Oversight and Technical Working Groups

- 1.1.4.3 The development and monitoring of the Evidence Plan and its subsequent progress has been overseen by the Steering Group. The Steering Group comprises of PINS, the IPT and the SEBs. The Steering Group met at the start of the Evidence Plan process and then, as the SEBs Focus Group, on a monthly basis throughout the programme. The agendas and minutes from the initial Steering Group meeting and the subsequent SEBs Focus Group meetings are included in Annex A.
- 1.1.4.4 Given that the remit of the Evidence Plan was wider than HRA considerations there was also an important role for Local Authorities

within the Evidence Plan. As such, Local Authority officers were included in the TWGs.

- 1.1.4.5 In addition, although the North Pennines AONB Partnership is not a statutory consultee, the organisation was considered to be an important stakeholder for several schemes. The AONB Partnership was included in the Landscape and Visual TWG.
- 1.1.4.6 A number of TWGs were formed to develop the key topic areas within the Evidence Plan. They met monthly where possible and each session was chaired by the IPT topic leads with the aim of reaching agreement with key stakeholders on EIA and HRA matters throughout the process. The invitees to the TWGs remained fairly constant over time but the IPT consulted other topics where relevant, for example the HRA lead attended a number of Water TWG meetings given the fundamental linkages between water and biodiversity for the River Eden Special Area of Conservation (SAC), which allowed for holistic discussions.

Selected Topics

- 1.1.4.7 During the initial meeting of the Steering Group, several environmental disciplines from the environmental assessment were identified that would benefit from regular discussion and ultimately formed the TWGs. These topics are outlined below. They were selected due to having multiple stakeholders, complex assessment requirements and/or likely to be key issues of consideration for the scheme.
- 1.1.4.8 Other EIA topics or areas that could be significant but have a single stakeholder and/or a commonly accepted methodology (such as noise modelling) have been managed through the standard scoping and engagement process and were not included in the Evidence Plan, other than where there is interrelation with the topics covered by the TWGs (e.g. the noise assessment output was shared with the EclA TWG in relation to the potential disturbance impacts on ecological receptors).

HRA Evidence Requirements

- 1.1.4.9 The HRA evidence requirements form the focus of one of the TWGs. The Evidence Plan log **for the HRA** is provided in Table 2: Evidence Plan log – HRA. This group has considered the following matters within the HRA TWG sessions:
- TWG 1: Evidence plan objectives, scheme overview, proposed baseline surveys, modelling and assessment that underpin HRA,
 - TWG 2: Designated sites and proximity to Project schemes, biodiversity strategy and HRA baseline, Baseline survey strategy, SAC fluvial geomorphology,
 - TWG 3: Update on Surveys, introduction to proposed route options, Trout Beck geomorphology modelling, HRA programme and documentation.
 - TWG 4: Discussion of potential Project impacts that could result in likely significant effects, opportunity to request more detail on specific elements of route alignment.

- TWG 5: Survey and assessment updates (including fish surveys, habitat assessment related to the Affected Route Network (ARN), geomorphology modelling findings for Temple Sowerby to Appleby, air quality assessment), initial responses to feedback from stat con, opportunity to request more detail on specific elements of design.
- TWG 6: survey updates (riverine eDNA results), air quality ammonia tool, updated traffic and air quality data, construction mitigation and methods (RE River Eden SAC, North Pennine Moors (*Special Protection Area (SPA)*)/SAC), design mitigation for crossing design (**River Eden SAC**) and treatment of road runoff, consultation process moving forwards (SoCG, TWGs, Evidence Plan).

Ecological Impact Assessment

1.1.4.10 The EclA requirements have been another key area of discussion through the Evidence Plan process. The **Evidence Plan** log for EclA is provided in Table 3: Evidence Plan log – Ecological Impact Assessment. The following matters were considered within the EclA TWG sessions:

- TWG 1: Evidence plan objectives, scheme overview, proposed baseline surveys, modelling and assessment that underpin the EclA.
- TWG 2: Ornithology strategy, overview of bat surveys and desk study results, update on red squirrel surveys, discussion around the biodiversity survey strategy.
- TWG 3: Update on badger bait marking surveys, discussion around otter holt resting place monitoring, discussion around MoRPH surveys (locations and methods), air quality discussion around information required.
- TWG 4: Update on recent survey findings, bat survey methodologies and scope of surveys.
- TWG 5: Ecology survey progress and new results of note, key findings from the Preliminary Environmental Information (PEI) Report.
- TWG 6: Update on survey findings, initial *Project* response to feedback received from stakeholders at stat con.
- TWG 7: Update on survey findings for reptiles, red squirrel, ornithology and eDNA, discussion on construction mitigation and methods, bat mitigation, design mitigation and walk-through (including biodiversity net gain).

Road Drainage and the Water Environment (watercourses and flood risk)

1.1.4.11 Road Drainage and the Water Environment was also raised as a topic that should be included in the Evidence Plan in its own right (for aspects outside of the HRA). Given the broad nature of this topic, the sessions were usually split into two, each half covering either surface

water or groundwater issues. The **Evidence Plan** log for Road Drainage and the Water Environment is provided in Table 4: Evidence Plan log - Road Drainage and the Water Environment. The following matters were considered within the Road Drainage and the Water Environment TWG sessions:

- TWG 1: Evidence plan objectives, scheme overview, assessment methodology overview for groundwater, WFD compliance, HEWRAT, Hydrological Impact Assessment (HIA), flood risk modelling.
- TWG 2 Part 1: Progress update and update on the flood risk assessment, review of watercourse crossings, review of key surface water receptors.
- TWG 2 Part 2: Progress update and update on work to date, review of key groundwater receptors.
- TWG 3 Part 1: Actions were reviewed from the last meeting, update on progress to date, flood modelling overview, survey update on aquatic habitat assessment, overview of the DCO process.
- TWG 3 Part 2: Actions were reviewed from the last meeting, discussion of the hydrogeology conceptual model, and updated on abstractions.
- TWG 4 Part 1: Updates on progress to date, including data collection, surveys and assessment, review of work to be completed, and overview of design options for PEI Report.
- TWG 4 Part 2: Updates on progress to date and ongoing work including water dependent habitats, updated on the ground investigation and the hydrogeological conceptual model.
- TWG 5: Updates on progress to date, including data collection, surveys and assessment, update on work for various scheme options, review of key findings from PEI Report.
- TWG 6 Part 1: Recap of key findings from the PEI Report, feedback from stakeholders from statutory consultation, update on ongoing works.
- TWG 6 Part 2: Recap of key findings from the PEI Report, feedback from stakeholders from statutory consultation, update on ongoing works (site investigation, ES, HIA, Karst Report).
- TWG 7: Project update, hydromorphology survey update, update on the cuttings assessment and springs surveys.

Landscape and Visual Impact (particularly in relation to AONB)

1.1.4.12 The Evidence Plan log for Landscape and Visual Impact is provided in and the matters considered within the Landscape and Visual Impact TWG sessions are summarised below:

- TWG 1: Evidence plan objectives, scheme overview, viewpoint consultation, landscape character assessment overview, AONB management plan approach for PEI Report, Areas of high landscape value, integrated design, Rochdale envelope.

- TWG 2: Summary of viewpoint consultations, potential ZTV options, potential effects on the setting of the AONB, special qualities of the Bowes Conservation Area, special qualities of the Greta Bridge Conservation Area.
- TWG 3: Landscape features relevant for design, scheme by scheme overview, options appraisal approach.
- TWG 4: Overview of key issues and opportunities for each scheme, including design considerations, user experience and view from the road.
- TWG 5: Landscape and Visual key PEI Report findings, mitigation review
- TWG 6: Key findings from statutory consultation, LVIA update and landscape design approach recap and interventions update.
- TWG 7: ZTV update, viewpoints and photomontage locations.

Heritage Assessment (Scheduled Monument, Research Strategy/Framework)

1.1.4.13 The Heritage Assessment was also identified for inclusion within the Evidence Plan. The **Evidence Plan** log for Landscape and Visual Impact is provided in Table 6 and the matters considered in the Heritage TWG sessions are summarised below:

- TWG1: Evidence plan objectives, scheme overview, Report on geophysics, AP and LiDAR, discussion of developing design at various locations, archaeological trenching
- TWG 2: Update on research agenda progress, designated funds and opportunities, discussion of developing design, archaeological trenching.
- TWG 3: Environmental Scoping Report programme and approach, further options assessment, research framework and geoarchaeology modelling discussion.
- TWG 4: Introduction and update on research framework, option appraisal for Temple Sowerby to Appleby and Appleby to Brough, Evidence and survey strategy summary, geoarchaeological modelling progress update.
- TWG 5: Overview of key findings from PEI Report.
- TWG 6: Stakeholder feedback on statutory consultation, updates on research framework, surveys and geoarchaeology modelling.
- TWG 7: Geoarchaeological modelling, survey updates, design updates.
- TWG 8: Introduction from the Principal Contractors (PC) for the Project (to be appointed via National Highways Delivery Integration Partners framework), research framework update, **Evidence Plan** log review, survey update.

1.1.5 Audit Trail

1.1.5.1 A record of all engagement undertaken during the development of this Evidence Plan has been maintained, shared with stakeholders and included in the Evidence Plan (Annexes A to F). This document also

includes the **Evidence Plan** logs for each considered topic, which record areas of engagement, progress and key issues raised and discussed (Section 5). The Evidence Plan therefore maintains an audit trail of information shared, responses received and areas where agreements were reached. The final version of the Evidence Plan and accompanying **Evidence Plan** logs have been submitted with the Environmental Statement to support the DCO application, in order to demonstrate the areas of agreement and to provide background information to any areas of remaining disagreement that will also be highlighted in the SoCG.

1.1.6 Change Management

1.1.6.1 It was recognised that the Project was refined throughout the process. Where changes were made to the Project that were relevant to the Evidence Plan, the TWGs were informed and they reviewed and revisited applicable discussions.

1.1.7 Wider Consultation and Engagement

1.1.7.1 It is recognised that the Evidence Plan was just one part of the overall consultation and engagement strategy. Other stakeholders were involved and may also have comments. In particular, the formal request for an EIA Scoping Opinion that was submitted in Spring 2021, the consultation on the PEI Report as part of the statutory consultation for the Project (September 2021), and consultation between technical specialists and relevant consultees. Input from this wider consultation and engagement was captured as part of the wider stakeholder process and any relevant issues were brought into the TWGs for discussion where needed.

1.1.8 Evidence Plan Logs

1.1.8.1 Records of areas discussed, actions ongoing and details of relevant meetings and correspondence are provided in the Evidence Plan logs in Table 2 to Table 6, which cover each of the five key topics identified above.

1.1.8.2 Each of the **Evidence Plan** logs were shared with the relevant TWGs at least once prior to the Evidence Plan being submitted with the Environmental Statement at DCO submission. Any feedback received has been incorporated and **Evidence Plan** logs updated.

1.1.8.3 The minutes of the initial Steering Group meeting, SEBs Focus Group meetings, TWG meetings and other relevant meetings are provided in Annexes A to F.

Table 2: Evidence Plan log – HRA

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
HRA01	HRA screening: sites and features/aspects	<p>The relevant internationally designated sites and their proximity to the scheme were outlined at TWG 1 and 2.</p> <p>A summary of the Stage 1 HRA Screening was shared in TWG 4.</p> <p>An updated (from PCF Stage 2) Stage 1 HRA Screening Report was provided as an Appendix to the PEI Report during statutory consultation.</p> <p>Statutory consultation response comments on the HRA Screening were provided by Natural England. These comments have been taken on board and addressed within the final Stage 1 HRA Screening Report which has been submitted as part of the DCO.</p> <p>It should be noted that the oligotrophic to mesotrophic standing water within the River Eden SAC outlined in the PEI Report refers to Ullswater. Natural England agreed in their statutory consultation comments that this SAC feature is outside of the biodiversity study area but note that it still needs to be mentioned as a reason for designation (as a footnote).</p>	<p>HRA TWG 1 (08/02/21) (Annex B.2.1)</p> <p>HRA TWG 2 (18/03/21) (Annex B.2.2)</p> <p>HRA TWG 4 (12.08.21) (Annex B.2.4)</p> <p>Stage 1 HRA Screening Report within the PEI Report (available at: https://virtualengage.arup.com/A66-NTP/pei-report/download/)</p> <p>Comments from Natural England on the Stage 1 HRA Screening Report received as part of their statutory consultation response (22/10/21)</p>
HRA02	Screening of SAC sites around ARN	<p>As noted for HRA01 an updated (from PCF Stage 2) the Stage 1 HRA Screening Report was provided as an Appendix to the PEI Report.</p>	<p>Stage 1 HRA Screening Report within the PEI Report (available at: https://virtualengage.arup.com/A66-NTP/pei-report/download/)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		No comments regarding screening of sites around ARN were received from TWG members during statutory consultation.	
HRA03	Baseline data requirements, data availability and survey requirements in relation to River Eden SAC (e.g. fish surveys of becks upstream and downstream of the A66 that are connected and functionally linked to the SAC)	<p>Natural England indicated (comment on the draft (informal) A66 Scoping Report) that fish surveys will be required where there is no Environment Agency data.</p> <p>The proposed baseline surveys, modelling and assessment to underpin the HRA was discussed in TWG 1 and TWG 2.</p> <p>The Draft A66 Biodiversity Survey Strategy committed to surveying all watercourses crossed by the scheme to determine presence/health of aquatic receptors that are qualifying features of the SAC and outlined the survey areas to be used. This document was shared with the HRA TWG. Natural England and the Environment Agency provided comments which were incorporated into survey methodologies where appropriate.</p> <p>Surveys have now been undertaken and the results shared in TWGs 3, 4 and 5.</p>	<p>Natural England comments via email on the draft (informal) A66 Scoping Report (09/12/20).</p> <p>HRA TWG 1 (08/02/21) (Annex B.2.1)</p> <p>HRA TWG 2 (18/03/21) (Annex B.2.2)</p> <p>Email from IPT issuing Draft A66 Biodiversity Survey Strategy (15/03/21)</p> <p>Natural England (22/03/21) and the Environment Agency (01/4/21) comments via email on the Draft A66 Biodiversity Survey Strategy</p> <p>HRA TWG 3 (08/07/21) (Annex B.2.3)</p> <p>HRA TWG 4 (12/08/21) (Annex B.2.4)</p> <p>HRA TWG 5 (03/11/21) (Annex B.2.5)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
HRA04	<p>Baseline data requirements for Annex I river habitat to include the riparian zone and the supporting processes on which qualifying natural species/habitats rely.</p>	<p>In their comments on the draft (informal) A66 Scoping Report, Natural England note that the River Eden SAC is designated for its Rivers with floating vegetation often dominated by water-crowfoot. This is the River Eden river habitat and is present throughout the whole length of the SAC (except for Ullswater) and hence is present in the study area. The impact on this habitat needs to be assessed in many of the scheme areas, but in particular the Temple Sowerby to Appleby scheme. The notified SSSI river feature (which is the same as the SAC feature) is Flowing waters - Type VI: base-rich, mesotrophic rivers in western and northern Britain, with a moderate to fast current.</p> <p>Natural England also noted that the designated river habitat feature (whether SSSI or SAC) is taken to comprise all components of river habitat, including in-channel, marginal and riparian habitats and any adjacent floodplain habitats that are hydrologically dependent on the river. The hydrological, chemical, physical and biological elements of the river are all considered to be integral components of the notified river habitat feature, which provides the basis for direct protection of natural habitat function.</p> <p>The Draft A66 Biodiversity Survey Strategy committed to a number of surveys (macrophyte, River Corridor Survey, NVC) and outlined the proposed survey areas to gather data to underpin the HRA. The Draft A66 Biodiversity Survey Strategy was presented in TWGs 1 and 2. Natural England and the Environment Agency provided comments which were incorporated into survey methodologies where appropriate. Survey results, with the exception of the NVC surveys which are ongoing, have been undertaken and reported on in TWGs 3-5.</p>	<p>Natural England comments via email on the draft (informal) A66 Scoping Report (09/12/20).</p> <p>Email from IPT issuing Draft A66 Biodiversity Survey Strategy (15/03/21) HRA TWG 1 (08/02/21) (Annex B.2.1) HRA TWG 2 (18/03/21) (Annex B.2.2) Natural England (22/03/21) and the Environment Agency (01/04/21)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>Detailed fluvial geomorphology surveys and modelling has been used to underpin the HRA in terms of supporting river processes.</p> <p>The combination of surveys outlined above are considered to cover the baseline data requirements for Annex I river habitat (RCS/macrophyte) to include the riparian zone (RCS/NVC) and the supporting processes on which qualifying natural species/habitats (geomorphology survey and modelling) rely.</p> <p>Assessment of impacts to feature includes water quality assessment and hydrogeological impact assessment and fluvial geomorphology modelling to be presented in ES to be submitted at DCO.</p>	<p>comments via email on the Draft A66 Biodiversity Survey Strategy HRA TWG 3 (08/07/21) (Annex B.2.3)</p> <p>HRA TWG 4 (12/08/21) (Annex B.2.4)</p> <p>HRA TWG 5 (03/11/21) (Annex B.2.5)</p>
HRA05	<p>Baseline data requirements, data availability and further breeding and wintering bird surveys in relation to North Pennines SPA.</p>	<p>As HRA04, the ornithology survey requirements were set out in the Draft A66 Biodiversity Survey Strategy. No comments were received on the Draft A66 Biodiversity Survey Strategy presented during TWGs 1 and 2.</p> <p>Survey results were presented in TWG 3.</p>	<p>HRA TWG 1 (08/2/21) (Annex B.2.1)</p> <p>HRA TWG 2 (18/3/21) (Annex B.2.2)</p> <p>Email from IPT issuing Draft A66 Biodiversity Survey Strategy (15/03/21)</p> <p>Comments via email on the Draft A66 Biodiversity Survey Strategy have been received from Natural England (22/03/21) and the Environment Agency (01/04/21).</p> <p>HRA TWG 3 (08/07/21) (Annex B.2.3)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
HRA06	Potential for runoff into SAC and SAC tributaries – agree way to manage this.	<p>The Highways England Water Risk Assessment Tool (HEWRAT), which was designed in consultation with the Environment Agency, has been used to specify an appropriate level of treatment for road runoff. Construction related runoff will be managed using best practice techniques (such as sediment fencing and onsite filtration systems).</p> <p>Construction and operational mitigation measures to treat runoff were presented during TWGs 5 and 6. No objections to proposals were received; however, it was flagged that Cumbria is a very wet catchment and this should be taken into consideration with the construction mitigation.</p> <p>Further details discussion on construction working methods in particular around Trout Beck were held with IPT, Natural England the Environment Agency and a representative from the PC(s). Mitigation measures identified in this session have been carried forward into the Project Design Principles document where appropriate.</p>	<p>HRA TWG 5 (03/11/21) (Annex B.2.5) HRA TWG 6 (26/01/22) (Annex B.2.6)</p> <p>Meeting with Natural England and the Environment Agency and a representative from the PCs (07/04/22) (Annex B.3.1)</p>
HRA07	Approach to assessment in relation to white-clawed crayfish (WCC) and other biosecurity aspects.	The approach to assessment of WCC has been discussed with the Natural England (see also HRA11 below). Mitigation, including methods to minimise biosecurity risk of invasive species during construction was discussed in TWG 6. The biosecurity risk of invasive species is included an impact pathway in the HRA.	<p>Email from Natural England (30/03/21) HRA TWG 6 (26/01/22) (Annex B.2.6)</p>
HRA08	Potential for impacts on habitat connectivity	The biodiversity team has worked closely with the design teams to ensure connectivity for aquatic and riparian species is maintained / enhanced. The specific design solution at each crossing has been informed by best practice watercourse crossing design, the relevant ecology data and technical input from the relevant species / discipline leads.	<p>HRA TWG 2 (18/3/21) (Annex B.2.2) HRA TWG 3 (08/07/21) (Annex B.2.3) HRA TWG 4 (12/08/21) (Annex B.2.4)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>The potential for impacts and the way in which these will be managed during construction and operation have been discussed in TWGs 2-6.</p>	<p>HRA TWG 5 (03/11/21) (Annex B.2.5) HRA TWG 6 (26/01/22) (Annex B.2.6)</p>
HRA09	<p>Modelling scope and methodology in relation to Trout Beck crossing</p>	<p>The approach to in-channel and “out of bank” flood flow modelling (for each route alignment / design) has been discussed in TWG 2 and TWG 3.</p> <p>The draft geomorphology modelling scope for the Temple Sowerby to Appleby scheme was shared with the TWG and specifically with Natural England and the Environment Agency. Comments were received from Natural England and the Environment Agency and were shared with the modelling team to be incorporated into the scope where appropriate.</p> <p>The draft hydraulic modelling method statement for the whole Project was also shared with the TWG. Comments were received from North Yorkshire County Council and have been incorporated into the scope.</p>	<p>HRA TWG 2 (18/3/21) (Annex B.2.2) HRA TWG 3 (08/07/21) (Annex B.2.3) Email from IPT (02/07/21 and 07/07/21) Email from Natural England (13/07/21) Email from The Environment Agency (21/07/21) Email from IPT (13/08/21) Email from North Yorkshire County Council (19/07/21)</p>
HRA10	<p>Impact of new crossing on SAC habitats and qualifying species</p>	<p>Parameters/design of the new crossing of Trout Beck was discussed in TWG1 and TWG 2).</p> <p>Refer to HRA09. Modelling has been undertaken to inform impact on habitats and supporting river processes.</p> <p>Impacts to be mitigated through sensitive watercourse crossing design.</p>	<p>HRA TWG 1 (08/2/21) (Annex B.2.1) HRA TWG 2 (18/3/21) (Annex B.2.2)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>The Geomorphology Modelling Method Statement has been shared with the TWG and specifically with Natural England and the Environment Agency. Comments were received from Natural England and the Environment Agency and were shared with the modelling team to be incorporated into the scope where appropriate.</p>	<p>Email from IPT (02/07/21 and 07/07/21) Email from Natural England (13/07/21) Email from The Environment Agency (21/07/21)</p>
HRA11	Use of eDNA techniques for freshwater and riparian receptors	<p>The use of aquatic eDNA analysis, in particular for WCC, was discussed in TWG 1 and TWG 2, and has been agreed directly with Natural England. Surveys have been completed and results shared in TWG 6.</p> <p>The objective of this monitoring is to supplement presence / absence data derived from traditional survey techniques (e.g. electric fishing and manual search / trapping for WCC).</p>	<p>HRA TWG 1 (08/2/21) (Annex B.2.1) HRA TWG 2 (18/3/21) (Annex B.2.2) Email from Natural England (30/03/21) HRA TWG 6 (26/01/22) (Annex B.2.6)</p>
HRA12	Air quality assessment: River Eden	<p>Natural England have identified that in their comments on the draft Stage 2 HRA Appropriate Assessment that they will provide further comments when the final modelling results are available and the figures in the draft HRA are updated. However, the assessment needs to also consider the Dutch Nitrogen case with regards to nutrient inputs to an already unfavourable site. Even though the Nitrogen inputs are likely to be very small, and particularly in comparison to other inputs, there still may be the need to offset this and reduce Nitrogen input to the SAC units in the vicinity. Further details have been provided in the final Stage 2 HRA Appropriate Assessment HRA.</p>	<p>Email comments on draft Stage 2 HRA Appropriate Assessment from Natural England (23/03/22).</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
HRA13	Design of Trout Beck piers	<p>The design of the piers was discussed at TWG 2 and TWG 6.</p> <p>Comments were also received from Natural England on the draft Stage 2 HRA Appropriate Assessment stating “Further detail is needed to assess whether the design of the pillars will be sufficient that they can withstand being in the river at some point in the future without the need to provide further protection such as concrete/rock armour etc.”</p> <p>Further detailed discussion on construction working methods at Trout Beck, which also included discussion around the pier design, was held with IPT, Natural England the Environment Agency and a representative from the PCs. It was noted a principle regarding the design of the piers at Trout Beck in line with Natural England’s comments has been included in the Project Design Principles document.</p>	<p>HRA TWG 2 (18/03/21) (Annex B.2.2) HRA TWG 6 (26/01/22) (Annex B.2.6)</p> <p>Email comments on draft Stage 2 HRA Appropriate Assessment from Natural England (23/03/22).</p> <p>Meeting with Natural England, the Environment Agency and a representative from the PCs (07/04/22) (Annex B.3.1)</p>
HRA14	Disturbance of otter nursery holt (possible natal holt) within red line boundary near Warcop	<p>It was identified in TWG 6 that the holt will remain during and post construction, however as it is likely to be disturbed during construction.</p> <p>Recommended mitigation will be required and will be agreed with Natural England in advance of construction but will potentially include construction of an artificial otter holt as part of the agreed mitigation.</p> <p>Any required mitigation (that will be agreed under the licencing process with Natural England in advance of construction) will be for mitigation/enhancement in HRA terms, as this is not required to avoid an adverse effect of site integrity.</p>	<p>HRA TWG 6 (26/01/22) (Annex B.2.6)</p>

Table 3: Evidence Plan log – Ecological Impact Assessment

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
EclA 01	Baseline data requirements for EclA	<p>Outline details of survey strategy and survey areas were shared at TWG 1. Further information was provided at TWG 2 on bats, birds and red squirrel.</p> <p>The draft A66 Biodiversity Survey Strategy was shared with TWG attendees on 15/3/21. Comments were received from Natural England and the Environment Agency; no other comments were received. The comments from Natural England and the Environment Agency were incorporated where possible into the A66 Biodiversity Survey Strategy.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1) EclA TWG 2 (15/03/21) (Annex C.2.2)</p> <p>Email from IPT issuing Draft A66 Biodiversity Survey Strategy (15/03/21) Natural England (22/03/21) and the Environment Agency (01/04/21) comments via email on the Draft A66 Biodiversity Survey Strategy</p>
EclA 02	Data availability, including from local groups (such as Durham Bird Club)	<p>Following discussions in TWG 1 and TWG 2, it was agreed that contact should be made with local bird groups to obtain any relevant data. Data has since been gathered from various groups including Durham Bird Club and Red Squirrel group.</p> <p>Data has been received from the Eden Rivers Trust following a request from the freshwater ecology lead.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1) EclA TWG2 (15/03/21) (Annex C.2.2)</p> <p>Email from Eden Rivers Trust (12/03/21).</p>
EclA 03	Programme optimisation and timing of protected species surveys – scope,	<p>Outline details of programme and assessment approach, including outline survey strategy were shared at TWG 1. No comments were raised by the TWG members.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
	<p>approach to information sharing</p>	<p>Comments were received from Natural England on the draft (informal) A66 scoping Report and from Natural England and the Environment Agency on the Biodiversity Survey Strategy. These comments have been incorporated into the EIA Scoping Report. Further comments were then received in the EIA Scoping Opinion from both PINs and NE, which have been addressed in the ES. All necessary surveys to inform the EIA have been completed by ES submission– survey scopes were discussed and agreed within the TWGs 1-3 and via the draft A66 Biodiversity Survey Strategy.</p>	<p>Natural England comments via email on the draft (informal) A66 Scoping Report (09/12/20). Email from IPT issuing Draft A66 Biodiversity Survey Strategy (15/03/21) Natural England (10/03/21) and the Environment Agency (01/04/21) comments via email on the Draft A66 Biodiversity Survey Strategy EIA Scoping Report (EIA Appendix 4.1: EIA Scoping Report (Application Document 3.4)) EIA Scoping Opinion (EIA Appendix 4.2: EIA Scoping Opinion (Application Document 3.4))</p>
<p>EclA 04</p>	<p>Scope and methodology for EclA</p>	<p>Outline details of the proposed scope and methodology for the EclA were shared at TWG 1 and continued to be discussed at TWGs 2 and 3.</p> <p>Comments were received from Natural England on the draft (informal) A66 Scoping Report and from Natural England and the Environment Agency on the Biodiversity Survey Strategy. These comments have been incorporated into the EIA Scoping Report.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1) EclA TWG 2 (15/03/21) (Annex C.2.2) EclA TWG 3 (29/04/21) (Annex C.2.3)</p> <p>Natural England comments via email on the draft (informal) A66 Scoping Report (09/12/20) Natural England 22/03/21) and the Environment Agency (01/04/21) comments via email on the Draft A66 Biodiversity Survey Strategy</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
			EIA Scoping Report (EIA Appendix 4.1: EIA Scoping Report (Application Document 3.4))
EclA 05	Programme optimisation implications for assessment and worst-case assumptions to inform early stages of assessment	Outline details on worst case approach and assumptions were shared at TWG 1.	EclA TWG 1 (11/02/21) (Annex C.2.1)
EclA 06	Requirements for mitigation	<p>Potential impacts and mitigation have been discussed in broad terms during various TWG meetings.</p> <p>A mitigation walkthrough was presented in TWG 7, and opportunities were provided for comments, which were incorporated into the final mitigation design where possible.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1)</p> <p>EclA TWG 2 (15/03/21) (Annex C.2.2)</p> <p>EclA TWG 3 (29/04/21) (Annex C.2.3)</p> <p>EclA TWG 7 (26/01/22) (Annex C.2.7)</p>
EclA 07	Disturbance and any changes to habitats	<p>Potential impacts and mitigation have been discussed in broad terms during the TWG meetings.</p> <p>Further TWGs have covered disturbance and mitigation (TWG 5 covered key findings from the PEI Report and TWG 7 covered mitigation on a scheme-by-scheme basis, including disturbance and potential impacts to habitats).</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1)</p> <p>EclA TWG 2 (15/03/21) (Annex C.2.2)</p> <p>EclA TWG 3 (29/04/21) (Annex C.2.3)</p> <p>EclA TWG 5 (10/08/21) (Annex C.2.5)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
			EclA TWG 7 (26/01/22) (Annex C.2.7)
EclA 08	Sites of wildlife importance	<p>Details of sites to be included for assessment were shared at TWG 1, where Natural England requested Augill Valley Pastures SSSI be included for assessment – this site has been scoped in to be included within the assessment of impacts arising from the ARN.</p> <p>The sites to be included in the air quality assessment, were discussed in TWG 3.</p>	<p>EclA TWG 1 (11/2/21) (Annex C.2.1)</p> <p>EclA TWG 3 (29/04/21) (Annex C.2.3)</p>
EclA 9	Importance of open habitats to bird species	<p>Potential impacts and mitigation were discussed in broad terms during TWGs 1-3, prior to completing surveys and assessments this information was only available at a high level.</p> <p>Bird related mitigation presented at TWG 7 and following discussion and clarification of queries, no objections raised.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1)</p> <p>EclA TWG 2 (15/03/21) (Annex C.2.2)</p> <p>EclA TWG 3 (29/04/21) (Annex C.2.3)</p> <p>EclA TWG 7 (26/01/22) (Annex C.2.7)</p>
EclA 10	Areas where disconnected habitats should be retained	<p>Potential impacts and mitigation have been discussed in broad terms during the TWG meetings. TWG 5 in particular discussed the key findings of the PEI Report assessment.</p> <p>The ecological (working draft) mitigation was presented in TWG 7. Queries and clarification raised and resolved at the meeting.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1)</p> <p>EclA TWG 2 (15/03/21) (Annex C.2.2)</p> <p>EclA TWG 3 (29/04/21) (Annex C.2.3)</p> <p>EclA TWG 4 (10/06/21) (Annex C.2.4)</p> <p>EclA TWG 5 (10/08/21) (Annex C.2.5)</p> <p>EclA TWG 7 (26/01/22) (Annex C.2.7)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
EclA 11	<p>Presence of protected species (e.g. water voles are very rare in Cumbria except scheme 6 area possibly where reintroduction occurred)</p>	<p>Outline details of the biodiversity survey strategy were shared at TWG 1. Further information was provided on bats, birds and red squirrel at TWG 2. The Draft A66 Biodiversity Survey Strategy was issued to TWG attendees on 15/3/21. Comments were received from Natural England and the Environment Agency and were incorporated where appropriate into the survey strategy. Surveys were completed in accordance with the updated A66 Biodiversity Survey Strategy (that took into account the comments received) and communications with Natural England regarding specific species outside of the TWGs).</p> <p>TWGs each 1-6 began with updates on survey findings for protected species surveys.</p> <p>Natural England raised the presence of sand martin relating to River Eden SSSI in TWG 1 – it was agreed this would be picked up in ornithology surveys. At TWG 1, the Environment Agency requested that the team consider redd surveys and also asked for the consideration of shoals as terrestrial invertebrate feature. Redd surveys at pre-construction stage have been included as a commitment in the EMP where significant vibration cannot be ruled out. Shoals have been considered in the EclA.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1) EclA TWG 2 (15/03/21) (Annex C.2.2) Email from IPT issuing Draft A66 Biodiversity Survey Strategy (15/03/21) Natural England (22/03/21) and the Environment Agency (01/04/21) comments via email on the Draft A66 Biodiversity Survey Strategy Email correspondence re. bats with Natural England (series of emails from 25/06/21 through to 07/09/21). GCN District Level Licencing emails with Natural England (02/02/22 and 09/02/21). Minutes from meeting with NE on reptiles and botanicals on 19/11/21 (Annex C.3.1) EclA TWG 1 (11/02/21) (Annex C.2.1) EclA TWG 2 (15/03/21) (Annex C.2.2) EclA TWG 3 (29/04/21) (Annex C.2.3) EclA TWG 4 (10/06/21) (Annex C.2.4) EclA TWG 5 (10/08/21) (Annex C.2.5)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>TWG 4 focussed primarily on the proposed bat survey methodology.</p>	<p>EclA TWG 6 (11/11/21) (Annex C.2.6)</p>
EclA 12	<p>Maximising opportunities from new landscape or habitat planting</p>	<p>At TWG 1 Natural England asked if potential enhancements are being picked up – it was explained how the team are looking at enhancements in context of NPSNN requirements.</p> <p>Mitigation presented at TWG 7 and following discussion and clarification of queries, no objections raised. Draft mitigation plans presented at TWG 7 demonstrated that opportunities for biodiversity gains would be maximised wherever possible within the draft DCO boundary.</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1)</p> <p>EclA TWG 7 (26/01/22) (Annex C.2.7)</p>
EclA 13	<p>Priority Fen habitat potentially could be lost on Scheme 6 and unable to include in the Biodiversity Net Gain (BNG) calculations – how to quantify this loss?</p>	<p>This issue was discussed with Natural England at a specific meeting. Natural England’s preference is to use BNG metrics as if the habitat was being directly lost. The Project team have determined the area of possible degradation and include in metrics. The Project team have also identified and confirmed suitable mitigation area to create new fen habitat.</p>	<p>Discussion meeting with Natural England on 14/03/22 (Annex C.3.2)</p>
EclA 14	<p>BNG is not yet mandatory (and will not become so until after the DCO submission), however it is intended to become a requirement for NSIPs as a provision of the Environment Bill when it is passed. Could the Project consider the provision of a 10% biodiversity net gain, thus becoming an exemplar Project?</p>	<p>BNG was discussed initially in TWG 1, but in more detail in TWG 6 in response to a query raised by Natural England during the Statutory Consultation period.</p> <p>The Project had already commenced on the basis of implementing Metric 2.0, and had completed all of the surveys, when Metric 3.0 was released. The Project has therefore continued utilising Metric 2.0. This was discussed during the mitigation run through in TWG 7. National Highways projects that have not already completed surveys to inform Metric 2.0 will adopt Metric 3.0.</p> <p>A route-wide BNG assessment has been completed using Biodiversity Metric 2.0, which has been used to inform the development of the ecological mitigation design. The Project is</p>	<p>EclA TWG 1 (11/02/21) (Annex C.2.1)</p> <p>EclA TWG 6 (11/11/21) (Annex C.2.6)</p> <p>EclA TWG 7 (26/01/22) (Annex C.2.7)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		aiming for No Net Loss as a minimum and seeks to maximise biodiversity net gains within the Order Limits where practicable.	
EclA 15	District Level Licencing (DLL) approach for GCN	Agreed with Natural England licencing team via email, confirming costs and approach. National Highways also confirmed with Natural England that ponds will be made available for the Project. This approach has been confirmed by National Highways SES and approved by the Major Projects Project Management team via email.	Email between Project team and Natural England on 02/02/22. Email from National Highways on 09/02/22 following phone call between National Highways and Natural England on 08/02/22. Emails from National Highways Major Projects on 15/02/22 and National Highways SES 09/02/22 following Project call to agree adoption of DLL.
EclA 16	Buried archaeology and heritage setting impacts of any habitat or landscape mitigation (cross over impacts)	The biodiversity mitigation plan has been shared with the archaeology and heritage, and landscape teams. The mitigation layer has been amended based on feedback from these teams. Mitigation proposals were presented at TWG 7 and following discussion and clarification of queries, no objections were raised.	EclA TWG 7 (26/01/22) (Annex C.2.7)

Table 4: Evidence Plan log - Road Drainage and the Water Environment

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
RDWE01	Baseline data requirement and timing	<p>Indicative timescales and the level of data required to inform the ES chapter were shared with the group in TWG 1 and TWG 2 Parts 1 and 2. Data requests were issued to the Environment Agency and local authorities for baseline data on water quality, abstractions and discharges. Data was received.</p> <p>All baseline and survey data available has now been shared with the stakeholders at the various TWGs 1-6.</p>	<p>RDWE TWG 1 (11/02/21) (Annex D.2.1)</p> <p>RDWE TWG 2 Part 1 (02/03/21) (Annex D.2.2)</p> <p>RDWE TWG 2 Part 2 (02/03/21) (Annex D.2.3)</p> <p>RDWE TWG 3 Part 1 (06/05/21) (Annex D.2.4)</p> <p>RDWE TWG 3 Part 2 (06/05/21) (Annex D.2.5)</p> <p>RDWE TWG 4 Part 1 (15/06/21) (Annex D.2.6)</p> <p>RDWE TWG 4 Part 2 (15/06/21) (Annex D.2.7)</p> <p>RDWE TWG 5 (11/08/21) (Annex D.2.8)</p> <p>RDWE TWG 6 Part 1 (02/11/21) (Annex D.2.9)</p> <p>RDWE TWG 6 Part 2 (02/11/21) (Annex D.2.10)</p>
RDWE02	Requirements for water features survey Surface Water (water course features, hydro-morphology)	<p>Details on the surveys proposed were outlined in TWGs1, TWG 2 Part 1 and TWG 2 Part 2. Indicative timescales and areas that had been surveyed were shown and the findings were shared with the group in these sessions.</p>	<p>RDWE TWG 1 (11/02/21) (Annex D.2.1)</p> <p>RDWE TWG 2 Part 1 (02/03/21) (Annex D.2.2)</p> <p>RDWE TWG 2 Part 2 (02/03/21) (Annex D.2.3)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
	<p>Groundwater (springs, abstractions) Flood risk (to inform modelling).</p>	<p>A detailed Geomorphology Modelling Methodology and a Hydromorphology Methodology were shared with the Environment Agency and Natural England via email. Comments were received and incorporated into the methodologies. This was summarised in TWG 6 Part 1.</p>	<p>Followed up by emails (geomorphology on 07/07/21 and hydromorphology on 12/10/21) Environment Agency comments via email on geomorphology scope received 19/10/21. RDWE TWG 6 Part 1 (15/06/21) (Annex D.2.9)</p>
RDWE03	<p>Water receptors identified</p>	<p>The water receptors to be included in the assessment were identified in the EIA Scoping Report. Comments received on the water receptors within the EIA Scoping Opinion were incorporated into the PEI Report. Comments received during statutory consultation have been addressed within the ES chapter.</p>	<p>EIA Scoping Report (EIA Appendix 4.1: EIA Scoping Report (Application Document 3.4)) EIA Scoping Opinion (EIA Appendix 4.2: EIA Scoping Opinion (Application Document 3.4)) PEI Report (available at: https://virtualengage.arup.com/A66-NTP/pei-report/download/) Statutory Consultation responses.</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
RDWE04	Flood risk assessment methodology (including climate change allowance)	<p>The flood risk methodology was initially discussed in TWG 1, where the group was given an overview of current work. The proposed methodology was issued to Environment Agency and lead local flood authorities (LLFAs) for comment.</p> <p>Comments were received from the Environment Agency and North Yorkshire County Council via email and at TWG 5 regarding the use of updated climate allowances. It was noted that the updated climate allowance would be available in time to be included in the Project flood models and would be taken into account. This approach was confirmed in the Scoping Report.</p> <p>Regarding the new peak rainfall value that is upcoming but not in force yet, the Project team advised stakeholders that unpublished data could not be used in the assessment and the data that was current at the time of assessment would be used instead. This was explained in TWG 5.</p>	<p>RDWE TWG 1 (11/02/21) (Annex D.2.1)</p> <p>Followed up by emails to: Environment Agency from JBA on 15/06/21; Eden District Council 16/07/21 and 13/08/21; Cumbria County Council 13/08/21; Richmond District Council 16/07/21; North Yorkshire County Council 16/07/21 and 13/08/21; and Durham County Council 16/07/21 and 13/08/21.</p> <p>Email from Environment Agency (07/05/21).</p> <p>Email from North Yorkshire County Council on 19/07/21.</p> <p>RDWE TWG 5 (11/08/21) (Annex D.2.8)</p> <p>EIA Scoping Report (EIA Appendix 4.1: EIA Scoping Report (Application Document 3.4))</p> <p>RDWE TWG 5 (11/08/21) (Annex D.2.8)</p>
RDWE05	Water quality from road runoff	Water quality monitoring (for the construction period) methodology to be developed and included in the Environmental Management	RDWE TWG 2 Part 1 (02/03/21) (Annex D.2.2)

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>Plan (EMP). During operation, water quality is not anticipated to be impacted following HEWRAT assessments and drainage design. The team explained that HEWRAT is an iterative process in conjunction with the drainage design and therefore HEWRAT test must be passed (any non-compliances will be addressed). This was discussed and agreed within TWG 2 Part 1.</p>	
RDWE06	Flood compensatory land requirements	<p>In TWG 6 Part 1 (Surface water) stakeholders were updated on progress as work was ongoing with the design and the flood modelling was still underway.</p> <p>Specific meetings were held with the Environment Agency and Cumbria County Council on flood modelling at Warcop. Any further refinement of the design during the detailed design stage will be shared with the relevant stakeholders.</p>	<p>RDWE TWG 1 (11/02/21) (Annex D.2.1) RDWE TWG 6 Part 1 (15/06/21) (Annex D.2.9)</p> <p>Meeting with Environment Agency and Natural England (10.03.22) (Annex D.3.1) Meeting with Cumbria County Council and Environment Agency (11.03.22) (Annex D.3.2) Meeting with Environment Agency, Natural England and Cumbria County Council (04.04.22) (Annex D.3.3)</p>
RDWE07	Culverts and bridges, outfall types and locations	<p>The Project water team have been feeding into engineering decisions alongside the biodiversity team. During TWG 1 and TWG 2 Part 1, options were still being developed. Flood risk, water environment and biodiversity (aquatic ecology) specialists fed into optioneering.</p> <p>In TWG 6 Part 1 (Surface water), stakeholders were updated on progress. Work was ongoing with the design and will be picked up during detailed by the PCs.</p>	<p>RDWE TWG 1 (11/02/21) (Annex D.2.1) RDWE TWG 2 Part 1 (02/03/21) (Annex D.2.2)</p> <p>RDWE TWG 6 Part 1 (15/06/21) (Annex D.2.9)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
RDWE08	Outfall locations / type to consider geomorphology particularly lateral river movement	<p>Initial outfall locations were shared by the Project drainage team in TWG 2 Part 1. The team have explored soft engineering solutions for outfalls into floodplains.</p> <p>In TWG 6 Part 1 (Surface water) stakeholders were updated on progress to date. It was agreed with stakeholders in TWG 6 Part 1 that soft engineering for outfalls to flood plains would be preferred, to allow for lateral movement of water courses where there is potential for this.</p>	<p>RDWE TWG 2 Part 1 (02/03/21) (Annex D.2.2)</p> <p>RDWE TWG 6 Part 1 (15/06/21) (Annex D.2.9)</p>
RDWE09		<p>Flood risk at Warcop was quantified as part of the flood risk modelling. Information regarding both flood risk and the drainage design at Warcop was shared with the TWG as the design evolved.</p> <p>In addition, specific meetings were held with the Environment Agency and Cumbria County Council on flood modelling at Warcop. Any further refinement of the design during the detailed design stage will be shared with the relevant stakeholders.</p>	<p>RDWE TWG 1 (11/02/21) (Annex D.2.1)</p> <p>RDWE TWG 2 Part 1 (02/03/21) (Annex D.2.2)</p> <p>RDWE TWG 6 Part 1 (15/06/21) (Annex D.2.6)</p> <p>RDWE TWG 7 (17/02/22) (Annex D.2.11)</p> <p>Meeting with Environment Agency and Natural England (10.03.22) (Annex D.3.1)</p> <p>Meeting with Cumbria County Council and Environment Agency (11.03.22) (Annex D.3.2)</p> <p>Meeting with Environment Agency, Natural England and Cumbria County Council (04.04.22) (Annex D.3.3)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
RDWE10	Implications of Project Speed programme - desk based conceptual models	Details of the Project programme and the assessment approach were outlined, including the survey strategy at TWG 1 and TWG 2 (Part 1 and 2). The group discussed this and were satisfied information had been provided. The Project team agreed that they would keep the TWG up to date with any changes.	RDWE TWG 1 (11/02/21) (Annex D.2.1) RDWE TWG 2 Part 1 (02/03/21) (Annex D.2.2) RDWE TWG 2 Part 2 (02/03/21) (Annex D.2.3)
RDWE11		Licence information on abstractions and discharges has been received for all schemes following a data request to the Environment Agency and local authorities. A methodology to ensure that small private abstractions are appropriately assessed was discussed and agreed within the groundwater TWG 3 Part 2. An update regarding abstractions was provided in TWG 7, where it was noted that all accessible licensed abstractions within the study area have been visited, including agricultural and industrial sites (such as the British Gypsum Mine).	RDWE TWG 3 Part 2 (06/05/21) (Annex D.2.5) RDWE TWG 7 (17/02/22) (Annex D.2.11)

Table 5: Evidence Plan log – Landscape and Visual Impacts

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
LVIA 01	Methodology – approach to landscape assessment	The use of the existing local landscape character assessments to inform the baseline for the landscape assessment was discussed during TWGs 1 and 2 and comments received have been taken on board in the development of the methodology. The proposed methodology for the assessment of landscape effects (following DMRB LA 107) was outlined in the EIA Scoping Report. Comments received on methodology within the EIA Scoping Opinion were addressed in the PEI Report. The responses received during statutory consultation outlined broad agreement with the proposed approach to the assessment of landscape effects.	LVIA TWG 1 (12/03/21) (Annex E.2.1) LVIA TWG 2 (26/04/21) (Annex E.2.2) EIA Scoping Report (ES Appendix 4.1: EIA Scoping Report (Application Document 3.4)) EIA Scoping Opinion (ES Appendix 4.2: EIA Scoping Opinion (Application Document 3.4)) PEI Report (available at: https://virtualengage.arup.com/A66-NTP/pei-report/download/) Statutory consultation responses from TWG members
LVIA 02	Methodology – approach to visual assessment	The proposed methodology for the assessment of visual effects (following DMRB LA 107) was outlined in the EIA Scoping Report. Comments received on methodology with the EIA Scoping Opinion have been addressed in the PEI Report. The responses received during statutory consultation outlined broad agreement with the proposed approach to the assessment of visual effects.	EIA Scoping Report (ES Appendix 4.1: EIA Scoping Report (Application Document 3.4)) EIA Scoping Opinion (ES Appendix 4.2: EIA Scoping Opinion (Application Document 3.4)) PEI Report (available at: https://virtualengage.arup.com/A66-NTP/pei-report/download/) Statutory consultation responses from TWG members
LVIA 03	Approach to Zone of Theoretical Visibility (ZTV)	The approach to the ZTV was discussed in TWG 2.	LVIA TWG 2 (26/04/21) (Annex E.2.2)

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>A series of ZTVs extending 10km from the proposed schemes were presented within the PEI Report to show the theoretical visibility of vehicles up to 4.7m in height at any point on the proposed schemes. These ZTVs were produced using BlueSky 5m Digital Terrain Model data and, in accordance with DMRB LA 107, includes for the reduction in extent of theoretical visibility caused by buildings and substantial areas of woodland. No comments were received on the extent or approach to ZTV within the statutory consultation responses.</p>	<p>PEI Report (available at: https://virtualengage.arup.com/A66-NTP/pei-report/download/) Statutory consultation responses from TWG members</p>
LVIA 04	Study area	<p>The extent of the potential study area was discussed in TWG 2, and it was agreed that the area of the AONB that is most likely to be affected by the proposals stretches up to 5km in the western part of the AONB and in the eastern part it follows the ridge line.</p> <p>A visual study area and landscape study area of 7km, which was informed by an initial ZTV and fieldwork, were identified in the EIA Scoping Report and the PEI Report.</p> <p>Comments received on methodology within the EIA Scoping Opinion have been addressed in the PEI Report. The responses received during statutory consultation outlined broad agreement with the study area.</p> <p>An update to reiterate how the ZTV will inform the study area for the assessment was provided in TWG 7.</p>	<p>LVIA TWG 2 (26/04/21) (Annex E.2.2)</p> <p>EIA Scoping Report (ES Appendix 4.1: EIA Scoping Report (Application Document 3.4)) EIA Scoping Opinion (ES Appendix 4.2: EIA Scoping Opinion (Application Document 3.4)) PEI Report (available at: https://virtualengage.arup.com/A66-NTP/pei-report/download/)</p> <p>LVIA TWG 7 (20/01/22) (Annex E.2.7)</p>
LVIA 05	Discuss and agree receptors/ viewpoints and photomontage locations	<p>Initial viewpoints and photomontage locations were shared, and viewpoint locations discussed in TWG 1 with some alternative and additional locations suggested.</p>	<p>LVIA TWG 1 (12/03/21) (Annex E.2.1)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>Viewpoint plans, which illustrated photomontage locations, were sent out for consultation in March 2021 (original draft showing work presented at TWG 1 and an updated set sent following comments received at TWG 1). Comments were received from Natural England, the North Pennines AONB Partnership and North Yorkshire County Council on the updated viewpoint plans suggesting additional and alternative viewpoint locations. These suggested viewpoints were reviewed, and updates were included where appropriate in the viewpoint plans shared with the PEI Report.</p> <p>Statutory consultation response comments on additional viewpoint locations or alterations to viewpoints were provided by Cumbria County Council and Eden District Council.</p> <p>Viewpoint and photomontage locations were again presented and discussed at TWG 7, where some amendments to locations (largely due to alterations in proposed alignments from earlier stages when viewpoint locations were initially identified) were requested. These changes to viewpoint and photomontage locations have been reviewed and accommodated in the viewpoints presented in the final ES where possible.</p>	<p>Email from Natural England (29/03/21)</p> <p>Emails from North Pennines AONB Partnership (29/03/21 and 30/03/21)</p> <p>Email from North Yorkshire County Council (16/04/21).</p> <p>Statutory consultation responses from TWG members</p> <p>LVIA TWG 7 Part 1 (20/01/22) (Annex E.2.7)</p> <p>LVIA TWG 7 Part 2 (31/01/22) (Annex E.2.8)</p>
LVIA 06	Approach to views from the road	<p>The approach to assessing views from the road was initially raised and discussed in TWGs 1 and 2. The requirement within DMRB LA 107 to assess views from the road was discussed.</p> <p>The issue of views from the road was discussed again at both parts of TWG 7 and it was noted that key views from the road would be considered in the Project Design Principles document and would also be considered within the Environmental Statement.</p>	<p>LVIA TWG 1 (12/03/21) (Annex E.2.1)</p> <p>LVIA TWG 2 (26/04/21) (Annex E.2.2)</p> <p>LVIA TWG 7 Part 1 (20/01/22) (Annex E.2.7)</p> <p>LVIA TWG 7 Part 2 (31/01/22) (Annex E.2.8)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
LVIA 07	Application of Rochdale Envelope to LVIA	The relevance of the Rochdale Envelope to the Project and its application to the LVIA was outlined in TWG 1. No comments or objections received.	LVIA TWG 1 (12/03/21) (Annex E.2.1)
LVIA 08	Sensitive design including opportunity to improve landscape and biodiversity in proximity to North Pennines AONB (within and setting)	<p>The AONB Management Plan and its use to inform the PEI Report was initially discussed in TWG 1.</p> <p>Landscape mitigation proposals around the AONB were discussed in TWGs 3 and 4 where the AONB Partnership flagged important to retain views from Kirkby Thore north of the AONB and DCC identified that open views around Warcop should be considered in addition to screening planting to ensure open views to the AONB are still available.</p> <p>The need for sensitive design in the vicinity of the AONB is recognised and the team has taken on board the recommendations of the AONB Management Plan that are relevant for the setting of the Scheme. Account has also been taken of the relevant special qualities as they relate to landscape character, in the assessment and design.</p> <p>The environmental mitigation plans which have been prepared to support the DCO are only intended to demonstrate that the environmental mitigation required by the scheme can fit within the DCO boundary. The evolving environmental mitigation plans were presented to Natural England, the North Pennines AONB Partnership, Cumbria County Council, Eden District Council, Durham County Council and North Yorkshire County Council at a series of Design Principles and mitigation walkthroughs. Comments received at these walkthroughs have been taken into consideration during the preparation of the Project Design Principles document, the Environmental Management Plan (EMP) and the Mitigation</p>	<p>LVIA TWG 1 (12/03/21) (Annex E.2.1)</p> <p>LVIA TWG 3 (24/05/21) (Annex E.2.3)</p> <p>LVIA TWG 4 (28/06/21) (Annex E.2.4)</p> <p>Mitigation Walkthroughs / Approach to Project Design sessions:</p> <ul style="list-style-type: none"> - CCC/EDC Session 1 (18/01/22) (Annex E.3.1) - CCC/EDC Session 2 (24/01/22) (Annex E.3.2) - NYCC/RDC (24/01/22) (Annex E.3.3) - DCC (27/01/22) (Annex E.3.4)

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>Schedule to seek to ensure that sensitive design and appropriate landscape mitigation is taken forward through detailed design.</p>	
LVIA 09	Link to heritage – settings	<p>The presence of sensitive heritage features and their settings including approaches to mitigation, in particular associated with Rokeby Park Registered Park and Garden, has been raised and discussed at a number of the TWGs sessions.</p> <p>A specific meeting on planting within the setting of Rokeby Park was held with Historic England where the approach to planting was agreed.</p> <p>Work will be ongoing throughout the detailed design stage to refine opportunities across the Project for integrated landscape/heritage mitigation which responds to heritage significance and setting.</p>	<p>LVIA TWG 3 (24/05/21) (Annex E.2.3) LVIA TWG 4 (28/06/21) (Annex E.2.4) LVIA TWG 7 Part 1 (20/01/22) (Annex E.2.7) Historic England meeting (15/02/22) (Annex E.3.5)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
LVIA 10	Scope of mitigation and opportunities for mitigating existing visual impacts of existing dualled road close to scheme	<p>Cumbria County Council queried at TWG 1 whether the Project would have scope to improve or mitigate parts of A66 not being dualled. It was explained that Highways England (now National Highways) powers to purchase land under the DCO are restricted to land required for essential mitigation for the scheme, not enhancement of the scheme. At TWG 2 PINs outlined that mitigation relied upon in the Environmental Statement must be within the DCO boundary, while enhancement measures could lie outside the DCO boundary.</p> <p>National Highways' Designated Funds, which could provide funding for enhancement measures, was discussed with the Local Authorities at the regular bi-monthly meetings in March/April 2021 and the Statutory Environmental Bodies at the February 2021 SEBs Focus Group.</p>	<p>LVIA TWG 1 (12/03/21) (Annex E.2.1) LVIA TWG 2 (26/04/21) (Annex E.2.2)</p> <p>LPA meetings:</p> <ul style="list-style-type: none"> - CCC and EDC (05/03/21) - NYCC and RDC (08/04/21) <p>SEBs Focus group meeting (25/02/21) (Annex A.2.2)</p>
LVIA 11	Location and appearance of ponds	<p>Concern regarding the location and appearance of the drainage ponds was initially raised in TWG 4 and has continued to be discussed in further TWGs. The landscape team has worked closely with the engineering team, to reposition the ponds to improve their integration with the landscape and, where possible within the engineering parameters, reduce the number of ponds.</p> <p>The pond design shown on the evolving environmental masterplans have been designed to meet engineering parameters to demonstrate that the drainage requirements of the Project can be met within the Project boundary. Additional space has been allowed within the Project boundary to allow the refinement of the design of the ponds and the key design principles relating to the detailed design of the ponds have been captured within the Project Design Principles document.</p>	<p>LVIA TWG 4 (28/06/21) (Annex E.2.4) LVIA TWG 5 (16/08/21) (Annex E.2.5) LVIA TWG 6 (01/12/21) (Annex E.2.6) LVIA TWG 7 Part 1 (20/01/22) (Annex E.2.7) LVIA TWG 7 Part 2 (31/01/22) (Annex E.2.8)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
LVIA 12	Link landscape mitigation to habitat benefits	The need and opportunity for integrated landscape and ecology design, including features such as green bridges, has been raised and discussed at various of the TWGs.	LVIA TWG 5 (16/08/21) (Annex E.2.5) LVIA TWG 6 (01/12/21) (Annex E.2.6) LVIA TWG 7 Part 1 (20/01/22) (Annex E.2.7) LVIA TWG 7 Part 2 (31/01/22) (Annex E.2.8)

Table 6: Evidence Plan log - Heritage Assessment (Scheduled Monument, Research Strategy/Framework)

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
HA01	Evidence and survey strategy – consultation around approach to evidence gathering to support ES	<p>Evidence and survey strategy initial discussion at TWG 3. The strategy was then issued informally on 07/06/21. A high-level summary was given at TWG 4.</p> <p>No objections or comments on this during statutory consultation.</p>	<p>Heritage TWG 3 (14/05/21) (Annex F.2.3) Heritage TWG 4 (08/06/21) (Annex F.2.4)</p>
HA02	Setting assessment	Forms part of the evidence and survey strategy document. Strategy issued informally 07/06/2021.	Email from IPT (07/06/21)
HA03	Scheduled Monument Consent (SMC) requirements as part of DCO and evidence needs relating to licensing	<p>Initial discussion of SMC (and Section 42 (S42) licences for surveys on Scheduled Monuments) for trial works to inform Environmental Statement held with Historic England 01/10/21.</p> <p>As of January 2022, all SMC needed for surveys have been issued and this is complete.</p> <p>All required S42 licences issued in February 2022 and works now complete.</p>	Email from Historic England dated 01/10/21
HA04	Building Assessment	<p>Forms part of the evidence and survey strategy document. Issued informally 07/06/2021.</p> <p>Building Assessment formally issued 27/07/21, no responses received from stakeholders.</p>	<p>Email from IPT (07/06/21) Email from IPT (27/07/21)</p>
HA05	Discussions around redline key issues relating to works, design and mitigation proposals.	<p>Meeting held with Historic England to discuss design development at Brougham and potential impact on scheduled monument (24/03/21).</p> <p>Meeting held with Historic England and Durham County Council (DCC) Senior Conservation Officer to discuss design development at Rokeby and potential impact on the Registered Park and Gardens and listed buildings (08/04/21).</p>	<p>Heritage Brougham minutes (24/03/21) (Annex F.3.1)</p> <p>Rokeby meeting minutes (08/04/21) (Annex F.3.2)</p> <p>A66 Rokeby Junction Options minutes (24/08/21) (Annex F.3.3)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>Site meeting held with design team, Historic England and DCC officers 23/06/21.</p> <p>Design options for Rokeby Junction with DCC and Historic England held 24/08/21.</p> <p>Carkin Moor – design team issued a Technical Note to Historic England.</p> <p>Post stat-con design change walk through with Historic England in January 2022 to cover likely issues and design evolution.</p>	<p>Email from IPT issuing Carkin Moor Technical Note (29/07/21)</p>
HA06	Identify areas where we need to restrict limits of deviation to protect key features	<p>Internal Project boundary reviews have been undertaken, where all specialists can feed into discussions around the limits of deviation.</p> <p>Discussed with TWG members in TWG 8 and also in SEBs monthly focus group.</p>	<p>Heritage TWG 8 (10/03/22) (Annex F.2.8)</p> <p>SEBs Focus Group minutes (25/03/22) (Annex A.2.3)</p>
HA07	Prioritisation of trenching to focus on key areas	<p>Forms part of the evidence and survey strategy document. Strategy issued informally 07/06/2021. Trenching Written Schemes of Investigation (WSI) issued.</p> <p>As of January 2022, trenching was completed where access / route selection information was available. Prioritisation no longer required.</p>	<p>Email from IPT issuing Evidence and Survey Strategy (07/06/21)</p>
HA08	Early assessment to inform mitigation options	<p>Ongoing internal discussion between environmental disciplines from Summer 2021, to develop and refine mitigation measures suitable for all topics.</p> <p>Design mitigation working draft proposals shared with local authorities at January 2022 mitigation walkthroughs and with SEBs at February 2022 focus group.</p>	<p>Mitigation Walkthroughs / Approach to Project Design sessions:</p> <ul style="list-style-type: none"> - CCC/EDC Session 1 (18/01/22) (Annex E.3.1) - CCC/EDC Session 2 (24/01/22) (Annex E.3.2) - NYCC/RDC (24/01/22) (Annex E.3.4) - DCC (27/01/22) (Annex E.3.4)

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
			SEBs Focus Group minutes (10/02/22) (Annex A.2.11).
HA9	Review public engagement - opportunities for public benefit?	<p>These opportunities were captured as part of the Research Framework. Initial draft informally shared with Historic England (27/09/21).</p> <p>Findings from Research Framework were shared in TWG (8). Formal draft of Research Framework was issued to the TWG members on 28/02/22.</p>	<p>Email from IPT issuing draft Research Framework (27/09/21)</p> <p>Heritage TWG 8 (10/03/22) (Annex F.2.8)</p> <p>Email to TWG on 28/02/22 with draft of Research Framework.</p>
HA10	Potential for possible changes to water table in areas of archaeological interest	Discussion with Road Drainage and the Water Environment lead in February 2022. The conclusion was that it is unlikely that there would be impacts in areas of archaeological interest. This was discussed in TWG 8.	Heritage TWG 8 (10/03/22) (Annex F.2.8)
HA11	Potential for construction impacts within Carkin Moor	<p>Discussed further in HA06.</p> <p>Linked to HA07.</p> <p>Design development meeting held with Historic England and North Yorkshire County Council 08/07/21. Structural review technical note issued.</p>	<p>Design development at Carkin Moor minutes (Annex F.3.4)</p> <p>Email from IPT issuing Carkin Moor Technical Note (29/07/21)</p>
HA12	Buildability important to identify and assess areas where temporary compounds and drainage may be required. This can have big impacts (see A1 at Catterick scheme for example).	<p>The EIA Scoping Report sets out approach.</p> <p>Compounds, drainage etc are all being factored within the redline boundary and new compounds and drainage features will not be introduced outside of the redline boundary post DCO submission.</p> <p>These issues have been assessed within the ES using the information available through the surveys.</p>	EIA Scoping Report. (ES Appendix 4.1: EIA Scoping Report (Application Document 3.4))

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
HA13	Potential impact at the Countess Pillar	<p>This was discussed at meeting held with Historic England to discuss design development at Brougham and potential impact on scheduled monument (24/03/2021).</p> <p>This has been covered in the EMP.</p>	Heritage Brougham minutes (24/03/21) (Annex F.3.1)
HA14	Agree baseline data scope – geographical extent, methods, programme	<p>The EIA Scoping Report was shared with Historic England. PEI Report shared formally with all stakeholders at statutory consultation.</p> <p>Geographical extent – no comments raised.</p> <p>Data sources – addressed in PEI Report and ES.</p> <p>Programme – surveys have been completed in time to feed into the ES.</p>	<p>EIA Scoping Report (EIA Appendix 4.1: EIA Scoping Report (Application Document 3.4))</p> <p>Historic England letter ref PL00586663 via email (22/12/21)</p> <p>PEI Report (available at: https://virtualengage.arup.com/A66-NTP/pei-report/download/)</p>
HA15	Use of and scope of Research Strategy	<p>Pre-commencement meeting with Historic England 13/05/21. Dr Pete Wilson was appointed to carry out the Research Strategy. Work commenced May 2021 and an initial first draft was issued for discussion 27/09/21.</p> <p>The research strategy was discussed during TWG 1, TWG 2 and TWG 4.</p>	<p>Minutes of pre-commencement meeting (Annex F.3.5)</p> <p>Heritage TWG 1 (09/02/21) (Annex F.2.1)</p> <p>Heritage TWG 2 (12/03/21) (Annex F.2.2)</p> <p>Heritage TWG 4 (08/06/21) (Annex F.2.4)</p>
HA16	Geoarchaeological modelling	Historic England identified a requirement for geoarchaeological modelling in response to informal scoping.	<p>Historic England letter ref PL00586663 via email (22/12/20)</p> <p>Heritage TWG 1 (09/02/21) (Annex F.2.1)</p> <p>Email from Historic England (09/02/21)</p>

ID	Topic for discussion	Key points of discussions and agreed actions	Details of relevant meetings/correspondence (ref)
		<p>Pre-commencement discussion to agree scope with D. O'Meara at Historic England on 05/05/21. Modelling commenced September 2021.</p> <p>Geoarchaeological modelling and reporting has been completed. The outcomes were reported to stakeholders in TWG 7 by Wessex Archaeology. Comments received by Historic England, which have been addressed in the geoarchaeological modelling report.</p>	<p>Geoarchaeological modelling minutes (05/05/21) (Annex F.3.6)</p> <p>Heritage TWG 7 (18/01/22) (Annex F.2.7)</p>

Annex A.1: SEBs Focus Group - Agendas

Item	Annex Reference
Steering Group Evidence Plan Workshop 15/12/20 Agenda	No Agenda
SEBs Focus Group 25/02/21 Agenda	No Agenda
SEBs Focus Group 25/03/21 Agenda	No Agenda
SEBs Focus Group 22/04/21 Agenda	A.1.1
SEBs Focus Group 27/05/21 Agenda	A.1.2
SEBs Focus Group 24/06/21 Agenda	A.1.3
SEBs Focus Group 22/07/21 Agenda	No Agenda
SEBs Focus Group 26/08/21 Agenda	A.1.4
SEBs Focus Group 25/11/21 Agenda	A.1.5
SEBs Focus Group 13/01/22 Agenda	No Agenda
SEBs Focus Group 10/02/22 Agenda	No Agenda
SEBs Focus Group 24/03/22 Agenda	A.1.6

Annex A.2: SEBs Focus Group - Minutes

Item	Annex Reference
Steering Group Evidence Plan Workshop 15/12/20 Minutes	A.2.1
SEBs Focus Group 25/02/21 Minutes	A.2.2
SEBs Focus Group 25/03/21 Minutes	A.2.3
SEBs Focus Group 22/04/21 Minutes	A.2.4
SEBs Focus Group 27/05/21 Minutes	A.2.5
SEBs Focus Group 24/06/21 Minutes	A.2.6
SEBs Focus Group 22/07/21 Minutes	A.2.7
SEBs Focus Group 26/08/21 Minutes	A.2.8
SEBs Focus Group 25/11/21 Minutes	A.2.9
SEBs Focus Group 13/01/22 Minutes	A.2.10
SEBs Focus Group 10/02/22 Minutes	A.2.11
SEBs Focus Group 24/03/22 Minutes	A.2.12

Annex B.1: HRA Technical Working Group - Agenda

Item	Annex Reference
HRA TWG 1 08/02/21 Agenda	No Agenda
HRA TWG 2 18/03/21 Agenda	No Agenda
HRA TWG 3 08/07/21 Agenda	B.1.1
HRA TWG 4 12/08/21 Agenda	B.1.2
HRA TWG 5 03/11/21 Agenda	B.1.3
HRA TWG 6 26/01/22 Agenda	B.1.4

Annex B.2: HRA Technical Working Group - Minutes

Item	Annex Reference
HRA TWG 1 08/02/21 Minutes	B.2.1
HRA TWG 2 18/03/21 Minutes	B.2.2
HRA TWG 3 08/07/21 Minutes	B.2.3
HRA TWG 4 12/08/21 Minutes	B.2.4
HRA TWG 5 03/11/21 Minutes	B.2.5
HRA TWG 6 26/01/22 Minutes	B.2.6

Annex B.3: HRA Technical Working Group – Other Supporting Evidence

Item	Annex Reference
Meeting with Natural England, Environment Agency and Principal Contractor representative 07/04/22 Minutes	B.3.1

Annex C.1: EclA Technical Working Group – Agendas

Item	Annex Reference
EclA TWG 1 11/02/21 Agenda	No Agenda
EclA TWG 2 16/03/21 Agenda	No Agenda
EclA TWG 3 29/04/21 Agenda	C.1.1
EclA TWG 4 10/06/21 Agenda	C.1.2
EclA TWG 5 10/08/21 Agenda	C.1.3
EclA TWG 6 11/11/21 Agenda	C.1.4
EclA TWG 7 26/01/22 Agenda	C.1.5

Annex C.2: EclA Technical Working Group – Minutes

Item	Annex Reference
EclA TWG 1 11/02/21 Minutes	C.2.1
EclA TWG 2 16/03/21 Minutes	C.2.2
EclA TWG 3 29/04/21 Minutes	C.2.3
EclA TWG 4 10/06/21 Minutes	C.2.4
EclA TWG 5 10/08/21 Minutes	C.2.5
EclA TWG 6 11/11/21 Minutes	C.2.6
EclA TWG 7 26/01/22 Minutes	C.2.7

Annex C.3: EcIA Technical Working Group – Other Supporting Evidence

Item	Annex Reference
Meeting with Natural England regarding reptiles and botanicals 19/11/21 Minutes	C.3.1
Meeting with Natural England regarding priority habitats 14/03/22 Minutes	C.3.2

Annex D.1: Road Drainage and Water Environment Technical Working Group – Agendas

Item	Annex Reference
RDWE TWG 1 11/02/21 Agenda	No Agenda
RDWE TWG 2 Part 1 – Surface Water 02/03/21 Agenda	No Agenda
RDWE TWG 2 Part 2 – Groundwater 02/03/21 Agenda	No Agenda
RDWE TWG 3 Part 1 – Surface Water 20/04/21 Agenda	D.1.1
RDWE TWG 3 Part 2 – Groundwater 21/04/21 Agenda	D.1.2
RDWE TWG 4 Part 1 – Surface Water 15/06/21 Agenda	D.1.3
RDWE TWG 4 Part 2 – Groundwater 15/06/21 Agenda	D.1.4
RDWE TWG 5 11/08/21 Agenda	D.1.5
RDWE TWG 6 Part 1 – Surface Water 02/11/21 Agenda	D.1.6
RDWE TWG 6 Part 2 – Ground Water 02/11/21 Agenda	D.1.7
RDWE TWG 7 07/02/22 Agenda	D.1.8

Annex D.2: Road Drainage and Water Environment Technical Working Group – Minutes

Item	Annex Reference
RDWE TWG 1 11/02/21 Minutes	D.2.1
RDWE TWG 2 Part 1 – Surface Water 02/03/21 Minutes	D.2.2
RDWE TWG 2 Part 2 – Groundwater 02/03/21 Minutes	D.2.3
RDWE TWG 3 Part 1 – Surface Water 20/04/21 Minutes	D.2.4
RDWE TWG 3 Part 2 – Groundwater 21/04/21 Minutes	D.2.5
RDWE TWG 4 Part 1 – Surface Water 15/06/21 Minutes	D.2.6
RDWE TWG 4 Part 2 – Groundwater 15/06/21 Minutes	D.2.7
RDWE TWG 5 11/08/21 Minutes	D.2.8
RDWE TWG 6 Part 1 – Surface Water 02/11/21 Minutes	D.2.9
RDWE TWG 6 Part 2 – Groundwater 02/11/21 Minutes	D.2.10
RDWE TWG 7 07/02/22 Minutes	D.2.11

Annex D.3: Road Drainage and Water Environment Technical Working Group – Other Supporting Evidence

Item	Annex Reference
Warcop flood modelling meeting with the Environment Agency and Natural England 10/03/22 Minutes	D.3.1
Warcop flood modelling meeting with Cumbria County Council and the Environment Agency 11/03/22 Minutes	D.3.2
Warcop flood modelling meeting with the Environment Agency, Cumbria County Council and Natural England 04.04.22 Minutes	D.3.3

Annex E.1: LVIA Technical Working Group – Agendas

Item	Annex Reference
LVIA TWG 1 12/03/21 Agenda	No Agenda
LVIA TWG 2 26/04/21 Agenda	E.1.1
LVIA TWG 3 24/05/21 Agenda	E.1.2
LVIA TWG 4 28/06/21 Agenda	E.1.3
LVIA TWG 5 16/08/21 Agenda	E.1.4
LVIA TWG 6 01/12/21 Agenda	E.1.5
LVIA TWG 7 20/01/22 Agenda	E.1.6

Annex E.2: LVIA Technical Working Group – Minutes

Item	Annex Reference
LVIA TWG 1 12/03/21 Minutes	E.2.1
LVIA TWG 2 26/04/21 Minutes	E.2.2
LVIA TWG 3 24/05/21 Minutes	E.2.3
LVIA TWG 4 28/06/21 Minutes	E.2.4
LVIA TWG 5 16/08/21 Minutes	E.2.5
LVIA TWG 6 01/12/21 Minutes	E.2.6
LVIA TWG 7 Part 1 20/01/22 Minutes	E.2.7
LVIA TWG 7 Part 2 31/01/22 Minutes	E.2.8

Annex E.3: LVIA Technical Working Group – Other Supporting Evidence

Item	Annex Reference
Approach to Design Principles Cumbria County Council and Eden District Council Session 1 18/01/22 Minutes	E.3.1
Approach to Design Principles Cumbria County Council and Eden District Council Session 2 24/01/22 Minutes	E.3.2
Approach to Design Principles North Yorkshire County Council and Richmondshire District Council 25/01/22 Minutes	E.3.3
Approach to Design Principles Durham County Council 27/01/22 Minutes	E.3.4
Rokeyby Planting discussion with Historic England 04/02/22 Notes of Meeting	E.3.5

Annex F.1: Heritage Technical Working Group – Agendas

Item	Annex Reference
Heritage TWG 1 12/03/21 Agenda	No Agenda
Heritage TWG 2 26/04/21 Agenda	No Agenda
Heritage TWG 3 11/04/21 Agenda	F.1.1
Heritage TWG 4 08/06/21 Agenda	F.1.2
Heritage TWG 5 05/08/21 Agenda	F.1.3
Heritage TWG 6 02/11/21 Agenda	F.1.4
Heritage TWG 7 18/01/22 Agenda	F.1.5
Heritage TWG 8 01/03/22 Agenda	F.1.6

Annex F.2: Heritage Technical Working Group – Minutes

Item	Annex Reference
Heritage TWG 1 12/03/21 Minutes	F.3.1
Heritage TWG 2 26/04/21 Minutes	F.3.2
Heritage TWG 3 11/04/21 Minutes	F.3.3
Heritage TWG 4 08/06/21 Minutes	F.3.4
Heritage TWG 5 05/08/21 Minutes	F.3.5
Heritage TWG 6 02/11/21 Minutes	F.3.6
Heritage TWG 7 18/01/22 Minutes	F.3.7
Heritage TWG 8 01/03/22 Minutes	F.3.8

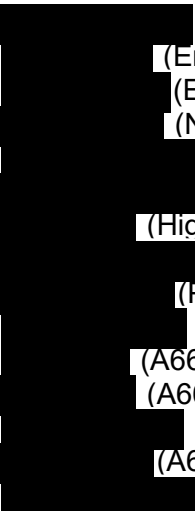
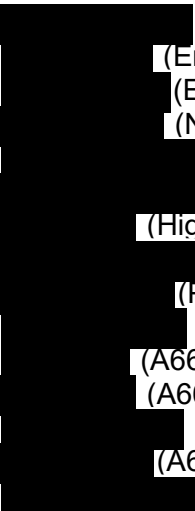
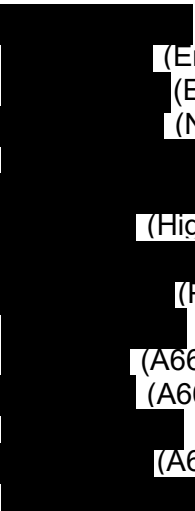
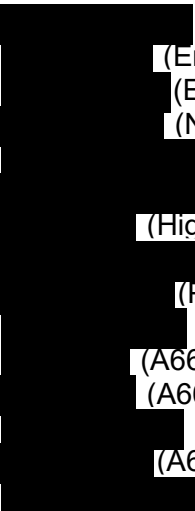
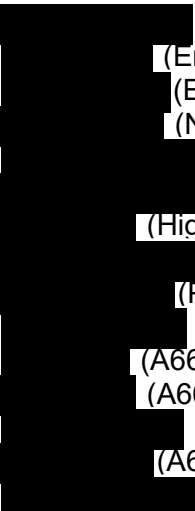
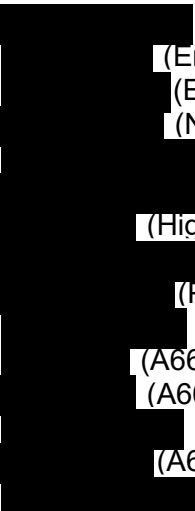
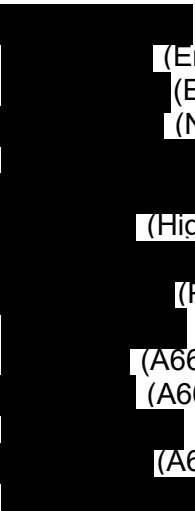
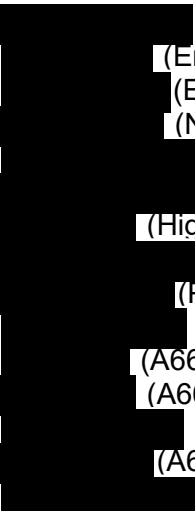
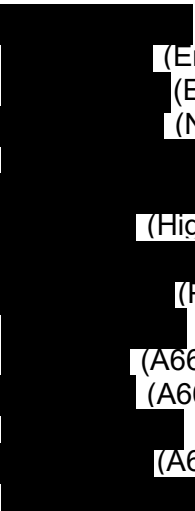
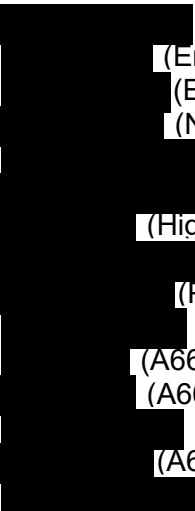
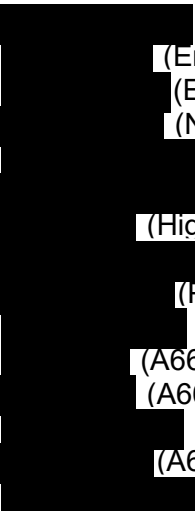
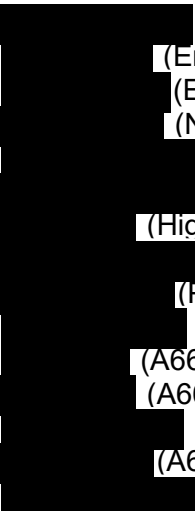
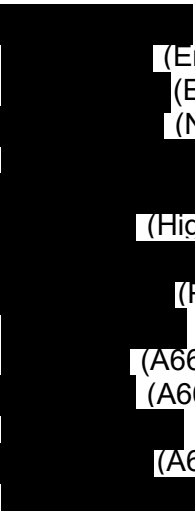
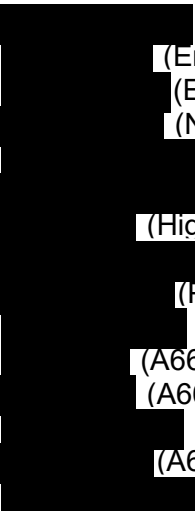
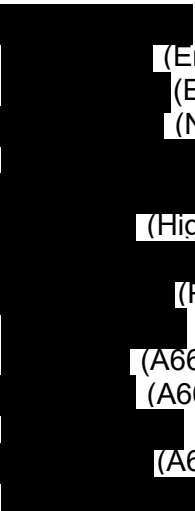
Annex F.3: Heritage Technical Working Group – Other Supporting Evidence

Item	Annex Reference
Design discussion for Brougham 24/03/21 Minutes	F.3.1
Rokeby Junction Options discussion 24/08/21 Minutes	F.3.2
Carkin Moor design discussion 08/07/21 Minutes	F.3.3
Cultural Heritage Research Framework pre-commencement discussion 13/05/21 Minutes	F.3.4

Agenda

A66 NTP

Project title	A66 Northern Trans-Pennine Project	Job number HE565627
Meeting name	SEBs monthly focus group	File reference HE565627-AMY-EGN-S00-AG-LX-000001
Location	MS Teams	Time and date 09:00 22 April 2021
Purpose of meeting	Monthly update	


Invitees	 (Environment Agency)  (Environment Agency)  (Environment Agency)  (Natural England)  (Historic England)  (Highways England)  (Highways England)  (Planning Inspectorate)  (Planning Inspectorate)  (Pinsent Masons)  (A66 IPT)  (A66 IPT)  (A66 IPT)  (A66 IPT)  (A66 IPT)
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Apologies -

Circulation Those attending:

Action

1. **Actions from last meeting**
2. **Progress and Programme update**

Prepared by 
Date of circulation 20.04.2021

Agenda

Project title

Job number

Date of Meeting

A66 Northern Trans-Pennine Project

HE565627

22 April 2021

Action

3. Evidence Plan and TWGs

EclA

Heritage

HRA

Landscape

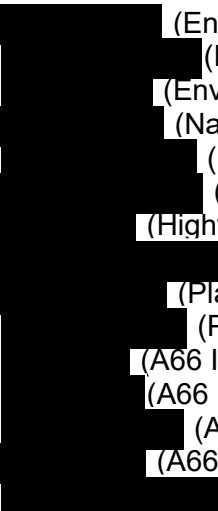
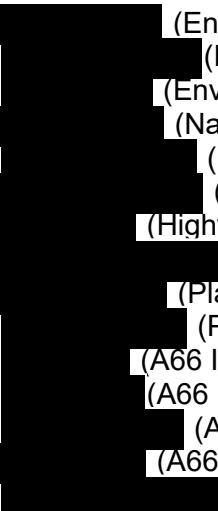
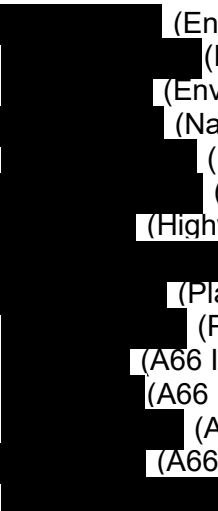
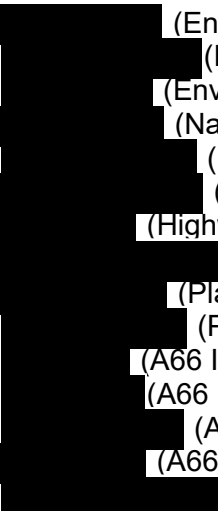
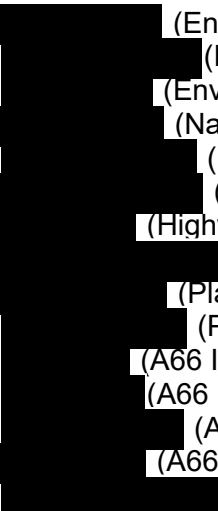
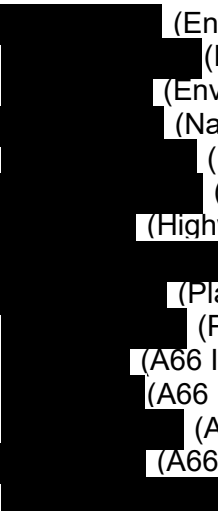
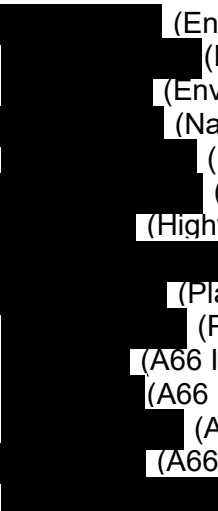
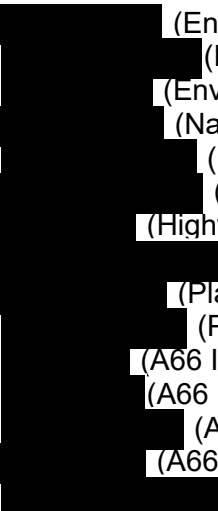
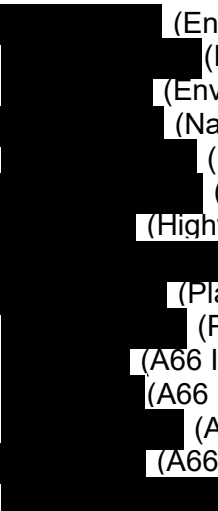
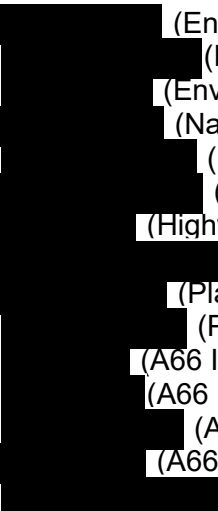
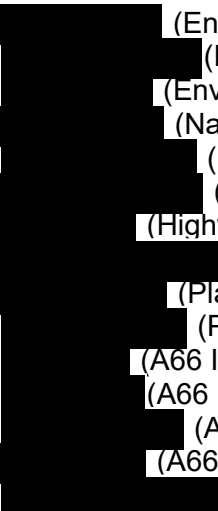
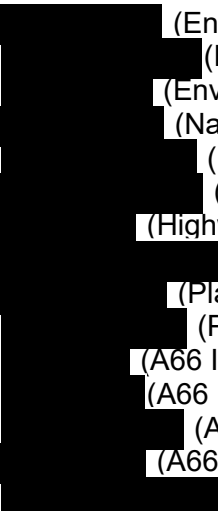
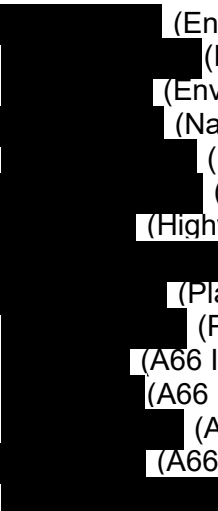
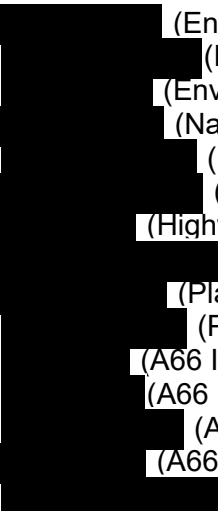
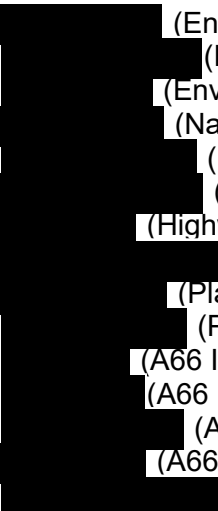
Water

4. AOB

Agenda

A66 NTP

Project title	A66 Northern Trans-Pennine Project	Job number HE565627
Meeting name	SEBs monthly focus group	File reference HE565627-AMY-EGN-S00- AG-LX-000002
Location	MS Teams	Time and date 09:00 27 May 2021
Purpose of meeting	Monthly update	

Invitees	 (Environment Agency)  (Environment Agency)  (Environment Agency)  (Natural England)  (Historic England)  (Highways England)  (Highways England)  (Planning Inspectorate)  (Planning Inspectorate)  (Pinsent Masons)  (A66 IPT)  (A66 IPT)  (A66 IPT)  (A66 IPT)  (A66 IPT)
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Apologies -

Circulation Those attending:

Action

1. **Actions from last meeting**

2. **Evidence Plan update**

Prepared by 
Date of circulation 20.04.2021

Agenda

Project title	Job number	Date of Meeting
A66 Northern Trans-Pennine Project	HE565627	27 May 2021

- 3. **Scheme by scheme walkthrough** Action
- 4. **AOB**

Agenda

A66 NTP

Project title	A66 Northern Trans-Pennine Project	Job number HE565627
Meeting name	SEBs monthly focus group	File reference Text
Location	MS Teams	Time and date 09:00 24 June 2021
Purpose of meeting	Monthly update	

Invitees	<div style="background-color: black; width: 100px; height: 100px; display: inline-block; vertical-align: middle;"></div> <ul style="list-style-type: none"> (Environment Agency) (Environment Agency) (Natural England) (Historic England) (Highways England) (Highways England) (Planning Inspectorate) (Planning Inspectorate) (Pinsent Masons) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT)
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Apologies	-
Circulation	Those attending:

- | | |
|---|---------------|
| | Action |
| 1. Review of actions from last meeting | |
| 2. Approach to mitigation | |
| 3. Environmental designated funds | |

Prepared by [REDACTED]
 Date of circulation

Agenda

Project title	Job number	Date of Meeting
A66 Northern Trans-Pennine Project	HE565627	24 June 2021

Action

- 4. Environmental scoping report
- 5. Statutory consultation
- 6. AOB

Agenda

A66 NTP

Project title	A66 Northern Trans-Pennine Project	Job number HE565627
Meeting name	SEBs monthly focus group	File reference Text
Location	MS Teams	Time and date 09:00 26 August 2021
Purpose of meeting	Monthly update	

Invitees

- (Environment Agency)
- (Environment Agency)
- (Natural England)
- (Historic England)
- (Highways England)
- (Highways England)
- (Highways England)
- (Planning Inspectorate)
- (Planning Inspectorate)
- (Pinsent Masons)
- (A66 IPT)
- (A66 IPT)
- (A66 IPT)
- (A66 IPT)
- (A66 IPT)

Apologies ██████████ (Natural England)

Circulation Those attending:

- | | Action |
|---|--------|
| 1. Review of actions from last meeting | |
| 2. PEIR status and assessment process | |
| Feedback from TWGs, opportunity to ask questions or raise areas where further information would be helpful ahead of Stat Con, forthcoming mitigation walkthroughs | |

Prepared by ██████████
 Date of circulation

Agenda

Project title

Job number

Date of Meeting

A66 Northern Trans-Pennine Project

HE565627

26 August 2021

3. Statutory consultation

Update on timings, process, how information available

4. Design update

Decisions on alternatives for Temple Sowerby to Appleby; Appleby to Brough and Rokeby

5. AOB

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	SEBs Monthly Focus Group	File reference Text
Location	MS Teams	Time and date 09:00- 25 November 2021 11:00
Purpose of meeting	Monthly update	

Attendance	<div style="background-color: black; width: 100px; height: 100px; display: inline-block;"></div> <ul style="list-style-type: none"> (Environment Agency) (Environment Agency) (Natural England) (Historic England) (Highways England) (Highways England) (Highways England) (Planning Inspectorate) (Planning Inspectorate) (Pinsent Masons) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT)
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Apologies	Text
Circulation	Those attending: Text

Action


- 1. Programme Updates**
- 2. Design Change and Updates**
- 3. Statutory Consultation Feedback**
- 4. AOB**

Prepared by [REDACTED]
 Date of circulation 23-11-21

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	SEBs Monthly Focus Group	File reference Text
Location	MS Teams	Time and date 09:00- 24 March 2022 11:00
Purpose of meeting	Monthly update	

Attendance	 (Environment Agency) (Environment Agency) (Natural England) (Historic England) (Historic England) (Highways England) (Highways England) (Planning Inspectorate) (Pinsent Masons) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT)
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Apologies Text

Circulation Those attending:
Text

Action

This meeting is to discuss what controls need to be captured in the Project Design Principles (PDP) report and Draft Environmental Mitigation Plan (dEMP). It will be held over 2 sessions as follows:

- 1. Session 1: To discuss PDP report and dEMP with focus on heritage in particular scheduled monuments (9-10am)**

Prepared by 
Date of circulation 23-03-22

Agenda

Project title

A66 NTP

Job number

HE565627

Date of Meeting

24 March 2022

Action

2. **Session 2: Session 1: To discuss PDP report and dEMP with focus on ecology/environment in particular River Eden SAC (10-11am)**

Responses to actions from previous meeting (10.02.2022)

	Action	Response
2.1	KW to raise need for early consultation regarding construction planning at Trout Beck and other locations associated with River Eden SAC with DIPs.	<i>This has been raised and a further meeting to discuss this has been suggested – to be discussed further.</i>
2.2	KW to check availability of background information (e.g. draft EclA chapter) to support HRA review.	<i>The draft HRA has now been shared with Natural England for comment. Unfortunately, it was not possible to share any further background information due to timescales associated with of drafting the various documents.</i>
3.3	CD to share next iteration of Evidence Plan	<i>Heritage agreement log has been shared; HRA, EclA, Water and Landscape agreement logs to be shared in due course.</i>

Agenda

Project title	Job number	Date of Meeting
A66 NTP	HE565627	24 March 2022

		Action
4.10	CE to review the flood compensation area at Trout Beck (Scheme 4/5) with the water and design teams.	<i>The preliminary design prepared for the DCO application will be further refined during detailed design and any key objectives it is required to achieve will be captured within the PDP report.</i>
4.12	CE to check the area of Common Land on Scheme 6 has been acknowledged by the environmental/ ecology team within their mitigation design.	<i>This has been raised with the environmental/ ecology team.</i>
4.13	JS/CE to investigate whether land around allotments site (Scheme 7) is designated Open Space and to review mitigation planting in this area.	<i>Proposed planting comprises verge and scrub planting. Land is not classed as designated Open Space in the County Durham Plan (adopted 2020).</i>
4.14 and 4.17	LM to advise if a meeting to discuss planting around Rokeby Park is required. CE to issue placeholder in case a meeting is required.	<i>This meeting has now taken place.</i>
5.1	CE/CD to feedback to KW and EIA team the need to ensure clear messaging around the approach to additional survey data which may follow the main submission is included in the ES.	<i>This has been fed back.</i>

Minutes of Meeting

A66 NTP

Evidence Plan Workshop #1

Purpose of Meeting: Kick off Evidence Plan process and agree coverage

Location: MS Teams

Time/Date: 15th December 2020 09:00

Attendees:

- █ – Environment Agency
- █ – Environment Agency
- █ – Historic England
- █ – Natural England
- █ – AmeyArup (Integrated Project Team)
- █ – AmeyArup (Integrated Project Team)
- █ – Highways England
- █ – PINS
- █ – PINS
- █ – Pinsent Masons (Integrated Project Team)
- █ – Pinsent Masons (Integrated Project Team)

Apologies: █ – AmeyArup (Integrated Project Team)

Circulation:

Item	Minutes	Actons
1.0	Introductions	
1.1	KW provided background to the workshop and objectives of agreeing format, content and approach to seeing up an Evidence Plan.	
2.0	DCO Process/Evidence Plans – PINS presentation	
2.1	SG provided an overview of the DCO process, including the timelines for the formal process following application. See attached slides.	
2.2	SG noted that adequacy of consultation is a key area for consideration in the DCO process. One of the learning points from Lower Thames Crossing (recently withdrawn from the DCO process) was that Local Authorities undertaking their statutory roles felt they had not been adequately consulted.	
2.3	SG – the aim of the inspector is to front-load the examination, so understanding all the issues as early as possible in the process. They aim to get comprehensive Relevant Representations submitted as early as possible – this is the key involvement of the SEBs early in examination.	
2.4	MS provided background to the Evidence Plan process – originally introduced and run by the Major Infrastructure and Environment Unit to aid the process of agreeing an evidence base for HRA in DCOs. It has been widely	

	adopted in the offshore wind sector in particular, and has applied to both EIA and HRA.	
3.0	Evidence Plan - Objectives	
3.1	All discussed draft objectives shared by KW and agreed they are good basis to work from. KW to develop short document recording objectives; Roles and Responsibilities; Process and structure of working groups; Terms of Reference and any procedural points. Output of TWGs to be recorded through meeting minutes and Agreement Log. KW to share draft format of Agreement Log with draft Plan. All to share bullets to include for Roles and Responsibilities (MS to share examples).	MS – share examples of roles/responsibilities for SEBs from other Evidence Plans All- share bullets for inclusion in plan specific to their organisation
4.0	Evidence Plan - Content	
4.1	KW explained reasoning behind not adopting the 'formal' process overseen by MIEU (now being taken over by NE) and rationale for content. Aim is not to repeat or add red tape to the existing EIA Scoping process and development of Statements of Common Ground, but to aid the continual engagement throughout pre-application.	
4.2	KW proposes to cover areas where there is benefit in ongoing sharing of data, multiple stakeholders involved and those where the policy or legislative protection is incredibly high, requiring a considerable amount of evidence. Areas which could be significant but have single stakeholders or more commonly accepted methodologies (e.g. noise modelling) are proposed to be dealt with through the standard scoping and engagement process.	
4.3	KW introduced the Mural board – aim is to agree areas for inclusion in the Evidence Plan and then start to discuss and record matters for consideration. The intention is that each area for inclusion will be considered by a Technical Working Group (TWG).	
4.4	Five areas were agreed for inclusion – HRA; Ecological Impact Assessment; Water and Road Drainage; Landscape and Visual impact (specifically in consideration of the AONB); Historic Environment – including Scheduled Monuments but also wider Research Agenda. See attached Mural Board for record of agreement of matters for inclusion. These will be worked up further (and added to if necessary) by the TWGs. Membership of TWGs suggested through circular notes on Mural Board. Action: All to provide names of individuals to be involved.	All: Provide names for membership of relevant TWGs
5.0	Process and Approach	
5.1	Agreed Steering Group to be combined with monthly SEBs meetings already included in scopes of engagement – one section of each meeting to be Evidence Plan.	KW: Arrange monthly meetings for 2021
5.2	TWGs will be formed (potentially consider combining water/HRA etc? But possibly separate out Flood Risk?).	KW: identify chairs for each TWG and

	Agreed TWGs to be chaired by someone from project team but 'independent' from the discussions happening to ensure they are focussed and achieve objectives. If any issues arise it may be possible for PINS or other independent organisation to chair specific meetings.	arrange for initial meetings to be scheduled.
5.3	KW to investigate data sharing website to facilitate sharing of evidence. KW to initially share details to check accessibility by government agencies.	KW: share details of information sharing portal

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group

Purpose of Meeting SEBs Focus Group – February Monthly Meeting

Location: MS Teams

Time/Date: 25-02-21 at 16:30-17:30

Attendees: ██████████ (CD) – A66 EIA Coordinator and Environmental Stakeholder Deputy at Amey/Arup

 ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup

 ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency

 ██████████ (JP) – Planning advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at the Environment Agency

 ██████████ (MS) – A66 EIA Lead at PINS

 ██████████ (EP) – A66 EIA Support at PINS

 ██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England

 ██████████ (EHP) – External legal advisor at Pinsent Masons

 ██████████ (TE) – Environment Advisor at Highways England

 ██████████ (JR) – Highways England

 ██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66

Apologies: ██████████ (KW) – A66 Environment Lead at Amey/Arup

 ██████████ (AW) – A66 Environment Deputy at Amey/Arup

 ██████████ (AP) – A66 Stakeholder Specialist at Amey/Arup

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Project Updates	
2.1	CE ran through update for scheme progress and noted key fixes in design to draft the PEIR, and a final fix for the ES. Developing the assessment as we gain more stakeholder and survey information	
2.2	In parallel with the PEIR, worst case mitigation is being developed. The team feed back to the engineers where any issues are identified so these may	
3.0	Evidence Plan and TWG updates	
3.1	CD gave an update on the progress with the first TWG meetings and noted that the Evidence Plan will be updated with key	

Item	Minutes	Actions
	<p>issue/comment and the project team will note how it has been addressed.</p> <p>Dates of the next TWG meetings were discussed.</p> <p>Anyone who wishes to join additional TWGs should contact CD.</p>	
3.2	<p>KS suggested that the AONB partnership should join the Landscape TWG. CD and CE agreed and will action this.</p> <p><i>Post meeting note: AONB Partnership attended Landscape TWG.</i></p>	CD to invite AONB partnership to Landscape TWG.
3.3	<p>KS suggested the Eden Rivers Trust should be included in some way. CD and CE noted that the Eden Rivers Trust may already be included in the Environmental Interest Focus Group. CD will check.</p> <p><i>Post meeting note: CD can confirm the Eden Rivers Trust are part of the Environmental Interest Focus Group.</i></p>	CD to check Eden Rivers Trust are being consulted with.
3.4	<p>MS asked when the Evidence Plan would be shared again. CD noted that this would likely happen after the second TWGs, possibly towards the end of March. TBC.</p>	
3.5	<p>MS asked if future TWGs would be an hour. CD confirmed that an hour has seemed appropriate for most groups so far, and this would be kept under review throughout and increased if needed.</p>	
4.0	Environmental Surveys	
4.1	<p>CE gave an overview of environmental surveys that are ongoing and upcoming.</p>	
5.0	Approach to Mitigation	
5.1	<p>All topics are considering mitigation, and four topics are looking at mitigation that would affect the Redline Boundary (RLB). The RLB identified for stakeholder consultation would be a worst-case boundary, and would be reduced and refined over time as the assessment advances. CE gave examples of mitigation measures.</p>	
5.2	<p>The four topics looking at mitigation that will impact the RLB are Cultural Heritage, Biodiversity, Landscape and Visual, Noise and Vibration.</p>	
5.3	<p>Cross disciplinary reviews of mitigation have been undertaken. For example, where noise have identified the need for a linear solution, should this be a fence, wall or bund, the landscape team will advise what is most appropriate. A worst-case approach, in terms of land take, is taken if there is uncertainty.</p>	
5.4	<p>LM asked about cross disciplinary discussion – will the impact of noise barriers on settings of scheduled monuments etc be undertaken. CE confirmed Heritage team are looking at this.</p>	
5.5	<p>LM asked what is being done to identify veteran trees, historic woodland and protected hedgerows, as this was recently raised by the Historic England advisory committee. CE confirmed that veteran trees will be looked at.</p>	
5.6	<p>KS asked about Biodiversity net gain (BNG) / biodiversity metrics. Should enhancements be included in the BNG or RLB? CE noted that the Compulsory Purchase Order (CPO) powers around enhancement are complicated and will ask this question to the Biodiversity team. EHP noted that BNG is being reviewed in terms of policy and legislation (and noted Environment Bill would not</p>	CE/CD to arrange separate meeting on BNG.

Item	Minutes	Actions
	<p>apply to this), but are hampered by restrictions for enhancements around CPO powers (which can only be used for essential mitigation). KS and CE agreed that a separate meeting on this would be useful.</p>	
6.0	Environmental Designated Funds	
6.1	<p>KS – NE and EA produced a list of possible environmental designated fund (EDF) ideas. These would fit in with mitigation in the road corridor, although some would be more like enhancement.</p> <p>Eden Rivers Trust have mapped these ideas. KS will share this list and other ideas.</p> <p>JP noted that the North East EA area had made additional suggestions (such as a culvert for Tutta Beck and small weirs). JP to share – noted that this was also in the EA scoping response.</p> <p><i>Post meeting note: JP has shared contact details and KS has shared designated fund ideas.</i></p>	<p>KS to share NE/EA designated fund ideas list an Eden Rivers Trust mapping.</p> <p>JP to share North East ideas/ contact details.</p>
6.2	<p>Although not sure if suitable for EDFs, LM noted that with the route becoming wider and faster, could we look at stopping places for people to appreciate historic and natural landscapes, such as St Ninians’s Church and the Church at Rokeby. CE noted that St Ninians’s is being looked at by the Heritage team. CE will look at whether this is something to consider for the EDFs or through the design work. LM added that the route has historic significance important to Historic England, so it is important that it is captured.</p>	<p>CE to investigate if this is a design issue or EDF idea.</p>
6.3	<p>TE suggested she and CE catch up about what info can be shared around criteria for EDFs.</p> <p><i>Post meeting note: TE passed information on EDFs to CE</i></p>	<p>CE and TE to discuss EDF criteria.</p>
6.4	<p>JP asked if there was provision for HGV stopovers as often laybys are used overnight, and this can impinge on views.</p> <p>KS asked if we have got layby information already. CD noted that laybys are being considered but not in final yet. CE added that Highways England have constraints around where laybys can be located so may not be able to avoid key places for viewpoints but will raise with the design team. KS noted that sensitive environmental areas should also be avoided for laybys due to litter etc.</p>	<p>CE to discuss layby locations with the design team.</p>
6.5	<p>LD asked if Milestone Society might want to be involved in terms of signage or milestone locations. CD and CE to follow up, and discuss which group they could join (Environmental Interest Focus Group, or Heritage TWG).</p> <p><i>Post meeting note: Milestone Society to be contacted by Heritage team</i></p>	<p>CD and CE to look at involving Milestone Society.</p>
7.0	Next Steps	
7.1	<ul style="list-style-type: none"> • Finalise the PEIR – and review subsequent formal scoping responses. • Ongoing input into the Evidence Plan document. • Ongoing input into the design, collaborating with the design team. 	

Item	Minutes	Actions
	<ul style="list-style-type: none"> • Further surveys, including species specific ecological surveys. • Refinement of the mitigation developed at the PEIR stage. • Completion of the Environmental Statement (ES). 	
7.2	<p>KS asked what the timescales are for public consultation and submitting the DCO application.</p> <p>CE noted that timescales are changing slightly due to design changes and definitive dates can't be shared yet. KS asked if original dates are still looking to be met. CE noted that this is uncertain at present.</p>	
7.3	<p>CE asked if there are any issues or discussions the group would like to have for the next meeting. Otherwise, the project team can still give a general update similar to today. KS noted that later down the line, once the group have mitigation information it would be useful to talk through this to review cross topic issues around mitigation. MS agreed that this is the right forum to discuss these issues.</p> <p>JP asked if any plans or documents that were to be discussed in the TWGs could be shared in advance to help aid discussions. CD will let teams know.</p> <p>MS noted that a shared site to share documents or information would be useful. CD confirmed that she is actioning this and hopes to set up a SharePoint site or similar.</p>	<p>CD to set up a SharePoint site for sharing information.</p>
7.4	<p>CD to circulate minutes.</p>	<p>CD to circulate minutes.</p>
8.0	AOB	
8.1	No AOB raised.	

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group

Purpose of Meeting: SEBs Focus Group – February Monthly Meeting

Location: MS Teams

Time/Date: 25-03-21 at 09:00-11:00

Attendees:

- ██████████ (KW) – A66 Environment Lead at Amey/Arup
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
- ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
- ██████████ (PC (Amey)) – A66 Consultant’s Design & Engineering Lead at Amey/Arup
- ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
- ██████████ (JP) – Planning advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at the Environment Agency
- ██████████ (PC (EA)) - Planning Specialist at the Environment Agency
- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England
- ██████████ (EHP) – External legal advisor at Pinsent Masons
- ██████████ (TE) – Environment Advisor at Highways England
- ██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66

Apologies: ██████████ (JR) – Highways England

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Evidence Plan and TWG updates	
2.1	Update on Evidence Plan and TWGs by CD. CD thanked the group for the feedback received so far on the Biodiversity Survey Strategy, Geophysics Survey Report and Sensing Report, and asked the group to send more feedback if needed. KW added to LM that a Heritage Strategy will be written and shared in response to her feedback on the Geophysics Report. KW also added that the Heritage Lead on the project team will reply to LM’s comments. CD noted that no comments have been received yet on the Landscape Viewpoints and asked the group to provide comments	All to provide any comments to CD on the documents issued. Project Team to

Item	Minutes	Actions
	ASAP if needed. CD asked the group to confirm if they have no comments too.	provide Heritage Strategy and respond to Historic England's comments.
2.2	KW explained how the scoping report will now work following updates due to programme review. The previously issued informal scoping report will now be updated and will be used as the formal scoping document for scoping opinions. This would be due out approximately mid-May.	
2.3	CD and KW asked for feedback on how the group are finding the TWGs so far: LM noted there wasn't much opportunity for local authority officers such as the county archaeologist to feed into the conversation as sometimes the agenda is too full or meetings too short to allow for discussion. The group agreed longer sessions were needed to allow deeper discussion. LM suggested that the Heritage Chair could ask more focused questions to help tease out the details. CE added that the Project Team are planning for future sessions to be minimum 2 hours going forward, and KW agreed the need for TWGs to be more workshop style in future.	
2.4	KS agreed first meetings had to be centred around information sharing but now the Project Team are getting survey data back, the TWGs should be more focussed on the data and specifics and should be more workshop like. KS added that it would be good to have information on the proposed agenda in advance so KS can consult other specialists where needed.	
2.5	CE gave an update on progress with a data sharing site, likely to be SharePoint. CE is hoping to have a site up and running this week or next and will send a test file to the group to ensure access. <i>Post meeting note: CE has circulated test file using the SharePoint site.</i>	CE to send test file when new SharePoint is running.
2.6	KW asked MS if she had any comments on the TWGs based on previous projects that have undertaken an Evidence Plan process which the Project Team could draw on for A66. MS noted that the first sessions have been largely an introduction to the Evidence Plan approach being undertaken and that future sessions could be more workshop based and longer to allow deeper discussions. MS commented from other project experience that TWGs/technical sessions as part of an Evidence Plan process have tended to take the form of workshops/detailed technical discussions and have typically been half a day in length. MS noted that some technical sessions have occasionally been full day sessions, whilst others have been shorter. The complexities of the issues to be discussed are likely to have influenced the length of session.	CD to look at potential to include future topics in the TWG schedule. CD to pass this feedback onto TWG Chairs.

Item	Minutes	Actions
	<p>MS added that getting the agenda out, together with any evidence the Applicant would like attendees to review/comment on in advance or discuss at the TWGs, as far in advance as possible may help people feed into the TWGs. KW noted that the team also aim to share future TWG meetings as well. CD to look at potential to include future topics in the schedule of future meetings.</p> <p><i>Post meeting note: CD has passed this feedback to the TWG chairs.</i></p>	
3.0	Project Updates	
3.1	<p>KW updated the group about some changes to the programme and changes to two of the schemes (schemes 4/5 at Trout Beck and scheme 6 at Warcop). KW noted this is not yet in the public domain and should remain confidential.</p> <p>KW also has a call with senior colleagues from the SEBs organisations later today.</p>	
3.2	<p>KW outlined objectives for DCO and the need for initial feedback from the group on the ongoing optioneering.</p>	
3.3	<p>Warcop AONB</p> <p>KW outlined that the design review has been ongoing at Warcop in relation to the AONB. It is likely that the impact on the AONB can't be avoided completely, and there is potential for adverse impacts for access too. The team need to address this in the design and have had initial discussions with Natural England. The Project Team have also taken a step back to see if there are other options we could look at to check if we have the correct alignment.</p> <p>KW noted that there is strong opposition to the route locally where locals think it should go through the AONB.</p> <p>There are lots of constraints of the area – residential receptors, archaeology, the AONB, businesses etc.</p>	
3.4	<p>PC (Amey) gave an overview of the options being reviewed at Warcop:</p> <ol style="list-style-type: none"> 1. Dual carriageway option that runs parallel to the existing alignment. Stays in the route corridor. KW noted this could reduce setting impact on the AONB. Access needed for land owners who farm both sides of the A66. 2. Red option runs south of the AONB and doesn't encroach at all – except for local tie ins. There is a property under the alignment, and it also crosses a watercourse – a tributary to the Eden and would need modelling in terms of flood risk. This option would improve the access into Brougham too. 3. Then further west, option around alternative northern parallel route. Utilise existing carriageway for eastbound, basically at grade. Local road will run to the north, using natural topography. Significantly reduces the earthworks, except for the overbridge, which need to accommodate the MOD vehicles as they are quite large. 4. Alignment raised higher and connectivity underneath. Encroaches into MOD land. Also adjacent to MOD depot, severs current accesses and provides new access to two properties. Have also spoken to MOD about this. Need to understand which option has the lowest impact on the 	

Item	Minutes	Actions
	AONB, potentially an option within the AONB could have lesser impact (quicker to build, lesser setting impact, less earthworks as follows natural topography).	
3.5	KW reiterated that even if encroaching into the AONB, there could be lesser setting impacts as PC (Amey) described. More than likely that we will be taking options into statutory consultation.	
3.6	JP asked about the MOD depot and if it can be relocated. PC (Amey) said the Project Team meet with MOD monthly and this is being discussed. This is a layover depot where MOD traffic re-fuel so it is used regularly. No comments back from MOD yet as shared yesterday. Immediate preference for options that retain depot.	
3.7	KS – noted that NE haven’t fed back on the viewpoints yet and will do that in the next few days. <i>Post meeting note: KS shared feedback on viewpoints with the Project Team.</i>	KS to send feedback on viewpoints.
3.8	PC (EA) asked about Crooks Beck and how it would be affected. PC (Amey) noted that the preference is to maintain the access into the MOD site, which is parallel to the river. The Project Team still need to understand the potential impacts on this beck and are reviewing the access. PC (EA) asked if these works are at grade as this is an area of flood risk – LD added that there is natural flood storage in the area currently. PC (Amey) said that this is a challenge but is being looked at and KW added that the Project Team clearly needs flood modelling in this area to understand, and this will be an iterative process to reduce impacts. PC (Amey) noted that the team don’t yet have this flood data and information on the flood storage area. LD added that there is quite a lot of wetland on the MOD land and the team will need to consider if it will be drained. PC (Amey) noted that MOD have highlighted all areas of wetland so the team are aware.	
	Trout Beck	
3.9	KW explained there is a similar approach at Trout Beck, where the team are trying to find a route that minimises the impact on the SAC. The preferred route option crosses at the widest point of the floodplain. KW added that the team believe a route can be constructed without this degree of impact but acknowledges that the beck needs to be crossed and there could still be some impacts. There are also other constraints (Village of Kirby Thore, Scheduled Monuments, archaeology, British Gypsum Mine).	
3.10	PC (Amey) gave overview of the proposals. One option (Blue route) is to move the preferred route further east, and moves to a narrower crossing of the floodplain (down from ~800m to ~400m) but drove the team to consider other options in addition to this one. Green options (dark and lighter) – cross flood zone 2 instead and move over the existing A66, but also move closer to the village and a scheduled monument. Two other options (Orange - dark and lighter) are online variants that were promoted previously and are adjacent to the existing	

Item	Minutes	Actions
	<p>A66. Could cross Trout Beck at a place that could have a lesser impact altogether, but there is an impact instead on the Scheduled Monument. These routes are ~700m shorter than the others, so it is likely there would be increased daily traffic on the route, providing economic benefits and would also result in noise and AQ benefits. Need to acquire a farm to build these options. All other options also require some demolition.</p> <p>Current work is to develop these routes further and it is highly likely that multiple routes will be taken into stat con. Highly likely that there will be an impact to something as a result of one of the routes.</p> <p>KW noted that until we have the full modelling work, we can't say which option would be best.</p> <p>A rigorous options appraisal is required. KW acknowledged it is not easy to build in this area given the array of environmental aspects and how heritage aspects relate to the setting too. Likely that we can't remove all of the impacts so will have to discuss what weight we give things.</p>	
3.11	<p>LD – Orange options, good that its constrained here, but there are paleo channels of the Trout Beck and the Eden. So the team might need to look at this - if anything, the river could do with being unconstrained and could benefit from more flexibility. LD also noted that one of the orange routes goes through a square showing in the LiDAR data.</p> <p><i>Post meeting note: LD has sent LiDAR image to CD & CE, which has been shared with the TWG chairs.</i></p> <p><i>Post meeting note: LM looked at LiDAR image and it may be indicating an archaeological feature beneath a spoil heap.</i></p>	LD to send through this lidar image.
3.12	<p>KS acknowledged that this is clearly very challenging. In terms of stat con, will the team do a HRA for each of the options, and will all of this be presented at the stat con? KW noted that it is important that everyone has a complete understanding of the potential impacts of all of the routes.</p> <p>KS also notes that the Biodiversity Strategy and TWGs have only looked at the preferred route, not the other routes.</p> <p>KW added that as peak survey season is coming up, the project team are going to be talking to landowners very quickly to allow us to get out on site and to do more surveys in case one of these routes becomes the preferred route option later.</p>	
3.13	<p>LM raised concerns around the orange options. The scheduling description explains that this is an area we know that there is archaeology. The area LD identified is likely archaeology, as there is a known iron age settlement.</p> <p>The green options are close to scheduled areas and it is likely there is archaeology in this area too, so this would need to be assessed properly.</p> <p>LM noted her preference would be for the preferred route or blue route. Or perhaps the shorter green route that gets back online quickly and the flag goes up for orange option. KW notes that the project team have flagged this with the design team and this is useful initial feedback from Historic England.</p>	
3.14	<p>LD asked if the orange options would replace the local road. PC (Amey) added that this local road would stay and the project team</p>	

Item	Minutes	Actions
	would also want to retain the existing connection to Crackenthorpe. LD queried the existing bridge as it contributes to existing flood risk, and asked if it could be removed. PC (Amey) agrees this looks like a throttle, and is one the project team are looking at.	
3.15	KW noted to the group that the project team will be rigorous in options selection and will need to justify the impacts.	
4.0	Potential Hybrid Approach to Stat Con and PEIR	
4.1	KW advised the group that a hybrid approach may be taken into stat con as it is likely more than one route shown for both Trout Beck and Warcop. It might be that we can rule out some routes quite quickly but likely not given the amount of detail needed. The team are undertaking extensive consultation, land owner discussions, identifying mitigation, assessments of impacts. Warcop work is more advanced and Trout Beck is still at an earlier stage while surveys and modelling are carried out.	
4.2	The PEIR will be based on the Rochdale envelope approach, where the team will be able to present the information available on the likely effects. The team will also be very clear on the information that is available and how we will address this for the ES e.g. through surveys. Likely survey information and assessment will start emerging around stat con so will need some work to see how we show this in the stat con as it won't be in the PEIR yet. KW also noted that engagement with the group will carry on, and the team will try to make sure the group members have comparable information.	
4.3	KS added that the design information for Trout Beck will be key to determining the suitability of certain options. There has to be some design information in the consultation, otherwise people can't make an informed decision. KW agrees this is a key point and there will be key design principals such as the use of an open structure. The intension is design information will be available at stat con, and design principals in the PEIR but the detailed design will likely follow. KS asked how soon after the PEIR will the EIA and HRA be done and how will this feed into DCO? KW outlined updated the programme where stat con could be in September, and the ES work will kick off as we go into stat con, and the design team will determine options in October time, and the ES would be prepared over the winter.	
4.4	LM asked if the team will be undertaking more surveys and geophysics in these areas? KW confirmed that this will be done, and ecology surveys are being discussed first as they have seasonal constraints. Discussions need to be had about trenching, as the team would like to avoid adding unnecessary trenches. The team acknowledges this could need lots of discussion with Historic England.	
4.5	KS supported the approach to take a step back, and appreciates the challenges this poses. KW and KS agreed that it is right to understand all the alternatives going forward and all the key challenges around the routes.	

Item	Minutes	Actions
4.6	<p>With regard to the assessment of the SAC, KW noted the PEIR will have enough information to help understand the likely significant effects on the SAC.</p> <p>KS asked about looking at the variants in terms of traffic data as shorter routes will have impacts on air pollution and climate, and shorter construction periods will have carbon implications too. KW confirmed all of this is being considered and the team are taking a holistic approach.</p>	
5.0	AOB	
5.1	<p>Group confirmed this is an ideal meeting time.</p> <p>KW added that if comments or queries come to mind on the Trout Beck and Warcop options the group can let KW, CE or CD know.</p> <p>Group can let CD or CE know if they want to cover anything specific in the next meeting.</p> <p>JP added that PC (EA) is taking over the role as main lead for the Environment Agency. Send info to PC (EA) and he will copy JP as necessary.</p> <p>KS asked to give other Natural England colleagues access to the SharePoint site. KW notes the access can be amended any time.</p>	<p>KS to send CD/CE list of colleagues for access to SharePoint site.</p> <p>CD to circulate minutes.</p>

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group

Purpose of Meeting: SEBs Focus Group – April Monthly Meeting

Location: MS Teams

Time/Date: 22-04-21 at 09:00-10:45

Attendees:

- ██████████ (KW) – A66 Environment Lead at Amey/Arup
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
- ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
- ██████████ (PC (Amey)) – A66 Consultant’s Design & Engineering Lead at Amey/Arup
- ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
- ██████████ (PC (EA)) - Planning Specialist at the Environment Agency
- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England
- ██████████ (EHP) – External legal advisor at Pinsent Masons
- ██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66

Apologies:

- ██████████ (JR) – Highways England
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (TE) – Environment Advisor at Highways England

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	CD gave an update on key actions from last meeting.	
2.0	Programme Updates	
2.1	KW gave an update on the programme, with scoping report May/June and stat con around mid-September. A design snapshot will be taken in June to inform the PEIR, and design will continue to be developed – the PEIR will be very clear on the information that has been used.	
2.2	KW gave an overview of how the options assessment will work including a high level sift of options in April/May with a detailed options appraisal ongoing from May to feed into the PEIR. The team are still reviewing whether options will simply be presented in the stat con or if the team will highlight a preferred option that is technically best.	

Item	Minutes	Actions
2.3	LM asked that the team share the slides when the minutes are shared. KW agreed the team can do this but noted to the group that the work around programme is still confidential.	CD/CE to share slides with minutes.
3.0	Design Updates	
3.1	KW reviewed the design development ongoing for schemes 4/5, 6, 8 and 9 and also in relation to the Kemplay Bank Police HQ access (scheme 2). KW noted that at the May meeting, the team will invite package leads to give detailed design run throughs.	
3.2	PC(Amey) gave an update on the work at scheme 8. The team will assess the potential visual impact of the proposed western junction on St Mary's Church.	
3.3	KS asked if the environmental considerations would be fairly similar for the options being considered, particularly in terms of the water environment. PC(Amey) said broadly yes and KW noted that heritage impact will be a key factor and the options sift would be used to identify any other potential impacts for consideration.	
3.4	LM told KW that they have been contacted by the Mortham Estate who shared the report they commissioned to explain why the church plantation part of the Rokeby Park and Gardens is of low value and to ask Historic England to change their position on this. LM is preparing a response to the estate and will copy in the project team when they respond.	
3.5	KW and PC(Amey) then gave an update on the Temple Sowerby to Appleby scheme as the team have sub-options in addition to what was shared at the last meeting. KW noted there are now 8 sub-options now and the group can review the detailed sift process later in the session.	
3.6	KS asked about a junction to go off into the village from the online options. PC(Amey) explained that the existing access would be closed and could tie into the western side of the village via a new access, but this work is ongoing. KS asked if the different junctions would be considered in the surveys etc. KW confirmed that all of the area around the options is being surveyed as we come into the survey season. If sifting drops out any of the options, then some of these might be stopped. KS noted that the red option would need further river surveys. PC(Amey) confirmed these are underway. KW noted that extent of geophysics surveys would be confirmed later as not as seasonally dependent and the team would like to avoid doing geophysics on the whole area if possible.	
4.0	Evidence Plan and TWG updates	
4.1	KS agreed that it would be useful to receive data feedback from surveys on any key or interesting findings.	
4.2	LM noted internal research agenda meeting at Historic England coming up.	
4.3	KW noted a new addition to the landscape team will join who specialises in the issues the team are working on.	

Item	Minutes	Actions
4.4	<p>KS asked about agreeing the geomorphology specification – has this been agreed already? KS noted this is important now that the scale of what the team are doing has increased.</p> <p>LD asked the team to make it clear in the invites/agendas if geomorphology is going to be discussed so key EA staff can be invited. CD to raise with [REDACTED] (TWG Water chair) for next meeting.</p> <p>KW added that the flood modellers are going out on site in May and KS noted landowners may be able to tell the team where flow pathways will be as it's been so dry lately the team may not be able to see clearly.</p> <p>PC(EA) asked if the intention is to ask the EA to review the flood modelling as this will take some time. KW confirmed.</p> <p><i>Post meeting note: CD has spoken to TWG Water chair.</i></p>	<p>CD to raise with [REDACTED] (TWG Water chair) for next meeting.</p>
4.5	<p>CD asked MS if recent agendas have been helpful following past feedback. MS suggested more detail and reflection of the agreement logs to see what we want to get out of the TWGs.</p>	
4.6	<p>CE raised some feedback from LPA meetings, as some LPAs want more focus on their areas, so the group are reviewing how we do this in the TWGs.</p>	
5.0	Sifting Matrix	
5.1	<p>KW explained the matrix is trying to draw out the key NPS factors that we need to demonstrate compliance with.</p> <p>KW opened this up to the group for comment.</p>	
5.2	<p>KS asked if there would be any weighting to any of the criteria. KW said the group are not planning to weight criteria as this poses its own challenges but noted some NPS criteria are more exact than others. The scores won't be used to simply choose an option and will be used to understand if any of the options can be discounted.</p> <p>PC(Amey) noted that the initial assessment would be based on unmitigated options, and then discussions would be had about whether issues can be mitigated and if this then makes them a better option.</p> <p>KS then asked if the design principals would be used or built into the scoring. PC(Amey) explained that he has asked the team for a consistent approach when scoring. KW added that the principle for the Trout Beck crossing would be that all options need to be open span and would need to allow the watercourse to function, and these principles would not be considered as mitigation.</p>	
5.3	<p>PC(EA) noted that most of the EA's issues have been captured. In terms of waste, different options would have different levels of excavation. PC(Amey) replied that this is not explicitly covered in the matrix. KW asked PC(Amey) if information would be available to cover this, and PC(Amey) replied that some information could be available in the movement of material from the west of the scheme to the east of the scheme.</p>	<p>PC to look into adding cut and fill to the matrix.</p>

Item	Minutes	Actions
5.4	<p>MS asked if the group could expand on the meaning of the scoring (-3 to +3). KW confirmed +3 would be highly positive against the objective and 0 would be neutral. A -3 would be a serious non-compliance issue, and a -1 could be a potential non-compliance issue that could be mitigated.</p> <p>MS also noted about Biodiversity, would the habitats regulations etc be better separated out. KW and MS then agreed this is captured in the NPS section of the matrix.</p>	
5.5	<p>KS asked about the landscape section 'effect on landscape of the crossings' and queried if there is something for the rest of the route. KW noted that the whole route will be considered, and the column is just to highlight key issues. KW welcomed the group to highlight anything key.</p>	
5.6	<p>KS asked about timeline and if the completed spreadsheet would be brought to the group to discuss. KW noted that the spreadsheet has been tested at Warcop and will be applied with various iterations over the next few weeks. KW suggested this be added to the agenda of the May meeting and will bring the responses back to the group.</p> <p>PC(Amey) asked for comments ahead of Monday.</p>	<p>Group to send comments by Monday.</p> <p>CE to add matrix review to May agenda.</p>
5.7	<p>KW asked EHP if Pinsents would be able to review this. EHP agreed they had reviewed a previous version and will compare with the new version to see if they have any further comments.</p>	
6.0	AOB	
6.1	<p>LM asked about the query 'would the SEBs have a problem with the 28 stat review process?'. Unclear what this means, is this normal? KW noted that legislation states minimum of 28 days, and for bigger complex schemes this would generally be longer. The project team has been challenged to stick to the 28 days, and make sure sufficient time etc, one issue was resourcing to ensure groups have time to actually review. KW noted that as lots of information is being shared proactively ahead of time, the group should be aware and possibly will have fed into key design aspects ahead of the review period.</p> <p>KS noted for Natural England, it isn't long for the scale of the proposed scheme but likely they would have seen all relevant information beforehand. KW suggested the project team would be happy to run workshops to help people prepare and understand. PC(EA) said it was unlikely the EA would have an issue with this timescale, and agreed it would be about having sufficient information upfront, likely through TWGs, so there shouldn't be anything new at that point. With sufficient warning the EA can plan for that timescale and this shouldn't be an issue.</p>	

Item	Minutes	Actions
6.2	KS asked if stat con will be accompanied by the PEIR and draft HRA, and not the Environmental Statement (ES). KW confirmed. KS asked if the PEIR would have sufficient information to make comments on mitigation etc. KW noted PEIR will be more advanced for schemes not in route optioneering. The PEIR won't be a draft ES but will be significantly more detailed than scoping, and will be supported by extra detail where available such as a draft HRA, flood modelling and landscape assessment. It will have sufficient information to comment on likely significant effects.	
6.3	KS asked if stat con could be undertaken again for Kirby Thore and Warcop if needed. KW agreed this would happen if anything major changed in the layout or new likely significant effects were identified, then this would happen. This would knock the programme back in terms of submission dates.	
6.4	KW asked group to let them know if they can't make the date of the next meeting as it will be an important one with design run throughs. KW will confirm with PC(Amey) on dates and confirm date of next SEBs focus group.	KW to confirm next focus group date based on design information.
6.5	Group can let CD or CE know if they want to cover anything specific in the next meeting.	CD to circulate minutes.

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group

Purpose of Meeting: SEBs Focus Group – May Monthly Meeting

Location: MS Teams

Time/Date: 27-05-21 at 09:00-11:05

Attendees:

- ██████████ (KW) – A66 Environment Lead at Amey/Arup
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
- ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
- ██████████ (PC (Amey)) – A66 Consultant’s Design & Engineering Lead at Amey/Arup
- ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
- ██████████ (PC (EA)) - Planning Specialist at the Environment Agency
- ██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England
- ██████████ (EHP) – External legal advisor at Pinsent Masons
- ██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66
- ██████████ (EP) – A66 EIA Support at PINS

Apologies:

- ██████████ (JR) – Highways England
- ██████████ (TE) – Environment Advisor at Highways England
- ██████████ (MS) – A66 EIA Lead at PINS

Circulation: All

Item	Minutes	Actions
1.0	Review of actions	
1.1	CD gave an update on key actions from the previous meeting.	
2.0	Evidence Plan progress updates	
2.1	CD gave an update on progress with the Evidence Plan, sharing key areas of ongoing discussion for most Technical Working Groups.	
3.0	Scheme by scheme walkthrough	
3.1	PC(Amey) gave an overview of the options and current alterations being made for various schemes.	

Item	Minutes	Actions
3.2	<p>PC(Amey) gave an overview of Scheme 2 (M6 Junction 40 to Kemplay Bank Roundabout). KS asked if the black lines from ponds to watercourses are for drainage, PC(Amey) confirmed. KS asked if these drawings could be shared with the group. KW replied these are draft and not in public domain but could share a version in draft. PC(Amey) has copies that can be shared and are confirmed the team will also be sharing with LPAs. CE asked if screenshots of the webmaps would be useful as provides context for the environment. KS agreed context useful.</p> <p>KW added that scoping report will contain maps but confirmed that they aren't as detailed and agreed that the presented drawings should be worth shared. The team will welcome comments.</p> <p>PC(EA) asked how close the SuDS pond is to the top of the river. PC(Amey) replied about 30m away. PC(EA) asked about the topography, KS confirmed that it is fairly flat coming down from the road and then flat floodplain. LD asked if this is the location where a weir had been taken out previously. KS thinks it would be upstream – LD noted that there is erosion at that location. KS added that we wouldn't want a settlement pond in danger of the river migrating into it. KS will check on the weir location.</p> <p>KW asked what the alternatives would be for the pond location. PC(Amey) suggested nearer the road but would need to be integrated into the police land and development aspirations. KS asked if this part of the road would be resilient as there isn't much space between road and River Eamont. PC(Amey) will review offline.</p>	<p>Team to share drawings.</p> <p>KS to review location of weir.</p> <p>PC(Amey) review resilience of design.</p>
3.3	<p>PC(Amey) gave an overview of Scheme 3 (Penrith to Temple Sowerby (Centre Parcs)) and junction into Centre Parcs. KW noted outfalls to River Eden and heritage features are key here. KW asked if LMF has looked in detail here with Heritage lead [REDACTED], LMF replied that her colleague has discussed with [REDACTED] and not overly concerned. LMF noted that the areas outside of the scheduled monument fall into the jurisdiction of Cumbria County Council so the team should discuss with them. PC(Amey) confirmed discussions with CCC ongoing with this.</p> <p>CE added that from discussions with design council that this is an area where we move from more urban to rural landscapes, so mitigation and screening will be key here. KW added that there will be a Design Principals document that will be submitted with the DCO, to include information about finishes etc.</p>	
3.4	<p>PC(Amey) outlined some challenges associated with Trout Beck (scheme 4/5 known as Temple Sowerby to Appleby) and how this has led to design changes as a result of team's reviews and consultation feedback, to avoid impact on the River Eden SAC. PC(Amey) explained the sifting workshop which had been undertaken to reduce the number of alternatives. Routes taken forward after sifting: blue (a version of the preferred route, better for floodplain and Trout Beck), red (crossing further upstream and follows landform, avoid more constraints), orange (less impacts due to river already constrained, heritage features).</p>	

Item	Minutes	Actions
	<p>KS asked if for stat con the team might take 2/3 viable routes or will a final route be presented. PC(Amey) explained the team will likely take all 3 forward and present equally at the Statutory Consultation. KW added that the PEIR will consider all 3 and team are working through how to do this. AQ/Noise teams to model the scheme route wide and so would only model a preferred route but will also undertake qualitative sensitivity testing for each option. LMF asked if the team could have early conversations as orange route will likely need scheduled monument consent. LMF advised that if the team want to do any investigative works, they should get info to Historic England ASAP to begin licencing. KW noted that the team need to agree what is proportionate given the orange route may not go forward. LMF added the team need to be quite certain they are going to choose orange before any consenting or intrusive works begin. KW agrees. LMF noted that Historic England might not support this option, but needs to be discussed – LMF acknowledged that impact might be less on all other environmental features.</p> <p>KS asked if trenching works would need to consider where soil is stored to avoid sediment run off into the river and careful water quality management. KW agrees and the team are requesting info from the contractors and might use watching briefs for ecology. LD asked if paleo channels could be dated to provide information in these locations. LMF noted these can be dated via pollen etc.</p>	
3.5	<p>PC(Amey) gave an update on progress with the Warcop route (scheme 6, Appleby to Brough), and landscape and visual assessments being undertaken here. Possible that there will be options at stat con but hoping to identify a preferred route beforehand. KW outlined the policy constraints and benefits of constructing in AONB vs the alternative (more visually intrusive). View from AONB Partnership and Natural England was that the impact on environment and community must also be considered and they were positive that exceptional circumstances should be pursued to keep roads in existing road corridor.</p> <p>PC(EA) asked what the impacts might be on the water courses at the MOD depot location? Group discussed various watercourses and LD added that these Becks have already been subject to changes/works in this area. KW noted that some renaturalisation works could then be beneficial. LD noted one of the Becks goes under the railway, there is a problem with a culvert here and the council highways team were looking at this but LD not sure if resolved. PC(Amey) noted that discussions with MOD are ongoing. KS asked if consultation has occurred yet. PC(Amey) replied that a leaflet has been provided to residents of Kirkby Thore to explain the options, and landowners have also been informed. KW noted the team have also discussed with MPs and LPAs.</p> <p>EP asked about gathering evidence for the exceptional circumstances test, how far along are the team with this and do they have a feel for whether this is a viable option yet? KW noted that this is quite early on and lots of evidence still to be gathered.</p>	

Item	Minutes	Actions
3.6	<p>PC(Amey) gave an update on Rokeby design. Design is being reviewed due to setting impacts on St Mary's Church. PC(Amey) noted that the team have had some feedback from LMF and Durham County Council (DCC). LMF noted that Historic England would want to reduce the impacts to the church, the views and setting. PC(Amey) and LMF discussed potential for a walkover, and LMF suggested involving DCC in this.</p> <p>LMF asked what DCC's response was and if it can be shared with Historic England. CD has received response and will share with PC(Amey), and will ask DCC if their response can be shared with LMF.</p> <p>LMF asked if a site visit could be arranged ASAP – CE to arrange.</p> <p><i>Post meeting notes: DCC response on Rokeby options drawings has been shared with LMF. The walkover at the Old Rectory took place 23-06-21.</i></p>	<p>CD to follow up with DCC.</p> <p>CE to arrange site visit.</p>
3.7	<p>PC(Amey) gave an overview of scheme 9 (Stephen Bank to Carkin Moor).</p> <p>LMF noted there were lots of ponds around the scheduled monument and queried why this is and if they are all needed so close to the scheduled monument and raised concerns about dewatering. PC(Amey) to follow up.</p>	<p>PC to follow up on ponds.</p>
3.8	<p>PC(Amey) gave an overview of the works at Scotch Corner, and noted no capacity improvements were needed.</p>	
4.0	AOB	
4.1	<p>EP added that PINs have received the shapefiles from the team and are formulating the consultation list.</p>	
4.2	<p>EP asked if information sharing with PINs could be carried out via SharePoint instead of via email. Project team to action.</p>	
4.3	<p>KS noted that they have been doing mapping work that might be useful to the team as it looks at Biodiversity and Ecosystems resource, to identify locations where Biodiversity enhancement could be undertaken. KS added that it would be good to cross check this with the project ecologists and asked if a call would be possible to share data both ways. KW agreed and outlined the mitigation work undertaken by the team to date.</p>	<p>CD/CE to arrange.</p>
4.4	<p>KW suggested in the future Monthly Focus Group the group could run through some preliminary mitigation for a couple of the schemes. KS agreed.</p>	
6.4	<p>KS asked if next TWGs are arranged, HRA in particular. CD confirmed upcoming dates and that HRA meeting invite is about to be sent out.</p>	<p>CD to send HRA meeting invite.</p>
6.5	<p>Group can let CD or CE know if they want to cover anything specific in the next meeting.</p>	<p>CD to circulate minutes.</p>

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group

Purpose of Meeting SEBs Focus Group – June Monthly Meeting

Location: MS Teams

Time/Date: 24-06-21 at 09:00-11:15

Attendees: ██████████ (KW) – A66 Environment Lead at Amey/Arup
 ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
 ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
 ██████████ (PC (Amey)) – A66 Consultant’s Design & Engineering Lead at Amey/Arup
 ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
 ██████████ (PC (EA)) - Planning Specialist at the Environment Agency
 ██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England
 ██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66
 ██████████ (EP) – A66 EIA Support at PINS
 ██████████ (GW) – Associate Advisor at Pinsent Masons
 ██████████ (TE) – Environment Advisor at Highways England
 ██████████ (KM) – A66 EIA coordinator at Amey/Arup
 ██████████ (MN) – A66 Environment Biodiversity Support at Amey/Arup
 ██████████ (SS) – A66 Environment Biodiversity Support at Amey/Arup
 ██████████ (RA) – A66 Environment Landscape topic lead for Amey-Arup/RSK
 ██████████ (CR) - Flood & Coastal Risk Management Officer at the Environment Agency

Apologies: ██████████ (JR) – Highways England
 ██████████ (MS) – A66 EIA Lead at PINS
 ██████████ (EHP) – External legal advisor at Pinsent Masons

Circulation: All

Item	Minutes	Actions
1.0	Review of actions	
1.1	CE gave an overview of actions from last meeting.	
2.0	Design Update	

Item	Minutes	Actions
2.1	<p>KW gave an update on the design at Warcop, and the recent site meeting with MOD. Helpful discussions with Natural England and AONB partnership have also taken place.</p> <p>KW added that the team will share options in stat con but will express a preferred option.</p>	
2.2	<p>PC (Amey) gave an overview of changes to Warcop design since last meeting, where the section near the MOD recycling facility was updated, provides smaller construction footprint and fewer impacts on the river.</p> <p>PC (Amey) noted that the traveller community is supportive too, but some landowners are still being consulted.</p>	
2.3	<p>PC (Amey) noted that there is potential for some enhanced planting around a heavily lit area of the MOD site. This could also provide an opportunity for landscape and biodiversity enhancements.</p>	
2.4	<p>EP asked where the Brough Hill Fair site was previously, and what the size difference is for the new area. Old site 4.9acres, and new site is 2.2acres. However strong reasons to support exceptional circumstances test, which would be 3.4acres. Pinsents have advised this may need to be considered as open space and replaced like for like. To be confirmed.</p> <p>EP asked if the landowners were uncomfortable with the new traveller fair site. PC (Amey) replied that they haven't been consulted on that yet.</p>	
2.5	<p>LD queried the current layout of the site and PC (Amey) noted this area is set up for rows of tents.</p> <p>LD noted that the planting site is often quite wet and asked if it could be managed with Natural Flood Management (NFM). KW replied that flood surveys are ongoing. KS noted that there appears to be some ponds to the east, and a mix of planting would be best in this area.</p>	
2.6	<p>CR asked if the team has considered compensatory flood storage yet for the Warcop scheme. PC (Amey) noted the team have gathered data to inform the model and modelling is underway.</p>	
2.7	<p>KW noted that the Kirkby Thore route has not been updated since last time. PC (Amey) added that the team will revisit consultation with the community to go through the junctions, and will include a SoundLab experience. KW added that design work is ongoing and assessment work is commencing. KS asked if Long Marton will be included in the SoundLab – KW confirmed that all communities positively or negatively affected will be included.</p> <p>KS asked if the community at Warcop has been consulted? PC (Amey) replied that they have been consulted previously but not on the new version of the design shown to SEBs today.</p>	
2.8	<p>KW asked LMF for an update on the site visit to Rokeby (23-06-21). LMF confirmed it was a worthwhile visit. Previously Historic England did not support the online route, and being on site experiencing the noise impact has compounded this view. LMF's colleague [REDACTED] view hasn't changed RE the Registered Park and Garden and severance to the church would be very harmful in Historic England's view. LMF confirmed that Historic England</p>	

Item	Minutes	Actions
	<p>would still be supporting the western junction. Moortham Estates are more in favour with the online route.</p> <p>LMF noted that the western junction gives two areas either side of the church, and can be used for biodiversity but also enhances the setting of the church too. LMF added that the old school hall seemed unused but appears to be in the process of being updated, and she is unsure who owns this. Possible opportunity to use this as a cycle hub or café to enhance the A66 experience. Paths could also be enhanced to provide a route through the plantation.</p> <p>LMF will respond back to the team to confirm Historic England's thoughts within the next week.</p> <p>PC (Amey) asked if DCC was supportive of the eastern option and LMF confirmed this seemed to be the case, particularly from the landscape perspective and loss of large trees. LMF asked could these trees be avoided (located on track to the farm close to A66)?</p>	<p>LMF to provide summary of Historic England's views.</p> <p>PC(Amey) to review tree locations.</p>
2.9	<p>LMF added that the group discussed the borrowed landscape of the Registered Park and Gardens, so while it is not specifically included, it was intended to be part of the setting of the church on the hill.</p>	
2.10	<p>PC (Amey) and KW discussed the possibility of going to stat con with options but expressing a preference.</p> <p>PC (Amey) noted that the traffic preference would be for the eastern route. KW added that the environment team are likely to be in line with Historic England's view and would need to understand the traffic impacts further.</p>	
2.11	<p>KS asked if the veteran trees LMF mentioned have been surveyed to check for bats etc. KW confirmed the area is part of the ecological survey corridor and will be picked up.</p>	
2.12	<p>LMF added that they unsure where the attenuation ponds were to be located.</p>	<p>Project team to provide maps to show location of ponds.</p>
3.0	Approach to mitigation	
3.1	<p>KW gave an overview of the approach to mitigation and noted the team is not yet at a stage to share specific mitigation measures. KW explained the principal of the 'design snapshot' for the PEIR, where the design would be considered fixed by the Environment team for the purpose of assessment for the PEIR, but the design team would still consider minor updates where needed.</p> <p>KW gave an overview of noise and water mitigation principals to date.</p> <p>KS added that ponds should not be sterile ponds and should have some biodiversity within, and this should be incorporated into the design. KW confirmed this has taken place.</p>	
3.2	<p>RA gave an overview of the approach to landscape and visual mitigation such as using compact junctions where possible, considering legislation, policy and guidance and considering the road user experience. They will also be designing with the local</p>	

Item	Minutes	Actions
	<p>and regional landscape in mind. Colour and materials also influences design.</p> <p>RA noted the team is looking at the route identity and road user experience in terms of how this can be enhanced.</p> <p>Information from consultees and site visits is also being included, and focussed discussions with water, biodiversity and heritage specialists is being included.</p>	
3.3	<p>SS gave an overview of the biodiversity team’s approach to mitigation. The previous review of mitigation was prior to having survey information, and now some of this survey data is becoming available it can be included in the mitigation design. Generally, ratio of replacement planting is at least 1:1 but more than this in places. At the next EclA TWG, the team will present the ratios being used in more detail.</p> <p>The team is also highlighting areas where air quality impacts are being considered. Areas around settlement ponds are being included in the biodiversity mitigation design to improve the value of these. There are still unknowns and the approach is currently worst case. SS added that some of the mitigation areas spread quite far north and south to connect to other areas of woodland etc, to avoid creating a purely west-east wildlife corridor.</p> <p>SS also added that potential areas of mitigation that could be used to inform the EDF ideas. Biodiversity Net Gain (BNG) calculations are underway, and will feed into the landscape masterplan.</p>	
3.4	<p>KS asked how the team is getting on with BNG, and if the team have a feel for what the outcome will be yet? KS added that the new Environment Bill will include BNG for Nationally Significant Infrastructure Projects (NSIPs).</p>	
3.5	<p>KW provided further information on BNG. Currently land for enhancement can’t be included in the Compulsory Purchase Order (CPO) land purchase for BNG as this is not a requirement under current environment legislation for NSIPs. Any areas beyond mitigation areas would be included as Environmental Designated Funds (EDF) and would be subject to landowner agreement.</p> <p>KW added that it is still to be confirmed whether the A66 scheme would be subject to the new BNG requirements included in the Environment Bill, but so far discussions indicate that the A66 would be outside the new Environment Bill.</p>	
3.6	<p>KW noted that mitigation maps would be provided once available and covered in future SEBs Focus Group meetings.</p>	
4.0	EDF	
4.1	<p>KW gave a recap on the EDF process and what should fall within the project or outside the project (in terms of legacy of the project). CE to share the technical EDF annexes that are available from Highways England following the meeting. TE confirmed the EDF air quality annex document is not yet available but is being produced.</p>	<p>CE to share the technical annexes.</p>
4.2	<p>CR noted that it might not always be clear in terms of flood risk where flooding mitigation would fall, and queried if increasing the flood storage beyond what is needed would be EDF or mitigation? Project team to follow up with Highways England EDF specialist.</p>	<p>Team to follow up with Highways England EDF</p>

Item	Minutes	Actions
		team RE flood storage.
4.3	CE ran through the spreadsheet of current ideas with the group, consisting of ideas put forward by the project team, Environment Agency and Natural England.	
4.4	KS noted that it would be good to run through some of the EDF ideas with survey information. Planting species rich grassland might be part of mitigation for the project already. KS suggested a meeting with the Biodiversity team to discuss details. CE/CD to set up meeting.	CE/CD to set up meeting.
4.5	KW asked LMF if there were any heritage ideas that could be added. LMF added that the heritage EDF ideas are restricted to Heritage Assets at Risk so it is quite challenging.	
4.6	CD noted that there was an idea relating to St Ninians's church from a previous Heritage Technical Working Group (TWG), where there was potential for signage and new paths to improve access and setting.	
4.7	LMF agreed and added that there was also potential to do something with Milestones. LMF asked the other statutory stakeholders to think of any ways heritage could be incorporated with Biodiversity or Water ideas.	
4.8	KS asked if there were opportunities to revisit funding opportunities beyond July/August 2021? KS noted that there has been no consultation with landowners yet re EDF ideas. Do we need landowner agreement at this stage? KW replied that the team can start talking to landowners once more survey data is back and once determined if more data is needed.	
4.9	LD asked about slurry pipe opportunities as these are much easier to add during a construction phase. KW suggested a conversation with the project stakeholder team who have been in touch with the landowners to determine this. KS added that this would be a good opportunity for her and her colleague who already discuss slurry with farmers in the area and should be involved.	Team to liaise with KS and stakeholder team.
4.10	CR keen to explore these ideas further and talk to Cumbria County Council too. Could CR have copy of the ideas spreadsheet? Team to check if spreadsheet can be shared but will share headings with CR in the meantime. Project team to check which ideas are within the Redline Boundary (RLB), and these should be parked for EDF purposes.	CD to confirm with GA if spreadsheet can be shared. CD send headings to CR.
4.11	KW suggested a separate EDF meeting with Highways England EDF lead to go through ideas, and to get an update on which funds still have funding available.	
4.12	KS asked if the team could look at the mapping layers with EDF in mind. CR asked if they could include NFM in this. KW suggested the Environment Agency and Natural England discuss together beforehand to focus on any key areas where we could prioritise	CE to arrange meeting in next few weeks.

Item	Minutes	Actions
	both. KW suggested key people at local authorities could also be invited.	
5.0	Scoping Report	
5.1	Team happy to answer any queries or points of clarification on the scoping report, this has been agreed with PINS. Any comments should be sent direct to PINS. KS asked how different the formal scoping report is from the previous informal version. KW updated the group that comments have been taken on board from previous version, and scheme descriptions have been updated where needed. The bulk of the report isn't hugely different.	
5.2	CE added that the AONB partnership is not a statutory consultee and they have asked if they can still provide a response to Natural England to include with theirs.	
6.0	Statutory Consultation	
6.1	Aiming for 24 th September. It will be a 30-day consultation period. Holding public events at the start of the consultation period, as well as online engagement. KW asked the group to consider if there is anything the team can do to help by sharing information in advance or holding workshops etc.	
7.0	Evidence Plan	
7.1	CD noted that the Evidence Plan will be updated to include landscape and heritage agreement logs and reissued to the group. Comments received on the Evidence Plan will also be updated and included in a future version. Next TWGs to be arranged for August and will focus on initial PEIR findings and mitigation. CE discussed possible ways of running through mitigation – likely to cover this scheme by scheme and involve multiple disciplines to provide holistic discussions.	
8.0	AOB	
8.1	CE noted the team will share the presentation/slides from today with the minutes.	CD to share slides and circulate minutes.
8.2	EP asked if the team have had much feedback on how the TWGs are going. KW added that these have been very useful from the teams' perspective. KS added that maps are very useful for discussions. KW suggested the group could look to meet in person around stat con.	
8.3	Group to inform CD or CE if they want to cover anything specific in the next meeting.	

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group

Purpose of Meeting	SEBs Focus Group – July Monthly Meeting
Location:	MS Teams
Time/Date:	22-07-21 at 09:00-11:00
Attendees:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (PC (EA)) - Planning Specialist at the Environment Agency</p> <p>██████████ (KM) – A66 EIA coordinator at Amey/Arup</p> <p>██████████ (CR) - Flood & Coastal Risk Management Officer at the Environment Agency</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (NK) – Natural England representative</p> <p>██████████ (MH) – Manager in the CCC area team at Natural England</p> <p>██████████ (GH) – Representative from the Environment Agency</p> <p>██████████ (GA) – A66 Designated Funds contact at Highways England</p>
Apologies:	<p>██████████ (JR) – Highways England</p> <p>██████████ (EHP) – External legal advisor at Pinsent Masons</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (PC (Amey)) – A66 Consultant's Design & Engineering Lead at Amey/Arup</p> <p>██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England</p> <p>██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (TE) – Environment Advisor at Highways England</p>
Circulation:	All

Item	Minutes	Actions
1.0	Purpose of Meeting	
1.1	CD gave an overview of the purpose and format of today's meeting.	
2.0	Environmental Designated Funds (EDF)	
2.1	CD explained she has summarised and consolidated previously submitted ideas into themes. The group can run through these ideas and discuss which might be priorities.	
2.2	CD noted that the EDF ideas can be submitted by other organisations without Amey/Arup or in partnership with Amey/Arup or other organisations.	
2.3	The group reviewed the spreadsheet of ideas together.	
2.4	GA added that ideas that are research cannot be submitted, there must be an element of implementation.	
2.5	While reviewing water related EDF ideas, LD suggested she visit site to look at some known problematic areas to review possible ideas.	
2.6	GH noted that he would like to submit an idea for Warcop on flooding as a project for flood management in this area was previously halted due to insufficient funding but is well developed.	
2.7	KW suggested that if ideas are already worked up, SEBs should send their ideas straight to the EDF Highways England inbox.	
2.8	New ideas were added to the spreadsheet at the end of the meeting.	
2.9	CD will send out EDF spreadsheet to SEBs following the meeting for people to review and contribute to. Additional ideas may also be sent to CD to incorporate.	
3.0	AOB	
3.1	CD will send out EDF spreadsheet to SEBs following the meeting for people to review and contribute to. Additional ideas may also be sent to CD to incorporate.	CD to share spreadsheet and circulate minutes.

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group

Purpose of Meeting SEBs Focus Group – August Monthly Meeting

Location: MS Teams

Time/Date: 26-08-21 at 09:00-11:00

Attendees:

- ██████████ (KW) – A66 Environment Lead at Amey/Arup
- ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
- ██████████ (PC (EA)) - Planning Specialist at the Environment Agency
- ██████████ (RK) – Project Speed lead at PINS
- ██████████ (NK) – Natural England representative
- ██████████ (SS) – Stakeholder Integration Deputy at Amey/Arup
- ██████████ (MM) – Senior Project Manager Infrastructure at Turner Townsend
- ██████████ (LMF) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (TE) – Environment Advisor at Highways England
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
- ██████████ (PC (Amey)) – A66 Consultant’s Design & Engineering Lead at Amey/Arup

Apologies:

- ██████████ (JR) – Highways England
- ██████████ (EHP) – External legal advisor at Pinent Masons
- ██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England
- ██████████ (MH) – Manager in the CCC area team at Natural England
- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup

Circulation: All

Item	Minutes	Actions
1.0	Introduction	
1.1	KW introduced the meeting and gave an update on actions from the previous meeting.	
2.0	EIA Scoping	
2.1	KW explained the project team had received the scoping opinion on 23 rd July. It was highlighted that responses were being noted wherever possible. However due to time, where this can’t be done	

Item	Minutes	Actions
	in time for the PEIR, the responses will be used to inform future activities.	
2.2	KW added that if anyone still felt there were issues to address, these should be reiterated in the statutory responses.	
3.0	PEIR status and assessment process	
3.1	KW noted that the Environmental Masterplan is being prepared, which will be the focus of the upcoming mitigation workshops. It is advised that some of the mitigation sessions will be postponed due to alternative options being reviewed.	
3.2	KW advised that the mitigation plans cannot be changed between now and statutory consultation (stat con). The Environmental Statement (ES) will be based off the final designs.	
3.3	KW highlighted that the comparisons of alternative options will be in the route development report and the traffic information in the Traffic Report.	
3.4	KW ran through status and process, and outlined key initial findings for the environmental topics: Road Drainage and the Water Environment: some mitigation still to be finalised. Biodiversity: Reviewing Biodiversity effects. Some areas of mitigation still to be secured. Air Quality: some potential significant impacts from ammonia deposition, further work is needed. Noise and Vibration: Locations where mitigation is required have been identified but not detailed yet. Cultural Heritage: construction and operational effects identified – mitigation is being worked up. Landscape and Visual: mitigation is being resolved, in particular integration into the landscape.	
3.5	Significant adverse effects identified for: Biodiversity, Air Quality, Noise and Vibration, Cultural Heritage, Landscape and Visual	
3.6	Significant beneficial effects identified for: Noise and Vibration, Walking, cycling and horse-riding networks, and some businesses.	
3.7	PC (EA) questioned the impact on flooding, were significant water effects ruled out for all schemes? KW advised that flood modelling has just been completed and still being reviewed but initial findings show the selected routes would not have a significant impact on flooding and geomorphology, mitigation is still being developed.	
4.0	Statutory Consultation	
4.1	KW noted that consultation begins on 24 th September with information available from 9am on the website. The project team will be available to answer questions via the digital consultation rooms.	KW to share website details.
4.2	KW added that the TWGs will continue, and next meeting may become more like drop-in sessions for those wanting to discuss plans and other material directly. KW/CE/CD will set up meeting, likely 3 weeks into consultation. Other specialists can be available to attend SEBs sessions in addition to the TWG meetings if needed.	KW/CE/CD will set up meeting 3 weeks into consultation.

Item	Minutes	Actions
4.3	PC (Amey) advised that stat con period has been extended from 30 days and will run for 6 weeks, however requested that comments could be provided by the Statutory Environmental Bodies (SEBs) within 30 days wherever possible to help stick to programme.	
4.4	KW raised that the project team would like to discuss the usefulness of sharing the informal scope to inform future projects. LM and LD confirmed that they found it very useful.	
4.5	RK asked if the informal scoping worked for the project, and if it worked for the wider project speed space? KW replied that helping stakeholders understand the scheme in advance of scoping is very useful.	
5.0	Design Update	
5.1	Temple Sowerby to Appleby PC gave an update on the options for Schemes 04/05. PC noted that the preferred route to bring through into stat con is the Blue route. Both orange and blue routes can be delivered with no flooding issues that cannot be resolved through mitigation. The Blue route does have a small impact on the Eden Rivers Trust scheme but can design to mitigate. An issue with the Scheduled Monument in this location is greater with the Orange route. The Red route is discounted as it involves several water crossings and the height of this route led to significant concerns about landscape and visual, in addition to construction concerns.	
5.2	KW added that there were also some economic benefits and some local support but cannot avoid Scheduled Monument impacts completely. PC added that compensation costs would increase the cost of Orange by over £10million.	
5.3	LMF said that the Blue route will still impact non-scheduled aspects too such as the Roman Road etc but through careful design the impact can be reduced. PC(EA) agreed the detail is important here, and PC(Amey) added that the team can share the model results with the EA if needed. KW explained that the PEIR was written before the flood modelling was completed so will not be reported on in PEIR and will share information during Stat Con.	
5.4	RK noted that it is important to be clear about the route selection of route in Stat Con and if lighting is only at junctions this should be made clear in the PEIR. KW replied that the lighting strategy is not fully developed yet. PC(Amey) and KW to review lighting in terms of landscape.	PC(Amey) and KW to review lighting in terms of landscape.
5.5	PC(EA) asked what the timescales are for sharing models as this will change how the EA can respond. KW responded that the project team have more data available than can be shared at Stat Con and seeking legal advice on what can and should be shared to avoid confusion at Stat Con. KW asked PC(EA) to email on timescales from EA's perspective.	PC(EA) to respond to KW RE timescales for data.
5.6	KW requested that SEBs provide in email when they would like information so the project team can begin to prepare responses.	

Item	Minutes	Actions
5.7	Appleby to Brough	
5.8	PC(Amey) advised that the preferred route that will be promoted at Stat Con is Black Blue Black and that the project team also believe they have adequate justification for exceptional circumstances for development in the AONB. PC(Amey) also noted that the Warcop Parish Council are not in favour of this option.	
5.9	KW added that the project team have had conversations with the MOD around accommodating their infrastructure within the A66 designs and this will provide opportunities for landscaping.	
5.10	Rokeby	
5.11	PC(Amey) advised that the Black route is being taken forward and KW furthered this is due to land take and the potential impact on the Registered Park and Gardens. PC(Amey) added that the black route has the least impact on the Registered Park and Gardens but lots of ongoing dialogue with the landowner and DCC in terms of traffic. KW added that environmentally the impact of the blue/black junction is worse in terms of land take but could be mitigated. The team will present the black route as the preference at stat con but will leave the blue route in the DCO boundary.	
5.12	PC(Amey) noted that the project team have suggested to Mortham Estates they review their own report against the NPS.	
5.13	PC(Amey) advised that traffic issues, raised by DCC, are not aligning with the information gathered by the assessments. RK questioned the likelihood of DCC bringing their own modelling info into the agreement where it becomes a case of one versus the other. PC(Amey) responded that the data is the same and disagreement is down to perception. DCC were asked to provide more evidence and accident data shows B road more accidents than Moorhouse Lane. Mortham have threatened legal action but the land agent now understands the position better.	
5.14	PC(Amey) advised LMF that their colleague [REDACTED] has been referenced by DCC as saying there will be less than substantial harm on the Registered Parks and Gardens. It was requested that the SEBs make their positions very clear. LMF agreed and noted that [REDACTED] was misinterpreted and meant that in order to get to a stage of less than substantial harm, a lot of mitigation is required whilst the alternative has no harm. LMF noted that it is not their place to find a public benefit.	
5.15	LMF realises that Historic England need a tight position statement given DCC's position. LMF noted this will advise it will be harmful but will not get drawn into substantial harm or public benefits as not their area. PC(Amey) questioned the impact on loss if, when the underpass is put in, it is replanted onto and grows back over time to the point it cannot be seen. LMF will speak to CM regarding this.	LMF to speak to CM about loss RE planting underpass.
5.16	PC(EA) questioned how close the western route was to Tutta Beck and if flood modelling will be done here. PC(Amey) and KW advised that it was quite close and forms part of the farm road to	

Item	Minutes	Actions
	mitigate the farm being severed by the pond. PC(Amey) confirmed that there will be modelling for this.	
5.17	KW noted the difference between PEIR and what will be presented in stat con. PEIR assesses preferred route and difference with junctions will be explained clearly in PEIR.	

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group Meeting

Purpose of Meeting	Monthly catch up and update
Location:	MS Teams
Time/Date:	25-11-21 at 09:00 - 10:30
Attendees:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (PC (EA)) - Planning Specialist at the Environment Agency</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (NK) – Sustainability lead at Natural England</p> <p>██████████ (MM) – Senior Project Manager Infrastructure at Turner Townsend</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (PC (Amey)) – A66 Consultant’s Design & Engineering Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (09:23) - South Cumbria team for the River Eden at Natural England</p>
Apologies:	<p>██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England</p> <p>██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introduction to meeting	
2.0	Programme update	
2.1	KW explained that statutory consultation (stat con) has highlighted further work needed and the team will need time to do that, so Development Consent Order (DCO) will now be submitted around mid-May.	
2.2	Several reasons including reducing land take in the DCO boundary, new survey data that can be used, use of the Delivery Integration Partners (DIPs), local challenges and to allow incorporation of stat con feedback.	
2.3	KW noted that the change in DCO submission date does not change the start of works in Jan 2024, and uses time now to make the design as robust as possible.	
3.0	Design change updates	
3.1	KW noted that responses have been received from SEBs, Local Authorities, parish councils and interested organisations and	

	individuals and all being reviewed in their raw form and as well as using a coding tool to understand themes.	
3.2	KW explained only substantial changes would be considered material and would require targeted consultation. Material changes include changes to: how schemes function, different environmental effects, different land take requirements.	
3.3	KW shared a list of locations where design changes are being considered.	
3.4	<u>Carkin Moor</u> – rationalisation of ponds and review of construction methods as the route goes through a Scheduled Monument.	
3.5	<u>Rokeby</u> – stat con design is being reviewed following large amount of feedback.	
3.6	<u>Cross Lanes</u> – rationalise land take and review feedback about the link road in front of the farm shop.	
3.7	<u>Bowes</u> – PC(Amey) explained that a wider structure is needed at the junction opposite Bowes Castle to deliver the scheme safely.	
3.8	<u>Warcop</u> – two areas that the team are looking at, one due to responses and one due to new information that has come to light from aquatic survey work (watercourses in the area are supporting SAC species meaning they are functionally linked). The team is looking to retain the functionality of these watercourses so using the same methodology as used for Trout Beck.	
3.9	PC(Amey) provided some notes from additional flood modelling and noted that one of the ponds is causing flood issues in the modelling so it will be removed. PC(Amey) asked for feedback from the group.	
3.10	LD highlighted a culvert between road and railway that has suffered scour previously without extra flow. LD noted that [REDACTED] at the Environment Agency had asked if there was potential for flood water from around the bridge at Moor Beck to be conveyed via a swale to the smaller watercourse to the west (as this is a different catchment), as well as some flood management in the loop of the junction. PC(Amey) will review this idea with the team. LD noted there are a couple of residential properties that are near the floodplain that should be considered. KW noted that the new flood modelling has not been shared with [REDACTED] yet as it was not completed when the last water Technical Working Group (TWG) took place.	
3.11	PC(Amey) asked if the conveyance would have to be a fairly naturalised process? LD replied that it would, and a fairly shallow swale or landform review would probably be suitable but should be discussed with [REDACTED] from an engineering perspective. PC(Amey) and CE discussed setting up a meeting next week with [REDACTED] and other key stakeholders.	CE to set up meeting RE Warcop flood modelling results.
3.12	KW outlined other feedback on Warcop from some residential properties who have queried why the road is being built to the south rather than the north as it comes quite close to their properties. The team is reviewing this and various constraints. LD asked if the northern part of the junction would cut off passage for squirrels and noted a crossing could be needed – KW advised that mammal crossings etc being reviewed from this week.	

3.13	Kirkby Thore – various tweaks being looked at here including access to Appleby, the location of the Roman Camp Scheduled Monument and access to Long Marton.	
3.14	LD noted that the river to the south of the old road should be considered as the slope is not very stable. PC(Amey) responded that the team that previously did the stabilisation work are the same as those reviewing, so they are very familiar.	
3.15	KW noted this would be subject to targeted consultation.	
3.16	PC(EA) noted that there are abstraction points in the area. PC(Amey) responded that the team is aware and the wells are located within the loops of the junctions and the team are in contact with British Gypsum to understand these wells further.	
4.0	Statutory consultation updates	
4.1	KW noted that SEBs stat con feedback was very helpful and noted that CE will likely be in touch regarding focus of future TWG discussions. KW gave some project updates based on some key consultation points raised by SEBs.	
4.2	KW noted that the current instruction from DfT is to continue to use Metric 2.0 for Biodiversity Net Gain.	
4.3	KW explained that current DfT policy does not allow for Biodiversity Net Gain target of 10%, however the amount of net gain will be maximised, and current work suggests this will be a positive situation.	
4.4	KW advised that the team is reviewing LA105 and NEA001 and has now received the ammonia tool from National Highways. NK explained that she is drafting an email on the differences between LA105 and NEA001 to hopefully send this week.	
4.5	KW added that the flood modelling is ready for review. PC(EA) noted that this is underway, and this is having to be done via transfer of a hard drive as it could not be done digitally so there is a slight delay.	
5.0	AOB	
5.1	PC(EA) noted that mitigation will be a key interest of the Environment Agency and keen to resolve any issues prior to submission. KW agreed and noted this may take various forms and require stages. CE will map out how this can be done.	CE to review how to pick up mitigation with SEBs.
5.2	CE noted that the next SEBs meeting will likely be not exactly a month due to Christmas and may instead be early in the new year to avoid school holidays and Christmas break. KW added that if any key design discussions were needed these could be carried out separately in the interim.	

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group Meeting

Purpose of Meeting	Monthly catch up and update
Location:	MS Teams
Time/Date:	13-01-21 at 09:15 - 11:00
Attendees:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (PC (EA)) - Planning Specialist at the Environment Agency</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (NK) – Sustainability lead at Natural England</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (PC (Amey)) – A66 Consultant's Design & Engineering Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England</p>
Apologies:	<p>██████████ (MM) – Senior Project Manager Infrastructure at Turner Townsend</p> <p>██████████ (TE) – Tamlyn Embley (TE) – Environment Advisor at Highways England</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introduction to meeting	
2.0	Design change and targeted consultation	
2.1	KW gave an update on the design changes that are being progressed for Kemplay Bank (Open Space re-provision) Temple Sowerby to Appleby (junction changes at Kirkby Thore, Long Marton and Appleby) and the Warcop schemes (alignment moving north at Sandford and raising of structures over watercourses north of Warcop).	
2.2	KW noted that these changes will be subject of targeted consultation (non-statutory), as they are of sufficient difference to what was presented at statutory consultation. Early February is the aim for targeted consultation.	
2.3	KS asked if non stat consultees will be invited. PC (Amey) said this is being reviewed, and the consultation will be targeted at the right people who could be affected or may have a response to share. PC (Amey) acknowledged the importance of AONB Partnership in relation to Warcop changes.	
2.4	PC (EA) asked how long the period will be and if this will impact the programme of the project. KW replied that it will be 28 days and will not impact the wider programme as it has been built into	

	the revised programme, so responses are returned in time to inform the final scheme that the DCO application is based on.	
2.5	LD asked whether - for examples like the crossing of Trout Beck the contractors are looking at temporary works as these could be substantial? PC(Amey) noted buildability, advanced works and temporary works should be split out. Buildability is being reviewed and refined and is looking at how we get across the watercourse and the compound strategy is being overhauled too. Larger compounds are being considered to act as hubs with smaller satellite compounds, and where possible compounds are being combined for schemes. The ES will cover some elements of this, LD noted that the team should be realistic about what might be required for this as it is a significant construction and should be considered early. KW suggested that the Delivery Integration Partners (DIPs) consult on this early, and conversation with LD and PC(EA) would be helpful.	KW to discuss Trout Beck with DIPs and arrange early meeting if possible.
2.6	KS noted she had a similar query about Trout Beck crossing detailed design. PC(Amey) responded that a report is being prepared on this and more flood modelling is being undertaken and more detailed work needed on orientation on piers looking at flows. This will largely be taken forward at detailed design. This can be discussed further at the next TWGs.	
3.0	Environmental mitigation approach	
3.1	KW outlined the approach to mitigation following stat con, including mitigation by design: avoid, minimise, restore examples were given and KW noted these have been incorporated into the design and will be covered in the Outline Environmental Management Plan (OEMP) and the ES.	
3.2	KW noted how environmental mitigation and land take requirements have evolved since stat con, where a high level and worst-case scenario was presented. More detail is being added and refinement has been undertaken.	
3.3	KW added that the team are working with landowners to understand what their operations are and their preferences for ecological mitigation. A substantial reduction in land will be seen compared to what was shown previously, but the project will take enough land to cover required ecological mitigation.	
3.4	KS noted that a lot of the mitigation information will be key to the HRA. KW noted that the team will be working very closely with the EA and Natural England on this. KW noted that the HRA programme is dependent on the air quality modelling. CE noted the short turnaround on the review period for Natural England on the HRA so advance notice will be given, and Natural England will have been consulted on key points in the HRA ahead of time either via email or through the Technical Working Groups (TWG).	KW/CE will confirm the date draft HRA will be shared with NE.
3.5	CE outlined the upcoming environmental mitigation with LPAs and asked if SEBs would prefer to attend 4 separate sessions with LPAs to cover everything, or separate SEBs session to be more targeted on specific areas. KS and LMF discussed benefits of separate targeted session. Likely to take place late January.	CD/CE to arrange.
3.6	CE ran through A66 driver experience and landscape design.	
4.0	Response to stat con design change	

4.1	CE ran through the design related comments from Historic England and reported back how these have been addressed. LMF believes this covers the relevant points and will get in touch with CE if anything else comes to light.	
4.2	KW and CE noted that individual responses will not be sent to each consultee, but all points raised by consultees in response to the statutory consultation will be responded to and will be addressed in the consultation report. If an organisation would like a formal written response, let CE know.	
4.3	KS asked if the responses would go into the Evidence Plan. KW confirmed this, and CE added that this will be carried through into the Statements of Common Ground (SoCG).	
4.4	PC(EA) asked if it would be possible to share the responses with the EA so they can be shared with other colleagues who inputted into the EA stat con response. CE agreed to share the slides. KW noted that similar tables will also be prepared for all aspects and can be shared once ready.	CE to share slides and follow up on when the wider response tables will be available.
4.5	LMF asked when the consultation report will be shared – KW noted that the key information in the report (Relevant response tables) can be shared ahead of time but the report as a whole is unlikely to be available in advance of the DCO submission.	
4.6	CE ran through the design related comments from Natural England and how these have been addressed.	
4.7	KS commented that the project should provide sufficient protection for rivers and roads, to take into account possible future movement of rivers.	
4.8	RK asked about lighting, and asked if lighting was being considered on a case-by-case basis. KW confirmed this, and noted that lighting is to be replaced like for like at the two terminals where it is already lit, and one location off the mainline at Bowes where a safety case review has indicated a need for lighting. RK noted this may cause people to question why some locations and not others. KW responded that the overarching principle is that it is a rural road and therefore lighting is not appropriate, however where safety issues are identified, lighting will be incorporated on a case-by-case basis.	
4.9	KW noted the points on bat mitigation, and that discussion with the ecology team in future would be useful. KS agreed. KW suggested this be done in a TWG as it is very topic specific. CD noted the next TWGs for biodiversity are late January and will ask the team to cover this there.	CD to let EcIA and HRA TWG leads know to cover bat mitigation.
4.10	NK believes this covers the key points from the NE stat con response.	
4.11	CE ran through the design related comments from Environment Agency and how these have been addressed.	
4.12	PC(EA) commented that mitigation locations on schemes 1/2 should further consider river erosion as River Eden has shown some movement already. PC(EA) asked that this location be covered in the upcoming mitigation session.	CD/CE to advise water/design teams.

4.13	PC(EA) and LD agreed this covers key points from stat con.	
5.0	AOB	
5.1	RK noted that in terms of Project Speed, PINs are gathering all the evidence and lessons learned to understand if this should be business as usual. RK said that PINs are trying to build closer relationships with LPAs and would like to do the same with statutory bodies, without National Highways and/or Amey/Arup in the room (to gather wider learning on points that could inform learnings for other projects). RK said he would like to set up a session and asked if anyone would object to that? No objections raised.	RK to arrange sessions.
5.2	KW noted that the Evidence Plan will eventually transfer into the Statements of Common Ground. How and when this happens needs to be agreed internally and we will then let the group know. As part of that the TWGs will move to be organisation-specific, probably from around March, to focus on draft SoCG.	

Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group Meeting

Purpose of Meeting	Monthly catch up and update
Location:	MS Teams
Time/Date:	10-02-22 at 09:15 - 11:15
Attendees:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (PC (EA)) - Planning Specialist at the Environment Agency</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (PC (Amey)) – A66 Consultant's Design & Engineering Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England</p> <p>██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66</p> <p>██████████ (MM) – Senior Project Manager Infrastructure at Turner Townsend</p> <p>██████████ (JS) – A66 Landscape and Visual Lead at JSLA</p> <p>██████████ (AT) – A66 Landscape and Visual Specialist at RSK</p> <p>██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup (<i>joined at 10:50</i>)</p>
Apologies:	<p>██████████ (TE) – Tamlyn Embley (TE) – Environment Advisor at Highways England</p> <p>██████████ (NK) – Sustainability lead at Natural England</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introduction to meeting	
1.1	KW and AT noted they will leave for another meeting at 10:30.	
2.0	Actions from previous	
2.1	KW gave an update on Trout Beck and conversations with Delivery Integration Partners (DIPs) – work in progress. KW to raise with them again the need to consult early around construction planning for this location (and others on River Eden) and propose meeting	KW – action carried over
2.2	CD noted that draft HRA is currently programmed for mid-March and comments needed back 22 nd March (as content has been largely discussed with NE in TWGs). KS asked if a draft of the ES chapter would also be available to help inform responses. KW noted that there is not time in the	KW to check availability of background

	programme to share ES chapters for comment, but if it would be helpful as context for HRA review, the team will look into this and see what can be provided. May be issue with timing as EclA chapter being produced later than HRA.	information to support HRA review
2.3	RK noted that conversations (as discussed at last meeting) regarding learnings from Project Speed have been held with Historic England and Natural England to date, which have been very helpful. To discuss with the Environment Agency later today. This information will be shared more widely in due course as part of the Project Speed lessons learnt.	
3.0	Project and programme updates	
3.1	KW gave an update on the project, including that targeted consultation is ongoing regarding the proposed changes that were discussed at the last meeting, mitigation design is progressing, and ES is underway.	
3.2	PC(Amey) noted that targeted consultation is underway and progressing well. A few small areas have been raised to be reviewed but generally very positive feedback from the public events.	
3.3	<p>CE noted that SoCG are underway for first drafts. RK asked what the Evidence Plan document would look like and will this be included in the application document? Is the purpose to influence the statements of common ground?</p> <p>KW explained that the Evidence Plan contains a record of all agreements (and areas not yet agreed) to date, along with all minute of meetings. After the next TWGs, we will move to organisation specific discussions and will move into finalising the draft SoCGs. The Evidence Plan will be appended to the ES as part of the evidence base for the consultation section and to the SoCGs.</p> <p>CD gave an update on the stage the Evidence Plan is at and current content (which takes the record of agreement up to statutory consultation), and noted that landscape and heritage sections have not yet been shared in draft. KW asked SEBs leads if they would like to see a draft now or wait until fully updated to the latest agreements . CD will share the current version next week, along with timings for the next update and SEBs can choose if they wish to comment on it at this time or wait for the final version.</p>	CD to share next iteration of Evidence Plan
4.0	Environmental mitigation approach	
4.1	KW outlined the approach to mitigation following stat con, including mitigation by design, and an update on BNG and how it is being used to inform the mitigation areas. Based on the very latest calculations, we are likely to be in a Net Gain position at submission (rather than no net loss) and this will be developed and improved further as the contractors are incentivised to deliver additional BNG.	
4.2	KW outlined how the landscape design has been developed.	
4.3	JS gave an overview of the landscape mitigation using Webmaps for each scheme.	
4.4	<p>Scheme 01/02</p> <p>LD commented on the shape of the ponds and asked what potential there is for them to be improved for wildlife. KW</p>	

	<p>confirmed that at detailed design, the ponds will be looked at to deliver environmental and biodiversity improvements where appropriate. This will be set out in the Design Principles document, which is certified along with the DCO. LD queried whether if left until detailed design, the engineering ponds can be turned into wildlife ponds, as they need shallow slopes (the areas involved in the ponds for the correct volume may not be able to provide shallow slopes). KW noted that areas are being retained around them for planting and this overall area will be available for the ponds to be redesigned as appropriate. CE noted that linear ecological features are not shown in the current Webmaps (such as bat crossings) but will be on the environmental masterplans. LD asked if the proposed wet woodland to the north of the river would be very wet as the areas adjacent to the river along this reach tend to be fairly sandy – JS noted the ecologists have surveyed this area and proposed wet woodland based on their survey findings.</p>	
4.5	<p>Scheme 03 AT noted that the Countess Pillar has a very open feature. AT noted that subtle grades are used wherever possible so that as much land as possible can be returned to the landowner.</p>	
4.6	<p>LD noted that the Forestry Commission site notes there are some new woodland diseases in the area, so consideration needs to be given to the species that are planted. JS noted that this will be taken into account in the planting mix and reviewed at detailed design against the latest information.</p>	
4.7	<p>Scheme 04/05 PC(Amey) and JS discussed the landscaping in terms of views – JS noted that ZTVs will be used to review this information. PC(Amey) requested a ZTV from Sanderson’s croft, JS confirmed this is being undertaken and has been tweaked following consultation with the LPA.</p>	
4.8	<p>KS asked where the ponds will be discharging to. PC(Amey) noted that outfalls to the north of Kirkby Thore run into Birk Sike via existing culverted watercourses.</p>	
4.9	<p>KS asked if the look of the Trout Beck bridge is being considered so that it is in keeping with the landscape. JS noted that the structure is being designed to be as simple as possible, so should be in keeping and shouldn’t draw attention to itself.</p>	
4.10	<p>LD asked about the land that is likely flood compensation land as the shape does not look appropriate. CE to find out what this land is for.</p>	<p>CE to review this area with the water and design teams.</p>
4.11	<p>LD asked if the long skinny feature near the River Eden would be planting or a pond. JS confirmed this is a strip of planting (and may not be required depending on how much existing planting can be retained).</p>	
4.12	<p>Scheme 6 PC(Amey) noted that there is an area of Common Land included in the mitigation polygons and this needs to be replaced like for like, so if proposed for new mitigation habitats it may need</p>	<p>CE to raise with ecology team and EF</p>

	moving. CE to raise and check it will be reviewed on boundary review call.	
4.13	<p>Scheme 7 [KW, MM and AT left the call] PC(Amey) asked the Environment team to review the enhancement planting around the allotment site and whether this is Open Space.</p>	JS/CE to review this with the ecology team.
4.14	<p>Scheme 8 JS noted that the ecological areas for this scheme are still being finalised. LM asked if the heritage consultants have assessed the impacts of additional planting to the east of the vicarage? LM noted she does not want this to impact on the park and garden. JS noted that the heritage team suggested this and should be ok. LM asked to check if this planting to the south would detract from the Park and Gardens. LM will ask the Historic England landscape architect to review this. CE suggested to LM that we could have a separate session on this if needed – LM to let CE/CD know if a call is needed.</p> <p><i>Post meeting note: the proposed meeting has now taken place.</i></p>	LM to let CE/CD know if a call is needed on planting at the Park and Gardens.
4.15	<p>Scheme 09 LM queried if the pink areas on Webmaps would be grassland. JS clarified that this is biodiversity areas that still need to be linked up in the mapper – likely to be species rich grassland. KS asked if the project will be material neutral in terms of cut and fill? JS noted that the project will work towards a balance wherever possible, where appropriate for the landscape. PC(Amey) noted that there is a level of surplus, due to unusually high topsoil levels throughout the project area. The team are working with the contractor to review where materials can be moved etc. Striving for a balance wherever possible</p>	
4.16	<p>Scheme 11 No comments were raised.</p>	
4.17	<p>Scheme 8 - Heritage lead DL joined the call, and the team collectively reviewed the query on Scheme 8. DL noted that this is unlikely to have much of an impact. LM asked if this would blend in the design to the planting towards the church and not detracting from the design of the Park and Gardens. LM will review with the Historic England landscape architect and feed back to the project team. DL noted that there is a need for screening between the local road and the A66. CE noted the need to resolve this ASAP (LM on leave from 19th Feb), so group agreed to add something to the diary in case this was needed.</p>	CE/CD to arrange a meeting to cover this topic ASAP.
5.0	AOB	
5.1	RK queried the approach to additional survey data that may follow the main submission. RK noted this should not undermine the ES itself – could the group look at how this is set out on the face of the application? To be reviewed in a later session (RK noted this has been raised with KW previously, but wants to ensure those reviewing the application do not query if the ES is complete etc in	CE/CD to feed back to KW and review in subsequent meeting.

	light of data gaps etc. It's about the messaging that goes with this in the application).	
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Minutes of Meeting

A66 NTP

SEBs Monthly Focus Group Meeting

Purpose of Meeting	Monthly catch up and update
Location:	MS Teams
Time/Date:	24-03-22 at 09:00 - 11:00
Attendees:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (CS) – Associate Technical Director at Arcadis on behalf of National Highways</p> <p>██████████ (LM) - Inspector of Ancient Monuments at Historic England and Historic England lead on A66 <i>(left at 10:00)</i></p> <p>██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup <i>(left at 10:00)</i></p> <p>██████████ (AD) – Inspector of Ancient Monuments at Historic England <i>(left at 10:00)</i></p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency <i>(joined at 10:00)</i></p> <p>██████████ (PC (EA)) - Planning Specialist at the Environment Agency <i>(joined at 10:00)</i></p> <p>██████████ (KS) – Lead advisor (River Eden SAC) and wider A66 input at Natural England <i>(joined at 10:00)</i></p> <p>██████████ (NK) – Sustainability lead at Natural England <i>(joined at 10:00)</i></p> <p>██████████ (MH) – Manager in the Cumbria area team at Natural England <i>(joined at 10:00)</i></p> <p>██████████ (MB) – A66 RDWE Topic Lead at Amey/Arup, Chair of RDWE TWG <i>(joined at 10:00)</i></p> <p>██████████ (TH) – Aquatic ecologist, Chair of A66 HRA TWG <i>(joined at 10:00)</i></p>
Apologies:	<p>██████████ (TE) – Environment Advisor at National Highways</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (MM) – Senior Project Manager Infrastructure at Turner Townsend</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introduction to meeting	
1.1	KW outlined the meeting will be split in two between Historic England (9:00-10:00) and Environment Agency (EA)/Natural England (NE) (10:00-11:00).	

	<p>KW noted this meeting will cover how mitigation will be secured in the DCO. Slides are to be issued with minutes.</p>	
2.0	General introduction to how mitigation is secured	
2.1	<p>KW explained that Order Limits will protect certain elements such as heritage assets by not including them where possible. Works plans define where ponds, roads, roundabouts are. Limits of Deviation (LoD) will be applied to these.</p>	
2.2	<p>The Project Design Principals (PDP) document – will secure the design of specific features that need to be present to gain appropriate mitigation. This will be a certified document under DCO so contractors will have to comply with it.</p>	
2.3	<p>The Environmental Management Plan (EMP) will be used to secure management procedures. This will also be a certified document and must be complied with and enforced on site.</p>	
3.0	Heritage [09:00-10:00]	
3.1	Stephen Bank to Carkin Moor - Carkin Moor Scheduled Monument	
3.1.1	<p>The centreline will have LoD but the team have pulled the Order Limits as tight as possible around the Carkin Moor scheduled monument.</p>	
3.1.2	<p>DL reviewed where trenching had taken place on the north side of the A66 and noted that the design principal here is to minimise ground disturbance wherever possible.</p>	
3.1.3	<p>An otter crossing is required at this location and LM queried the size of it. DL noted that it is included in the body of the embankment to avoid digging down any deeper. KW noted this will be included as a design principal.</p>	
3.1.4	<p>LM queried if there are embankments on both sides of the A66 as it passes through the scheduled monument? DL stated that there will be a retaining wall to the south of the road.</p>	
3.1.5	<p>AD queried if a general rule for this scheme could be, if topsoil is removed for embankments, could a protective layer be added to protect exposed archaeology while machinery is present. The group agreed that where the contractor can't guarantee avoidance of machinery in these areas, a protective layer would be needed. LM added this could be for scheduled monuments and non-designated assets. This will be included as a design principle for all schemes.</p>	
3.1.6	<p>LM asked for the retaining wall to be included in design principals. In addition, a design principle to only allow construction of the retaining wall from the existing carriageway shall be included in the design principles.</p>	
3.1.7	<p>Part of the southern section of the scheduled monument falls within the Order Limits. The need for a design principle to protect this area was discussed. LM suggested marking the scheduled monument with a fence. DL suggested a boundary buffer could be added.</p>	

3.1.8	<p>LM noted the cutting for Warrener Lane being so close to the scheduled monument is not ideal as it affects the setting but understood the need for the design.</p> <p>A design principle requiring the cutting to be offset as far as possible from the scheduled monument and for the construction works to only be from the south in the area was discussed.</p>	
3.1.9	<p>LM noted a design principal of not tracking over the scheduled monument (unless necessary to include a drainage ditch for example), no storage of materials on it etc was required. KW noted that the wording would require the contractor to stay outside and work outside the scheduled monument boundary wherever possible and to include a protective layer and minimise tracking wherever works are needed inside the scheduled monument.</p>	
3.1.10	<p>KW added that a LoD will be included for the Warrener Lane area to keep works away from scheduled monument wherever possible. LM noted she would like to ensure design doesn't change substantially from what is shown here.</p>	
3.1.11	<p>DL asked if planting would need to be constrained here too. KW showed the mitigation plans on WebMaps and noted that there would be open grassland on the scheduled monument and would be non-intrusive planting. LM asked if the landowner will maintain this land as pasture. KW will follow up, as NH will buy the land and may sell it on.</p>	<p>KW to query how the land will be maintained.</p>
3.2	Cross Lanes to Rokeby	
3.2.1	<p>Greta Bridge</p> <p>DL noted that the scheduled monument has come into the Order Limits.</p> <p>LM queried if this will be resurfacing and/or line marking. KW confirmed that it will be.</p> <p>A design principle was discussed that the works in this area should not extend below existing carriageway construction, this shall be included.</p> <p>LM noted the vicus extends under the carriageway in this location. AD noted this was also the case at Kirkby Thore.</p>	
3.2.2	<p>Rokeby Park and Gardens</p> <p>No changes have been made to design here since the latest Rokeby discussion, so no further discussion was required.</p> <p>DL to share notes from latest Rokeby discussion.</p> <p>Design principles around planting design in this area to be based on the most recent Rokeby discussions including requiring tree planting to reinstate planting, to try and replicate what was previously there, and avenue tree planting along road with more feathered planting on the southern side.</p> <p><i>(Post meeting note: notes from meeting were shared with Historic England via email on 02.03.2022)</i></p>	<p>DL to share notes from meeting.</p>
3.2.3	<p>Rokeby Park and Gardens</p> <p>KW noted that the Order Limits are fairly tight here already and the Old Rectory has been taken out due to challenges from the landowner. The Order Limits also protect the row of trees to the north.</p>	

3.2.4	<p>Milestones DL noted that the two milestones in this location are within the Order Limits and will be covered by a design principle requiring a strategy of 'record, remove, replace' where they still exist (as to date it has not been possible to locate one of the two recorded milestones).</p>	
3.2.5	<p>Cross Lanes Farm DL noted the farm (and the milestones) are Grade II listed and would sit with the conservation officer, but if they are to be removed (even to be replaced) Historic England would be involved. This area is mostly covered and protected by the Order Limits.</p>	
3.3	Bowes Bypass	
3.3.1	<p>Stone Bridge Farm DL explained there would be a setting effect here rather than a physical effect. A design principle to not let the access road be constructed directly in front of the houses is to be included.</p>	
3.4	Appleby to Brough	
3.4.1	<p>Warcop Roman Camp and Roman Road DL explained that this is mostly protected by the Order Limits but the west part will be lost to excavation and this needs to be minimised as much as possible through detailed design. A design principle shall be included to minimise impact as much as possible through detailed design. KW noted the contractors have asked for Order Limits to be extended further to the south to allow a potential shift of the scheme further south away from the scheduled monument. The north boundary will remain as shown. DL noted that the design principal here means the impact on the scheduled monument can't be any greater than currently shown on maps and should be lessened wherever possible.</p>	
3.5	Temple Sowerby to Appleby	
3.5.1	<p>Redlands Bank DL and AD have discussed this area previously. Order Limits take a sliver of the scheduled monument. The depth of excavation will be limited here through a design principle as it is intended only as a cycle path.</p>	
3.5.1	<p>Roman Road LM noted the Roman Road is not scheduled but asked if the planting in this area has been discussed with the county archaeologist? KW said she would follow up if planting has been discussed with the LPA.</p>	KW to follow up if planting has been discussed with the LPA.
3.5.1	<p>Kirkby Thore Roman Fort DL noted there is a kink in the Order Limits that pushes into the SM – KW to query this with design team. DL added that there are no impacts anticipated here.</p>	KW to query the Order Limits here with design team.
3.6	Penrith to Temple Sowerby	

3.6.1	<p>Countess Pillar and Alms Table</p> <p>These features are included within the Order Limits due to the works proposed around them. The design principal for these features will require that the currently fenced area will not be touched and will be protected from machinery. DL noted that the wider scheduled area is likely to be a buffer around the structure.</p> <p>KW noted the team will determine the working distance and will note minimal works to allow construction of the path will be included in the design principles. DL added that excavation works to the south of the monument should not be able to move northwards.</p> <p>LM asked if English Heritage had been consulted on the scheme? LM commented that presumably they are happy that the site will be better connected. DL to check.</p>	DL to check if English Heritage have been consulted on this.
3.6.2	<p>Brougham Castle</p> <p>KW noted the team need to talk to the Principal Contractor about the overbridge and constraining this. Otherwise in the scheduled area there will be planting, but DL noted this would be grassland. KW to add this as a design principal. KW will check the underpass with the Principal Contractor too but believes this is already addressed.</p>	<p>KW to add design principal for planting here.</p> <p>KW to discuss overbridge and underpass design with Principal Contractor</p>
3.7	AOB	
3.7.1	KW noted the group will share the EMP and PDP when available with HE.	CD/CE to share the documents with HE.
3.7.2	LM asked for a schedule of documents they will be receiving as part of the DCO. KW suggested covering this in the last SEBs monthly meeting in April. DL added this should also be shared with the other members of the TWG too.	CE/CD to share schedule of documents
4.0	Natural England / Environment Agency [10:00-11:00]	
4.1	KW gave an overview as in Section 2 of these minutes. Slides are to be issued with minutes.	
4.2	KS queried when the team would need comments back for.	KW to check programme
4.3	Temple Sowerby to Brough – Trout Beck (River Eden and Tributaries)	
4.3.1	<p>KW noted that the Order Limits include part of the SAC and have been identified to provide a reasonable working area. KW noted that a design principle has already been identified for this area in relation to the bridge design – to include an open span structure.</p> <p>KW suggested a meeting with the Principal Contractor on working methods in relation to the SAC.</p> <p><i>(Post meeting note: the meeting with the Principal Contractor was held on 07/04/22.)</i></p>	CE/CD to set meeting up.

4.3.2	KS asked what the oval area on the map is – CE noted this area will be flood compensation land. KS asked if the land will be lowered here. LD noted that lowering the land doesn't always work. CE added that she spoke to the engineers on this and they said it could be tweaked at detailed design stage and could be blended into the landscape better, however this has been tested in the flood models and does work.	
4.3.3	KS asked if there is a footpath all the way down the road here? KW noted the intention is to create east-west links wherever possible and will check this for KS and find out if this can be shared. KS noted if any of these routes will be crossing a river, they will need to be included in the HRA. TH noted in a previous iteration of design that there used to be a path crossing the river but believes this was taken out. KW to confirm this is no longer present.	KW to check footpath with design team.
4.3.4	LD added a geomorphologist should look at this flood compensation area as it is very close to the river and potentially on a paleo channel but noted that this is not detailed design stage.	
4.3.5	LD queried outfall design. TH noted that the engineers were proposing open ditches A design principle shall be included to require that wherever the riverbank is natural, drainage features should tie in as open ditches, and where the riverbank is engineered drainage features should tie in with existing outfalls.	
4.3.6	LD noted the culverted watercourse not shown underneath the road and queried if it could be improved to improve fish passage. The group discussed the culverts in this location, and the potential for other species to travel up here if culverts were removed or improved. TH noted that the design team may be considering de-culverting some of this.	TH/KW to follow up with drainage team on culverts here.
4.3.7	PC noted that the EA will likely push back against flood compensation areas within the flood zones.	
4.3.8	KW noted that the Principal Contractor proposes to use a construction methodology involving a temporary crossing similar to that used for the A14, noting that the watercourse in that instance was not designated. There was discussion around the need for any temporary access roads to be designed to cope with flooding. LD queried crane platforms and whether their design is realistic. KW suggested an additional meeting with the Principal Contractor to discuss points like this with the group. <i>(Post meeting note: the meeting with the Principal Contractor was held on 07/04/22)</i>	CE/CD to set meeting up
4.3.9	TH noted KS's comment on the HRA in relation to piers and natural movement of the river. KW added that there is an existing design principal relating to the bridge structure needing to be open span, but another one will be added to cover the piers specifically. Piers to be designed to sustain erosion to allow for the migration of the watercourse (piers could end up	KW to add another design principal to cover piers.

	in middle of river) and the foundation depths needs to take account of this.	
4.3.10	KS noted that the outfall ditch on the left bank may need to be rejigged to fit with the river restoration scheme proposed by Eden Rivers Trust there. KW thinks this had been taken into account.	
4.3.11	KS added that there is an area of paleo channel where the landowner has done a lot of woodland planting. KS noted the team should be aware there is a lot of new planting that may not be on aerial maps yet and a ditch may go through here. TH added the Order Limits are very restrictive here to avoid impacts.	
4.3.12	KS asked who will be responsible for the ditches after completion. KW explained that where the drainage ditches are for roads, if relating to the A66 – NH will be responsible, and if it is a de- trunked road then responsibility is passed to the LPA.	
4.4	Appleby to Brough – Warcop	
4.4.1	KW gave an overview of the design in this area. TH noted that there aren't going to be geomorphological impacts but there are tributaries that support species that are qualifying features.	
4.4.2	KS asked if there will be a hierarchy of crossings. TH explained there is a hierarchy and outlined that how the design principals will relate to this hierarchy.	
4.4.3	PC noted there could be opportunities to incorporate other benefits and acknowledged that what is presented at DCO will not necessarily be the final flood risk solution. PC suggested a design principle should be included, which allows flexibility for other work to be done in parallel increase benefits. KW agreed and noted that the scheme put forward at DCO must be permissible, but the design principle will provide for further refinement.	KW/CE to add design principal for work to be done in parallel here.
4.4.4	Moor Beck LD noted that the basin here is very hard against the river and could be a concern as it would not allow Moor Beck to migrate. KW flagged that the design team had faced challenges finding suitable locations for the basins in this location as there were not many options available. It was noted that historic mapping showed that Moor Beck had not moved from its current alignment in a very long time. PC requested the inclusion of a design principle relating to ponds near watercourses requiring their design to protect against erosion.	KW to add a design principal to prevent pond erosion through design.
4.4.5	MH asked about the design in this location in relation to the AONB and whether there were wider restoration opportunities that would negate the need for a raised road solution. KW noted that the intention is to define this design, and this is a worst case with LoD, and flood modelling will continue to understand if the same solution can be achieved for geomorphology with a lower and softened solution.	

4.4.6	<p>The need for a design principle relating to local access roads within the AONB being in keeping with the AONB was discussed and a design principle will be included to capture this.</p> <p>MH noted that if conversations are including the AONB partnership this is good. KW asked MH to share with Andy Gale too and agreed to share the EMP and PDP document also with the AONB Partnership when available.</p>	CE/CD to share docs with AONB Partnership
4.4.7	<p>KS queried whether the PDP would include planting details. KW agreed a design principle will be included requiring planting for ponds to be native to River Eden catchment. MH added this should be applicable to bank restoration works too.</p>	KW to include a design principal to require native planting for ponds in River Eden catchment.
4.5	AOB	
4.5.1	<p>KW noted an outline method statement for working adjacent to the SAC will be included in the EMP and will arrange a discussion with the Principal Contractor.</p> <p><i>(Post meeting note: the meeting with the Principal Contractor was held on 07/04/22)</i></p>	CE/CD to set meeting up
4.5.2	<p>KS asked if the HRA included anything with regards the temporary bridge. TH noted it does not currently but this will be included.</p>	
4.5.3	<p>TH added that a conversation about the construction window would be ideal with respect to the various species migration periods. LD noted that the closed season for salmonid has been extended and now runs from 1st October to 15th June, which overlaps with crayfish and breeding birds. KS agreed to a discussion and agreed to bring fisheries team along if needed.</p> <p>LD and KS to send availability to CE and CD to arrange follow up meetings.</p>	TH to arrange call on construction timing re. species migrations

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	HRA TWG 3	File reference Text
Location	Teams	Time and date Time 1500- 8 July 2021 1630
Purpose of meeting	HRA TWG 3 meeting	
Attendance	<p>██████████ (KP) - Chair of EclA TWG and A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (TH) – A66 Biodiversity Topic Support at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (CCP) – Sustainable Development Coordinator at Eden District Council</p> <p>██████████ (TE) – A66 Environment Lead at Highways England</p> <p>██████████ (TMH) – Senior Ecologist at Durham County Council</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (NA) – Head of Development Management for Planning Services at Eden District Council</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (RC) – Lead Officer in Development Control Team at Cumbria County Council</p> <p>██████████ (PC) – Planning Specialist at the Environment Agency</p>	
Apologies	Text	
Circulation	Those attending: As above	

Action

1. Update on HRA surveys

Prepared by ██████████
Date of circulation 03/06/21

Agenda

Project title

Job number

Date of Meeting

A66 NTP

HE565627

8 July 2021

Action

2. **Introduction to proposed route options for scheme 4/5 (Temple Sowerby to Appleby) and scheme 6 (Warcop)**
3. **Trout Beck geomorphology modelling (discussion of objectives and method)**
4. **HRA programme and documentation**
5. **Agenda for next meeting**
6. **AOB**

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	HRA TWG 3	File reference Text
Location	Teams	Time and date Time 10:00- 12 August 2021 12:00
Purpose of meeting	HRA TWG 4 meeting	
Attendance	<p> [REDACTED] (TH) – A66 Biodiversity Topic Support at Amey/Arup [REDACTED] (CC) – A66 Biodiversity Topic Support (Mammals) at AmeyArup [REDACTED] (SS) – A66 Biodiversity EclA Lead at Amey/Arup [REDACTED] (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup [REDACTED] (LD) – Biodiversity Officer (Cumbria) at the Environment Agency [REDACTED] (CCP) – Sustainable Development Coordinator at Eden District Council [REDACTED] (TE) – A66 Environment Lead at Highways England [REDACTED] (TMH) – Senior Ecologist at Durham County Council [REDACTED] (MS) – A66 EIA Lead at PINS [REDACTED] (NA) – Head of Development Management for Planning Services at Eden District Council [REDACTED] (RC) – Lead Officer in Development Control Team at Cumbria County Council [REDACTED] (PC) – Planning Specialist at the Environment Agency </p>	
Apologies	<p> [REDACTED] (KP) - Chair of EclA TWG and A66 Biodiversity Topic Lead at Amey/Arup [REDACTED] (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England [REDACTED] (NK) – Sustainable Development Lead Advisor, Cumbria Area Team at Natural England [REDACTED] (MH) – Operations Manager, Cumbria Area Team at Natural England [REDACTED] (EP) – A66 EIA Support at PINS [REDACTED] (RW) – LNRS Project Manager at Cumbria County Council [REDACTED] (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup </p>	
Circulation	As above	

Prepared by [REDACTED]
 Date of circulation 06/08/21

Agenda

Project title

Job number

Date of Meeting

A66 NTP

HE565627

12 August 2021

Action

1. Introductions

2. Updates since last meeting

Ecology survey and assessment progress (specific to HRA)

3. Discussion of potential Project impacts that could give rise to Likely Significant Effects

Run-through of potential Project impacts that (in the absence of mitigation) could give rise to a Likely Significant Effect on a qualifying feature / site.

4. Opportunity to request more detail on specific elements of the route alignment

Opportunity for stakeholders to request more detail on route alignment. Webmaps (online GIS) will be used to look in more detail at specific project elements where requested.

5. AOB

Next meeting - Mitigation

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	HRA TWG 5	File reference Text
Location	Teams Call	Time and date 10:00 3 November 2021
Purpose of meeting	Statutory Consultation – Project response to feedback received to date and opportunity for stakeholders to ask questions to aid them in their formal responses	
Attendance	Text	
Apologies	Text	
Circulation	Those attending: Text	

		Action
1.	Introductions	TH
2.	Survey/Assessment updates (HRA specific) Fish surveys Habitat Assessment – within 200m of ARN (North Pennine Moors SAC/SPA) Overview of Geomorphology Modelling findings Scheme 4_5 Air Quality Assessment	TH
3.	Initial Project response to feedback received Initial Project responses to feedback received from stakeholders (from the ongoing Statutory Consultation)	TH
4.	Opportunity to request more detail on specific element of the design Interrogation of Webmaps (online GIS) as required	TH
5.	Plan for future TWG meetings	TH
6.	AOB	TH

Prepared by ████████████████████

Date of circulation

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Habitats Regulation Assessment (HRA) Task Working Group (TWG)	File reference Text
Location	Vitual (Microsoft Teams)	Time and date 10:00- 26 January 2022 12:00
Purpose of meeting	TWG 6: Provide an update on the HRA and discuss key areas relevant to the assement and protection of the European Protected Sites	
Attendance	<p>██████████ (TH) – Chair of HRA TWG and A66 Biodiversity Topic Support at Amey/Arup</p> <p>██████████ (CD) - A66 Environmental Stakeholder Coordinator at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (PC) Biodiversity Officer at the Environment Agency</p> <p>██████████ (LJ) – Consultant support from WSP for Eden District Council</p> <p>██████████ (YL) – A66 Biodiversity Topic Support at Amey/Arup</p> <p>██████████ (CC) – Sustainability Coordinator at Eden District Council</p> <p>██████████ – (HG) – Environmental lead at Cumbria County Council</p> <p>██████████ (NK) – Sustainability lead at Natural England</p> <p>██████████ (KS) -</p> <p>██████████ (GF) – Geomorphologist at the Environment Agency on behalf of Cumbria County Council</p> <p>██████████ (DM) – South Cumbria team for the River Eden at Natural England</p> <p>██████████ (EP) – Senior Environmental Impact Assessor advisor at PINS</p> <p>██████████ (JB) - Environmental Impact Assessor advisor at PINS</p> <p>██████████ (CP) – WSP, as DCO support to Cumbria County Council / Eden District Council</p>	
Apologies	Text	
Circulation	Those attending: Text	

Prepared by ██████████
Date of circulation

Agenda

Project title

A66 NTP

Job number

HE565627

Date of Meeting

26 January 2022

Action

1. **Survey updates since last meeting**
Riverine eDNA results
2. **Assessment updates since last meeting**
Air quality (ammonia) tool
Updated traffic and air quality data
3. **Construction mitigation and methods**
River Eden SAC
North Pennine Moors SPA / SAC
4. **Design mitigation**
River Eden SAC crossing design
Treatment of road runoff
5. **Opportunity for discussion on key areas (HRA specific)**
Webmaps can be interrogated to aid discussions
6. **Consultation process moving forward**
TWG, Statement of Common Grounds (SoCG) and Evidence Plans
7. **AOB**

Minutes of Meeting

A66 NTP

Methods of Working at Trout Beck

Purpose of Meeting: To discuss methods of construction working at Trout Beck

Location: MS Teams

Time/Date: 07/04/2022 at 09:30 - 10:30

Attendees:

- ██████████ (KW) – A66 IPT
- ██████████ (CE) – A66 IPT
- ██████████ (TH) – A66 IPT
- ██████████ (MB) – A66 IPT
- ██████████ (JN) – A66 IPT
- ██████████ (KC) – A66 IPT
- ██████████ (KS) – Natural England
- ██████████ (NK) – Natural England
- ██████████ (PC) – Environment Agency
- ██████████ (LD) – Environment Agency
- ██████████ (FMT) – Environment Agency
- ██████████ (IC) – Principal Contractor (Balfour Beatty)

Apologies: ██████████ – A66 IPT

██████████ – A66 IPT

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Key constraints, risk and management actions	
2.1	KW provided a brief overview of the scheme at Trout Beck before handing over the TH.	
2.2	<p>TH provided a brief overview of the key constraints, risks and management actions associated with the River Eden SAC at Trout Beck.</p> <p>Key sensitivities:</p> <ul style="list-style-type: none"> • Crossing Trout Beck important but also wider SAC downstream • Qualifying species of bullhead, salmon, lamprey, other species of conservation present. <p>Key risks:</p> <ul style="list-style-type: none"> • Disturbance to key species, mortality / injury • Introduction and/or spread of invasive non-native species 	

	<ul style="list-style-type: none"> No point of year where you would avoid species -but can avoid <p>Key management actions:</p> <ul style="list-style-type: none"> Design of open span structure Pollution prevention in line with best practice Sediment management Buffer between compound area and river No in channel works or night working Construction outside of key migration areas to avoid vibration Strict biosecurity -no transfer of plant <p>Robust weather forecasting required to help mitigate pollution from construction run off and accidental spills.</p> <p>Strict biosecurity measure to be implemented particularly with regard signal crayfish due to presence downstream. It was also noted that there should be no plant movement from eastern to western schemes to avoid spread of signal crayfish.</p>	
2.3	<p>MB stated from a water perspective TH had covered most points.</p> <p>A cuttings assessment has been undertaken and not expecting any significant impacts at Trout Beck. No adverse changes to how water moves in the catchment are predicted.</p> <p>Drainage features are to be lined to reduce risk of collapse or dissolution of features downstream – this is important for Scheme 6, less so for Scheme 4/5.</p> <p>Trying to reduce the amount of new material brought in to limit increase in sediment loading.</p> <p>Looking to reduce barriers to flood flows especially 1 in 2 flood flows.</p>	
2.4	<p>IC provided a short presentation on proposed high level construction approach.</p> <p>Trout Beck crossing is similar to A14 which has an 800m crossing of the Great Ouse (long but not high viaduct). Noted Great Ouse not designed. Key issue on the A14 was space needed for construction - working area needed to build piers and deck, room needed for construction traffic and plant.</p> <p>For A66 proposing haul road from west to east. Potential need for temporary bridge (a pontoon bridge was used for A14).</p> <p>Will need to access pier (currently 9-10) positions for concrete, piles and other material. Preference for a precast concrete deck over a wet poured one as less risk of pollution.</p>	
2.5	<p>LD queried height of construction platforms in flood plain.</p> <p>IC stated intention is to keep as low as possible so platforms flood, rather than become a barrier to the flood event and risk</p>	

	wider area flooding -will monitor rain and water levels to get notification of flood and then move all plant out of the area.	
2.6	LD noted that FRA might be needed for the platforms and that the catchment is much more flashy than Great Ouse catchment. IC noted that they could pull plant out of flood plain each night if required.	
2.7	KS noted that the temporary bridge shown in the A14 example appeared to be on a causeway but this might impeded flood flow. IC noted that Great Ouse is a navigable river so the temporary bridge needed to be much higher than would be required on Trout Beck.	
2.8	KS queried are we planning on using the same ponds as the final design solution for sediment management ponds during construction? Also Can the system cope with the amount of rainfall in the area. IC - Intention is to put all permanent ponds in place before construction works, including before archaeological strip as this will leave bare soil. Will do an assessment to establish if additional cut-off ditches are required. Will seek to minimise construction footprint to minimise runoff and seek to keep as much of are grassed as possible. Worst case would need to bring in silt busters and mechanical pumps but would prefer not to.	
2.9	KS also queried size of stone to be used for crane platforms – needs to be sized to avoid washing out. IC noted current thinking was that the platforms would be constructed from 100mm stone with no fines or bring in material and stabilise it with something like lime so it forms a hard surface.	
2.10	IC noted that the intention is to do as much work off site as possible and looking to avoid using wet concrete wherever possible. Also looking at using second hand piles and drive into ground.	
2.11	IC hoping that plant will be largely electrical powered by time of construction.	
2.12	LD – flagged temporary bridge – would prefer a clear span to a pontoon type bridge. Machines have to track between piles and river – need to use an easily reversible solution to stabilise banks – easy in and easy out. Causeway could be an issue as area is at risk is downstream. IC - pontoon not proposed, even questioning if a bridge is required. If bridge is required it would be a construction access bridge only, not for transporting materials.	

2.13	<p>LD flagged that the piers may end up in the river if Trout Beck migrates, need to design for this.</p> <p>IC noted this would be reviewed at detailed design.</p> <p>KW flagged that this is in the Project Design Principles (PDP) document; shape and orientation of piers also in PDP</p>	
2.14	<p>FMT queried how bank stability was being considered, noting the shorter the better the section of bank impacted.</p> <p>FC also noted the contractors can sign up for flood warnings so can get 24hours notice.</p> <p>IC noted that Trout Beck is narrow so think they can have a clear span set back from watercourse – min. 12m bridge so circa 4m back from banks.</p>	
2.15	<p>LD flagged River Caldeu has already moved at pre-construction and temporary bridge stage so piers now in river.</p>	
2.16	<p>PC noted while expecting not to raise ground levels if have to raise haul road and platforms, worst case, should some flood modelling be done for DCO so out in open and won't have to revisit construction solution.</p> <p>IC preferred solution is to strip topsoil, do archaeological clearance and then put platform on top but not work above existing ground levels.</p> <p>LD flagged there are lots of paleochannels in the area and not sure how stable the ground is in that area.</p> <p>TH noted bank top to bank top is 10m, wetted part of Trout Beck is much narrower.</p> <p>KC modelling we have done so far will be presented in DCO, while have not allowed for raised haul road in flood model but have put in cofferdams etc and no adverse impact.</p> <p>KW suggested modelling so it can be shared in early DCO process based on GI etc.</p>	
2.17	<p>KS queried how long it would take to construct Trout Beck crossing.</p> <p>IC indicated 6-9 months as p[recast, ideally moving to installation of a bridge rather than construction of a bridge. Would like to be in in March and out by October.</p>	
2.18	<p>LD queried if needed to undertake in channel working?</p> <p>IC replied unless design requires it, no.</p> <p>LD flagged no in river working October to May.</p>	
2.19	<p>TH outlined works away from river during winter, works closer to the river in summer. Looking at whether vibration would be a significant impact on river.</p>	

	IC noted possibly construct using bored pile with CFA rig or tube pushed into ground.	
2.20	LD noted if lighting is required in winter ensure directional and away from river. KW stated security lighting would be away from river.	
2.21	KS queried if HRA and EMP would be revised to take into account what discussed here? KW – EMP will contain Method Statements as essay plans setting out key controls but how they will be implemented will follow with the detailed design. TH stated that the HRA will be updated to include the temporary bridge.	
2.22	LD flagged keep away from blue toned lighting KS noted there are specific lighting specs for bats KW stated this is being considered.	
2.23	IC stated that when they start detailed design they are keen to ensure everything is left in best possible state so can look to do improvements to Trout Beck, within the site boundary, while on site. KW noted trying to tie in with Eden Rivers Trust works so can get benefits while construction activities on site. KS flagged if river restoration works can be dovetailed in during construction period then have one lots of disturbance, this is the preferred route. KW noted this will be considered in HRA in the in-combination effects. TH noted the HRA will have to be heavily caveated as there is not yet an HRA for the river restoration works outside of the scheme. KS flagged HRA still required for restoration projects as while may leave river in better state the works themselves (construction or management operations) may cause issues. KS also noted pollution controls and sediment controls need to work together between the 2 projects. KW noted can state in the HRA the mitigation we'd assume the other project would implement and flag future discussions required.	
2.24	IC to share presentation with those attending.	IC to share presentation.

Agenda

A66 NTP

Project title	A66 NTP	Job number
Meeting name	EcIA TWG 3	File reference Text
Location	Teams meeting	Time and date 14:00- 29 April 2021 16:00
Purpose of meeting		
Attendance	Text	
Apologies	Text	
Circulation	All	

Action

- 1. Update since last meeting**
Activities and surveys
- 2. Badger bait marking**
Discussion around optimal timing and survey window where we have been unable to carry out surveys to date
- 3. Otter holt resting place monitoring**
Discussion around appropriate monitoring period.
- 4. MoRPH Surveys**
Discussion around appropriate survey locations and use of combination of survey methods for watercourse assessments
- 5. Air Quality**
Discussion around integration with air quality assessment requirements and ensuring we have the information required for biodiversity assessment
- 6. AOB**

Prepared by



Date of circulation

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	EclA TWG 4	File reference Text
Location	Teams Call	Time and date Time 1000- 10 June 2021 1155
Purpose of meeting	Discussion of Bat Survey Methodologies	
Attendance	<p> ██████████ (KP) - Chair of EclA TWG and A66 Biodiversity Topic Lead at Amey/Arup ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup ██████████ (RS) – A66 Biodiversity Bats Lead and Biodiversity Topic Deputy at Amey/Arup ██████████ (TH) – A66 Biodiversity Topic Support at Amey/Arup ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency ██████████ (EP) – A66 EIA Support at PINS ██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England ██████████ (CCP) – Sustainable Development Coordinator at Eden District Council ██████████ (TE) – A66 Environment Lead at Highways England ██████████ (JP) – Planning advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at the Environment Agency ██████████ (TMH) – Senior Ecologist at Durham County Council ██████████ (MS) – A66 EIA Lead at PINS ██████████ (NA) – Head of Development Management for Planning Services at Eden District Council ██████████ (JC) – Principal Ecologist at North Yorkshire Council ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup ██████████ (RC) – Lead Officer in Development Control Team at Cumbria County Council ██████████ (PC) – Planning Specialist at the Environment Agency ██████████ – Arup Bat Specialist </p>	
Apologies	Text	
Circulation	Those attending: As above	

Prepared by ██████████
 Date of circulation 03/06/21

Agenda

Project title	Job number	Date of Meeting
A66 NTP	HE565627	10 June 2021

	Action
1. Introductions	
Introductions from Amey/Arup team new to the call	KP
2. Update since last meeting	KP
New survey results of note	
3. Bat Survey Methodologies – Discussion points	RS
3.1 Bat trapping/radiotracking + static detectors as replacement techniques to transect surveys	
3.2 Scope of crossing point surveys	
3.3 Scope of Tree climbing Surveys	
3.4 Use of BTO Acoustic pipeline for data analysis	
4. AOB	
Next Meeting – Proposed discussion: Ornithology Mitigation	

Agenda

A66 NTP

Project title	A66 NTPText	Job number HE565627
Meeting name	EclA TWG 5	File reference Text
Location	Teams Call	Time and date 14:00- 10 August 2020 16:00
Purpose of meeting	Discussion of key PEIR findings	

Attendance

[REDACTED] (SS) – A66 Biodiversity EclA Lead at Amey/Arup
[REDACTED] (TH) – A66 Biodiversity Topic Support (Aquatics) at Amey/Arup
[REDACTED] (NW) – A66 Biodiversity Topic Support (Botany) at Amey/Arup
[REDACTED] – A66 Biodiversity Topic Support (Birds) at Amey/Arup
[REDACTED] (CC) – A66 Biodiversity Topic Support (Mammals) at AmeyArup
[REDACTED] (MN) – A66 Biodiversity Topic Support (Terrestrial Invertebrates and BNG) at Amey/Arup
[REDACTED] (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
[REDACTED] (EP) – A66 EIA Support at PINS
[REDACTED] (CCP) – Sustainable Development Coordinator at Eden District Council
[REDACTED] (TE) – A66 Environment Lead at Highways England
[REDACTED] (TMH) – Senior Ecologist at Durham County Council
[REDACTED] (MS) – A66 EIA Lead at PINS
[REDACTED] (NA) – Head of Development Management for Planning Services at Eden District Council
[REDACTED] (JC) – Principal Ecologist at North Yorkshire Council
[REDACTED] (RC) – Lead Officer in Development Control Team at Cumbria County Council
[REDACTED] (PC) – Planning Specialist at the Environment Agency

Prepared by [REDACTED]

Date of circulation

Agenda

Project title	Job number	Date of Meeting
A66 NTPText	HE565627	10 August 2020

Apologies

██████████ (KP) - Chair of EcIA TWG and A66 Biodiversity Topic Lead at Amey/Arup

██████████ (RS) – A66 Biodiversity Bats Lead and Biodiversity Topic Deputy at Amey/Arup

██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England

██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup

Circulation

Those attending:
As above

- | | | Action |
|----|---|--------|
| 1. | Introductions
Topic leads who are new to the call | SS |
| 2. | Update since last meeting
Ecology survey progress and new results of note | SS |
| 3. | Key Findings from the PEIR
Run-through of potential Likely Significant Effects
Opportunity to request more detail from topic leads | SS |
| 4. | AOB
Next meeting – mitigation | |

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	EcIA TWG 6	File reference Text
Location	Teams Call	Time and date 14:00 – 11 November 2021 16:00
Purpose of meeting	Ecology update and responses to feedback received to date	
Attendance	Text	
Apologies	Text	
Circulation	Those attending: Text	

		Action
1.	Introductions Topic leads who are new to the call	KP
2.	Survey updates Ecology survey progress and new results of note	KP
3.	Initial project response to feedback received Initial project responses to feedback received from stakeholders (from the ongoing Statutory Consultation)	KP
4.	Plan for future TWG meetings	KP
5.	AOB Next meeting - mitigation	KP

Prepared by



Date of circulation

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Ecological Impact Assessment Task Working Group (TWG)	File reference Text
Location	Vitual (Microsoft Teams)	Time and date 14:00- 26 January 2022 16:00
Purpose of meeting	TWG 7: Provide an update on the EclA and discuss mitigation measures	
Attendance	<p> [REDACTED] (SS) – A66 Ecology Design Lead at Amey/Arup [REDACTED] (KP) – A66 Ecology Lead at Amey/Arup [REDACTED] (TH) – A66 HRA lead and aquatic ecology topic lead at Amey/Arup [REDACTED] (AJC) – A66 Ornithology lead at Amey/Arup [REDACTED] (CD) - A66 Environmental Stakeholder Coordinator at Amey/Arup [REDACTED] (TMH) – Senior Ecologist at Durham County Council [REDACTED] (JC) – Principal Ecologist at North Yorkshire Council [REDACTED] (PC) Biodiversity Officer at the Environment Agency [REDACTED] (KS) - Lead advisor (River Eden and SAC) and wider A66 input at Natural England [REDACTED] (LD) – Biodiversity Officer (Cumbria) at the Environment Agency [REDACTED] (CC) – Sustainability Coordinator at Eden District Council [REDACTED] (RK) – Project Speed lead at PINS [REDACTED] (LJ) – Consultant support from WSP for Eden District Council [REDACTED] (NK) – Sustainability lead at Natural England [REDACTED] (EP) – Senior Environmental Impact Assessor advisor at PINS [REDACTED] (CP) – WSP, as DCO support to Cumbria County Council / Eden District Council </p>	
Apologies	Text	
Circulation	Those attending: Text	

Prepared by

[REDACTED]

Date of circulation

Agenda

Project title

A66 NTP

Job number

HE565627

Date of Meeting

26 January 2022

Action

1. **Survey updates since last meeting - KP**
2. **Construction mitigation and methods – KP/TH**
3. **Bat mitigation - RS**
4. **Design mitigation walk-through - SS**
Webmaps will be presented
5. **AOB**

Minutes of Meeting

A66 NTP

Ecological Impact Assessment (EclA) Technical Working Group 1

Purpose of Meeting: EclA Technical Working Group – Meeting 1

Location: MS Teams

Time/Date: 11-02-21 at 16:00 - 17:00

Attendees:

- ██████████ (AM) – Chair of HRA TWG and A66 Biodiversity Topic Lead at Amey/Arup
- ██████████ (CD) – A66 EIA Coordinator and Environmental Stakeholder Deputy at Amey/Arup
- ██████████ (KW) – A66 Environment Lead at Amey/Arup
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
- ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
- ██████████ (JP) – Planning advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at the Environment Agency
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England
- ██████████ (RC) - at Cumbria County Council
- ██████████ (NA) – at Eden District Council

Apologies:

- ██████████ (TE) - Highways England
- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (TMH) – Senior Ecologist at Durham County Council

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introductions from all attendees and introduction to the purpose of the TWG by AM and KW.	
2.0	Evidence Plan – Objectives	
2.1	Overview of the Evidence Plan by KW: <ul style="list-style-type: none"> To consolidate and support formal scoping process. Agree and document specific matters that the evidence plan process aims to address. Agenda for future meetings is flexible and the team welcomes input from attendees. Seek agreement on how evidence will be collected and analysed. 	

Item	Minutes	Actions
	<ul style="list-style-type: none"> Achieve a common understanding of the challenges posed by the programme. TWGs can be a means of ironing out some of the challenges earlier on. Seek to reach agreement on key matters where possible. Work towards agreements where gaps exist currently, and document points that are not agreed. Discuss approaches to design development and to resolve and refine the assessment where possible. 	
3.0	Scheme Overview	
3.1	AM gave an overview of the statutory and non-statutory sites that will be included in the assessment (all are listed in the presentation/recording).	
3.2	AM noted that the habitats along the route are agriculturally dominated but that there are interesting habitats across the route. Section 41 habitats recorded via survey and ancient woodland are listed.	
3.3	Habitats – AM reported approximately 72% coverage for Phase 1 Habitat Surveys so far, including arable, grassland, coniferous woodland, heathland (particularly around Scheme 6 at Warcop), hedgerows, ponds, watercourses, ditches. Lots of locations where watercourses are crossed. Some surveys still to complete, but fairly good coverage achieved to date.	
3.4	Species – AM noted that desk study information from PCF Stage 2 was used and has allowed the team to scope in various surveys straight away. The Phase 1 Habitat Surveys will also be used to determine other surveys that might be needed. The surveys needed vary across the schemes depending on habitats. Lots of species surveys that we are looking to complete this year.	
3.5	<p>Approach to EclA for A66 NTP</p> <p>AM confirmed that the EclA will follow the latest DMRB guidance as well as the CIEEM guidelines for Ecological Impact Assessment.</p> <p>Survey dates are complicated as surveys will be running up to September 2021 and the EIA is due to be prepared up to September 2021 too. AM confirmed the team is working to worst-case mitigation at present and will carry out the assessment based on that whilst feeding in survey information as it becomes available. An addendum with supplementary information will be prepared up to November 2021.</p>	
3.6	<p>AM invited questions from the group.</p> <p>KS asked for the designated sites slides and suggested the team considers whether Augill Valley Pastures should be included as it is adjacent to part of the A66, although it is already dualled, depending on pollution and traffic. KW confirmed that this site is within the air quality model affected road network, although is not part of the core scheme area for biodiversity but suggested to AM that this should be reviewed with the Asby Complex SAC as part of the model check the team will carry out. KS thinks this is also something that has also been fed back in the scoping response.</p>	AM to ensure Augill Valley Pastures is included.
4.0	Proposed baseline surveys, modelling and assessment to underpin the EclA	

Item	Minutes	Actions
4.1	<p>Biodiversity survey strategy – surveys completed to date: From PCF Stage 2, the work focussed on Schemes 4 and 5 around the River Eden SAC from Public Rights of Way. A River Eden survey was also undertaken, looking at the river habitats, corridor and geomorphology. Breeding bird surveys were undertaken for Schemes 6 and 7 around the North Pennines Moors SPA.</p> <p>For current PCF Stage 3 work, ~72% Phase 1 Habitat Surveys are complete, in addition to:</p> <ul style="list-style-type: none"> • Bat transects have been undertaken for the first visits. • Wintering bird surveys were commenced in November 2020. • White clawed crayfish surveys commenced November 2020 – 5 surveys across different schemes and presence was confirmed at Scheme 6. • Bat roost suitability commenced in January 2021. • Terrestrial mammal transects – various species, including badger, hedgehog, polecat, pine marten, brown hare and deer. Deer are being looked at in particular due to collision risk. Both transects and camera trapping have commenced. • Riparian mammals commenced February 2021. • Deadwood invertebrate surveys commenced November 2020. <p>AM gave a summary of upcoming surveys that are outlined in a survey strategy the team is creating (this goes into detail on where, what and when surveys are being undertaken). This will be finalised and shared ASAP. Habitats surveys include:</p> <ul style="list-style-type: none"> • Completion of Phase 1 Habitat Surveys up to May 2021. • Hedgerows – within the redline boundary and up to 50m. • NVC up to August 2021, looking at up to 250m from the redline boundary. The air quality assessment will feed into this to refine what needs to be included in NVC – so far designated sites, ancient woodland and S41 habitats. • Ponds and ditches (PSYM) surveys within the redline boundary and up to 50m (up to August 2021). • Condition assessments to inform the biodiversity metrics and to identify areas that the team needs to revisit. • River Eden SAC – Annex 1 Habitats (including Aquatic CSM, terrestrial CSM and LEAFPACS). Ongoing May – August 2021. <p>Ornithology surveys include:</p> <ul style="list-style-type: none"> • Wintering birds Nov-March 2021 (transects and vantage points within 500m of each scheme). • Breeding birds March-June 2021(transects and vantage points within 500m of each scheme). The surveyors will be looking at key habitats. • Building on PCF Stage 2 Barn Owl surveys for field surveys and nest sites until July 2021. <p>KS asked AM if the bird surveys would include sand martin nesting banks where outfalls occur? AM explained that this has not been raised so far but can raise with the team to include this. KS noted</p>	

Item	Minutes	Actions
	<p>that this is a SSSI feature of the River Eden, as well as being protected. KW asked if baseline data exists showing current locations. KS confirmed that she is not aware of any existing data. LD confirmed they do not have any existing data, but advised AM to contact the Cumbria bird club or the records centre in case they have locations listed to show Sand Martin colonies. KS noted that this may also be relevant to the geomorphology work too, to understand areas where erosion may be occurring and if there are any issues with outfalls. AM confirmed the team has data from the records centre and is looking to gain data for all species from relevant groups.</p>	
4.2	<p>Bats</p> <p>Preliminary assessments including Phase 1 Habitat survey and stand alone surveys within redline boundary.</p> <p>Habitat assessments for flight routes and aerial tree climbs summer 2021 (all trees within the redline boundary with moderate or high bat roost potential).</p> <p>Emergence and re-entry surveys summer 2021.</p> <p>Static detectors – began September/October 2020, and again April – August 2021.</p> <p>Hibernation – sites are being reviewed for scope to determine what will be needed.</p> <p>Crossing point surveys using flight line information.</p> <p>The use of trapping and radio tracking is being considered and would target different species and habitats to identify significant conservation roosts (e.g. maternity roosts).</p>	
4.3	<p>Terrestrial mammals</p> <p>Started camera trapping and data is being reviewed currently.</p> <p>Transects picking up key habitats.</p> <p>Badger setts are being identified to assess their status and bait marking will be undertaken on 4 setts. Artificial sett locations are being reviewed.</p> <p>Red squirrels are being picked up in various locations via camera trapping. The team is investigating further surveys for red squirrel.</p> <p>Other mammals – camera traps, habitat suitability, incidental records from other species surveys and roadkill data from Highways England. All of this will be used to determine if additional surveys are needed.</p>	
4.4	<p>Riparian mammals</p> <p>Otter and water vole surveys will be undertaken. These are being picked up in camera trapping and transects also.</p>	
4.5	<p>Herpetofauna</p> <p>GCN</p> <ul style="list-style-type: none"> • A review of connectivity will also be undertaken between 250-500m. • Pond surveys, HSI and eDNA will be used. • The team is looking into district-level licencing with North Yorkshire and Durham – possible from March. Team is considering if this is possible or if traditional surveys should be used. Traditional surveys in Cumbria. <p>Reptiles</p> <p>Potential adder surveys and reptile hibernation transects.</p>	

Item	Minutes	Actions
4.6	<p>Terrestrial invertebrates</p> <p>Some surveys took place in 2020 and will recommence March 2021, including a range of habitats in more detail.</p>	
4.7	<p>Freshwater ecology</p> <p>Much of this was covered in the HRA TWG earlier in the week for fish and white clawed crayfish.</p> <p>More general habitats assessments March-April 2021.</p> <p>LD asked about shoals – unsure if any are likely to be affected and this may fall under terrestrial invertebrates instead, but shoals in the river are a SSSI feature. There may not be any in the impact area but will these be checked? AM confirmed that the team will check this.</p> <p>LD also noted that the surveys listed for fish were all summer surveys, would the team consider any redd surveys? It might be something to consider later but having data during the construction stage from an earlier period can be very helpful if changes need to occur. AM noted this and confirmed it hasn't been passed on so far. LD mentioned that most of these rivers could contain trout.</p>	
5.0	Discussion	
5.1	<p>AM invited questions from the group.</p> <p>LD asked about areas where the project is considering SuDS ponds, is it worth carrying out a wider survey? When it comes to enhancements, it can be useful to have associated ponds that are not linked. AM noted that SuDS ponds are adjacent to the route and are in areas where wider Phase 1 Habitat Surveys have been carried out. The team is also feeding this into the design to look at additional ponds. AM noted that the makeup of the ponds are being considered too and will contain features suitable to invertebrates and amphibians.</p>	
5.2	<p>KS asked if the team is picking up locations where enhancement might be feasible. AM responded that in terms of mitigation the team is looking at this at different levels, such as worst case and what habitats are being lost (like for like replacement), and also looking more widely in terms of potential enhancements. KW said that in response to enhancements, this came up in the informal scoping responses and one of the constraints that Highways England works within is that there is no legal requirement for Biodiversity Net Gain on NSIPs and there is no direct potential to use CPO powers to take land for enhancements. Mitigation can be included where it can be linked to direct loss or effects, and the team will be targeting as much enhancement as possible within the boundary. Anything beyond that has to be done with landowner agreement and potentially funded separately. Whilst Highways England's objective is to maximise biodiversity and make the enhancements that we can, it is a fine line between mitigation for the DCO and enhancements that need to be brought forward through other routes. The Highways England Biodiversity advisor has offered to come to future TWG meetings if useful to discuss, particularly around using the Defra metric. Some enhancement will need to come through the designated funds route so we should try to arrange funds as much in advance as possible. KS agreed it is worth identifying designated funds earlier. KW noted that further</p>	

Item	Minutes	Actions
	<p>information is emerging about some landowners now who are also looking for opportunities so definitely potential here.</p> <p>In relation to biodiversity metrics, it would be a very useful discussion to have and KS could recommend someone from Natural England's national team who has experience in this. KW agreed this would be useful.</p>	
5.3	<p>AM confirmed that the contents of the slides around surveys is being collated into a strategy that will be shared with the TWG once available.</p>	<p>AM to share survey strategy once complete.</p>
5.4	<p>With regard to breeding and wintering birds, KS asked if this is focussed on likely areas where populations might be that were identified in the Phase 1 Habitat Surveys? AM confirmed this is based on Phase 1 Habitat Surveys and designated sites, and desk study information. KS noted that there are lots of Lapwing areas, particularly around Sandford Mire and Kirkby Thore – some of these are in unlikely areas (unpromising land) and may not come across as somewhere to focus effort on. AM confirmed Lapwing have been discussed and one of the surveyors has sent a brief summary also noting Golden Plover across several schemes, as well as Merlin at schemes 6 and 7. KS suggested a general approach as well as a focussed approach, which agrees with AM's approach. AM mentioned that some landowners have also provided information about Lapwing.</p>	
6.0	Next meeting	
6.1	<p>CD to circulate meetings and recordings in due course.</p> <p>The next full TWG will be approximately in one months' time.</p> <p>AM noted that members of the group are welcome to put forward discussion points for the next meeting agenda. KS asked if any preliminary survey results could be shared and discussed. AM confirmed this, and results are currently being pulled into the PEIR at present.</p> <p>KW let the group know that any actions or issues would be logged and recorded. The group is for members to use as and when needed.</p>	<p>CD to circulate minutes and recording.</p> <p>All to consider topics for discussion at next TWG.</p>

Minutes of Meeting

A66 NTP

Ecological Impact Assessment (EclA) Technical Working Group 2

Purpose of Meeting: EclA Technical Working Group – Meeting 2

Location: MS Teams

Time/Date: 16-03-21 at 15:00 - 16:00

Attendees:

- ██████████ (AM) – Chair of EclA TWG and A66 Biodiversity Topic Lead at Amey/Arup
- ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
- ██████████ (TM) – A66 Biodiversity Ornithology Lead at Amey/Arup
- ██████████ (RS) – A66 Biodiversity Bats Lead and Biodiversity Topic Deputy at Amey/Arup
- ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England
- ██████████ (RC) – Lead Officer in Development Control Team at Cumbria County Council
- ██████████ (PC) – Planning Specialist at the Environment Agency
- ██████████ (CCP) – Sustainable Development Coordinator at Eden District Council
- ██████████ (JC) – Principal Ecologist at North Yorkshire Council
- ██████████ (TE) – A66 Environment Lead at Highways England
- ██████████ (SC) - Highways England

Apologies:

- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (TMH) – Senior Ecologist at Durham County Council
- ██████████ (JP) – Planning advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at the Environment Agency
- ██████████ (NA) – Head of Development Management for Planning Services at Eden District Council

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introductions from all attendees.	
2.0	Ornithology Strategy	

Item	Minutes	Actions
2.1	TM gave an overview of the survey work completed to date for wintering birds. Initial visit undertaken in November 2020, surveys using pre-planned transect routes and 2-hour vantage point surveys Dec – March.	
2.2	North Yorkshire Moors Special Protected Area (SPA): SPA species: Merlin and golden plover have been observed regularly. TM noted interesting results and diversity. March results will be reviewed when available to see if species are beginning to move into breeding territories before breeding bird surveys commence from April.	
2.3	TM gave a summary of survey results: Reasonable number of SPA and Schedule 1 species observed in January with good mix of Birds of Conservation Concern (BoCC) Red species, and also wading birds, as expected, in these areas. Same again for February, a count of 60 is a regular number for golden plover. At Scheme 6 a dead barn owl was recorded. Incidental sightings of barn owl have also been recorded, but species-specific surveys will look in more detail during targeted surveys. KS asked if the golden plover seem to be in the same fields each time. TM confirmed that this seems to be the case although they do move around.	
2.4	Previous breeding bird survey data only targeted SPA species but is considered useful background information. This year transects and vantage points are being undertaken within 500m of the route April to June 2021. Some interesting species are known along the Eden such as a large population of sand martin. Vantage point survey will be important for observing raptor species in particular.	
2.5	TM outlined the general mitigation principals for Ornithology. KS noted that there should be an assumption that an Environmental Management Plan (EMP) will contain any licensing needs. TM and AM agreed and told KS this would be considered in advance of the EMP. KS told TM that it would be good to know in advance when they are planning to do licensing so KS can prepare resource in the team. TM added that when the team start Breeding Bird (BB) surveys they will have a much better idea of what is needed and can get in touch with KS.	
3.0	Bats	
3.1	RS gave an overview of bat surveys and desk study results. Desk study records very detailed in the Cumbria area. Number of roost records heavily biased towards Cumbria, due to more data there in general. There are known maternity roosts including one near Kemplay Bank for example. Results from the record centres are broadly as expected. Sep/Oct 2020 transect results are generally as expected. Higher count of noctule bats near Centre Parcs than may have been expected. Soprano pipistrelle – high number of bats for Scheme 3. Low count of Myotis species, unusual, particularly Scheme 6. There will be a focus on these points in future work.	

Item	Minutes	Actions
3.2	<p>Quite a lot of roost assessment work ongoing, using previous DMRB guidance (minimum 100m buffer to pick up all structures), which would give well over 500 structures across the schemes. Decision was taken to just include structures within Redline Boundary (RLB), and focus also on significant flight routes. Approximately 100 structures will be included.</p> <p>The team have also taken the decision to concentrate on only trees within the RLB at this time – RS acknowledges deviation from DMRB, there is further detail in survey strategy provided.</p>	
3.3	<p>There was a decision to discontinue activity transects as a survey method as it doesn't offer sufficient clarity of habitat use for the effort required. As an alternative the team will look at static tracking and bat trapping, following Bat Conservation Trust guidance, and IAN 116/08.</p> <p>The team think the work proposed is proportionate and suitable for the project. An external consultant has also advised that activity transects are likely to become a less favourable survey method for bats in future.</p>	
3.4	<p>RS outlined the approach to mitigation for bats.</p> <ul style="list-style-type: none"> • Roost loss in structures will be replaced like for like. • Roost loss in trees will be replaced 2:1. The team will look to retain any suitable cavities in the landscape. • Opportunity around any replanting incorporating fruit trees is being considered. • Flight paths – greening overbridges is being looked at. 2-2.5m x 2.5m for rectangular culverts. • Avoid bat gantries – evidence suggests they aren't effective. Hop-overs aren't generally possible due to the width of the carriageway. 	
3.5	<p>KS queried whether the wildlife underpasses are in addition to those that are for watercourses. RS said that they are still waiting for data but could be the case. AM added that the team are looking at multi-species use.</p> <p>TE asked about the deviation in standards (regarding trees) from DMRB RS mentioned, and whether this is specifically referenced in DMRB. RS noted this is in the IAN 16/08. TE noted that this IAN has been superseded by LD118. AM added that a lot of specific guidance on distances isn't included in the new DMRB guidance. TE noted that this IAN has been withdrawn and so if it isn't in DMRB is it a deviation from standards? RS believed this is a proportionate approach. TE said the team just need to provide evidence in reporting on why it's proportionate, but she doesn't think it is a deviation.</p>	
3.6	<p>KS noted that AM wrote to KS about deviation from standards and a response will be issued. KS believes approach is proportionate and sensible from her review.</p> <p>KS asked will peaks be captured by revised methodologies? RS noted that all these locations will be repeated in better months and the team will have comparative data for other months. KS asked if the static monitors were within the RLB or other suitable locations? RS said there was a mix, located roughly</p>	<p>KS to respond to AM's query.</p>

Item	Minutes	Actions
	perpendicular to the routes but follow field boundaries to pick up maximum activity.	
3.7	LD asked whether the team have spoken to Ministry of Defence (MOD) yet as LD thinks they have bat data. RS will speak to MOD.	RS to speak to MOD for bat data.
4.0	Red Squirrel	
4.1	AM gave an overview on red squirrel. Drey surveys, camera traps. Schemes 1,3,2,6 were found to have evidence of red squirrel. Looking at further assessment methods. They could be present at schemes 4/5 but no impacts to habitat identified. Records for scheme 8 but no survey evidence recorded. No records or survey findings for 7 and 9. Surveys will start next month.	
4.2	AM gave an overview of red squirrel mitigation measures: <ul style="list-style-type: none"> • Avoid felling trees during breeding season and within dreys. • Avoid isolating trees so they can relocate. • Replacement habitat to compensate for tree removal. 	
4.3	Red Squirrel conservation groups are to be contacted. Grey squirrel have also been recorded and to be taken into account.	
4.4	LD noted that she thinks there are grey squirrel wardens who control levels around Cumbria. AM thinks the conservation groups will also know more on this.	
5.0	Discussion	
5.1	AM welcomed comments on the Biodiversity Strategy but notes more comments can be sent via email.	
5.2	LD noted that general eDNA was mentioned in February for fish and crayfish, and couldn't see it in the strategy. AM replied that due to the programme evolving, direct surveys may now be used in place of eDNA. ██████████ (HRA TWG chair) can confirm if more information is needed.	AM to let LD know about eDNA for fish/crayfish.
5.3	KS queried what portion of land has not been able to be accessed, whether the team will keep trying, and whether the team think they will miss out on any key information because of it. AM answered that generally access has been very good. There is one area at scheme 4/5 that the team can't access yet but this is being resolved. AM doesn't expect access will be a limitation on the results.	
5.4	SC raised a point that the survey strategy indicates a high dependency on technology and in particular on cameras, which have limitations. SC queried whether this be backed up with other methods such as clay matts for squirrels. SC added that she appreciated that for the scale, technology will be needed but was concerned that this may mean species/results could be missed and asked how are the team approaching this potential limitation. AM said camera traps have been used to help back up and provide extra information as well as walkovers etc. Some species aren't going to have further surveys, such as brown hare and deer, so these will rely on desk study information and camera traps. Camera traps will be supplemented with surveys too. AM	CD to share enhancement ideas with group

Item	Minutes	Actions
	<p>added that the team want to use these to their advantage at otter crossing points for example – as an additional means, to try to narrow down what might be there in areas where we aren't sure.</p>	
5.5	<p>SC noted that in terms of the bat work, there is a large amount to look at. Annex A of the team's biodiversity survey strategy scores features – SC asked what about a risk based approach? What number of features would be within the RLB and which would need a more detailed survey?</p> <p>RS replied that the team will leave out the features with low potential. AM added that rather than only just looking at a buffer, the team could also look at locations where there could be potential impacts. SC asked if Natural England have been approached regarding bat methods? AM replied that Natural England are involved and KS has involved a bat specialist. SC wondered if there is opportunity to draw on anything from other big schemes such as HS2. AM added that the team are using lessons from HS2 to devise their strategies to determine what will be possible and proportionate for a scheme of this size. KS agreed Natural England have been involved.</p>	
5.6	<p>KS asked about replacement habitats for birds – would they be in busy and noisy areas? TM added that the team are looking at areas near the RLB to replace habitat, and areas slightly beyond the scheme have been included in the RLB now, however this needs to be discussed with landowners. TM will also look at linkages wherever possible would be really useful for birds. KS added that she sent ideas for enhancements to CD – CD to share.</p> <p><i>Post meeting note: CD shared KS's email on enhancement opportunities with AM.</i></p>	
5.7	<p>LD raised a point with regards to the fish section of the team's biodiversity survey strategy and recording in stream obstructions. Are the team just looking for presence/absence or something else? AM added this would need to be addressed by [REDACTED]</p> <p>LD added that photos would be useful for the Environment Agency, and any information on culverts too. AM confirmed [REDACTED] has been involved in the culvert design. CD noted [REDACTED] would be at the HRA TWG on Thursday so can discuss then too.</p>	
5.8	<p>AM asked that any further comments are fed back to the team and the team will update the group next time depending on survey outcomes. If the group wants to discuss something in particular or speak to a particular species lead – let CD/AM know.</p>	
6.0	Next meeting	
6.1	<p>CD to circulate minutes.</p> <p>The next full TWG will be approximately in one months' time.</p> <p>AM noted that members of the group are welcome to put forward discussion points for the next meeting agenda.</p>	<p>CD to circulate minutes.</p> <p>All to consider topics for discussion at next TWG.</p>

Minutes of Meeting

A66 NTP

Ecological Impact Assessment (EclA) Technical Working Group 3

Purpose of Meeting	EclA Technical Working Group – Meeting 3
Location:	MS Teams
Time/Date:	29-04-21 at 14:00 - 15:15
Attendees:	<p>██████████ (AM) – Chair of EclA TWG and A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (RS) – A66 Biodiversity Bats Lead and Biodiversity Topic Deputy at Amey/Arup</p> <p>██████████ (KP) – A66 Biodiversity Topic Support at Amey/Arup</p> <p>██████████ (TH) – A66 Biodiversity Topic Support at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (CCP) – Sustainable Development Coordinator at Eden District Council</p> <p>██████████ (TE) – A66 Environment Lead at Highways England</p> <p>██████████ (JP) – Planning advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at the Environment Agency</p> <p>██████████ (TMH) – Senior Ecologist at Durham County Council</p>
Apologies:	<p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (NA) – Head of Development Management for Planning Services at Eden District Council</p> <p>██████████ (JC) – Principal Ecologist at North Yorkshire Council</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (RC) – Lead Officer in Development Control Team at Cumbria County Council</p> <p>██████████ (PC) – Planning Specialist at the Environment Agency</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introductions from Amey/Arup team new to the call.	
2.0	Update since last meeting	
2.1	Wintering bird surveys complete, and the team have moved into breeding bird surveys. AM gave an overview of key findings from March. No SPA species recorded.	
2.2	KS asked if the team know the cause of death for the dead barn owl that was found. AM will follow up and report back.	AM to follow up with survey team.
2.3	Invertebrate scoping surveys ongoing – total 21 sites for sampling surveys from May. AM noted KS's comment on the Biodiversity Strategy around pollinators – mitigation will be designed to have high pollinator benefits, connectivity of habitats etc and is being picked up.	
2.4	AM noted that across the project, 14 badger setts have been recorded and bait marking has been undertaken on four main setts that are likely to be impacted by the scheme. One more sett to gain access to for bait marking.	
2.5	Otter and water vole scoping surveys have been undertaken and 60 watercourses scoped in.	
3.0	Badger bait marking	
3.1	AM noted that the peak survey window has been missed for the sett where land access was not available yet and potential for another sett to be included due to optioneering. Potential window for bait marking September/October. AM asked the group for their input on whether this would be acceptable for the EclA and informing artificial sett locations, no comments given.	
3.2	KS asked about whether it was very likely that the scheme would be impacted. AM noted an example where the sett itself would not be impacted but the scheme could impact connectivity depending on the extent of badger territory. KS added that September surveys would be good but likely to be too late for input into the design. KS noted that surveys can be done in May, but results would not be as good as the activity levels were less. Potentially combine this with other approaches or with bait marking in September. KS also suggested that the landowner may also know the routes / places used by badgers.	██████████ / KP to speak to follow up with landowners.
3.3	EP asked if the lack of access was due to landowner issues, and do the team think this could prevent future access? AM confirmed the team could not gain access during peak survey time but access should be available in future.	
3.4	KS noted that the team should use all available guidance out there and refer to the Natural England website for species guidance to make sure the team have sufficient evidence to feed into mitigation and EclA etc.	
4.0	Otter holt monitoring	
4.1	AM noted that no otter holts have been recorded so far. In terms of monitoring, which would be needed for mitigation and EclA etc, the team would like to understand if approximately 3-4 weeks of camera trapping would be sufficient.	

Item	Minutes	Actions
4.2	<p>LD noted that otters tend to move around. AM noted that in addition to the 3-4 week period, the team could go back before construction starts to carry out pre-construction surveys. KS added that for the PEIR and ES, the team would need to know where the lay up sites and holts are, especially to inform mitigation so that culverts can be designed to be passable etc. LD noted that surveys will be needed nearer the time for construction and licences to determine if there are breeding holts. EP added that a worst-case approach would be needed for EIA. AM noted that the team haven't found any holts yet, but best practice guidance will be followed in terms of the monitoring time / period.</p>	
4.3	<p>KS asked if the team have done any monitoring yet or found any holts? AM replied that so far only initial scoping visits have been undertaken and actual surveys would be undertaken in May alongside water vole surveys. KS noted that this sounds sensible, and depending on what the team find, more detailed work could be carried out at some locations.</p>	
	<p><i>[AM left the call, TH took over chairing]</i></p>	
5.0	MoRPH	
5.1	<p>TH gave an update on the aquatic habitat surveys that have been ongoing and the types of watercourses and habitats that have been identified.</p>	
5.2	<p>MoRPH survey has been undertaken in the impacted reaches. TH noted that KS had requested MoRPH surveys upstream, at the impacted/crossing reach, and downstream. TH indicated that all these areas will be surveyed as part of the baseline but not using the MoRPH survey technique; fish habitat mapping covers at least 250m upstream and 250m downstream of each crossing (extended where required, e.g. Trout Beck) and River Corridor Surveys will be cover 500m upstream and 500m (i.e. 2 x RCS per crossing). Using MoRPH to survey full reaches is too time-consuming. MoRPh is being used to supplement the baseline and provide a "River Condition" for net gain calcs, but only at the proposed crossing/impact point.</p>	
5.3	<p>TH summarised for schemes 4/5 and 6 findings from habitat assessment. As expected, the larger rivers are of higher conservation value and well connected to the SAC. Also, some good information on which streams throughout the project dry up from landowners. This has helped the team to scope fish surveys.</p>	
5.4	<p>TH also noted on eDNA monitoring for aquatic species that the project has put forward an application for designated funding to cover this. Noted that eDNA could back up the data for this project but also a great opportunity to test the methodology for wider projects and believes significant value for Highways England. KS asked if the eDNA would be used for other species. TH confirmed that bullhead and lamprey would also be picked up alongside the white-clawed crayfish, as would notable riparian species such otter and red squirrel. KS agreed this would be very useful.</p> <p>KS noted that if the team can find other potential enhancement opportunities that would be great for designated funds.</p>	

Item	Minutes	Actions
5.5	<p>KS asked if the team are doing more river surveys upstream and downstream given there are more options being considered now. TH noted that for most schemes the design is fairly fixed or have minor deviations that are covered by the existing surveys, but for the Trout Beck scheme, TH has undertaken additional / extended surveys.</p> <p>TH noted that this is more complicated for invertebrates and fisheries, but more sites are being added as they become known.</p>	
6.0	Air Quality and Affected Road Network (ARN)	
6.1	<p>TH raised the air quality assessments in relation to aquatic habitats and riparian habitats which has been discussed with the air quality team. TH is fairly confident that <i>Ranunculus</i> won't need to be assessed in terms of air quality as they are submerged. The air quality team have confirmed the pollutants would be diluted into the water with a negligible impact to water quality.</p> <p>TH asked for the groups thoughts on whether the team can screen out aquatics and how this would impact riparian habitats? TH also asked if Natural England hold any data on the status of qualifying habitats for the relevant SACs that the ARN would pass through.</p> <p>KS confirmed that Natural England would have this information and the team would need to use the APIS dataset. CD supplied link in the chat: [REDACTED]</p> <p>LD noted that there would be some macrophyte information near the roads.</p> <p>TH noted that this is useful information and asked about the aquatic <i>Ranunculus</i> could be discounted. LD noted that the plants do have some floating leaves but it is a very small percentage of the plant and this would be periodically flushed during medium and high river flows and broadly agreed that the air quality risk to <i>rannuculus</i> would be negligible either through water quality changes or direct deposition.</p>	
6.2	<p>KS noted that there are bryophyte rich woodlands in the area that are very susceptible to air pollution. TH added that AM has already supplied the air quality team with key features to include in their assessment. KS added that there are also woodland features in some of the SACs depending on where the ARN goes.</p>	
6.3	<p>KS noted that in terms of data, maps would be available and asked TH when the team would need this data. TH replied the team require data ASAP.</p> <p>Priority inventory on MAGIC database would be useful and TH agreed but noted that this wasn't on MAGIC for the River Eden. KS said that more general habitat information will be available on MAGIC for Eden and will pick up on wetlands and flushes, although it isn't totally accurate. Bespoke surveys would provide better data if available. TH will investigate this on MAGIC.</p> <p>KS noted that ancient woodland data is also available from MAGIC.</p>	KS to send TH data on SACs.
6.4	<p>LD noted that there might be useful data on the impacts of farming on air quality, as air quality assessments are needed for certain farms and these may already contain data.</p> <p>KS noted that the River Eden doesn't tend to feature highly in these assessments, and LD added that shoals could be an issue</p>	

Item	Minutes	Actions
	<p>if there were very high levels of air pollution and could be included in the cumulative assessment.</p> <p>LD and KS discussed the potential for macro invertebrates in the aquatic habitats. KS agreed with the approach (i.e. looking at the susceptibility of different habitats and species to air quality risks) and suggested the biodiversity team review APIS with the air quality team. and suggested the biodiversity team review APIS with the air quality team.</p>	
7.0	Next meeting	
7.1	<p>Members of the group are welcome to put forward discussion points for the next meeting agenda. TH also noted the group can also discuss offline if needed.</p> <p>TH noted that KP will be taking over from AM on the EclA TWGs in future.</p>	All to consider topics for discussion at next TWG.
7.2	<p>KS asked if the group could discuss more about birds and mitigation around the destruction of habitat and disturbance as this could be difficult as much of the mitigation could be best outside the redline boundary. TH noted that the redline boundary was extended to incorporate some such areas but not all and agreed that this would be a good direction for future meetings.</p>	TH to review if this will be possible.
7.3	<p>KS added that the group don't know where the redline boundary is completely and could be useful to start looking at the schemes on maps (noting that schemes 4/5 and 6 would be subject to change).</p>	TH to review if this will be possible.
7.4	<p>KS noted that there is more to discuss on Trout Beck, but this is more likely to be relevant to the Water and HRA TWGs. TH added that the team agree and will discuss further once information is available. LD suggested a meeting on Trout Beck. KS suggested that the team could meet on site to discuss. TH also would like to discuss Warcop areas in more detail too.</p>	Team to arrange meeting on Trout Beck when more info available.
7.5	<p>LD raised that there are a lot of dead trees on the Eamont due to Ash dieback, and this should be looked at. TH to pass this comment onto relevant colleague.</p>	TH to pass comment onto team.
7.6	<p>CD to circulate minutes.</p>	CD to circulate minutes.

Minutes of Meeting

A66 NTP

Ecological Impact Assessment (EclA) Technical Working Group 4

Purpose of Meeting	EclA Technical Working Group – Meeting 4
Location:	MS Teams
Time/Date:	10-06-21 at 10:00 - 10:50
Attendees:	<p>██████████ (KP) – Chair of EclA TWG and A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (RS) – A66 Biodiversity Bats Lead and Biodiversity Topic Deputy at Amey/Arup</p> <p>██████████ (CDe) – A66 Biodiversity Topic Support at Amey/Arup</p> <p>██████████ (SS) – A66 Biodiversity Ecological Assessment and Mitigation Lead at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (PC) – Planning Specialist at the Environment Agency</p> <p>██████████ (RC) – Lead Officer in Development Control Team at Cumbria County Council</p> <p>██████████ (JC) – Principal Ecologist at North Yorkshire Council</p> <p>██████████ (TE) – A66 Environment Lead at Highways England</p> <p>██████████ (NA) – Head of Development Management for Planning Services at Eden District Council</p> <p>██████████ (LJ) – Consultant support from WSP for Eden District Council</p>
Apologies:	<p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (CCP) – Sustainable Development Coordinator at Eden District Council</p> <p>██████████ (TMH) – Senior Ecologist at Durham County Council</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introductions from Amey/Arup team new to the call.	
2.0	Update since last meeting	
2.1	Ornithology surveys out. No SPA species recorded yet.	
2.2	KP noted that the team will provide further survey updates as more data comes in and will share data via maps where possible in future TWGs. KS confirmed this would be helpful.	
3.0	Bat Surveys: Brief overview of methods	
3.1	RS gave an overview of the methodology proposed for bat surveys, including preliminary bat roost assessments, emergence surveys, static detectors, crossing point surveys, transects, trapping/radiotracking and tree inspection surveys.	
3.2	RS outlined the benefits of trapping and radiotracking, and noted the group will use this method to replace transects. RS invited comments. KS said as long as the team are collecting sufficient information to make robust conclusions, she is content with that. KS asked if this would be used to influence mitigation and habitat creation needs. RS confirmed.	
3.3	RS outlined the crossing point surveys and noted the alterations the team are proposing for the methodology. CDe noted that the radio tracking information will also show where bats go and will compliment the crossing point survey methodology. On other projects, this has been very useful. KS noted she was going to ask if the team will be doing 2 initial repeats followed by one additional repeat where higher activity is observed mean the team will miss any key time periods?. CDe replied that the 3 visits would be planned to be one per month June-August so would give good coverage. RS added that the scoping surveys would be spread through June and July. KS agreed and added that this is backed up by all other survey methods the team are using. CDe noted that for a similar scheme in Wales, no crossing point surveys were undertaken and the scheme was consented. KS noted that this seems a sensible approach to her, and she will check with the Natural England bat specialist.	KS to consult the Natural England bat specialist.
3.4	RS explained proposed approach for tree climbing surveys. Programme for the project makes this difficult within optimum survey season, repeat surveys to be undertaken pre construction. RS asked for comments. KS noted this seems like a good pragmatic approach. Local bat groups will have really useful information about where the good locations for bats are. RS noted that the team have this information. LD asked if these records are of bats in mines, because MOD also have separate records and knows that these mines have roosts within them now. RS will review this. KS noted that the MOD have conservation groups, not just for bats. RS to follow up.	RS to review / locate MOD ecology data.

Item	Minutes	Actions
3.5	<p>RS noted the use of British Trust for Ornithology (BTO) acoustic pipeline. This is relatively new, where data is uploaded and analysed for the team. Provides a consistent approach to all data and automates the process.</p> <p>CDe explained this is a relatively new approach for consultancy but has been used for years in citizen science projects, and is really accurate. KS responded to say this system sounds like a really good system. KS will consult the Natural England bat specialist. KS asked if RS could share the slides too. LD agreed that the information sounds good.</p> <p><i>Post meeting notes: CD shared slides with KS.</i></p>	<p>KS to consult the Natural England bat specialist.</p> <p>RS/CD to share slides.</p>
4.0	AOB	
4.1	<p>Are all bridges and culverts assessed? RS replied that any underpasses have been captured, with the exception of small culverts that haven't been picked up due to being too small to access.</p>	
4.2	<p>KP noted the group are working up some mitigation and the next TWG will provide mitigation and survey data. KP also discussed the previous request made for discussion of ornithology results – KP will action in future TWG meetings. Would the group like to see anything else?</p> <p>KS asked to see bat data on maps to better inform discussions around the data once collected. Also useful to discuss other species. RS noted this will be prepared for future TWGs (possibly not next TWG depending on when final data is collected).</p>	
4.3	<p>LD – useful to see Trout Beck information as soon as available. KP confirmed this is a work in progress – will be picked up in the HRA meeting.</p>	
4.4	<p>KS asked if extra surveys are being done to cover the options being considered. RS noted that additional surveys are being undertaken to supplement existing as required. KP noted that all species leads have included extra survey information where necessary.</p> <p>KS added that seeing habitat information would be useful too. RS noted this may be covered in future TWGs.</p>	
4.5	<p>KS asked if GCN surveys have been undertaken yet – KP confirmed. KS asked if crayfish eDNA surveys would be undertaken, and KP confirmed this is a work in progress.</p>	
4.6	<p>LD asked if the team would have an idea where Ash trees would be located. KP will review with the habitats lead and confirm.</p>	<p>KP to discuss Ash tree information with habitat lead.</p>
4.7	<p>CD to circulate minutes.</p>	<p>CD to circulate minutes.</p>

Minutes of Meeting

A66 NTP

Ecological Impact Assessment (EclA) Technical Working Group 5

Purpose of Meeting	EclA Technical Working Group – Meeting 5
Location:	MS Teams
Time/Date:	10-08-21 at 14:00 - 16:00
Attendees:	<p>██████████ (CC) – A66 Mammal Lead at Amey/Arup</p> <p>██████████ (PC) – Planning Specialist at the Environment Agency</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (JC) – Principal Ecologist at North Yorkshire Council</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (CP) – Vice President (Scotland) CIEEM</p> <p>██████████ – A66 Habitats Lead / Amphibians Lead at Amey/Arup</p> <p>██████████ – A66 BNG Lead / Invertebrates Lead at Amey/Arup</p> <p>██████████ (SS) – Chair of EclA TWG and A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (TH) - A66 Biodiversity Topic Support / Freshwater Lead at Amey/Arup</p> <p>██████████ (TM) – A66 Ornithology Lead at Amey/Arup</p>
Apologies:	<p>██████████ (RS) – A66 Biodiversity Bats Lead and Biodiversity Topic Deputy at Amey/Arup</p> <p>██████████ (KP) – A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (AW) – A66 Environment Deputy Lead at Amey/Arup</p> <p>██████████ (AJC) – A66 Bird / Bat support at Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ – A66 Environment Lead at Highways England</p> <p>██████████ - Senior Ecologist at Durham County Council</p> <p>██████████ - Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ – Head of Development Management for Planning Services at Eden District Council</p> <p>██████████ - Sustainable Development Coordinator at Eden District Council</p> <p>██████████ – A66 Environment Lead at Amey/Arup</p> <p>██████████ - Consultant support from WSP for Eden District Council</p> <p>██████████ - Consultant support from WSP for Eden District Council</p> <p>██████████ (HR) - Consultant support from WSP for Eden District Council</p>

██████████ (PH) - Consultant at WSP on behalf of Eden District Council

██████████ (MH) - Manager in the CCC area team at Natural England

██████████ – Natural England representative

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Update since last meeting	
2.1	<p>Ornithology:</p> <ul style="list-style-type: none"> Breeding bird surveys now completed (final survey was in June 2021) – summary of findings can be found in TWG 5 presentation. Sand martin surveys – three colonies recorded at M6 Junction 40 to Kemplay Bank along River Eamont. <p>Barn Owl Surveys - surveys ongoing throughout August 2021.</p>	
2.2	<p>Bats:</p> <p>Surveys completed:</p> <ul style="list-style-type: none"> 215 structures have been assessed for bat roost potential (BRP) within the draft DCO boundary or within 100m of a potential crossing point. 335 trees have been assessed for BRP within the draft DCO boundary. <p>Surveys currently underway:</p> <ul style="list-style-type: none"> Roost activity surveys (87 structures – mod / high BRP located within draft DCO boundary or within 100m of potential crossing point). Aerial tree inspection surveys of 187 trees with mod or high BRP within the draft DCO boundary. Bat activity surveys at 56 locations identified as potential points where bat flight routes would cross the proposed alignment. 66 locations where bat static detectors have been deployed in habitats suitable to provide bats with commuting routes and/or foraging resources. <p>17 locations where bats will be trapping, tagged and then tracked to identify roost locations in both buildings and trees.</p>	
2.3	<p>Mammals:</p> <ul style="list-style-type: none"> Red squirrel surveys that have been undertaken to date confirm presence at schemes M6 Junction 40 to Kemplay Bank, Penrith to Temple Sowerby and Appleby to Brough. <p>Otter and water vole surveys are being completed w/c 9th August 2021. Camera trap data has not yet been analysed from these surveys but at least one maternity otter holt has been identified within the alignment options for Appleby to Brough.</p>	
2.4	<p>Terrestrial Inverts:</p> <p>32 transects have been assessed by walkover survey, 30 of these are undergoing sampling surveys.</p>	
2.5	<p>River Corridor Survey and Macrophytes:</p> <ul style="list-style-type: none"> All crossings surveyed in July / August 2021. 	

	<ul style="list-style-type: none"> The Nationally Scarce bryophyte <i>Porella pinnata</i> was found in Trout Beck (Scheme 6 - Appleby to Brough) in the vicinity of the red route alignment. <p>Trout Beck and Light Water confirmed as sub-type 2 water course of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation (3260).</p>	
2.6	<p>Aquatic Inverts: Spring samples have been collected and are undergoing analysis in the lab. A second set of (Autumn) samples will be collected in September/October 2021. Results pending.</p>	
2.7	<p>Fish Surveys: Pending - scheduled to start w/c 16th August 2021. All species, including specific surveys for juvenile lamprey.</p>	
2.8	<p>White-clawed crayfish surveys White-clawed crayfish surveys and eDNA (crayfish and fish species) scheduled for early September 2021.</p>	
3.0	Key PEIR findings	
3.1	<p>SS gave presentation on key PEIR findings. <i>Post meeting note: Please refer to presentation for details of this update. Presentation covers:</i></p> <ul style="list-style-type: none"> - <i>Stat designated sites</i> - <i>Non-stat sites</i> - <i>Habitats</i> - <i>Aquatic habitats</i> - <i>Species:</i> <ul style="list-style-type: none"> o <i>Bats</i> o <i>Red Squirrel</i> o <i>Otter</i> o <i>Water vole</i> o <i>Badger</i> o <i>Pine marten/polecat/brown hare/hedgehog/deer</i> o <i>Birds</i> o <i>Reptiles</i> o <i>Amphibians</i> o <i>Terrestrial Inverts</i> <p><i>Aquatic species</i></p>	
4.0	Issues raised during meeting	
4.1	<p>CP queried the following:</p> <ul style="list-style-type: none"> - Second round of badger bait marking surveys taking place during Sept / Oct 2021 and if results would be limited due to vegetation cover etc. CC responded saying that although this is not the optimal survey window, Sept/Oct is still within guidance recommendations. Land to be covered during these surveys was predominantly arable / hedge lines / boundary features and therefore dense vegetation cover should not be too much of a limiting factor. - Are we including pollinator highways – NW responded and said verge and hedgerow improvements are being included / considered. <p>Why has the team gone up to 250m for bat roosts – project team responded to confirm that this is to ensure all suitable features have been considered in line with all alignment options.</p>	
4.2	CM queried the following:	

	Have designated sites been considered and scoped in within 200m of existing road and new proposed alignments. NW confirmed this is the case.	
4.3	<p>RK queried the following:</p> <ul style="list-style-type: none"> - Functioning linked habitat for SPAs/SACs – species can / do use land outside of boundaries and therefore these habitats must be considered too. TH confirmed these habitats are also being considered. - Is mitigation being considered at Stage 1 HRA Screening (Sweetman)? The project team confirmed that mitigation is not being considered as part of the Stage 1 Screening stage. <p>Are wintering bird surveys in Jan for completing the picture or relate to LSE as that would be an issue in timing for the ES. TM confirmed these surveys will fill in the gaps left due to land access issues and the additional options and will complete the picture. Likely survey months would be Nov and Dec 2021, Jan 2022, TBC.</p>	
4.4	<p>NW raised the following:</p> <ul style="list-style-type: none"> - Need for more info / discussions surrounding current and historic pollution incidents on designated sites. Specifically a historic oil leak on a designated site. LD offered to gain more info on this. <p>MN/TH to gain more info potentially via [REDACTED] (potential point of contact for more info as he has been heavily involved in several surveys in the past).</p>	<p>LD to send project team information on oil leak.</p> <p>MN/TH to approach [REDACTED] for more info.</p>
4.5	<p>LD queried the following:</p> <ul style="list-style-type: none"> - Whether LSE for the PEIR took account of mitigation. SS responded that where mitigation was confirmed LSE did take this into account however not all mitigation confirmed at this stage. - Where the local invertebrate sites were as wasn't aware of these. Suggested more sources of data for NW to look into for these and Temple Sowerby SSSI. The team noted they can provide a separate note on invertebrate shingle sites (<i>post meeting note: please see separate invertebrate shingle sites word document to be circulated with minutes</i>). - Whether we will be considering hydrology impacts for Temple Sowerby. NW/TH response - this has been broadly considered in the PEIR but will be reviewed in detail within final ES. <p>Discussion around inclusion of candidate SINCS and de-notified SINCS, consensus to include both in ES.</p>	
5.0	Next meeting	
5.1	<p>Mitigation to be covered in next meeting:</p> <p>CD informed all that invites will be sent out soon for w/c 6th Sept 2021 (internal and external invites) – several sessions to be held which will bring together different topic leads and proposed mitigation will be discussed scheme by scheme.</p>	CD to send mitigation invites

5.2	Similar mitigation process / meetings to be set up specific to HRA.	TH to run through HRA mitigation process in subsequent meetings.
5.3	Members of the group are welcome to put forward discussion points for the next meeting agenda.	All to consider topics for discussion at next TWG.
5.4	CD to circulate minutes and slides, as well as note on invertebrates.	CD to circulate files.

Minutes of Meeting

A66 NTP

ECOLOGICAL IMPACT ASSESSMENT (ECIA) TECHNICAL WORKING GROUP 6

Purpose of Meeting	EcIA Technical Working Group – Meeting 6
Location:	MS Teams
Time/Date:	11-11-21 at 14:00 - 16:00
Attendees:	<p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (AHJ) – A66 Herptile Lead at Amey/Arup</p> <p>██████████ (JB) – EIA Advisor at the Planning Inspectorate</p> <p>██████████ (PC) – Planning Specialist at the Environment Agency</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (HG) – Environment and Sustainability Lead at Cumbria County Council</p> <p>██████████ (LJ) – Consultant support from WSP for Eden District Council</p> <p>██████████ (KP) – Chair of EcIA TWG and A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (CM) – Vice President (Scotland) CIEEM</p> <p>██████████ (NW) – A66 Habitats Lead at Amey/Arup</p> <p>██████████ (MN) – A66 BNG Lead / Invertebrates Lead at Amey/Arup</p> <p>██████████ (EP) – EIA and Land Rights Advisor at the Planning Inspectorate</p> <p>██████████ (TH) – A66 Freshwater Lead at Amey/Arup</p> <p>██████████ (HW) – A66 Mammals support at Amey/Arup</p>
Apologies:	<p>██████████ (RS) – A66 Bats Lead and Biodiversity Topic Deputy at Amey/Arup</p> <p>██████████ (AW) – A66 Environment Deputy Lead at Amey/Arup</p> <p>██████████ (AJC) – A66 Ornithology / Bats support at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (JC) – Principal Ecologist at North Yorkshire Council</p> <p>██████████ (RK) – Project Speed Lead at PINS</p> <p>██████████ (SS) – A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (TM) – A66 Ornithology Lead at Amey/Arup</p> <p>██████████ (ZW) – A66 EcIA Lead at Amey/Arup</p> <p>██████████ (TE) – A66 Environment Lead at Highways England</p> <p>██████████ (TMH) – Senior Ecologist at Durham County Council</p> <p>██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England</p>

██████████ (CCP) – Sustainable Development Coordinator at Eden District Council

██████████ (DG) – Consultant support from WSP for Eden District Council

██████████ (HR) – Consultant support from WSP for Eden District Council

██████████ (PH) – Consultant at WSP on behalf of Eden District Council

██████████ (NK) – Natural England representative

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introductions from Amey/Arup team new to the call (species leads).	
2.0	Update since last meeting	
2.1	Habitats: <ul style="list-style-type: none"> Detailed hedgerow surveys and assessments are due to be completed in November. Phase 1 Habitat surveys to be completed in December/January focussing on the draft DCO boundary and land that was not previously accessible. 	
2.2	Reptiles: <ul style="list-style-type: none"> Reptile Habitat Assessment surveys are due to be completed in November. These will inform the requirement for further targeted surveys in spring 2022. 	
2.3	Ornithology: <ul style="list-style-type: none"> Further winter bird survey visits are being undertaken in November, December and January to fill data gaps in key areas around Temple Sowerby to Appleby which were inaccessible during the first round of winter bird surveys. Barn owl surveys are now complete and preliminary findings suggest good numbers of barn owl are present throughout the central schemes of the project (schemes 03 to Scheme 09). 	
2.4	Bats: <ul style="list-style-type: none"> Preliminary roost potential surveys of 215 structures and 335 trees have been completed. Detailed surveys now complete: roost activity surveys of 87 structures, aerial tree inspection surveys of 187 trees, bat activity surveys at 56 potential route crossing points, static detector monitoring at 66 bat commuting/foraging locations and back-tracking surveys at 17 locations to identify roosts. Bat data analysis is ongoing, to be completed early 2022. 	
2.5	Mammals: <ul style="list-style-type: none"> Final otter and water vole surveys were completed at the beginning of August. No water vole signs were identified but otters have been found on the majority of watercourses across the schemes. Several otter holts have been identified on watercourses between Penrith and Brough. Badger bait-marking surveys were completed in September/October to help identify territory extents. 	

	<ul style="list-style-type: none"> Additional red squirrel surveys are planned in and will be completed towards the end of the year. 	
2.6	<p>Freshwater Ecology:</p> <ul style="list-style-type: none"> All surveys are now completed. River Corridor Survey and Macrophyte surveys – detailed analysis and reports in progress. Important riverine habitats have been recorded between Penrith and Brough. Aquatic Invertebrates – Autumn samples have been collected and are undergoing analysis in the lab. Results pending. Spring samples have been analysed and several are classified as being ‘very good’ and representing sites with unpolluted, high water quality. Tributary of Tutta Beck (Cross Lanes to Rokeby) is of ‘high conservation value’. Fish – detailed data analysis (species densities) is pending for fish species recorded. White-clawed crayfish (WCC) – have been recorded. No invasive crayfish recorded (eDNA pending). Riverine eDNA – 22 sample locations and three analysis types (“vertebrate” metabarcoding for fish and riparian mammals, WCC primer, invasive crayfish primer). Results pending, but will supplement traditional surveys. 	
3.0	Feedback following the statutory consultation period	
3.1	<p>Natural England – key points raised relevant to the EcIA with project team response to each point:</p> <ol style="list-style-type: none"> Some elements of the project (construction site, settlement ponds) to be created above the floodplain raising concerns that these elements will be at risk from future erosion. This is noted and we are looking at this as part of the geomorphology walkovers. There are queries in relation to some of the mitigation areas proposed – e.g. where species rich grassland and wetland have been proposed within M6 Junction 40 to Kemplay Bank whether wet woodland could be considered. Detailed mitigation is still being developed but happy to consider wet woodland as an alternative or as part of the habitat matrix at M6 J40 floodplain site. Detailed comments on SSSIs and CWS in terms of descriptions and features. All comments made have been noted and will be included/ revised/ double checked for the ES. Comments on the use of Defra Biodiversity Metric 3.0 rather than 2.0. The scheme and baseline calculations were started prior to 3.0 being released and approach was agreed with NH that the project should continue with Metric 2.0. Detailed comments on bat surveys and impacts on bat habitat loss and fragmentation and mitigation We note the comments made in relation to bats. We propose to cover this via a separate meeting with Natural England or during the next TWG when the bat lead has returned. 	

3.2	<p>Environment Agency – key points raised relevant to the EclA with project team response to each point:</p> <ol style="list-style-type: none"> 1. Refers to some examples along the entire route of small watercourses or ditches being culverted where they could be diverted instead e.g.the Cross Lanes to Rokeby RED option involves the culverting of Tutta Beck. Where the scheme involves works to footbridges or works to / across the floodplain of the River Eden SAC, any proposals or designs must fully consider the dynamic geomorphic processes and natural flow regime of the SAC. Realignment had been identified as a preference to a culvert in this location. The local topography made this challenging but has been looked at. However, the Rokeby RED option is currently not part of the preferred route. The road runs from east-west and the rivers typically run north-south so diversions do not generally help. 2. Further information required, such as a biosecurity and Invasive Non-Native Species (INNS) management plan which should identify any known INNS and have specific mitigation assigned. Agreed. Preliminary Environmental Information Report (PEIR) covers INNS locations and general mitigation principles. Presence of INNS will be considered in more detail within the ES. An INNS Management Plan will be produced or incorporated within the project Construction Environment Management Plan (CEMP). Aquatic and riparian INNS will be a key aspect of the CEMP. Note that invasive crayfish (a significant threat to WCC) have not been recorded. 	
4.0	Issues and queries raised during meeting	
4.1	<p>CM queried the following:</p> <ul style="list-style-type: none"> - The date range for the bat roost and bat activity surveys. The Bats Lead (RS) was not available to answer this but subsequently confirmed that roost activity, radiotracking and crossing point surveys were undertaken between June and September 2021, and within survey guidelines. - Whether CCI scoring was used for the aquatic invertebrate sampling. TH confirmed this and stated that we will also be screening the aquatic invertebrate species lists against JNCC datasets to assess the conservation value of individual species (in additional to CCI, WHPT, WFD metrics, etc.). - Potential for temporal impacts on salmonids, e.g. at river crossing points. TH stated that this is work in progress while design is being finalised and construction discussions are ongoing as we don't have all the information needed yet to make a full assessment. He will try to get further clarity on this for the HRA working group. 	TH to report back at next meeting

4.2	<p>LD queried the following:</p> <ul style="list-style-type: none"> - Possible duplication of WCC crayfish eDNA survey data with other monitoring being done by the Eden Rivers Trust. TH to investigate and respond. - Potential timing constraints for vibration piling near to river stretches where salmon redds are present. Mainly an issue if peak particle velocity is above 12mm/sec. TH noted and asked whether LD had further guidance on salmon redds. 	<p>TH to report back at next meeting</p> <p>LD to provide further guidance</p>
4.3	<p>HG raised the following:</p> <ul style="list-style-type: none"> - Can the Local Nature Recovery Strategy for Cumbria be considered in the assessment please: https://www.cumbria.gov.uk/planning-environment/lnrs/default.asp - CMc had raised that also in the PEIR comments on behalf of CCC/EDC. 	<p>All to consider when writing the ES</p>
4.4	<p>KP stated that further queries are being responded to as part of the statutory consultation feedback process.</p>	
5.0	Next meeting and AOB	
5.1	<p>Bats & mitigation to be covered in next meeting – date to be confirmed.</p>	<p>KP</p>
5.2	<p>Members of the group are welcome to put forward discussion points for the next meeting agenda.</p>	<p>All to consider topics for discussion at next TWG</p>
5.3	<p>CD to circulate minutes and slides.</p>	<p>CD</p>

Minutes of Meeting

A66 NTP

ECOLOGICAL IMPACT ASSESSMENT (EclA) Technical Working Group 7

Purpose of Meeting	EclA Technical Working Group – Meeting 7
Location:	MS Teams
Time/Date:	26/01/2022 at 14:00-16:00
Attendees:	<p>██████████ (PC) Planning Specialist at the Environment Agency</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager Lead at Amey/Arup</p> <p>██████████ (CCP) – Sustainable Development Coordinator at Eden District Council</p> <p>██████████ (LJ) – Consultant support from WSP for Eden District Council</p> <p>██████████ (JC) – Principal Ecologist at North Yorkshire Council</p> <p>██████████ (KP) – A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (NK) – Natural England representative</p> <p>██████████ (CM) – Consultant at WSP on behalf of Eden District Council</p> <p>██████████ (EP) – EIA and Land Rights Advisor at the Planning Inspectorate</p> <p>██████████ (RR) - A66 Mammal Lead at Amey/Arup</p> <p>██████████ (HR) – Consultant support from WSP for Eden District Council</p> <p>██████████ (RS) – A66 Bat Lead at Amey/Arup</p> <p>██████████ (SS) - A66 Design and Mitigation Lead at Amey/Arup</p> <p>██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (TH) –A66 Aquatic Lead at Amey/Arup</p> <p>██████████ (AJ) – A66 Ornithology Lead at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p>
Apologies:	<p>██████████ (TE) – A66 Lead Environment Advisor at Highways England</p> <p>██████████ (TMH) – Senior Ecologist at Durham County Council</p> <p>██████████ (RW) – Local Nature Recovery Strategy Manager at Cumbria County Council</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (AB) – Sustainability Coordinator and Biodiversity Officer at Eden District Council</p> <p>██████████ (DG) – Consultant support from WSP for Eden District Council</p> <p>██████████ (RK) – Project Speed Lead at PINS</p>
Circulation:	All

Item	Minutes	Actions
1.0	KP provided introductions and agenda for the meeting	
2.0	Update on Surveys	
2.1	<p>KP and TH provided survey updates for the following topics;</p> <ul style="list-style-type: none"> • Reptiles • Red squirrel • Ornithological • eDNA surveys for aquatic species <p>Please ref to presentation slides for detailed info.</p>	
3.0	Construction Mitigation Methods	
3.1	<p>KP provided summary overview of construction mitigation methods. Some methods are still under review and there will be an opportunity for stakeholders to feed into mitigation methods prior to the construction stage. Please ref to presentation slides for detailed info.</p>	
4.0	Species specific	
4.1	Please ref to presentation slides for detailed info.	
4.2	<p>TH provided update on aquatic survey results and impacts. The detailed method of data collection has given a robust understanding of INNS.</p>	
4.3	<p>RR provided update on otter survey results and impacts. The presence and location of a confirmed otter maternity holt was presented (See presentation slides for info).</p>	
4.4	<p>RS provided an update on bat survey results and impacts. A summary was provided of all identified bat roosts and notable flight paths following the surveys undertaken (see presentation slides for info).</p>	
5.0	Design Mitigation	
5.1	<p>SS provided detailed mitigation proposals for each scheme.</p>	
5.2	<p>Scheme Overview SS noted that the scheme will achieve a BNG score of no net loss as a minimum but will hope to achieve a net gain with the inclusion of species-specific mitigation.</p>	
5.3	<p>EP asked what metric would be used for BNG. SS responded to confirm that Biodiversity metric 2.0 would be used.</p>	
5.4	<p>HR asked if the BNG calculations would be applied for the project as a whole or per scheme.</p> <p>SS responded – The aim was to ensure BNG no net loss for each scheme. But where this is not possible look to compensate losses occurring in one scheme by additional planting in another. For example, some mitigation planting required to achieve no net loss for Scheme 11 may need to be done on Scheme 09</p>	
5.5	<p>CM asked if species mitigation will be additional to BNG mitigation. Is species mitigation included within the BNG calculations?</p> <p>SS responded - The current BNG calculations are based on a previous iteration of the scheme design. Land for specific</p>	

Item	Minutes	Actions
	species has been set aside and it is hoped that that land will lead to more than 0% net gain.	
5.6	PC – What are the current figures for BNG net gain. SS – Current figure are higher than 10% and will be scaled back.	
5.7	KS sought confirmation that the project will aim for no net loss on a scheme-by-scheme basis and total. SS responded that this is correct.	
6.0	Scheme 0102 (M6 Junction 40 to Kemplay Bank) mitigation	
6.1	SS provided detailed mitigation proposals for this scheme by sharing detail held on webmap.	
6.2	CM Raised concerns re red squirrel crossing points and if it would be better to control grey squirrel population. Would encouraging crossing be appropriate? RR responded that consultation has been undertaken with the Whinfell red squirrel officer and it was agreed that allowing crossing would not likely to be an issue. <i>Post meeting note: Subsequent consultation with Penrith and District Red Squirrel Group have confirmed that grey squirrel control would be beneficial – however they were in agreement the red squirrel crossing points proposed are unlikely to encourage increased grey squirrel incursion.</i>	
6.3	LD raised concerns over a line on webmap mitigation and queried what this line represented and if it was in the floodplain. TH & SS informed red line represented otter fencing and if it was damaged by flooding repairs would be made.	
7.0	Scheme 03 (Penrith to Temple Sowerby)	
7.1	SS provided detailed mitigation proposals for this scheme by sharing detail held on webmap. Notably, SS noted larger areas of woodland to be lost on this scheme and areas where replacement woodland has been proposed. TH also summarised areas of wet woodland creation proposed for this scheme.	
8.0	Scheme 04/05 (Temple Sowerby to Appleby)	
8.1	SS provided detailed mitigation proposals for this scheme by sharing detail held on webmap.	
8.2	KS queried the effectiveness of proposed golden plover mitigation adjacent to the road. AJ responded that wintering golden plover are already using areas adjacent to existing A66 carriageway and that wintering golden plover in this area are likely already habituated to some traffic disturbance events. AJ also noted that there is an abundance of golden plover habitat in the wider area.	
8.3	CM raised concern over ancient monuments and adjacent proposed tree planting within this Scheme.	

Item	Minutes	Actions
	SS noted this and will be raised with the heritage/landscape teams to review.	
8.4	<p>KS raised concerns over a potential compound (assumed to be adjacent to the proposed Trout Beck viaduct) in floodplain and if a temporary bridge may be required.</p> <p>TH to investigate.</p> <p><i>Post meeting note: Yes a temporary bridge will be required during construction. This will span banktop to banktop. The haul road associated with the bridge will be at the level of the floodplain minimising impacts to flood flows in a flood event.</i></p>	TH to investigate
8.5	<p>LD raised concerns over Appleby Horse fair and if this had been considered.</p> <p>SS confirmed that engineers had had a good understanding of the impacts that the horse fair has on the local area and that resulting road closures would have been considered.</p>	
8.6	<p>KS noted the presence of a polygon feature that appeared to be within existing river.</p> <p>TH to investigate.</p> <p><i>Post meeting note: To confirm, this polygon shows proposed bed lowering required for flood compensation.</i></p>	TH to investigate
9.0	Scheme 06 (Appleby to Brough)	
9.1	SS provided detailed mitigation proposals for this scheme by sharing detail held on webmap. SS informed that the Scheme supported a more diverse range of habitats.	
9.2	<p>KS queried if conifer woodlands would be planted for red squirrel mitigation.</p> <p>SS confirmed it would be a mixed woodland.</p>	
9.3	<p>LD queried if MoD been consulted re potential overbridge.</p> <p>CE to investigate.</p> <p><i>Post meeting note: All potential impacts that impact MoD land have been consulted.</i></p>	CE to investigate.
10	Scheme 07 (Bowes Bypass)	
10.1	SS provided detailed mitigation proposals for this scheme by sharing detail held on webmap. SS noted the difficulty implementing tree/woodland mitigation in this area due to the presence of parliamentary land. No questions were asked during this scheme discussion.	
11	Scheme 08 (Cross Lanes to Rokeby)	
11.1	SS provided detailed mitigation proposals for this scheme by sharing detail held on webmap. No questions were asked during this scheme discussion.	
12	Scheme 09 (Stephen Bank to Carkin Moor)	
12.1	SS provided detailed mitigation proposals for this scheme by sharing detail held on webmap. SS noted that there are large	

Item	Minutes	Actions
	amounts of landscape mitigation proposed in this area. No questions were asked during this scheme discussion.	
13	Scheme 11(A1(M) Junction 53 Scotch Corner)	
13.1	SS provided detailed mitigation proposals for this scheme by sharing detail held on webmap. Any need for woodland planting would be provided on Scheme 09. No questions were asked during this scheme discussion.	
14	SS opened the floor to questions on mitigation proposals	
14.1	KS – Offered to review bat queries. SS/RS would discuss in separate meeting/correspondence if required	RS/SS to discuss further if additional correspondence relating to bats is required.
14.2	PC – raised query about working in floodplain area in Bowes. CE to investigate. <i>Post meeting note: DIPs (contractors building the A66) are onboard and are beginning to consider construction methodologies for the project.</i>	CE to investigate.
14.3	LJ – Queried moving confluence north on Scheme 06 (Woodend – Yosgill confluence shift). How far this would be moved and how much land would be taken and that this may be met with resistance from landowner. CE to investigate and advise. <i>Post meeting note: This was investigated further. The culvert is still shown for extension to the north. It is assumed the current extent of the redline boundary at this location is enough for any flood compensation required and the remodelling of the watercourse channels. The landowner is aware of the requirement to amend the structure and that a small area of flood compensation may be required. This will be looked at in further detail during detail design.</i>	CE to investigate.
14.4	CM requested detail for existing badger setts and additional info re red squirrels. RR agreed to send through.	RR to prepare additional text to be circulated to attendees alongside the minutes.
14.5	██████████ informed the project team of the Pollinator Project commissioned by National Highways which the project team should tie into where appropriate. SS noted.	KP sourced the pollinator schemes identified along the A66 and re-shared them with the A66 Project Team

Minutes of Meeting

A66 NTP

REPTILES AND BOTANICAL DISCUSSION WITH NATURAL ENGLAND

Purpose of Meeting: To discuss and seek agreement on the proposed strategy for reptile surveys and botanical (NVC) surveys

Location: MS Teams

Time/Date: 19-11-21 at 10:00 - 10:30

Attendees: [REDACTED] (AHJ) – A66 Herptile Lead at Amey/Arup
 [REDACTED] (NM) – A66 Reptile Specialist at Amey/Arup
 [REDACTED] (NW) – A66 Habitats Lead at Amey/Arup
 [REDACTED] (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
 [REDACTED] (NK) – Lead Advisor at Natural England

Apologies: [REDACTED] (KP) – A66 Biodiversity Topic Lead at Amey/Arup
 [REDACTED] (TB) – Senior Specialist at Natural England

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introductions from Amey/Arup team.	
2.0	Reptile Survey and Mitigation Strategy	
2.1	NM presented the reptile survey and mitigation strategy, explaining the key elements (including the patchy distribution of common lizard, slow worm and adder along the route; habitat screening for further survey and defining the survey area; targeted pre-construction presence/likely absence surveys; and mitigation by way of habitat creation, displacement and translocation where deemed necessary). NK noted general agreement with the reptile strategy and did not raise any comments during the meeting. Further detailed comments on the reptile strategy were invited from TB after the meeting. These were received 20/12/2021 and subsequently incorporated into a revised draft of the reptile strategy, noting that Natural England was satisfied with the overall approach.	
3.0	Botanical - NVC Survey Strategy	
3.1	NW presented the NVC survey strategy and approach to be used for the ES. NW explained that NVC surveys are proposed in April/May 2022 for key identified habitats (woodland, grassland, heath, mire and bog, including those within designated sites) and prioritised in areas most likely to be impacted by the project. The results of these surveys will be appended to the DCO submission. NW also explained that the mitigation hierarchy will be followed and fed into the design process; a full review of available desk study	

Item	Minutes	Actions
	<p>data (e.g. SSSI condition units) is being undertaken to help identify NVC communities and their quality; and that mitigation for potential impacts on valuable habitats will follow the precautionary principle. This approach ensures that NVC surveys are undertaken at an appropriate time of year so that the botanical data feeding into the post-ES detailed landscape design and mitigation phase is scientifically robust. Existing Phase 1 and desk study botanical data provides sufficient coverage to avoid the best areas as the project design is refined.</p> <p>NK noted agreement with this strategy and did not raise any comments during the meeting.</p> <p>NW queried whether Natural England holds further data (e.g. SSSI site management plans) that could be made available. NW agreed to provide NK with a list of SSSIs relevant to the project so that NK could investigate.</p> <p>NW also clarified to NK that bog habitats falling within the survey area are within SSSIs e.g. Bowes Moor.</p>	<p>NW to provide SSSI list to NK to follow up</p>
4.0	AOB	
4.1	<ul style="list-style-type: none"> • No other matters were raised during the meeting. • CD to circulate meeting recording with minutes to follow. <p><i>Post meeting note: recording circulated 19-11-21.</i></p>	CD

Minutes of Meeting

A66 NTP

Ecology mitigation meeting – fen and ancient woodland

Purpose of Meeting	To discuss specific ecology mitigation in relation to priority habitats
Location:	MS Teams
Time/Date:	14-03-22 at 11:00 - 12:30
Attendees:	<p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (MN) – A66 BNG Lead / Invertebrates Lead at Amey/Arup</p> <p>██████████ (SS) – A66 Ecology Mitigation Lead at Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (KS) - Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>████████████████████ (CCP) - Sustainable Development Coordinator at Eden District Council</p> <p>██████████ (LJ) - Consultant support from WSP for Eden District Council</p> <p>██████████ (NK) – Natural England representative</p> <p>██████████ (GK) – Senior Planning Officer, Cumbria Council</p> <p>██████████ (TC) – A66 Botany and Habitats Assistant Lead at Amey/Arup</p>
Apologies:	<p>██████████ (KP) – A66 Biodiversity Topic Lead at Amey/Arup</p> <p>██████████ (ZW) – A66 Ecological Assessment Lead at Amey/Arup</p> <p>████████████████████ (TMH) - Senior Ecologist at Durham County Council</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introductions	
2.0	Scheme 6 (Warcop) priority fen habitat	
2.1	<p>SS explained the proposed alignment has undergone a design change, post stat con, and a new balancing pond has been added such that there is now an encroachment on fen habitat. Assuming the alignment can be adjusted and the new balancing pond re-designed at the detailed design stage to minimise the construction area, it is estimated that the encroachment will result in a direct habitat loss of 0.2Ha.</p> <p>SS described three options for mitigation including areas adjacent to the lost habitat (although these may not be sufficient in area), one area to the south of the proposed scheme and one area of Scheme 4/5 where an existing fen is being protected and enhanced.</p>	

2.2	KS raised hydrology effects which may cause larger degradation issues on the retained fen habitat, particularly if the proposed junction impedes drainage from a seepage it appears to cross.	TC to escalate to the hydrology team for inclusion in their assessment if not already covered.
2.3	KS / MN / TC discussed how to quantify loss of degraded habitat in terms of suitable mitigation and NE's preference is to use BNG metrics as if the habitat was being directly lost.	TC to provide area of possible degradation and MN to include in metrics. SS to identify and confirm suitably sized mitigation area with suitable hydrology to create fen habitat.
2.4	LJ pointed out the newly created PRow may be affected by re-shaping the pond and if this changed the assessment would need to be updated. SS confirmed the engineers had committed to re-designing the balancing pond within the existing space between the fen and the current design but would raise the concern.	SS to raise to engineers presence of PRow.
2.5	GK asked whether the Red Line Boundary (RLB) could be extended to the north to create more fen habitat at the site of loss. SS explained the RLB was now fixed but Amey/Arup would identify whether the areas currently within the RLB at that point would have suitable hydrology conditions to allow any localised fen habitat creation.	TC to include in liaison with hydrology team.
2.6	CC-P raised whether road run-off with pollutants including de-icing chemicals would cause further degradation issues to the fen. SS explained that road run off was captured in the road drainage and entered the balancing ponds so there should be no pollution effects on adjacent habitats.	TC to include in habitat assessment relating to indirect effects.
2.7	SS queried whether Biodiversity Net Gain could be reported for the proposed scheme when priority fen habitat is being lost. KS said she would need to check the guidance. NK stated that as long as habitat replacement like for like or better was delivered within the scheme and not off site, then BNG could be claimed.	SS to confirm mitigation areas for fen within scheme boundaries once areas of loss are confirmed.
2.8	SS explained that mitigation for degradation through air quality was currently being quantified using a ratio based on previous	SS to examine

	schemes. The application of BNG metrics for degraded habitats from indirect effects was discussed and NE's preference is to use the metrics.	impact of this on mitigation design for air quality.
2.9	TC queried whether the ES could conclude no significant effect for fen. NK / KS were satisfied with that conclusion as long as mitigation was like for like or better within the area.	TC to update ES once input from hydrology provided and confirmation that quantified indirect effects can be mitigated for.
3.0	Scheme 8 (Cross Lanes to Rokeby) ancient woodland	
3.1	Efforts have been made to remove works within ancient woodland since potential impacts were reported at PEIR stage. Across all schemes there is one remaining potential impact on ancient woodland. This area comprises a planted ancient woodland site that has been replanted with conifer plantation. No direct habitat loss is anticipated but some minor construction activity may be required where there is a drainage ditch tie in.	
3.2	KS clarified the extent of the impacts would be limited to within the areas adjacent to the existing drainage ditch and asked SS to confirm the areas that are currently proposed for woodland creation and mitigation. SS clarified proposed woodland blocks within Scheme 8, including an area of woodland planting adjacent to the effected ancient woodland block.	
3.3	NK raised that the standard approach would be to include mitigation recommendations within a CEMP. These would include standard pollution prevention, noise and dust reduction and consideration of NE standing advice for ancient woodland. KS highlighted opportunities for any tree losses to provide opportunities for enhancement with replanting of broadleaved species.	TC to detail and reflect within ES.
3.4	SS explained that there may need to be a post and wire fence installed within the 15m ancient woodland buffer. CE raised the potential for fence posts to be hand dug to avoid heavy machinery being used which could result in ground compaction within the buffer area. KS mentioned the option to use low pressure vehicles and vehicle mats/pads to avoid ground compaction if machinery was needed.	SS to follow up with landscape team. If required, mitigation measures to be included with CEMP/LEMP.
3.5	KS raised opportunity to use the 15m buffer for woodland edge planting. SS notes that the red line boundary now starts 15m from the canopy edge so we are unable to plant within that area. KK clarified that all works would be on the north side of the track that runs in parallel with the RLB.	

3.6	TC, SS, KS and NK agreed conclusion that there will not be a significant adverse effect within this area from the proposed drainage works.	TC to detail and reflect within ES.
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Agenda

A66 NTP

Project title	A66 Northern-Trans Pennine	Job number HE565627
Meeting name	Water Technical Working Group 3 Surface Water	File reference Text
Location	MS Teams	Time and date 13:30 20 April 2021
Purpose of meeting	Regular updates on surface water aspects of A66 NTP	

Attendance

[Redacted] (Natural England)
[Redacted] (Environment Agency)
[Redacted] (Environment Agency)
[Redacted] (Environment Agency)
[Redacted] (Environment Agency)
[Redacted] (Environment Agency)
[Redacted] (Environment Agency)
[Redacted] (Planning Inspectorate)
[Redacted] (Planning Inspectorate)
[Redacted] (DCC)
[Redacted] (CCC)
[Redacted] (CCC)
[Redacted] (EDC)
[Redacted] (Ramboll/Highways England)
[Redacted] (Highways England)
[Redacted] (Aecom)
[Redacted] (JBA Consulting)
[Redacted] (A66 IPT)
[Redacted] (A66 IPT)
[Redacted] (A66 IPT)
[Redacted] (A66 IPT)
[Redacted] (A66 IPT)

Apologies [Redacted] (Aecom)

Circulation Those attending:
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Prepared by [Redacted]
Date of circulation 15th April 2021

Agenda

Project title

A66 Northern-Trans Pennine

Job number

HE565627

Date of Meeting

20 April 2021

		Action
1.	Introductions	
2.	Minutes from previous meeting	
3.	Progress to date Data collection Site surveys Baseline Assessments Co-working Opportunities Flood modelling overview (work so far)	Surface Water project team to provide update on project progress AB to provide overview on baseline flood modelling so far
4.	Work to be completed Outline of on-going surface water programme	MB to provide update on surface water programme
5.	Introduction to DCO Brief overview of process Questions	Overview of DCO process
6.	Introduction of Designated Funds Brief overview of process Questions & suggestions	CE to give brief introduction to Designated Funds
7.	AOB	

Agenda

A66 NTP

Project title	A66 Northern Trans-Pennine	Job number HE565627
Meeting name	Water Technical Working Group 3 Groundwater	File reference HE565627-AMY-EWE-S00- AG-LX-000001
Location	MS Teams	Time and date 15:30 21 April 2021
Purpose of meeting	Regular updates on groundwater aspects of A66 NTP	

Attendance

- ██████████ (Environment Agency)
- ██████████ (Environment Agency)
- ██████████ (Environment Agency)
- ██████████ (Planning Inspectorate)
- ██████████ (Planning Inspectorate)
- ██████████ (Cumbria County Council)
- ██████████ (Cumbria County Council)
- ██████████ (Cumbria County Council)
- ██████████ (Cumbria County Council)
- ██████████ (Durham County Council)
- ██████████ (Eden District Council)
- ██████████ (Eden District Council)
- ██████████ (North Yorkshire County Council)
- ██████████ (Highways England)
- ██████████ (JBA)
- ██████████ (Amey)
- ██████████ (Arup)
- ██████████ (Arup)
- ██████████ (Arup)
- ██████████ (Arup)
- ██████████ (Arup)
- ██████████ (Arup)

Apologies Text

Circulation Those attending:

-

Prepared by ██████████

Date of circulation 13 April 2021

Agenda

Project title

A66 Northern Trans-Pennine

Job number

HE565627

Date of Meeting

21 April 2021

		Action
1.	Introductions	
2.	Minutes from previous meeting	
3.	Progress to date Data collection Site surveys Baseline Assessments Co-working Opportunities	LB to provide update on project progress
4.	Work to be completed Outline of on going groundwater programme	LB to provide update on groundwater programme
5.	Focus point: Groundwater supplies/abstractions Aquifers Source Protection Zones Licenced abstractions Other abstractions (not requiring a licence)	LB to present data and provide overview of assessment methodology
6.	AOB	
7.	Next meeting Proposal for next focus point: Groundwater dependant habitat	

Agenda

A66 NTP

Project title	A66 Northern-Trans Pennine	Job number HE565627
Meeting name	Water Technical Working Group 3 Surface Water	File reference Text
Location	MS Teams	Time and date 11:00 15 June 2021
Purpose of meeting	Regular updates on surface water aspects of A66 NTP	

Attendance	<div style="background-color: black; width: 100%; height: 100%; position: relative;"> <div style="position: absolute; top: 0; right: 0; width: 50%; height: 100%; text-align: right; padding-right: 10px;"> <p>(Natural England)</p> <p>(Environment Agency)</p> <p>(Environment Agency)</p> <p>(Environment Agency)</p> <p>(Environment Agency)</p> <p>(Environment Agency)</p> <p>(Environment Agency)</p> <p>(Planning Inspectorate)</p> <p>(Planning Inspectorate)</p> <p>(DCC)</p> <p>(CCC)</p> <p>(CCC)</p> <p>(EDC)</p> <p>(Ramboll/Highways England)</p> <p>(Highways England)</p> <p>(Aecom)</p> <p>(JBA Consulting)</p> <p>(A66 IPT)</p> <p>(A66 IPT)</p> <p>(A66 IPT)</p> <p>(A66 IPT)</p> <p>(A66 IPT)</p> <p>(A66 IPT)</p> <p>(Aecom)</p> </div> </div>
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Apologies	Text
Circulation	Those attending: -

Prepared by [REDACTED]
 Date of circulation 10th June 2021

Agenda

Project title

A66 Northern-Trans Pennine

Job number

HE565627

Date of Meeting

15 June 2021

		Action
1.	Introductions	
2.	Minutes from previous meeting	
3.	Progress to date Data collection Site surveys Baseline Assessments Co-working Opportunities	Surface Water project team to provide update on project progress
4.	Work to be completed Outline of on-going surface water programme	MB to provide update on surface water programme
5.	Design options for the PEIR Brief overview of options	Brief overview of options
6.	AOB Questions & suggestions Forming next meeting's agenda	

Agenda

A66 NTP

Project title	A66 Northern-Trans Pennine	Job number HE565627
Meeting name	Water Technical Working Group 4 Groundwater	File reference HE565627-AMY-EWE-S00- AG-LX-00000x
Location	MS Teams	Time and date 13:30 15 June 2021
Purpose of meeting	Regular updates on groundwater aspects of A66 NTP	

Attendance	<div style="background-color: black; width: 100px; height: 100px; display: inline-block; vertical-align: top;"></div> <ul style="list-style-type: none"> (Environment Agency) (Environment Agency) (Environment Agency) (Planning Inspectorate) (Planning Inspectorate) (Cumbria County Council) (Cumbria County Council) (Cumbria County Council) (Cumbria County Council) (Durham County Council) (Eden District Council) (Eden District Council) (North Yorkshire County Council) (Highways England) (Highways England) (Ramboll) (Aecom) (JBA) (Amey) (Arup) (Arup) (Arup) (Arup) (Arup) (Arup)
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Apologies	Text
Circulation	Those attending: -

Prepared by ██████████
 Date of circulation 8th June 2021

Agenda

Project title

A66 Northern-Trans Pennine

Job number

HE565627

Date of Meeting

15 June 2021

		Action
1.	Introductions	
2.	Minutes from previous meeting	
3.	Progress to date Data collection Site surveys Baseline Assessments Co-working Opportunities	LB
4.	Work to be completed Outline of on going groundwater programme	LB
5.	Focus point: Hydrogeological conceptualisation Groundwater Dependant terrestrial Ecosystems	LB
6.	AOB	

Agenda

A66 NTP

Project title	A66 Northern-Trans Pennine	Job number HE565627
Meeting name	Water Technical Working Group 5 Surface water and Groundwater (combined)	File reference HE565627-AMY-EWE-S00-AG-LX-00000x
Location	MS Teams	Time and date 10:30 11 August 2021
Purpose of meeting	Regular updates on Water aspects of A66 NTP	

Prepared by



Date of circulation

8th June 2021

Agenda

Project title

A66 Northern-Trans Pennine

Job number

HE565627

Date of Meeting

11 August 2021

Attendance

[REDACTED] (Aecom)
[REDACTED] (Amey)
[REDACTED] (Arup)
[REDACTED] (Arup)
[REDACTED] (Arup)
[REDACTED] (Arup)
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[REDACTED] (Cumbria County Council)
[REDACTED] (Cumbria County Council)
[REDACTED] (Cumbria County Council)
[REDACTED] (Cumbria County Council)
[REDACTED] (Cumbria County Council)
[REDACTED] (Durham County Council)
[REDACTED] (Eden District Council)
[REDACTED] (Eden District Council)
[REDACTED] (Environment Agency)
[REDACTED] (Environment Agency)
[REDACTED] (Environment Agency)
[REDACTED] (Environment Agency)
[REDACTED] (Highways England)
[REDACTED] (Highways England)
[REDACTED] (JBA)
[REDACTED] (North Yorkshire County Council)
[REDACTED] (Planning Inspectorate)
[REDACTED] (Planning Inspectorate)
[REDACTED] (Ramboll)
[REDACTED] (WSP)
[REDACTED] (Natural England)
[REDACTED] (AECOM)
[REDACTED] (Environment Agency)
[REDACTED] (Environment Agency)

Apologies

Text

Circulation

Those attending:

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	Action
1. Introductions	

Agenda

Project title

A66 Northern-Trans Pennine

Job number

HE565627

Date of Meeting

11 August 2021

	Action
Introduction for new attendees	MB/LB
2. Minutes from previous meeting Check on circulation of minutes Any comments to address?	MB/LB
3. Progress to date Data collection Site surveys Baseline Assessments Co-working Opportunities	MB/LB
4. Scheme options <ul style="list-style-type: none"> • Temple Sowerby to Appleby • Appleby to Brough (Warcop) • Cross Lanes to Rokeby 	MB/LB
5. PEIR a) Scheme by scheme high level review for: <ul style="list-style-type: none"> • Receptors valuation • Impact magnitudes • Significance of effects • Mitigation b) Detailed mitigation for Temple Sowerby to Appleby, Appleby to Brough (Warcop), and Cross Lanes to Rokeby	MB/LB
6. AOB	

Agenda

A66 NTP

Project title	A66 Northern-Transpennine	Job number HE565627
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Prepared by 
Date of circulation

Agenda

Project title A66 Northern-Transpennine Job number HE565627 Date of Meeting 2 November 2021

Meeting name Water Technical Working Group 6 Surface Water File reference Text
Location MS Teams Time and date 13.30 2 November 2021
Purpose of meeting Regular updates on surface water aspects of A66 NTP

Attendance
[REDACTED] (MB) – Chair of RDWE TWG (Surface water) and A66 RDWE Topic Lead at Amey/Arup
[REDACTED] (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
[REDACTED] (AB) – A66 Flood Risk specialist at JBA
[REDACTED] (BW) – A66 RDWE Water Environment Support at Amey/Arup
[REDACTED] (DH) – A66 RDWE Topic Reviewer at Amey/Arup
[REDACTED] (PC) – Planning Specialist and A66 key contact at the Environment Agency
[REDACTED] (CR) – Flood & Coastal Risk Management Officer at the Environment Agency
[REDACTED] (FTM) – Flood Risk Support Officer at Environment Agency
[REDACTED] (ST) – Flood and Development Officer covering Eden District at Cumbria County Council
[REDACTED] (LJ) – Senior Infrastructure Planner representing EDC and CCC
[REDACTED] (DC) – Flood and Drainage Officer at Cumbria County Council
[REDACTED] (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
[REDACTED] (AC) – Environment Officer at Environment Agency
[REDACTED] (RK) – Project Speed lead at PINS.
[REDACTED] (SH) – Water Environment Specialist at WSP as a technical advisor for Eden and Cumbria
[REDACTED] (HR) – WSP
[REDACTED] (PH) – WSP
[REDACTED] (DB) – Groundwater Specialist at the Environment Agency
[REDACTED] (DG) – Senior Infrastructure Planner representing EDC and CCC
[REDACTED] (JS) – Representative (groundwater specialist) from AECOM on behalf of Highways England
[REDACTED] (TE) - Highways England
[REDACTED] (SW) – Principal Environmental Health Officer at Eden (specialising in pollution of GW supplies)
[REDACTED] (EM) – Engineering Officer at Eden District Council
[REDACTED] (SC) – Representative from Ramboll on behalf of Highways England
[REDACTED] (WR) – Representative from AECOM on behalf of Highways England
[REDACTED] (BW) – Drainage and Coastal Protection Manager at Durham County Council
[REDACTED] (PB) – Lead Officer for Flood and Development Management at Cumbria County Council
[REDACTED] (MS) – A66 EIA Lead at PINS
[REDACTED] (EP) – A66 EIA Support at PINS
[REDACTED] (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England
[REDACTED] (DM) – Natural England
[REDACTED] (NK) – Natural England

Agenda

Project title

A66 Northern-Transpennine

Job number

HE565627

Date of Meeting

2 November 2021

Apologies

Text

Circulation

Those attending.
Text

- | | | Action |
|-----------|--|--|
| 1. | Introductions | |
| 2. | Minutes from previous meeting
Check on circulation of minutes & review of any comments | |
| 3. | PEIR
Recap of PEIR | Project team to provide update |
| 4. | Feedback from stakeholders from Statutory Consultation
Initial discussion on feedback raised during Statutory Consultation | |
| 5. | Update on Ongoing Works
Environmental Statement and associated assessments | Project team to provide update on project progress |
| 6. | AOB
Questions & suggestions
Forming next meeting's agenda | |

Agenda

A66 NTP

Project title	A66 Northern-Transpennine	Job number HE565627
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Prepared by



Date of circulation

Agenda

Project title	Job number	Date of Meeting
A66 Northern-Transpennine	HE565627	2 November 2021

Meeting name	Water Technical Working Group 6 Groundwater	File reference Text
Location	MS Teams	Time and date 15.30 2 November 2021
Purpose of meeting	Regular updates on groundwater aspects of A66 NTP	

Attendance

- [REDACTED] (LB) – Chair of RDWE TWG (Groundwater) and A66 RDWE Groundwater Specialist at Amey/Arup
- [REDACTED] (MB) – Chair of RDWE TWG (Surface water) and A66 RDWE Topic Lead at Amey/Arup
- [REDACTED] (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
- [REDACTED] (BW) – A66 RDWE Water Environment Support at Amey/Arup
- [REDACTED] (DH) – A66 RDWE Topic Reviewer at Amey/Arup
- [REDACTED] (PC) – Planning Specialist and A66 key contact at the Environment Agency
- [REDACTED] (CR) – Flood & Coastal Risk Management Officer at the Environment Agency
- [REDACTED] (FTM) – Flood Risk Support Officer at Environment Agency
- [REDACTED] (ST) – Flood and Development Officer covering Eden District at Cumbria County Council
- [REDACTED] (LJ) – Senior Infrastructure Planner representing EDC and CCC
- [REDACTED] (DC) – Flood and Drainage Officer at Cumbria County Council
- [REDACTED] (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
- [REDACTED] (AC) – Environment Officer at Environment Agency
- [REDACTED] (RK) – Project Speed lead at PINS.
- [REDACTED] (MC) – Hydrogeology Specialist at WSP as a technical advisor for Eden and Cumbria.
- [REDACTED] (SH) – Water Environment Specialist at WSP as a technical advisor for Eden and Cumbria
- [REDACTED] (HR) – WSP
- [REDACTED] (DB) – Groundwater Specialist at the Environment Agency
- [REDACTED] (DG) – Senior Infrastructure Planner representing EDC and CCC
- [REDACTED] (JS) – Representative (groundwater specialist) from AECOM on behalf of Highways England
- [REDACTED] (TE) - Highways England
- [REDACTED] (SW) – Principal Environmental Health Officer at Eden (specialising in pollution of GW supplies)
- [REDACTED] (EM) – Engineering Officer at Eden District Council
- [REDACTED] (SC) – Representative from Ramboll on behalf of Highways England
- [REDACTED] (WR) – Representative from AECOM on behalf of Highways England
- [REDACTED] (BW) – Drainage and Coastal Protection Manager at Durham County Council
- [REDACTED] (PB) – Lead Officer for Flood and Development Management at Cumbria County Council
- [REDACTED] (MS) – A66 EIA Lead at PINS
- [REDACTED] (EP) – A66 EIA Support at PINS
- [REDACTED] (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England
- [REDACTED] (DM) – Natural England
- [REDACTED] (NK) – Natural England

Agenda

Project title

Job number

Date of Meeting

A66 Northern-Transpennine

HE565627

2 November 2021

Apologies

Text

Circulation

Those attending.
Text

Action

1. **Introductions**
2. **Minutes from previous meeting**
Check on circulation of minutes & review of any comments
3. **PEIR**
Recap of PEIR
Project team to provide update
4. **Feedback from stakeholders from Statutory Consultation**
Initial discussion on feedback raised during Statutory Consultation
5. **Update on Ongoing Works**
Site Investigations
Environmental Statement
Hydrogeological Impact Assessment
Karst Report
Project team to provide update on project progress
6. **AOB**
Questions & suggestions
Forming next meeting's agenda

Agenda

A66 NTP

Project title	A66 North Transpennine	Job number HE565627
Meeting name	Road Drainage and the Water Environment TWG 7	File reference Text
Location	MS Teams	Time and date 10:00- 7 February 2022 12:00
Purpose of meeting	Update on progression of assessment	
Attendance	Text	
Apologies	Text	
Circulation	Those attending: Text	

Action

1. **Introductions**
2. **Actions from previous meeting**
3. **Project update**
4. **Surface Water**
Hydromorphology surveys
5. **Groundwater**
Update on the cuttings assessment and springs surveys
6. **AOB**

Prepared by



Date of circulation

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 1

Purpose of Meeting	RDWE Technical Working Group – Meeting 1.
Location:	MS Teams
Time/Date:	11-02-21 at 11:00-12:00
Attendees:	<p>██████████ (MB) – Chair of RDWE TWG and A66 RDWE Topic Deputy at Amey/Arup</p> <p>██████████ (MJ) – A66 RDWE Topic Deputy at Amey/Arup</p> <p>██████████ (DH) – A66 RDWE Topic Lead at Amey/Arup</p> <p>██████████ (LB) – A66 RDWE Groundwater Specialist at Amey/Arup</p> <p>██████████ (BW) – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ (CD) – A66 EIA Coordinator and Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (JP) – Planning advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at the Environment Agency</p> <p>██████████ (AC) – Flood Risk Advisor at the Environment Agency</p> <p>██████████ (DB) – Groundwater specialist at the Environment Agency</p> <p>██████████ (FTM) – Flood risk support officer at the Environment Agency</p> <p>██████████ (CR) – Flood Risk Advisor at the Environment Agency</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (AB) – A66 Flood Risk Specialist at JBA consulting</p> <p>██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council</p> <p>██████████ (ST) – Flood and Development Officer at Cumbria County Council</p> <p>██████████ (EM) – Flood Officer at Eden District Council</p>
Apologies:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (TR) – A66 RDWE Water Environment Specialist at Amey/Arup</p> <p>██████████ (BH) – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ (TE) - Highways England</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introductions	N/A
1.1	Introductions from all attendees and introduction to the intent of the TWG by MB and CD.	
2.0	Evidence Plan – Objectives	
2.1	<p>Overview of the Evidence Plan by CD:</p> <ul style="list-style-type: none"> To consolidate and support formal scoping process. Agree and document specific matters that the evidence plan process aims to address. Agenda for future meetings is flexible and the team welcomes input from attendees. Seek agreement on how evidence will be collected and analysed. Achieve a common understanding of the challenges posed by the programme. TWGs can be a means of ironing out some of the challenges earlier on. Seek to reach agreement on key matters where possible. Work towards agreement where gaps exist currently, and document points that are not agreed. Discuss approaches to design development. Resolve and refine the assessment where possible. 	
3.0	Scheme Overview	
3.1	MB gave an overview of the scheme to the group.	
4.0	Assessment Methodology	
4.1	LB gave an overview of any noteworthy groundwater points that are being considered for the project.	
4.2	DH ran through the WFD compliance and hydro-morphology methodology for the Environmental Statement (ES). A standalone WFD assessment will be completed that will inform the ES and will form an appendix to the ES. The team have been liaising with the design team throughout to ensure WFD principals have been considered where possible.	
4.3	<p>MJ gave an overview of water quality and HEWRAT. Preliminary assessment has been carried out to date using precautionary assumptions where site information is not available for the PEIR. These will be reviewed and updated in the ES.</p> <p>MB noted that the team have been out on site to provide some context to the HEWRAT assessments and this will be built on later.</p>	
4.4	LB ran through the Hydrological Impact Assessment (HIA), looking at groundwater resources across the alignment. Some information has been received from local authorities on private, unlicensed wells.	
4.5	AB gave an update on the flood risk modelling. Currently carrying out detailed hydraulic modelling focussing on fluvial flood risk.	
5.0	Discussion	
5.1	KS asked if when modelling fluvial flood risk, in addition to looking at mitigation/prevention of flooding, will the team be looking at opportunities to improve flood risk, beyond what mitigation would deliver (enhancement). Particularly around Warcop where there would be opportunities for Natural Flood Management (NFM). DH replied that NFM is a consideration for the team as they work	

Item	Minutes	Actions
	<p>through the project. Immediate potential for NFM to mitigate, and potential for wider river restoration benefits. Moving away from the scheme, it is difficult to incorporate NFM measures as it is hard to link them, and hard to gain access to land but at this stage it is an opportunity that the team are exploring.</p>	
5.2	<p>KS also asked while the team are looking at water quality of receiving water courses for road drainage, many of which will be going into the Eden SAC, other stretches of the road will cross over farmland where their management of their water on their land, as well as nutrient budgets, will be affected. Will this be looked at as part of the surface flow or farm drainage? MB replied that this isn't currently within the scope for the scheme but an element of that will be covered in the assessment to provide some baseline commentary, but not in detail. KS noted that the building of the carriageway may also disrupt the farm management and prevent them managing their slurry as effectively. Will we be looking to mitigate against secondary impacts? Not only for mitigation but also for enhancements as well. MB noted that potential for enhancement would be reviewed in the ES, and this is probably an area that crosses multiple disciplines such as Biodiversity. It could be that a review of potential enhancements could lead to potential additional projects outside of the scheme. KS noted that some enhancements to existing features could be made when constructing drainage for the scheme. MB added that this would be considered.</p> <p>EM informed the group of a document called the Eden catchment plan that may be helpful. EM added a link: [REDACTED] [REDACTED] [REDACTED] Some of the datasets would be relevant to the points KS raised, and includes several partners including Highways England. It might already have provided a foundation for this work.</p>	
5.3	<p>KS noted that there still needs to be ongoing discussions around Trout Beck, which crosses many different groups (water and HRA in particular). MB added that this is high on the team's agenda and will arrange something when information is available.</p>	
5.4	<p>CR asked what the programme would be, particularly around flood risk plans for Warcop? AB replied that the current programme would be partly determined by land access for some of the surveys required. Approximately 50% complete building the models, anticipating baseline model results for all schemes apart from scheme 6 in the next couple of weeks, and then the team can begin to assess the project for flood compensation requirements, however scheme 6 will be behind this and unclear when land access will be available.</p>	
5.5	<p>CR noted that the Environment Agency developed a model around Warcop in the last couple of years and asked if the team had this model. AB confirmed the team have access but noted it doesn't include a couple of the tributaries and part of Low Gill at the upstream end, so surveys would still be required to add to this but agreed the model does provide a good basis to start from.</p>	

Item	Minutes	Actions
	<p>KS asked if the model at Warcop is similar to the one used by Durham or Lancaster University on flooding around Warcop which was presented to the farming community (primarily looking at fluvial and hydrological model and super imposing NFM measures), and if they used the same model. CR said this is likely to be a different model and not the same one. KS noted it might be worth checking with ██████████ to see if he has data of use but suspects it wouldn't be as detailed as the Environment Agency model.</p> <p>CR noted that there are a few discussions going on around Warcop about NFM between the Parish Council and the MOD regarding implementing NFM measures on their land, MOD were supportive.</p>	
5.6	<p>KS asked about public consultation on the designs in the Spring – will the draft EIA be published at that time? CD replied that the team will have the PEIR but unsure if it will be publicly available and will get back to KS. KS noted that some further information would be useful to go alongside the designs. KS asked what the PEIR would be. CD replied that in the case of A66 this is something between the scoping and the ES and is a requirement of the PLANNING Inspectorate (PINS) guidance for Development Control Order (DCO)/Nationally Significant Infrastructure Project (NSIP) schemes. MB added that several of the assessments outlined earlier will not be part of the PEIR and will be presented in the ES. MS added that the statutory consultation would be where the PEIR is provided, and there is no standard as to what the PEIR should look like and can take many forms.</p>	
5.7	<p>MS asked if the agreement logs would include lists of likely receptors that have been identified for parties to review? CD replied that if this is something the stakeholders would like to see then this could be looked at by the team. If raised already in the informal scoping, then it may already have been covered. MS added that this could be a good way to capture this information to support the DCO. KS noted that she thinks this was covered in the draft scoping as receptors were looked at there, particularly for the SAC. MB added that the team would be building on the feedback from the informal scoping in the PEIR and ES.</p>	
6.0	Next meeting	
6.1	<p>CD to circulate meetings and recordings in due course.</p> <p>The next full TWG will be approximately in one months' time. The next meetings will likely be focussed more on the evidence that will be collected.</p>	<p>CD to circulate minutes and recording.</p>

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 2: Part 1 Surface Water

Purpose of Meeting	RDWE Technical Working Group – Technical Working Group 2: Part 1 Surface Water
Location:	MS Teams
Time/Date:	02-03-21 at 14:00-15:00
Attendees:	<p>██████████ (MB) – Chair of RDWE TWG and A66 RDWE Topic Deputy at Amey/Arup</p> <p>██████████ (MJ) – A66 RDWE Topic Deputy at Amey/Arup</p> <p>██████████ (BW) – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ (BH) – A66 RDWE Framework Drainage Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (JP) – Planning Advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at Environment Agency</p> <p>██████████ (AC) – Environment Officer at Environment Agency</p> <p>██████████ (FTM) – Flood Risk Support Officer at Environment Agency</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (AB) – A66 Flood Risk Specialist at JBA Consulting</p> <p>██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (EM) – Engineering Officer at Eden District Council</p> <p>██████████ – Drainage and Coastal Protection Manager at Durham County Council</p> <p>██████████ - Representative from Ramboll on behalf of Highways England (to review)</p> <p>██████████ - Chair of HRA TWG and A66 Biodiversity Topic Support at Amey/Arup</p>
Apologies:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (TR) – A66 RDWE Water Environment Specialist at Amey/Arup</p> <p>██████████ (TE) - Highways England</p>

██████████ (DH) – A66 RDWE Topic Lead at Amey/Arup

██████████ (LB) – A66 RDWE Groundwater Specialist at Amey/Arup

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introductions from all attendees.	
2.0	Progress	
2.1	<p>MB outlined recent progress and work carried out.</p> <p>The team is carrying out a desk based scoping assessment. Identification of receptors is underway – detailed in later slides.</p> <p>The team has undertaken site visits to survey surface water (SW) receptors across all schemes and visited most watercourse crossings, where possible. Further surveys for hydromorphology of crossings will be undertaken where required.</p> <p>Initial HEWRAT water quality assessment on outline design to inform drainage design to ensure water quality compliance.</p>	
3.0	Work to be completed	
3.1	<p>MB updated the group on work to be completed.</p> <p>Collect further data to inform baseline.</p> <p>WFD compliance surveys to be carried out to accompany the Environmental Statement (ES).</p> <p>Hydromorphology surveys will be carried out.</p> <p>Ground truthing of abstraction and discharges will be undertaken (in addition to information provided from the Environment Agency (EA), as there may be additional private licences – looking at this as a result of scoping responses).</p>	
3.2	<p>Work is also underway to inform the Flood Risk Assessment (FRA). BH gave an update on the FRA, which the team is aiming to complete for the end of PCF Stage 3. Watercourse modelling is key to this, combined with environment team and design team input. Due to some design reviews that are ongoing, river modelling is being progressed where possible.</p>	
3.3	<p>AB gave an update on hydraulic modelling. Baseline results ready for schemes 3, 4, 7, 8 and nearly 9. All apart from scheme 4 are ordinary watercourses. Will then progress schemes 2, 5, 6 for remaining rivers after additional surveys to fill in some gaps in data.</p>	
4.0	Watercourse Crossings	
4.1	<p>Small crossings:</p> <p>MB showed various crossing options and the type will be determined based on conversations with design and environment teams.</p> <p>Proposed 0.3m gravel in the base of the precast concrete boxes where required as a result of assessments.</p>	
4.2	<p>Medium crossings:</p> <p>Considered when a small crossing is not appropriate or suitable.</p> <p>MB showed various crossing options and the type will be determined based on conversations with design and environment teams.</p>	
4.3	<p>Large crossings (such as Trout Beck):</p> <p>MB noted the teams are looking to use clear span crossings of watercourse width with supports in the floodplain – a detailed review of geomorphology and modelling will be undertaken in these instances.</p>	
5.0	Key SW receptors overview	

Item	Minutes	Actions
5.1	<p>MJ gave an overview of key receptors for schemes 1 and 2, noting that Thacka Beck is crossed.</p> <p>KS asked what the small spur of the Redline Boundary (RLB) that goes to the Eamont River is for? BH said this would be a discharge pipe or open ditch. KS asked if this would go to a settlement pond before going into the river. BH confirmed this is the case.</p> <p>LD asked if the outfall was upstream of Eamont Village bridge/A6 – could we move it downstream of the village as there are already flooding issues at Eamont Village (frequent and severe)? BH noted there is an existing discharge and it is unlikely to be moved – discharge rates can be considered.</p> <p>A camp/caravan site was noted by EM as being directly opposite the proposed outlet. EM and BH noted foul water issues at the country park. BH said the intention is to reduce the runoff rate from the A66 and store significant volumes of water, to mitigate road construction.</p> <p>ST mentioned a drain is located near the highways depot but the council are unsure of the source. Has this drain been considered? Some surveys have also been undertaken of this at Skillsgill Lane. The team is not currently aware of the drain. ST to send BH/MB any information available on this.</p> <p>BH asked ST if there is a proposed Flood Alleviation Scheme (FAS) at Eamont Bridge? LD and EM said they aren't aware of one (one has been discussed previously as this is a known pinch point). There is also a weir there that has previously been raised for removal discussions in external forums. EM noted that the A6 goes sharply downhill and Eamont Bridge is in the floodplain, and constricts the river at that point. Carletonhall Park raised as being at high flood risk as located in Eamont floodplain. The caravan site is raised up here and A66 is up the bank from this location, but something for the team to be aware of. ST to send S19 report on Eamont Bridge flooding related to the discussion.</p>	<p>ST to provide Amey/Arup team with any info available on drain close to A6.</p>
5.2	<p>MJ gave an overview of key receptors for scheme 3.</p> <p>Crosses Lightwater and Swine Gill. ST asked if an assessment of Lightwater will happen, is this near Llama Karma Café (as there is flood risk there). BH noted there is also a secondary watercourse that is piped across the next field before Lightwater. Lightwater has a substantial bridge – BH said that there could be flood risk issues here. ST noted this location is on the council's flooding hotspot list, and asked if there is an opportunity to do something with this? BH replied that there will probably be changes to existing setup that would influence flood risk here. AB added there is a significant structure over Lightwater, another watercourse to the east with small structure with ponds too, there is likely some interaction between these two watercourses on high return period events (may not have been observed).</p> <p>WR asked what the project strategy is for existing culverts – will these be reviewed on a watercourse by watercourse basis. BH confirmed each is being assessed individually and the team will likely look to retain and extend the existing situation due to flood risks downstream related to widening culverts but that the environmental benefit of widening culverts will be taken into consideration. The team is still in the baseline review stage currently.</p> <p>KS asked could we use designated funds to look at NFM for some of the related small crossings and rivers? BH and MB discussed whether this would be possible as a designated fund idea and will investigate.</p> <p>EM sent a link to useful opportunities: [REDACTED]</p> <p>[REDACTED]</p> <p>TH noted that discussions around designated fund ideas for Trout Beck and other areas are ongoing – the group should let the project team know if they</p>	<p>BH/MB to investigate</p>

Item	Minutes	Actions
	<p>have any ideas. KS will send list of ideas from Natural England and Environment Agency.</p> <p>WR explained he has experience in work with designated funds and there is nothing to stop the EA or councils applying for funds.</p> <p>LD added that for the small watercourses in the area, there is lots of culverting upstream – could some of them be deculverted as mitigation? TH replied that the team is looking at de-culverting and daylighting as part of the HRA.</p>	KS to send list
5.3	<p>MJ gave an overview of schemes 4 and 5.</p> <p>River restoration scheme being discussed for this area. BH noted the project team is looking to receive existing modelling from AquaUoS detailed in a report sent by KS for this location, but is waiting for data.</p> <p>KS added that the work in this location is still early days and Natural England will wait to see what modelling shows.</p>	
5.4	<p>MJ gave an overview of scheme 6.</p> <p>Lots of watercourse crossings of tributaries to River Eden SAC so these are considered to be sensitive. Ongoing discussions around the design for this scheme.</p> <p>BH asked if there is existing information about flooding at Warcop – lots of small culverts between A66 and Warcop where the railway is. ST asked if the team had access to the section 190 reports. EM provided a link to this information: https://www.cumbria.gov.uk/elibrary/Content/Internet/544/3887/6729/6734/42695145050.pdf?timestamp=44257142856</p>	
5.5	<p>MB gave an overview of scheme 7.</p> <p>Minimal, but some, interaction with watercourses (western end). There are some small unnamed watercourses that drainage ponds will feed into. HEWRAT assessment will be undertaken to ensure discharge is of a good standard.</p>	
5.6	<p>MB covered scheme 8 overview.</p>	
5.7	<p>MB gave an overview of scheme 9. There are a number of watercourses to the south of the A66.</p>	
6.0	Discussion	
6.1	<p>MB asked the group for any questions.</p> <p>SC asked what is the overall approach for treating water? Assume pollutants will be mitigated using ponds. MB replied that HEWRAT will assess road runoff included copper, zinc and suspended solids. It will be iterative and have completed a first pass on the initial drainage design. When the HEWRAT test is passed then the drainage system is shown to be able to discharge water of a good enough quality. If the test is not passed, an iterative approach is taken with the drainage team to incorporate changes to design where possible to improve water quality. SC asked about the assessments the team has already carried out and how the results are looking so far. MB confirmed the results have been positive.</p> <p>KS asked if the project team is looking at flows of receiving watercourses as this will affect dilution and if this was considered in the model. MJ replied this is included in the HEWRAT assessment.</p>	
6.2	<p>LD asked if the project team is surveying for micro-plastics, although acknowledges this is quite a new area. MB replied that this is not part of the assessment. SC added that Highways England has a research project at tender stage to look into micro-plastics, which requires detailed information and may need example sites to study.</p>	
6.3	<p>AB asked about ordinary watercourse crossings re potentially changing culverts – will this be assessed by the Lead Local Flood Authority (LLFA) rather than the EA? If so, is there any specific guidance for impacts on third party land for the</p>	ST to send consent ing

Item	Minutes	Actions
	LLFAs? ST noted Cumbria has a consenting team and ST will send links with consenting information.	information.
6.4	SC asked if any soakaways were proposed. MB is aware of issues with gypsum and dissolution, unlikely to have soakaways.	
6.5	SC asked about water quality monitoring - what is the team proposing? MB considering scopes and locations and noted difficulties with getting on site due to Covid. The monitoring will look at a range of parameters to build up a baseline idea of water quality where there are gaps in EA monitoring data, or it is considered necessary. SC suggested an offline discussion around monitoring with MB.	SC and MB to discuss
6.6	ST asked about file sharing – CD advised data or information can be sent to MB ([redacted]@arup.com) and CD ([redacted]@arup.com)	
7.0	Next meeting	
7.1	CD to circulate meeting minutes in due course. The next full TWG will be approximately in one month time.	CD to circulate minutes.

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 2: Part 2 Groundwater

Purpose of Meeting	RDWE Technical Working Group – Technical Working Group 2: Part 2 Groundwater
Location:	MS Teams
Time/Date:	02-03-21 at 15:15-16:15
Attendees:	<p>██████████ (MB) – A66 RDWE Topic Deputy at Amey/Arup</p> <p>██████████ (LB) – Chair of RDWE TWG and A66 RDWE Groundwater Specialist at Amey/Arup</p> <p>██████████ (TR) – A66 RDWE Hydrogeologist Water Environment Specialist at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (JP) – Planning Advisor (Cumbria and Lancs, and adjoining North East and Yorkshire areas) at Environment Agency</p> <p>██████████ (DB) – Groundwater Specialist at the Environment Agency</p> <p>██████████ (FTM) – Flood Risk Support Officer at Environment Agency</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (EM) – Engineering Officer at Eden District Council</p> <p>██████████ (BW) - Drainage and Coastal Protection Manager at Durham County Council</p> <p>██████████ (SC) – Representative from Ramboll on behalf of Highways England (to review)</p> <p>██████████ (SW) – Principal Environmental Health Officer (EHO) at Eden (specialising in pollution of GW supplies).</p> <p>██████████ (JS) – Hydrogeologist for AECOM.</p>
Apologies:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Lead at Amey/Arup</p> <p>██████████ (BH) – A66 RDWE Framework Drainage Lead at Amey/Arup</p> <p>██████████ (MJ) – A66 RDWE Topic Deputy at Amey/Arup</p> <p>██████████ (DH) – A66 RDWE Topic Lead at Amey/Arup</p> <p>██████████ (TE) – A66 Environmental Advisor at Highways England</p>

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introductions from all attendees.	
2.0	Progress to date	
2.1	Fieldwork and ground truthing of groundwater receptors has begun.	
2.2	The cross interactions between surface water (SW) and biodiversity are being assessed with the respective SW and Biodiversity teams.	
3.0	Work to be completed	
3.1	The team has started to collect baseline data and the second phase of ground truthing will begin soon. Co-working with the SW team for the WFD compliance assessment.	
3.2	Licence discharge information has been received, and the team has also identified some private/unlicenced wells in the DCC area, little information available on the Cumbria section – the team will enquire about this.	
3.3	Plan and profile drawings are being reviewed with the drainage team. Focus on areas in cuttings or other design elements where the groundwater regime could be impacted (e.g. deep foundations).	
4.0	Key GW receptors overview	
4.1	LB gave an overview of the data used to determine receptors: British Geological Survey (BGS) maps, aquifer maps, licenced abstraction maps. BGS karst datasets for springs etc. Aerial imagery and OS maps.	
4.2	LB showed receptors identified so far for schemes 2 and 3. There is one spring near the river for Scheme 3, where the river receives groundwater (GW) based flow from the aquifer so is also a receptor. Not many other GW receptors in this area.	
4.3	<p>LB gave an overview of receptors at schemes 4 and 5.</p> <p>There are several enclosed or potentially enclosed depressions of gypsum karst – identified via survey. Additional sites identified to those in the BGS dataset.</p> <p>KS asked if these enclosed depressions are where slumping or caves are developing into old mines. LB added these are locations where gypsum is essentially at surface and very shallow. KS added that towards Trout Beck there are some subsidence or collapse locations. LB reported that the team has identified some from aerial photos, some depressions are confirmed and some still to be confirmed. There may be more – but enough data has been collected to provide clear evidence that the gypsum is very shallow in the area. This is the only area along the alignment where the route crosses gypsum at surface – the GW team is working with the Geotech team regarding the potential for subsidence, and with the drainage team to ensure drainage will not exacerbate subsidence.</p> <p>KS asked if there was a connection between the gypsum and the river. LB noted that the river is entirely on sandstone here and</p>	

Item	Minutes	Actions
	does not cross onto gypsum. There are no known gypsum caves in the area.	
4.4	LB gave an overview of Scheme 6 receptors. No dissolutional features. A number of springs in the area. Focussing mainly on 1km for GW but do look at 2km for receptors. Small number of wells have been identified since the maps were created but these will be included as receptors.	
4.5	LB gave an overview of Scheme 7 receptors. In terms of geology this area is carboniferous limestone. Potential for karst and caves. Working with the Geotech team looking at subsidence. The GI will be focussed in areas where subsidence is possible. Significant number of springs within 1km of here, these will be included in the assessment.	
4.6	LB gave an overview of schemes 8 and 9 – there are few GW receptors here.	
4.7	LB asked if the group had questions. SC asked if there are any cuttings anywhere along the route that are of notable size? LB noted there are very few cuttings, the alignment is mostly at grade or on embankment. Schemes 4/5 have some cuttings of approx. 7/8m in Kirkby Thore.	
4.8	SC asked if any soakaways are proposed? Or will the project use all SW drainage? LB replied that no soakaways and no infiltration are proposed currently, and all will use SW drainage. LB added that he is keen that we don't have infiltration in gypsum areas. Areas of limestone could have infiltration if this was considered to be beneficial but not in place currently. SC asked if the ponds will be lined in the gypsum area? LB confirmed this is correct.	
4.9	DB pointed out that on the western end (Penrith side), some of this area is within the groundwater source protection zones. The team could consider adding this as a receptor, even though not anticipating any discharges. LB confirms the team has the datasets and will add/review in more detail to protect aquifers.	LB to review groundwater source protection zones for receptors.
4.10	JS – are there any groundwater dependent terrestrial ecosystems? LB noted the team is reviewing this now. In limestone dominated areas there are quite a lot of springs and areas that are wetted up all year long. LB has made the Biodiversity team aware and will visit these locations with the Biodiversity team to discuss together. This is an ongoing stream of work. LB also noted some of the springs are at a higher level than the road, so it can be difficult for them to be hydrologically connected at the road, and are unlikely to be impacted. The team is screening these as part of the PEIR.	
5.0	Discussion	
5.1	EP asked how far in advance the next TWGs would be planned? CD replied that the TWGs would occur approximately monthly and appointments would be sent out for the next few in advance. Agendas to be sent nearer the time.	CD to send out future TWG invites.
5.2	LB noted that the team is working through private well information and can show this next time. SW added that there is an issue around releasing specific data on where private locations are in case the info is used adversely e.g.	SW and LB to discuss private well

Item	Minutes	Actions
	contamination. SW asked to discuss offline with LB. LB agrees valid point, agrees there are issues on how we show private data.	information offline.
5.3	CD mentioned designated funds. Any ideas to be sent to LB, MB or CD.	All to send designated fund ideas.
6.0	Next meeting	
6.1	CD to circulate meeting minutes in due course. The next full TWG will be approximately in one month time. The next meetings will likely be focussed more on the evidence that will be collected.	CD to circulate minutes and recording.

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 3: Part 1 Surface Water

Purpose of Meeting	RDWE Technical Working Group – Technical Working Group 3: Part 1 Surface Water
Location:	MS Teams
Time/Date:	06-05-21 at 09:30-11:00
Attendees:	<p>██████████ (MB) – Chair of RDWE TWG and A66 RDWE Topic Deputy at Amey/Arup</p> <p>██████████ (BW) – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ (BH) – A66 RDWE Framework Drainage Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (DH) – A66 RDWE Topic Lead at Amey/Arup</p> <p>██████████ – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ - Chair of HRA TWG and A66 Biodiversity Topic Support at Amey/Arup</p> <p>██████████ (AB) – A66 Flood Risk Specialist at JBA Consulting</p> <p>██████████ – Planning Specialist and A66 key contact at the Environment Agency</p> <p>██████████ - Flood & Coastal Risk Management Officer at the Environment Agency</p> <p>██████████ (FTM) – Flood Risk Support Officer at Environment Agency</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (EM) – Engineering Officer at Eden District Council</p> <p>██████████ – Principal Environmental Health Officer at Eden (specialising in pollution of GW supplies)</p> <p>██████████ - Representative from Ramboll on behalf of Highways England</p> <p>██████████ – Representative from AECOM on behalf of Highways England</p>
Apologies:	<p>██████████ (KW) – A66 Environment Lead at Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (TR) – A66 RDWE Water Environment Specialist at Amey/Arup</p> <p>██████████ (LB) – A66 RDWE Groundwater Specialist at Amey/Arup</p>

- ██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
- ██████████ (AC) – Environment Officer at Environment Agency
- ██████████ (TE) - Highways England
- ██████████ – Drainage and Coastal Protection Manager at Durham County Council
- ██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council
- ██████████ (MS) – A66 EIA Lead at PINS

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	SC asked if the organisations in attendance could be listed. CD gave an overview of attendee organisations.	
2.0	Minutes from previous	
2.1	MB asked for any issues from previous minutes to be raised.	
2.2	KS raised that she had not been sent a spec for the geomorphology surveys, particularly for Trout Beck. TH replied that JBA, who are doing the geomorphology modelling and surveys, provided a proposal to the project team last week. BH noted that Highways England has had to serve legal notice to the relevant landowners due to land access issues, which means the window for surveys is limited but surveyors were out doing a walkover yesterday and today. This is why the team haven't been able to agree a survey spec with Natural England due to this tight window to get onto the land. BH will send KS a copy of the proposals from JBA. BH added that AquaUoS have not sent through required information yet. KS and BH discussed the lack of data received from the Eden Rivers Trust, regarding river restoration. KS will prompt them. WR has just received an application to review an EDS application from them so suggested the team will hear back from them soon.	BH to send geomorph proposal to KS.
3.0	Progress to date	
3.1	MB provided the group with an update on the current programme.	
3.2	MB updated the group on progress with assessment work, including updating the formal scoping report, options assessment sifts, site visits and data collection for flood modelling and aquatic habitats.	
4.0	Flood Modelling Overview	
4.1	AB gave an overview of the flood modelling results, noting that three climate change scenarios have now been included in the modelling.	
4.2	Results are fairly similar to the existing flood extents around the River Eamont.	
4.3	Thacka Beck modelling – AB has carried out checks to ensure channel capacity hasn't changed. Some update to hydrology due to floods in 2015.	
4.4	SC queried if this was baseline modelling. AB confirmed this is the case.	
4.5	Lightwater watercourse and unnamed tributary, combined as during high return period events an overland flow route exists. Changes to previous understanding.	
4.6	Swine Gill – no out of bank flooding. TH noted that the area of wet woodland is right up against the embankment and does not appear to be in the valley as might be expected. AB added that water fills up in pond areas upstream.	

Item	Minutes	Actions
4.7	Trout Beck – uses the existing EA model from 2006, upgraded by Arcadis in 2016. JBA have extended this to the Eden. This modelling shows some differences to the EA flood zones, which mainly related to channel survey and hydrology. Further refinements are expected as more survey data is collected for geomorphology, so frequent cross-sections will be added to the model at this location.	
4.8	Small amount of overtopping at Bowes. TH noted that this looks like a sensitive crossing on paper, but noted that there is a huge natural bedrock barrier and this watercourse is not linked to the River Greta.	
4.9	Tutta Beck and tributary at Rokeby (Manifold Beck) have been modelled. Some out of bank flooding at high return period events.	
4.10	Scheme 9 model is still being reviewed – will be available by the next TWG.	
4.11	SW noted that Dog Beck has experienced flooding, relevant to Thacka Beck and that this this doesn't seem to be in the model. SW will send this information to AB. <i>Post meeting note: SW has sent information to AB.</i>	SW to send info to AB.
4.12	KS asked what the next stages are for flood modelling – will the team put the design fixes in the model to review the impacts? AB confirmed this is the case. KS asked if the team will be modelling all options for Warcop and Trout Beck schemes, pending some sifting of options. BH replied that the team are likely to review 3 options for each location.	
4.13	WR asked if any flood risk has been identified from any sources other than river flooding. BH noted that he doesn't think so but will check. MB noted that groundwater flooding will be covered in the next TWG, and in terms of fluvial the team have used the available mapping. PC noted that the flood maps are available, AB confirmed the team are using this to QA data.	
4.14	AB asked PC about the review process – would the EA only want to review main river models or would they want to review models for all areas. PC suggested the EA could review all modelling. PC will consider this and get back to the team.	PC to let the team know about EA reviews.
4.15	ST noted that Cumbria County Council (CCC) (as the Lead Local Flood Authority (LLFA)) would also like to review the modelling. PC suggested a discussion around who will review. AB agreed. EM asked ST if this would be something relevant to 'making space for water'. ST noted that some of this information would feed into those meetings. CR asked if 'making space for water' would be a good place to check understanding of the work/sense checks, but possibly not to undertake the technical aspects of a review and confirmed the EA can help with main river reviews at least.	AB, PC and ST to discuss reviews.
4.16	BH gave an update on drainage. TH asked if culverts might be opened up in some places – BH noted that this is unlikely as culverts are usually added for very specific purposes so limited opportunities to daylight existing culverts. TH noted that the Biodiversity team have observed some opportunities. BH also noted that surveyors have observed some potentially unlicensed culverts – ST asked BH to send over any information available. FTM reinforced that if any further potentially unpermitted works are identified in main rivers to let the EA know.	BH to send information to ST. TH to send daylighting opportunities to BH.
5.0	Survey Update – Aquatic Habitat Assessment	

Item	Minutes	Actions
5.1	TH gave an overview of progress to date on freshwater ecology work. TH noted of 34 river crossings identified, 29 have been screened in – and noted species surveys that are ongoing.	
5.2	TH outlined the data that is being collected by the team, including barriers, pipes, culverts etc.	
5.3	TH gave an overview of sensitive rivers/sites: <ul style="list-style-type: none"> • Lightwater - from A66 to the SAC is very diverse and good habitat. • Trout Beck – very dynamic river with diverse habitats, erosion etc. Some habitats are sub-optimal but still likely to support range of species. • Hayber/Moor Beck – opportunities for a number of species. Clearly functionally linked habitat to SAC. Existing data that salmon are migrating up this river and the habitat here is pristine. Key from a geomorphology perspective. • Tutta Beck – landowners have reported Trout, and there is potential for sensitive species. Lots of erosion, deposition, deeply encised. 	
5.4	KS noted that this was useful and answered previous queries from the EclA TWG.	
6.0	DCO process	
6.1	BW gave an overview of the DCO process and the optimised approach being used on the project.	
7.0	Designated Funds	
7.1	MB gave an overview of the Highways England designated funds process, including the four funds: users and communities, environment and wellbeing, innovation and modernisation, safety and congestion.	
7.2	MB described a designated fund idea from the EA at Tutta Beck as an example.	
7.3	BH asked how designated fund ideas relate to the main project. CD explained that designated funds ideas are not mitigation, but can be considered enhancements. WR added that they should be relevant to the network, not necessarily to the project. CR asked if diversion routes could be included. WR confirmed this is the case. KS asked if other groups can apply for funding. WR confirmed.	
7.4	EP asked if these projects will be included in the ES. TH replied that the designated fund ideas cannot be considered mitigation, but could potentially be included in Biodiversity Net Gain.	
7.5	KS noted that Cumbria are piloting a new mapping project that may have data for the A66 corridor that may be relevant to designated fund ideas. KS suggested a separate meeting on this, possibly involving Eden Rivers Trust and Cumbria Wildlife Trust. CD and KS to discuss offline.	CD and KS to discuss separate meeting offline.
8.0	Discussion	
8.1	SC asked if the runoff rates are likely to improve or remain similar. BH noted that online widening would include attenuation, but unlikely for offline, and over the project there will be an overall improvement (not necessarily for each scheme).	
8.2	CR asked about the climate change element of the flood modelling – what will the team do with the new climate change values that are proposed to come out over the Summer? AB noted that she is aware changes are coming forward but doesn't have the information yet. AB outlined that the team have good coverage in terms of climate change as they have	CR to provide draft climate change

Item	Minutes	Actions
	<p>considered three climate change scenarios. CR will provide AB with draft data if possible. AB suggested the team stick with the climate change scenarios they are already using. BH queried if the climate change allowances go up significantly and require more landtake, does this become a problem for the project? SC asked if the changes would be to river flows or rainfall intensities or both, CR confirmed likely to be both. BH noted the potential risk to the project and that this could have quite a big impact on the overall project. PC has some guidance on how to apply the data for existing projects and will review for the team.</p>	<p>data to AB.</p> <p>PC to review guidance on how to apply the data to existing projects.</p>
8.3	<p>CR asked what the timeframe would be for reviews? Baseline only or Do-Something scenarios too. AB suggested it would be better if the models are reviewed earlier, and would be ideal to get the baseline models agreed ASAP. PC noted that the EA can do this and the sooner AB can provide them, the sooner comments can be provided.</p>	<p>AB to review when models could be sent to EA.</p>
8.4	<p>EP noted that it is important to use the most up to date climate change information available at the time of submission as this has been a non-acceptance issue for previous projects. PC confirmed likely timescales for the new data would be July but he will speak to the EA team to see if data can be provided to the project team sooner.</p>	<p>PC to obtain early data for the team if possible.</p>
9.0	AOB	
9.1	<p>MB suggested the group members can suggest topics for discussion in the subsequent TWG.</p>	<p>CD to circulate minutes.</p> <p>All to send ideas for discussion to MB or CD ahead of next TWG.</p>

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 3: Part 2 Groundwater

Purpose of Meeting	Design Development.
Location:	MS Teams
Time/Date:	06-05-21 at 11:30-12:55
Attendees:	<p>██████████ (LB) – Chair of RDWE TWG and A66 RDWE Groundwater Specialist at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (MB) – A66 RDWE Topic Deputy at Amey/Arup</p> <p>██████████ (SS) – A66 Stakeholder Support at Amey/Arup</p> <p>██████████ Highways England</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (EM) – Engineering Officer at Eden District Council</p> <p>██████████ (SW) – Principal Environmental Health Officer (EHO) at Eden (specialising in pollution of GW supplies).</p> <p>██████████ (KS) – Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (DB) – Groundwater Specialist at the Environment Agency</p> <p>██████████ (SC) – Representative from Ramboll on behalf of Highways England</p> <p>██████████ (PC) – Planning Specialist and A66 key contact at the Environment Agency</p>
Apologies:	<p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (FTM) – Flood Risk Support Officer at Environment Agency</p>
Circulation:	ALL

Item	Minutes	Actions
1.0	Introductions	
1.1	LB provided an introduction to the meeting.	
2.0	Minutes from previous meeting	
2.1	LB provided an update of works that are underway and recent achievements. The main topic will be supplies and abstractions.	
2.2	LB noted that they are developing a conceptual model to determine the potential impacts upon hydrogeology. Highlighted that it is particularly important for the groundwater that the team knows where the source is and where the interaction between bedrock and superficial deposits. These conceptual models will help with the construction planning and understanding possible contamination.	
2.3	For information around abstraction LB noted they have the record of all EA licences in the area. In addition, for non-licences, the team have taken into consideration the property, farm or industry which could have an impact. It is understood that not everyone has registered their wells.	
2.4	LB demonstrated in web format where they are storing information.	
2.5	SW recommended a name change for the extraction of less than 20m ³ from non-licences to minor-abstractions. LB agreed that this was a reasonable change.	
2.6	(Using WebGIS) LB advised that the normal study area is 1km however for groundwater this can change to an area of up to 2.5km – whilst some known unproductive aquifers can be reduced to between less than 1km.	
2.7	LB noted that when it comes to limestone the team will be cautious to protect them from construction impacts due to the potential presence of karst (caves, conduits etc).	
2.8	It was raised by LB that the project team database (for source protection zones) refers to a source protection zone south of the A66 at Greta Bridge. It is highlighted that this comes from a 3 rd party database but was not present in the Defra public databases. LB asked if the Environment Agency (DB) would be able to make an enquiry to see if this was inactive/decommissioned.	LB to forward details of SPZ to DB.
2.9	LB notes that at Bowes, whilst there are multiple springs these are hydrological separate from the project and as such no impacts are anticipated.	
2.10	There are a number of SPZs located within or close to the scheme project areas. Notably for schemes 1 and 2.	LB to speak with mitigation team.

Item	Minutes	Actions
2.11	At Kirby Thore, the team have identified 5 licensed wells in the area with 4 on the limestone and 1 on the Eden shells. 3 are for the British Gypsum site. The other 2 are agricultural. Two of the British Gypsum wells are close to the alignment and have the potential be impacted.	
2.13	At Kemplay bank LB noted that current designs will cut under the roundabout which is in a designated SPZ and therefore will need to consider potential impacts.	
2.14	KS questioned if the assessment area had been widened for example at Trout Beck in light of the options. LB confirmed that while there is a focus on impacts in the 1 km vicinity that the team always looks beyond that extent and the study area is always extended if there is potential for hydraulic connection beyond the study area. Furthermore, the team review all sensitive receptors within 2.5km of the alignment.	
2.15	KS asked a further question regarding the de-watering and where would the river be going to and what the impact be. Responding LB confirmed that the team is reviewing all locations where deep excavation is proposed.	
2.16	LB noted that from a project perspective that it is undesirable to impact any private water supply or result in the degradation of the water quality.	
2.17	SW and LB agreed that they will look into ways to incorporate the Eden Valley private wells information.	
2.18	KS questioned what the impact on the wells at British Gypsum will be and if they can be served by the mains. LB responded stating that they are still in the early stage of the impact assessment. Typically options are protection of existing wells, replacement or compensation. LB is in discussion with the stakeholder engagement team.	
2.19	LB mentioned that the attenuation ponds will be lined but where it is agreeable that opportunities exist to recharge to groundwater then these will be explored..	
2.20	SC questioned if any areas have been identified for groundwater flooding/flowing/flooring. LB responded advised that areas for potential groundwater flooding have been identified where the groundwater level is close to surface. These are largely in the eastern end of the alignment near the Durham/North Yorkshire county border. The groundwater team is in discussion with geo-tech team.	
2.21	SC further question if there are any major structures planned where the foundations could impact the flow of groundwater. LB replied stating that major structures, such as deep bridge	

Item	Minutes	Actions
	foundations, do have the potential to modify groundwater pathways. Currently assessments are being undertaken based on a conservative design and these will be revised when designs are updated.	

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 4: Part 1 Surface Water

Purpose of Meeting	RDWE Technical Working Group – Technical Working Group 4: Part 1 Surface Water
Location:	MS Teams
Time/Date:	15-06-21 at 10:00-12:30
Attendees:	<p>██████████ (MB) – Chair of RDWE TWG and A66 RDWE Topic Lead at Amey/Arup</p> <p>██████████ (BH) – A66 RDWE Framework Drainage Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (DH) – A66 RDWE Topic Lead at Amey/Arup</p> <p>██████████ (AB) – A66 Flood Risk Specialist at JBA Consulting</p> <p>██████████ (PC) – Planning Specialist and A66 key contact at the Environment Agency</p> <p>██████████ (CR) - Flood & Coastal Risk Management Officer at the Environment Agency</p> <p>██████████ (FTM) – Flood Risk Support Officer at Environment Agency</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (EM) – Engineering Officer at Eden District Council</p> <p>██████████ (SC) - Representative from Ramboll on behalf of Highways England</p> <p>██████████ (WR) – Representative from AECOM on behalf of Highways England</p> <p>██████████ (BW) – Drainage and Coastal Protection Manager at Durham County Council</p> <p>██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (LJ) – Senior Infrastructure Planner representing EDC and CCC</p> <p>██████████ (SS) – Deputy Stakeholder Management (minutes) at Amey/Arup</p> <p>██████████ (DC) – Flood and Drainage Officer at Cumbria County Council</p>
Apologies:	<p>██████████ (TE) - Highways England</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (AC) – Environment Officer at Environment Agency</p>

██████████ (SW) – Principal Environmental Health Officer at Eden
(specialising in pollution of GW supplies)

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Minutes from previous	
2.1	MB requested any comments on previous minutes. No issues raised.	
3.0	Progress to date	
3.1	MB noted that there was not a lot of information to update the team on as they are moving towards the PEIR. MB noted that the Environmental Scoping Report has been submitted to PINS with a formal request for scoping opinion. The scope for the geomorphology is also being prepared.	
3.2	KS questioned if the project team has spoken with the Environment Agency regarding the geomorphology scope. MB responded by noting they at this stage they have not spoken with the EA and they are completing internal works prior to it. The scope will be submitted for comment in the coming weeks.	
4.0	Work to be completed	
4.1	MB provided an outline of the ongoing surface water programme.	
5.0	Design options for the PEIR	
5.1	MB presented a brief overview of options currently being considered.	
5.2	Following the briefing, KS questioned if detailed maps will be provided for all of the options. MB responded saying that scheme 8 has the most detailed map as it is the most developed. Over the coming weeks, the remaining schemes will be developed further.	
5.3	MB noted that for scheme 8 the redline boundary is larger than anticipated, which is due to the movement of junctions. DC questioned the location of this scheme, which MB confirmed is at Rokeby.	
5.4	AB provided a brief update on the modelling scope: <ul style="list-style-type: none"> •Scheme 3 – small extension to the model to include watercourse at the Llama Karma Café. •Scheme 4/5 – Expanding the Trout Beck model. To include a representation of the River Eden and along the railway embankment. Gathering data on additional watercourses through dye tracing. •Scheme 6 – series of small drains to the west of Warcop. Will be impacted by proposed SUDS. Landowners have raised concerns of flooding. •Scheme 7 – Bowes watercourse already modelled. Looking at getting a detailed model of water running underneath the junction to look at up and downstream impacts. •Scheme 8 – Extending the model upstream for more information on flood risk. 	
5.5	WR reviewing the plans noted a watercourse that looked to be going east, recommend that this be checked. AB agreed.	AB to check potential watercourse
5.6	BH noted as schemes are developing more findings are coming through. BH stated that land take is needed predominantly for ditches and ponds however the water and environment team are making changes following alignment changes.	

Item	Minutes	Actions
5.7	DC questioned if there was the potential to have one basin rather than multiple. BH responded that HE requires HE systems to standalone and that side roads are to have their own drainage systems separate from the HE drainage network . This is HE policy relating to ownership and management of assets rather than a project decision.	
5.8	SC questioned if flood modelling is all baseline? AB confirmed yes, but will advance shortly.	
5.9	KS questioned if the design of the ponds will be in the PIER including their planting detail and has the locations taking into consideration ecological factors. MB confirmed that the information will be within the biodiversity chapter and that ecological considerations have been factored in when choosing locations.	
5.11	DC questioned if ponds would remain sterile to reduce maintenance. EM further questioned if the design team are adhering to SUDS principles. BD responded that they are aiming to achieve a balance between biodiversity and the need for maintenance.	
5.12	DC highlighted that for scheme 6 they are looking into flood resilient projects. They are keen to work with HE to maximise funding. CR agreed that they would be very keen to engage in that discussion	
5.13	SC stated that additional benefits always welcomed. DC noted that they were submitting a Designated Funds bid. BH advised that Designated Funds are a completely separate mechanism from the project. WR further cautioned that they cannot be used within the scope of the project.	
5.14	KS questioned if biodiversity net gain applies to the funds. CD confirmed that they will discuss with the ecology team.	
5.15	Re assets DC raised that they are very keen on as little maintenance as possible.	
5.16	WR raised the discussion around water stored in drainage basins. WR raised that plans will need to make it clear where they will be located and the treatment required to maintain water quality, BH noted that this will be done and that the water treated by the project should have better water quality than the existing road. This will be picked up in the HEWRAT assessments.	
5.17	DC raised that some of the works appear close to an NR line. BH advised that it is a private heritage railway line and therefore not an interest of Network Rail.	
5.18	DC asked if swales will be used in the project, noting a preference for swales over gulleys due to maintenance cost. BH responded that swales unlikely to be used on the roadside but possible between ponds and outfalls. BH noted they will be continuing to consult with Local Authorities however the highways adopting authorities had expressed a preference for using gullies at previous meetings. It was requested that a consistent steer from CCC would be needed unifying the LLFA and highway authority's opposite stances expressed to date.	DC to provide clarity
5.19	EM asked if CCC has a SUDS policy. DC confirmed yes for new developments – trying to avoid gullies. DC to provide copy of CCC SUDS policy.	DC to provide SUDS policy
5.20	BH raised that those on the call should start considering compensatory storage for some of the SUDS ponds in Flood Zone 2. BH noted that all of the culverts that go under the A66 go to much smaller ones under the	CR to arrange meeting

Item	Minutes	Actions
	railway therefore also questioned the likely impact on the railway. CR unsure but meeting to be arranged to discuss revising Flood Zone 2/3 maps to reflect new modelling by JBA.	withEA to discuss
6.0	AOB	
6.1	CR questioned update on climate change. PC advised that they have made changes to the river flow data. The new approach will be at a catchment level allowing for more variety in values. AB advised Amey and JBA were aware of the updates to UKCP10 climate change allowances and have used updated river flow climate changes allowances	
6.2	BH raised that there is a manhole in the grounds of the North Lakes Hotel close to M6 J40 with a large culvert (24") crossing the A66 into CCC owned Skirsgill depot. ST to confirm contact details for depot to allow details of depot drainage system to be requested.	ST to provide contact details
6.3	MB will prepare and circulate an agenda for the next meeting.	
6.4	MB advised the group members can suggest topics for discussion in the next TWG.	CD to circulate minutes. All to send ideas for discussion to MB or CD ahead of next TWG.

Minutes of Meeting

A66 NTP

Groundwater Technical Working Group 4

Purpose of Meeting	Groundwater Technical Working Group 4
Location:	Microsoft Teams
Time/Date:	15 June 2021, 13:30-14:30
Attendees:	<p>██████████ (DB) – Groundwater Specialist at the Environment Agency</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (PC) – Planning Specialist and A66 key contact at the Environment Agency</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (DC) – Flood and Drainage Officer at Cumbria County Council</p> <p>██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (EM) – Engineering Officer at Eden District Council</p> <p>██████████ (LJ) – Senior Infrastructure Planner representing EDC and CCC</p> <p>██████████ (SC) – Representative from Ramboll on behalf of Highways England</p> <p>██████████ (BH) – A66 RDWE Framework Drainage Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (DH) – A66 RDWE Topic Lead at Amey/Arup</p> <p>██████████ (LB) – Chair of RDWE TWG and A66 RDWE Groundwater Specialist at Amey/Arup</p> <p>██████████ (TR) – A66 RDWE topic support Amey/Arup</p>
Apologies:	<p>██████████ (CR) - Flood & Coastal Risk Management Officer at the Environment Agency</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (BW) – Drainage and Coastal Protection Manager at Durham County Council</p> <p>██████████ (SW) – Principal Environmental Health Officer (EHO) at Eden (specialising in pollution of GW supplies)</p> <p>██████████ (TE) – A66 Lead Environment Advisor at Highways England</p> <p>██████████ (MW) A66 Water Specialist at Highways England</p> <p>██████████ (MT) – project support for Highways England at Aecom</p> <p>██████████ (AB) – A66 Flood Risk Specialist at JBA Consulting</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ - Chair of HRA TWG and A66 Biodiversity Topic Support at Amey/Arup</p>

Circulation:

Item	Minutes	Actions
1.0	Introductions	
1.1	New attendees: [REDACTED] (Flooding, Cumbria County Council) [REDACTED] (Planner on behalf of Eden County Council and Cumbria County Council)	None
2.0	Summary of previous meeting	
2.1	Last meeting covered abstraction locations and how assessments will be completed.	LB – to send DB SPZ in eastern portion of the site identified on groundsure report.
3.0	Progress to date	
3.1	Update on water dependent habitats will be provided at the next meeting.	None
3.2	PEIR process underway.	None
4.0	Ongoing work	
4.1	An overview of environmental assessment was given. This included the methodology to evaluate the sensitivity of groundwater receptors and determine the magnitude of impacts.	
5.0	Focus point	
5.1	Hydrogeological conceptualisation was presented of the region and the western end of the alignment, summarised as: Western part of project lies on the Penrith Sandstone Principal aquifer. The project is largely at or above grade, with cuttings located nr Penrith and Kirkby Thore. Critical to understand the vulnerability of the Penrith Sandstone, i.e. the distribution and type of superficial cover. Clay dominated superficial deposits will provide natural protection to the aquifer, whereas granular superficial deposits will provide little protection and have greater risk to the aquifer. Assessment will be undertaken conservatively, using available information. As project specific ground investigation data becomes available the 'conceptual model' will be updated.	
5.2	Ground investigation is expected to commence in September 2021. Based on current schedule to ES this indicates that winter peak groundwater levels will be included in the ES but summer low groundwater levels will not. The groundwater level monitoring will be key to understand how recharge drives	

	seasonality of groundwater level so that response to storm events and extended periods of dry weather may be characterised.	
5.3	Conceptualisation of eastern part of the project will be presented in a following meeting.	
6.0	AOB	
6.1	<p>JS – One year of monitoring data is limited in showing the absolute min/max groundwater levels. How will this be accounted for in the ES?</p> <p>LB –The monitoring will be able to characterise how groundwater responds to recharge, which is critical to determining likely peak events. The fracture and conduit flows of limestone in the east of the project is expected to have a flashy response potentially with significant response amplitude. While the more sandstone with its greater primary permeability is expected to have a gradual rise in the autumn and fall in the winter.</p> <p>JS commented there is value in looking for long term monitoring data to show groundwater variation. LB agreed.</p>	
6.2	<p>LD – How will the scheme interact with boreholes in Center Parcs area?</p> <p>LB – These boreholes have been considered in the assessments. The nearest scheme to Center Parcs is largely at grade with no significant cuttings. The SPZ of the Center Parcs abstraction lies >1km from the nearest scheme.</p>	
6.3	<p>SC – Are there cuttings that might impact on springs and GWDTE?</p> <p>LB – Major cuttings are around Penrith and Kirkby Thore. At this time no springs identified that would be impacted by the schemes. We will be looking at springs with biodiversity to determine ecological value.</p>	
6.4	<p>LD – Potential for saturated archaeology near Kirkby Thore?</p> <p>LB – Discussions pending with archaeology team, but we are aware changing groundwater can have an impact on preservation of archaeological features. Once cuttings are confirmed in Kirkby Thore, drawdown impacts can be estimated and relayed to archaeology.</p>	
6.5	<p>SC –Is the route impacting British Gypsum boreholes in Kirkby Thore and are there any updates on discussions with them?</p> <p>LB – No updates at the moment. If scheme impacts these boreholes the boreholes will be</p>	

	considered firstly in terms of protection but if this is not possible then compensation wells will be considered.	
6.6	JS – Are receptors upgradient being considered in terms of drawdown? LB – Where dewatering is anticipated then all water receptors within the drawdown extent are considered for potential impact (water quantity and water quality).	

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 5

Purpose of Meeting	RDWE Technical Working Group – Technical Working Group 5 to discuss key findings of PEIR.
Location:	MS Teams
Time/Date:	11-08-21 at 10:30-12:30
Attendees:	<p>██████████ (MB) – Chair of RDWE TWG and A66 RDWE Topic Lead at Amey/Arup</p> <p>██████████ (BH) – A66 RDWE Framework Drainage Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (BW) – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ (DH) – A66 RDWE Topic Reviewer at Amey/Arup</p> <p>██████████ (LB) – Chair of RDWE TWG (Groundwater) and A66 RDWE Groundwater Specialist at Amey/Arup</p> <p>██████████ (TR) – A66 RDWE topic support (groundwater) Amey/Arup</p> <p>██████████ (PC) – Planning Specialist and A66 key contact at the Environment Agency</p> <p>██████████ (CR) - Flood & Coastal Risk Management Officer at the Environment Agency</p> <p>██████████ (FTM) – Flood Risk Support Officer at Environment Agency</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (LJ) – Senior Infrastructure Planner representing EDC and CCC</p> <p>██████████ (DC) – Flood and Drainage Officer at Cumbria County Council</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (AC) – Environment Officer at Environment Agency</p> <p>██████████ (RK) – Project Speed lead at PINS.</p> <p>██████████ (MC) – Hydrogeology Specialist at WSP as a technical advisor for Eden and Cumbria.</p> <p>██████████ (SH) – Water Environment Specialist at WSP as a technical advisor for Eden and Cumbria</p> <p>██████████ (DB) – Groundwater Specialist at the Environment Agency</p> <p>██████████ (DG) – Senior Infrastructure Planner representing EDC and CCC</p> <p>██████████ (JS) – Representative (groundwater specialist) from AECOM on behalf of Highways England</p>
Apologies:	██████████ (TE) - Highways England

██████████ (SW) – Principal Environmental Health Officer at Eden (specialising in pollution of GW supplies)

██████████ (EM) – Engineering Officer at Eden District Council

██████████ (SC) – Representative from Ramboll on behalf of Highways England

██████████ (WR) – Representative from AECOM on behalf of Highways England

██████████ (BW) – Drainage and Coastal Protection Manager at Durham County Council

██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council

██████████ (MS) – A66 EIA Lead at PINS

██████████ (EP) – A66 EIA Support at PINS

██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England

██████████ (AB) – A66 Flood Risk Specialist at JBA Consulting

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Minutes from previous	
2.1	LB requested any comments on previous minutes. No issues raised.	
3.0	Progress to date	
3.1	Working on PEIR, final review early September 2021.	
3.2	September 2021 to January 2022 – Environmental Statement. Planned DCO submission February 2022	
4.0	Study area	
4.1	LB explained that the draft DCO boundary includes both the engineering boundary and land take. Then water team have taken 1km beyond that for the study area. Specific cases where the study area has been extended where needed/appropriate.	
4.2	LB noted that SW and GW attributes are included in the assessment.	
4.3	LB added that further groundwater site investigations commencing Autumn 2021 for peak groundwater levels over the winter.	
5.0	Key findings from the PEIR	
5.1	Schemes 1 and 2 – M6 Junction 40 to Kemplay Bank MB outlined areas of flood risk and rivers scoped into assessment. BH added that mapping and data is being refined.	
5.2	DC asked if the modelling was just fluvial or if it had a pluvial aspect to it as well? BH noted models have been developed in line with EA practice and a method statement was agreed with the EA. DC noted he assumes it should also include surface water discharges. CR added that he believes they are just fluvial models developed from EA models and there needs to be some exercise to include pluvial. DC noted the team should be including both as significant levels across Cumbria are pluvial and not always just the fluvial aspect. PC noted that comments were sent from the EA to JBA and advised JBA to contact the LLFA to discuss. DC noted that this sounded like pluvial is not included and should be. Would pluvial updates from climate models be	BH to check queries with JBA

Item	Minutes	Actions
	<p>included? Should be 47% (government figure) - not official yet but about to be. BH noted that for Highways England as can't use these until they are published. DC asked if this would be considered a risk to DCO. BH confirmed the fluvial figures have been published and PC confirmed rainfall data has not been completed or published yet and likely to be early 2022 for that data. DC added that the current figure is 40%, so if the data isn't available before DCO then this figure should be used.</p>	<p>CD to send scope to Cumbria</p>
5.3	<p>Scheme 3 – Penrith to Temple Sowerby JS asked if most properties in this area have wells, or is this very precautionary? LB replied that this is very precautionary and allows the team to focus on where there could be risks. As the team move into the ES, this would be refined and some discounted. The GW investigation is where the team will focus on groundwater protections. LB added that there are generally less than 10 per scheme. JS added that they may also be present on the upslope, and LB replied that there is a buffer either side of the road to account for this.</p>	
5.4	<p>Scheme 4/5 – Temple Sowerby to Appleby MB noted the different route options and highlighted key surface water receptors. LB outlined the key receptors and any receptors that were being scoped out. No comments received.</p>	
5.5	<p>Scheme 6 – Appleby to Brough MB outlined options for this scheme and noted which surface water receptors were being scoped out.</p>	
5.6	<p>DC noted that those north of the A66 are not all main rivers. MB will check and these will be refined ahead of publication. CR agreed this should be checked.</p>	<p>MB will check map data.</p>
5.7	<p>LD asked if MB had mentioned Low Gill Beck – MB confirmed it is scoped in.</p>	
5.8	<p>CR added that the old Mill channel splits off from Hayber Gill. MB noted that the team are aware, and surveys have been undertaken here to determine which parts should be main river. CR advised that the majority of the flow goes over a weir and this could be affecting the flood zones in that area. MB added that there is still work to be done to understand the flows in this area. DC added that there has been a lot of discussion with MOD and Highways England to do with reducing flooding in the Warcop village and possible use of Natural Flood Management (NFM). MB queried if this had been looked at as part of the designated funds. DC noted that Lancaster University and JBA have been approached by CCC on this. CR echoed this and agreed these conversations should be maintained. DC added that the same model should be used, and a joined-up approach should be used and CCC have a pot of funding to do NFM in this area, conditional on joining funds with others. MB suggested another call to discuss in detail and to invite JBA. CD raised that the designated funds team could also be invited as this could be a good opportunity for funding.</p>	<p>MB to set up a call to discuss with JBA, and designated funds team once alignment fixed.</p>
5.9	<p>LD asked if groundwater connectivity is reviewed? LB confirmed this is being considered and assumptions made for all schemes.</p>	
5.10	<p>Scheme 7 – Bowes Bypass LB outlined key groundwater features scoped in and those scoped out. BW described key surface water features.</p>	

Item	Minutes	Actions
5.11	Scheme 8 – Cross Lanes to Rokeby BW and LB outlined key surface water and groundwater features, noting that there are not many issues in this area.	
5.12	Scheme 9 – Stephen Bank to Carkin Moor BW and LB outlined key surface water and groundwater features, noting that there are not many issues in this area.	
6.0	Potential Impacts	
6.1	LD asked if the SSSI bog (Temple Sowerby Moss) present on scheme 4/5 orange option is being looked at and she had heard a new path was being considered here. LD would like to know more. LB to check.	LB to check this with Biodiversity.
6.2	MB outlined the potential impacts identified for WFD, ecology, contaminated land, groundwater, flood risk, and during construction and operation.	
7.0	Design Mitigation and Enhancement	
7.1	Majority of impacts considered have been removed through embedded mitigation and good design practice. Key points are around WFD and hydromorphology, surveys are being undertaken and detailed modelling on several watercourses (particularly schemes 4/5 and 6). Mitigation at Trout Beck would include reviewing the spacing of piers within the floodplain and interactions in the floodplain.	
7.2	The WFD assessment is underway and further details will be identified in due course. This will be considered in the ES.	
7.3	MB noted that mitigation discussions around Warcop are ongoing, and work to define what is mitigation and what is enhancement (that can be covered in designated funds).	
8.0	Potential Significant Effects	
8.1	MB outlined the risk of effects currently appraised as being low (subject to ongoing assessment).	
9.0	AOB	
9.1	LD asked about field drains as these can be damaged/compacted during construction – are these reinstated like for like? LD noted these are often considered improvements as existing field drains are often clogged. MB said this is just starting to be looked at now. LD noted that some of the clogged field drains could house biodiversity and wouldn't want to replace these. LB added that the water team should discuss with the biodiversity team.	MB & LB to look into the field drains reinstatement.
9.2	DC noted that in terms of NFM, some agricultural policies are being changed and there is an agricultural officer who can be consulted, and DC can put MB in touch if useful. MB noted that this would be useful and compound areas will be confirmed during the ES and we can have these early discussions now.	DC to provide agricultural officer details to MB.
9.3	JS thanked the group for the useful way of presenting this info. JS asked if indirect effects are being considered? LB noted that potential indirect effects identified so far are not considered significant and are being discussed with the Biodiversity team too and the team are very mindful of this.	
9.4	JS asked what the ground investigation would involve. LB confirmed this is direct investigation including boreholes etc with regular monitoring and also geophysics. JS asked on a sense of scale roughly how many boreholes could there be. LB noted he doesn't have exact number, but some schemes have 10-20 boreholes.	

Item	Minutes	Actions
9.5	LD asked if the water team are also liaising with the heritage team too to discuss below ground aspects? LB confirmed.	
9.6	RK asked about WFD derogation. MB confirmed that it the team are unlikely be a position to comment on potential WFD derogations until WFD assessment conducted (to be provided as an appendix to the ES).	MB to contact RK when WFD assessment complete.
9.7	CD explained the format of the next TWG, which will focus on mitigation and will be a joint session between multiple topics to allow a holistic and integrated review of mitigation.	
9.8	CD to circulate minutes. JS asked if the PowerPoint could also be shared. CD to check and share if possible.	CD to circulate minutes. CD to check if PowerPoint can be shared.

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 6: Part 1 Surface Water

Purpose of Meeting	RDWE Technical Working Group – Technical Working Group 6: Part 1 Surface Water
Location:	MS Teams
Time/Date:	02-11-21 at 13:30-15:00
Attendees:	<p>██████████ (MB) – A66 RDWE Topic Lead at Amey/Arup, Chair of RDWE TWG (Surface water)</p> <p>██████████ (TH) – Aquatic ecologist, Chair of A66 HRA TWG</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (BW) – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ (PC) – Planning Specialist and A66 key contact at the Environment Agency</p> <p>██████████ (CR) - Flood & Coastal Risk Management Officer at the Environment Agency</p> <p>██████████ (FTM) – Flood Risk Support Officer at Environment Agency</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (DC) – Flood and Drainage Officer at Cumbria County Council</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council</p> <p>██████████ (SC) – Representative from Ramboll on behalf of National Highways</p> <p>██████████ (WR) – Representative from AECOM on behalf of National Highways</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (DM) – South Cumbria team for the River Eden at Natural England</p> <p>██████████ (NK) – Sustainability lead at Natural England</p>
Apologies:	<p>██████████ (AB) – A66 Flood Risk specialist at JBA</p> <p>██████████ (DH) – A66 RDWE Topic Reviewer at Amey/Arup</p> <p>██████████ (LJ) – Senior Infrastructure Planner representing EDC and CCC</p> <p>██████████ (RK) – Project Speed lead at PINS.</p> <p>██████████ (SH) – Water Environment Specialist at WSP as a technical advisor for Eden and Cumbria</p> <p>██████████ (HR) – Consultant support from WSP for Eden District Council</p> <p>██████████ (PH) – Consultant support from WSP for Eden District Council</p> <p>██████████ (DB) – Groundwater Specialist at the Environment Agency</p>

- ██████████ (DG) – Senior Infrastructure Planner representing EDC and CCC
- ██████████ (JS) – Representative (groundwater specialist) from AECOM on behalf of National Highways
- ██████████ (TE) - A66 Environment Lead at National Highways
- ██████████ (SW) – Principal Environmental Health Officer at Eden (specialising in pollution of GW supplies)
- ██████████ (EM) – Engineering Officer at Eden District Council
- ██████████ (BW) – Drainage and Coastal Protection Manager at Durham County Council
- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England
- ██████████ (AC) – Environment Officer at Environment Agency

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	MB reminded attendees that there is a groundwater session at 15:30.	
2.0	Minutes from previous meeting	
2.1	No comments from attendees.	
3.0	PEIR Recap	
3.1	MB introduced the PEIR.	
3.2	MB described the study area as 1km from the draft DCO boundary and reminded attendees that alternative routes and alignments were also assessed. Receptor types are outlined for both surface water and groundwater.	
3.3	MB outlined the potential impacts that were identified at PIER stage.	
3.4	MB explained that good design practice and mitigation has been embedded. Hydromorphology assessment to be undertaken on the project to include watercourse crossings. Detailed geomorphological modelling will be carried out for Scheme 4/5 where there are potential impacts on River Eden SAC functionally linked habitats. Being undertaken for Scheme 6.	
3.5	MB explained that WFD assessment is ongoing, using the surveys and modelling outputs. This will determine any need for WFD-specific mitigation. If required, will be subject of discussion at a future TWG.	
3.6	MB covered the enhancement section of the PEIR. Feedback received by MB on designated finds has been passed on to National Highways.	
3.7	DC – we have two different parts of JBA doing modelling and we want to have a combined effort for Warcop. Any update to when this will be communicated. This falls under enhancements too. MB to raise with to JBA.	MB to follow up with JBA

3.8	<p>EP- how will the baseline incorporate the proposed Rivers Trust scheme enhancement at Kirby Thore? TH – meetings with the rivers trust have been ongoing, there has been flexibility from both parties to ensure it works for all. Current baseline as things stand, restoration project will be treated as an in-combination effect and likely to be beneficial. EP asked for an update on timings for both projects, but understands it spans HRA and ES. Concerns around flooding and flow. TH – No answer for that yet. MB noted that it will be incorporated into the RDWE chapter and the HRA. Explained that the JBA geomorphology modelling for the Kirby Thore scheme shows only localised flood impacts and so A66 won't impact river restoration opportunity negatively. TH confirms that the enhancement will be positive but is not needed to offset or mitigate effects from the A66 project, as they have all been addressed via embedded mitigation.</p>	TH to follow up with an update on timings and incorporation.
3.9	MB shared slide of assessment of effects from PIER	
4.0	Feedback from stakeholders from Statutory Consultation	
4.1	MB explained that Natural England comments have not been reviewed yet.	
4.2	MB requested that in regard to one of the EA comments, it concerns EA modelling following Storm Desmond, can PC or CR please share the data referenced?	CR and PC both to provide
4.3	MB noted thanks for the style of the feedback from the EA and gives positive feedback.	
4.4	<p>EP questioned, in terms of Project Speed, would it be possible for EA, Natural England, LA's to share their consultee responses. This will help to flag any potential issues. CE confirmed that they will need to get written permission from consultees.</p>	CE to liaise with EP and [REDACTED] and then gain permission from stat con
4.5	<p>MB questioned an EA statutory consultation response around monitoring, and the extent of the monitoring during construction. Concern about ability and safety to do this. SC suggests that visual monitoring for sediment rather than water quality sampling would be appropriate. TH noted that an ECoW will be required to ensure mitigation is in place and functioning. PC confirmed that this EA comment came from north east area and he will check the exact meaning. But assumes that it is to check that the plans are in place and would not expect sampling in a flood and that what is proposed sounds reasonable. FMT echoes PC to explain that the EA does not expect people to be present during flood events, but monitoring should be ensured. It will be included within permitting requirements.</p>	PC to check stat con response around monitoring after rainfall events
4.6	<p>MB confirmed that if chemical dosing is needed then it will be actioned. WR asks if treatment chemical dosing is planned for construction or permanent drainage. MB confirmed that construction only, permanent (operational) drainage will be designed to work without the need for chemical dosing.</p>	

5.0	Update on Ongoing Works	
5.1	MB outlined the actions required to close out the Evidence Plan and gives an update on progress. Flood risk methodology has been issued to EA and LLFAs, and we are awaiting comments back from LLFAs.	
5.2	MB advised that flood compensation areas are being planned currently, watercourse crossings and outfall locations are designed, and some minor design changes may be needed. Design to be shared when ready. EP enquired what issues are around scheme 6. MB explained that the design is still being developed to address land take, ponds in floodplain and other general consultee responses.	
5.3	MB advised that baseline flooding is being finalised. Suggested that a future TWG could cover flood modelling conducted by JBA. CR supports seeing the results. Also highlights the split of Hayber Beck/Moor Beck. MB to check that JBA modelling can be circulated. Action to follow up on this. PC added that in EA response it was made clear they require to see the models asap and [REDACTED] has asked what the best way to send these on is. PC to confirm.	PC to coordinate with MB and AB on best way to circulate modelling results.
5.4	MB noted that himself and TH and TG are in regular contact with the design team and regrets not being able to share more specific confirmed detail yet. This is to follow.	
6.0	AOB	
6.1	WR asked if there is any update to the program. CE advised spring 2022 for DCO submission. More detail will be provided when available.	

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 6: Part 2 Groundwater

Purpose of Meeting	RDWE Technical Working Group – Technical Working Group 6: Part 2 Groundwater
Location:	MS Teams
Time/Date:	02-11-21 at 13:30-15:00
Attendees:	<p>██████████ (TG) – Chair of RDWE TWG (Groundwater) and A66 RDWE Groundwater Specialist at Amey/Arup</p> <p>██████████ (MB) – Chair of RDWE TWG (Surface water) and A66 RDWE Topic Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (BW) – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ (DH) – A66 RDWE Topic Reviewer at Amey/Arup</p> <p>██████████ (PC) – Planning Specialist and A66 key contact at the Environment Agency</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (JS) – Representative (groundwater specialist) from AECOM on behalf of National Highways</p> <p>██████████ (SC) – Representative from Ramboll on behalf of National Highways</p> <p>██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council</p> <p>██████████ (DM) – South Cumbria team for the River Eden at Natural England</p> <p>██████████ (NK) – Sustainability lead at Natural England</p> <p>██████████ (KN) – EIA Advisor at PINS.</p>
Apologies:	<p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (WR) – Representative from AECOM on behalf of National Highways</p> <p>██████████ (BW) – Drainage and Coastal Protection Manager at Durham County Council</p> <p>██████████ (TE) - A66 Lead Environment Advisor at National Highways</p> <p>██████████ (SW) – Principal Environmental Health Officer at Eden (specialising in pollution of GW supplies)</p> <p>██████████ (EM) – Engineering Officer at Eden District Council</p> <p>██████████ (AC) – Environment Officer at Environment Agency</p> <p>██████████ (RK) – Project Speed lead at PINS</p>

██████████ (MC) – Hydrogeology Specialist at WSP as a technical advisor for Eden and Cumbria

██████████ (SH) – Water Environment Specialist at WSP as a technical advisor for Eden and Cumbria

██████████ (HR) – Consultant support from WSP for Eden District Council

██████████ (DB) – Groundwater Specialist at the Environment Agency

██████████ (DG) – Senior Infrastructure Planner representing EDC and CCC

██████████ (CR) - Flood & Coastal Risk Management Officer at the Environment Agency

██████████ (FTM) – Flood Risk Support Officer at Environment Agency

██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council

██████████ (LJ) – Senior Infrastructure Planner representing EDC and CCC

██████████ (DC) – Flood and Drainage Officer at Cumbria County Council

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Minutes from previous meetings	
2.1	TG requested any comments on previous minutes. Action remaining in reference to a SSSI bog, this has been raised to Biodiversity and will be addressed after results from the cuttings assessment. No comments from attendees.	
3.0	PEIR Recap	
3.1	TG acknowledged that most people were in the SW meeting and so will cover the PEIR recap briefly to minimise duplication.	
3.2	TG described the study area as 1km from the draft DCO boundary and reminded attendees that alternative routes and alignments were also assessed. Receptor types are outlined and flagged that some discharges and springs were scoped out.	
3.3	TG assured that the cutting assessment is ongoing and that results will be discussed at a later TWG.	
4.0	Feedback from stakeholders from Statutory Consultation	
4.1	TG explained that discussions are ongoing regarding potential disapplication of consents, and will be communicated/discussed with the EA as soon as possible.	
4.2	TG acknowledged that a comment from the EA stated that licences were identified but then not incorporated in the assessment or de-scoped. Reassured that they will now be incorporated in the HIA and ES.	
5.0	Update on Ongoing Works	
5.1	TG informed that site investigations were undertaken in spring and summer, in the form of boreholes and trial pits. There are 106 monitoring locations within the boreholes across the project, a mix of superficial deposits and bedrock monitoring locations. TG used webmapper to show all locations of site investigations. No monitoring at Scotch Corner due to limited works occurring there.	

	<p>TG informed that site investigations were undertaken in spring and summer, in the form of boreholes and trial pits. There are 106 monitoring locations within the boreholes across the project, a mix of superficial deposits and bedrock monitoring locations.</p> <p>TG used webmapper to show all locations of site investigations.</p> <p>No monitoring at Scotch Corner due to limited works occurring there.</p>	
5.2	<p>TG explained that at this stage limited monitoring is available as it is just from spring/summer, and so for the assessments a conservative assumption will be used. In general, assuming that it is at or close to surface ground level.</p>	
5.3	<p>TG updated that the ES chapter is in progress, and the recent site specific investigation will aid the Hydrogeological Impact Assessment (HIA) Appendix to the ES. The HIA is in progress that collates all the site and desk-based data. Cutting's assessment of all the cuttings below water table will be undertaken, and any risks in relation to embankments etc noted.</p> <p>A further appendix to the ES will be a Karst report that was done to assess risk of Karst features along the scheme including gypsum deposits.</p>	
5.4	<p>JS enquired about the frequency and quality of the monitoring. TG responded that the site reports that have been received report 4 to 5 weeks of monitoring with one visit for samples. He acknowledges that data from autumn/winter will be important to complete the picture and has enquired on the future plan for monitoring.</p>	<p>TG to follow up on the future level and quality of monitoring</p>
5.5	<p>SC asked if there were any unexpected results from the GI data. TG advised not in the data he has been through so far, all seemed within expected limits.</p>	
5.6	<p>SC enquired if findings in the PIER expected sig effects on GW? TG responds that no sig specific effects identified, however at that time the GI was not available. Majority of cuttings will be relatively small and will be assessed in cutting assessments and any risks will be mitigated out with good design practice.</p>	
5.7	<p>CS asked if TG has a good handle on permeability and storage? TG responds that there is not much site specific permeability data, some tests done but nothing too rigorous. The assessment will then need conservative estimates, assuming relatively high ROI and permeabilities. PSD data for the superficals will give a good indication of the permeability range, and literature values will be used for the bedrock.</p> <p>CS commented that sometimes high is too high and there is a need for a bit of pragmatism.</p> <p>TG agreed. Reasonably high permeability values will be used, with engineering judgement on the likelihood of that flow.</p>	
6.0	AOB	
6.1	None raised.	CD to share minutes.

Minutes of Meeting

A66 NTP

Road Drainage and the Water Environment (RDWE) Technical Working Group 7 : combined surface water and groundwater

Purpose of Meeting	RDWE Technical Working Group – Technical Working Group 7: combined surface water and groundwater
Location:	MS Teams
Time/Date:	02-11-21 at 13:30-15:00
Attendees:	<p>██████████ (MB) – A66 RDWE Topic Lead at Amey/Arup, Chair of RDWE TWG (Surface water)</p> <p>██████████ (TG – A66 RDWE Groundwater lead at Amey/Arup</p> <p>██████████ (TH) – Aquatic ecologist, Chair of A66 HRA TWG</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (BW) – A66 RDWE Water Environment Support at Amey/Arup</p> <p>██████████ (PC) – Planning Specialist and A66 key contact at the Environment Agency</p> <p>██████████ (CR) - Flood & Coastal Risk Management Officer at the Environment Agency</p> <p>██████████ (FTM) – Flood Risk Support Officer at Environment Agency</p> <p>██████████ (ST) – Flood and Development Officer covering Eden District at Cumbria County Council</p> <p>██████████ (DC) – Flood and Drainage Officer at Cumbria County Council</p> <p>██████████ (LD) – Biodiversity Officer (Cumbria) at the Environment Agency</p> <p>██████████ (PB) – Lead Officer for Flood and Development Management at Cumbria County Council</p> <p>██████████ (SC) – Representative from Ramboll on behalf of National Highways</p> <p>██████████ (WR) – Representative from AECOM on behalf of National Highways</p> <p>██████████ (LJ) – Senior Infrastructure Planner representing EDC and CCC</p> <p>██████████ (NK) – Sustainability lead at Natural England</p> <p>██████████ (AC) – A66 Hydromorphology specialist at JBA</p> <p>██████████ (JE) – A66 Hydromorphology specialist at JBA</p> <p>██████████ (NT) – A66 Hydromorphology specialist at JBA</p> <p>██████████ (AB) – A66 Flood Risk specialist at JBA</p> <p>██████████ (SH) – Water Environment Specialist at WSP as a technical advisor for Eden and Cumbria</p> <p>██████████ (GF) – Geomorphology specialist at the Environment Agency</p> <p>██████████ (DK) – Flood specialist at the Environment Agency</p>
Apologies:	██████████ (DH) – A66 RDWE Topic Reviewer at Amey/Arup

- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (RK) – Project Speed lead at PINS.
- ██████████ (HR) – Consultant support from WSP for Eden District Council
- ██████████ (PH) – Consultant support from WSP for Eden District Council
- ██████████ (DB) – Groundwater Specialist at the Environment Agency
- ██████████ (DG) – Senior Infrastructure Planner representing EDC and CCC
- ██████████ (JS) – Representative (groundwater specialist) from AECOM on behalf of National Highways
- ██████████ (TE) - A66 Environment Lead at National Highways
- ██████████ (SW) – Principal Environmental Health Officer at Eden (specialising in pollution of GW supplies)
- ██████████ (EM) – Engineering Officer at Eden District Council
- ██████████ (BW) – Drainage and Coastal Protection Manager at Durham County Council
- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England
- ██████████ (AC) – Environment Officer at Environment Agency

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	MB gave a general introduction to the TWG format.	
2.0	Minutes from previous meeting	
2.1	PC confirmed that he had completed his action from the last meeting. He followed up on a consultation response from Yorkshire and confirmed that the comment is recommending that a watching brief is in place during construction.	
3.0	Project updates	
3.1	MB informed attendees that the project is moving towards Order Limits being confirmed. Package A is confirmed with others to follow in coming weeks.	
3.2	MB explained that the drainage and flood compensation design is progressing and is going through final developments before modelling can commence.	
3.3	MB describes the work that the team were completing on site at the start of the month. This included looking at surface water features, springs, and abstractions.	
3.4	MB adds that the Environmental Statement (ES) chapter and technical appendices are being progressed.	
4.0	Hydromorphology	
4.1	AC introduced himself and explained that JBA have completed site-based assessments combined with desk-based components such as historic mapping and lidar data. This forms an evidence base to assess the proposed designs.	

4.2	AC summarised that the majority of watercourses that the team encountered were field drains and had low hydromorphological diversity. A small number were observed to have good and strong hydromorphology characteristics.	
	Scheme 2	
4.3	AC started his description of the hydromorphology at Scheme 2, explaining that Thacka Beck is primarily culverted and the open channel is heavily modified and artificially managed. The characteristics of this watercourse are modified in terms of flow and sediments. This is the only watercourse being considered at Scheme 2. TH explained that for this scheme, the alignment is completely within the existing culverted section, and there is no extension to the culvert or change at that crossing as a part of the scheme.	
	Scheme 3	
4.4	AC progressed to Scheme 3 explaining that there are limited areas of good hydrological conditions with the majority of watercourses being classified as field drains, with some diverse flow and sediment characteristics within woodland areas on the Lightwater, downstream of A66 and upstream at Hallsteads Wood. Elsewhere the good condition was limited. Swine Gill at Swine Gill Plantation had wet woodland present, likely due to the existing culverts invert level that backs up water south of existing A66 creating positive ecological and hydromorphology conditions. The watercourse associated with Water Crossing Point (WCP) 4 experiences high erosion but AC explained that this is related to the culvert and steep slope.	
4.5	TH gave additional context that at Scheme 3, the only notable species (e.g. salmon, lamprey, white clawed crayfish, bullhead) were observed in the Lightwater.	
4.5	GF asked about bank erosion around WCP4, seeking clarification on its cause. AC responds that where the culvert outfalls into the watercourse, the flow out of the culvert has exacerbated erosion rates but it is more to do with the topography of the area. AC used lidar data to show a steep drop to River Eamont floodplain. TH added that when he was there was no flow in that channel. GF was satisfied with the response.	
4.6	DC enquired if any changes to the proposed designs were being taken from this information. AC responds that they are still in process of assessing designs in the models and so it is too early to say if design changes will be needed.	
	Scheme 4/5	
4.7	AC described Scheme 4/5 and that Trout Beck has very good areas of hydromorphological function. There is variation in bed material and forms and riparian vegetation. AC describes that some of the watercourses have been artificially realigned	

	historically and this adds to the intense erosion observed at bends in the watercourse.	
4.8	<p>WR enquires about the designated fund proposal that was mentioned in a previous TWG for this area and asks for an update.</p> <p>CD confirmed that it is at a high-level idea stage at the moment, rather than the application fund stage but it is with the team.</p> <p>MB further explained to the group that the proposals were drawn up to have a secondary channel that is more naturalised. He explains that detailed geomorphological modelling was done and as a result, the piers for the crossing have been placed so there are only very localised impacts.</p> <p>GF adds that he is glad to hear the design has taken into account the proposals.</p> <p>TH advised that there have been conversations with the River Eden Trust to reach a design that worked for both parties.</p>	
4.9	AC continued that the remaining watercourses at Scheme 4/5 were mainly field drains, with poor quality homogenous characteristics and flow and sediment. A lack of riparian coverage was noted, with livestock poaching being recorded as an issue.	
	Scheme 6	
4.10	<p>AC described Scheme 6, explaining that the unnamed tributary of Mire Sike at WCP11 contained structures in the channel and was incised. This made it degraded and of poor quality with silt deposits in channel upstream of structures.</p> <p>Cringle Beck and unnamed drain adjacent are classified as field drains downstream of A66, although they are slightly larger than others observed, they are still straightened with bed incisions. Additionally, the sediment from poaching and rail culverts had negative impacts upstream, with homogenous flow and sediment characteristics. Upstream of A66 there was some good characteristics observed and the channel planform was sinuous with good bed forms like riffles and pools.</p> <p>TH added that from a fisheries perspective, there was salmon fry in the altered section, and then 2 weeks later the bed was dry, but upstream there is suitable salmonid habitat.</p>	
4.11	<p>AC continued to describe Scheme 6 watercourses. The Hayber Gill was categorised as an upland and high productive stream, high energy flow with riffles and some rapids sections, there is also established woodland flanking both banks. Bed material was bedrock and coarse cobble and gravels. Topography impacts this channel a lot, as the gradient increases towards existing A66 down slope, the flow velocity increases. This watercourse is culverted under the existing A66 before it splits into a Mill Leat (now referred to as Moor Beck (oftake)) and Moor Beck.</p> <p>Moor Beck has high erosion and sinuous upstream sections, very active and could adopt new plan form in high flood events. It then goes into the straightened channel through football field. Not much</p>	

	<p>bankside planting or trees – banks are more susceptible to erosion. Riffles and pools were observed, displaying a good variation in features.</p> <p>TH adds that Moor Beck supports all qualifying features of the SAC, including salmon; trout; river brook lamprey, otter and it is functionally linked to the SAC</p>	
4.12	<p>DC raised that flooding in Warcop is well documented and he is concerned about aspects of the scheme impacting on the floodplain.</p>	<p>Revisit this concern and discuss modelling that DC wishes to organise. Action completed within the TWG, see Item 4.23</p>
4.13	<p>WR asked for clarification of the feature at the channel split. AC confirmed that it is more of a step feature than a full weir, with TH contributing to explain that notches were added to the steps by the Eden Rivers Trust to improve fish passability.</p> <p>WR asked if the River Eden Trust or the Environment Agency have looked at changing the weir arrangement to give more flow to Moor Beck and TH responded that they mitigated the weir to give fish passage but that the Warcop Training Camp barracks require the offtake to supply their fire pond and so the second channel cannot be removed completely.</p> <p>DK asked the group if the Moor Beck could take more flow volume to divert water from flowing through Warcop so quickly and that this may provide some biodiversity benefits.</p> <p>GK agreed that Moor Beck doesn't look too oversized in channel capacity, and so could adjust to have more flow in his opinion.</p>	
4.14	<p>After some more general discussions within the group around naming of the watercourses and differences between maps and flood mapping data, TH confirmed Moor Beck (offtake) and Moor Beck naming.</p>	
4.15	<p>TC described that Eastfield Sike, from A66 to its confluence with Crooks Beck is similar to natural stretch of Moor Beck. However, upstream it has been straightened on the approach to the A66 and then a large amount of culverts exist resulting in an impounding influence with deposits of fine material. Upstream of road crossings it is more natural, classified as an upland river system with narrow valley and steep gradients.</p> <p>TH added that it supports all the SAC fish species as well.</p> <p>GF asked if the scheme design will improve conditions. TH responded that this culvert should be widened and the tank turning area culvert should be able to be removed. A mixture across the</p>	

	<p>scheme in terms of improvement, some culverts will be extended and some replaced with opportunities for improvement.</p>	
4.16	<p>TC continued that the Moor Beck (offtake) has limited flow and is a man-made channel. Conditions were poor with little riparian planting, and it does not have the same characteristics of the Moor Beck.</p> <p>TH asked the group if anybody new where offtake comes back to Crooks Beck and DC informs him that the MasterMap detailed dataset does have the outfall on it and is correct in its placement.</p>	
4.17	<p>TC moved his presentation to the east of Scheme 6, focusing on Yosgill Sike and Woodend Sike explaining that there are a few crossing points in this area.</p> <p>Yosgill Sike had moderate flow energy and is an upland river system. Unlikely that it is managed but bank incision and bank slumping and lack of riparian cover occurs with cattle poaching very prominent.</p> <p>Woodend Sike has not as prominent incision, with riparian cover improved compared to Yosgill Sike. This improves the morphology as natural materials input and will give variation to dynamics. Bed material was clean through this section, upstream the riparian woodland drops of and an increase in cattle poaching.</p>	
4.18	<p>TC continued to report that Lowgill Beck downstream of the existing A66 has a steep gradient, with good riparian cover, a range of bed material, and natural sinuosity in the channel. Features from riffles to runs were observed. Further west the channel has been straightened and managed for agricultural uses, which gave an increase in flow energies and bank slumping and erosion. There was a lack of floodplain connectivity further downstream because of the incised nature of the channel. As the watercourse flows towards Warcop the channel is straightened further and is managed, with riparian woodland increasing.</p>	
4.19	<p>TC moved on to talk about an unnamed tributary of Lowgill Beck, explaining that the upstream section was a field drain with heavily overgrown and incised banks. Downstream the watercourse is incised and disconnected from the flood plain. It is culverted under the A66 and downstream the conditions become more sinuous in plan form, retain some riparian woodland sections, and the flow diversity in this section is improved with alternating riffles and runs.</p> <p>TH contributed that at WCP18 it is possibly the only realignment of a watercourse on the scheme, with the channel being straightened to facilitate a culvert. No fish were observed but there is white claw crayfish in this river. The design will ensure that there will be habitats within the culverts to support adult whiteclawed crayfish.</p> <p>GF asked if it is a natural bend or artificially created. AC answered that it is probably natural but there is very incised sections upstream and so the incision could be due to the tight geometry of the floodplain.</p>	
4.20	<p>TC moved his slides onto WCP19 and the two channels associated with it. It has been straightened and the section leading to A66 is</p>	

	<p>very steep and trapezoidal banks with cattle poaching, disconnected from the floodplain and no riparian woodland. Upstream of this gave slight improvements but it does act as a field drain, some diversity in bed substrate and riparian woodland increasing slightly. Downstream of the culvert, the gradient dropped off significantly, and so the characteristics majorly changed. Low energy, glides to some runs. As a result the bed substrate was finer sand and silt. The watercourse was small/field drain.</p>	
4.21	<p>LJ asked if there was the opportunity at WCP19 to relocate the confluence so it isn't right under the culvert and if the confluence will be moved up into the field network, has the landowner been informed. TH responded that this was raised in consultation and that the landowner is aware of modifications to the structure.</p> <p>TH gave further context that there is a significant amount of artificial bed up Woodend Sike and Yosgill Sike, with concrete leading to the culvert and so there is a potential opportunity for enhancement in this location to create a more natural bed.</p>	
4.22	<p>WR observed that opportunities for removing or improving culverts have been mentioned and asked if there is scope to remove sections of modified watercourses and renaturalise areas.</p> <p>AC responded that once JBA have assessed the designs they will set out recommendations for enhancement if appropriate. TH further expanded that the focus for the project has been on designs that have minimal impact and retaining function of rivers as they are. The team are looking at enhancement such as extending wet woodland and riparian fencing. The mitigation is not finalised yet but lots of these watercourses are within Order Limits and so there are opportunities for enhancement.</p> <p>EG contributed that at WCP19 the baffles in the culvert do not give the best fish passability and so it's a good potential enhancement that is achievable.</p>	
4.23	<p>DC takes the opportunity to expand on his earlier comments. – He would like to see coordination from interested bodies that want to do improvements. He voiced concern that currently when discussing changes to watercourses and habitats it does not seem a joined-up approach. He suggests that the River Eden Trust, AONB, himself as a representative of Cumbria County Council and the A66 project team should be in talks. He voices his wish to find a way to facilitate actually getting together to approach such enhancement measures.</p> <p>MB explained the project scope is only to mitigate the impacts of the scheme. The designated funds opportunities are where enhancement separate to the scheme can be sought.</p> <p>DC voiced that his team at Cumbria County Council are wanting to flood model areas, and he would like to explore ways to share the models that the A66 has produced to reduce duplication of work.</p> <p>TH agreed that the designated funds team would be the most appropriate way to approach this.</p>	<p>MB to send DC designated funds details to raise his ideas. National Highways contact: [REDACTED] [REDACTED] [REDACTED] highwaysengland.co.uk</p>

4.24	<p>JE started her presentation by giving the context that schemes going 7-11 and are mostly agricultural drains with less hydrological importance than the schemes in the west.</p>	
	Scheme 7	
	<p>JE - Scheme 7 has very straightened and very steep landforms. The watercourse within the study area is incised and artificial. It is culverted under the existing A66.</p>	
	Scheme 8	
4.25	<p>JE described Scheme 8 – Punder Gill to Tutta Beck contained some pool and riffle formations, some features of naturally occurring woody dams giving diverse areas. The culverted crossing gives change in gradient and gives a glide flow.</p> <p>JE further explained that the other tributaries of Tutta Beck had minimal flows and were classified as field drains with trapezoidal forms and heavily vegetated.</p> <p>TH added that Tutta Beck contains trout, but isn't as diverse as it could be given the catchment. TH explains that he is aware of a designated fund opportunity that is logged, which would aim to transform an existing corrugated steel culvert to improve and give better connectivity.</p>	
	Scheme 9	
4.26	<p>JE moved onto Scheme 9 explaining that it was very similar to Scheme 8, with a lot of the watercourses being classed as agricultural ditches with low flow/dry when surveys occurred. Foxwell Farm watercourse had low velocities with poor or no flow and stagnant pools.</p> <p>Mainsgill plantation and middle plantation give gravel beds and natural looking watercourse but still low to moderate flow. This watercourse is then dredged within the field and artificial in character. Very large culvert south of A66 disconnects the upper watercourse from the rest of the catchment.</p> <p>TH added that signal crayfish were found in this area and so a need for biosecurity protocols. TH also added that he has flagged opportunities to daylight the large culvert in this area, and that discussions with the landowner are ongoing.</p>	
	<p>SC raised that his understanding on designated funds is that they will usually only cover the cost of the works and not the cost of facilitating partnerships.</p> <p>TH responded that this is the case, they would not fund research into forming proposals but that there are people in Amey/Arup and National Highways who help coordinate the proposals.</p> <p>WC suggested adding the names of contacts to the minutes for circulation.</p>	<p>MB to add contact details for designated funds</p> <p>██████████</p> <p>██████████</p> <p>██████████</p> <p>██████████ highwaysengland.co.uk</p>
5.0	Groundwater	
5.1	<p>TG gave an update on the cuttings assessment progress. He explained that some cuttings are deep and give high inflows but in</p>	

	<p>reality they are more of an extension of existing cuttings and so inflows won't be that high. This means finding the reasonable worst case is important, qualitative assessment will follow quantitative assessment where issues are raised.</p> <p>Summary of each scheme cuttings:</p> <p>Scheme 01/02 cuttings not anticipated to encounter bedrock, all in glacial till or fluvial glacial gravels.</p> <p>Scheme 3 – cuttings within glacial deposits, not anticipated to encounter bedrock</p> <p>Scheme 4/5 at the Kirby Thore bypass, there will be a cutting that will go into the Penrith sandstone and hence this is a focus for the cutting assessment. At Crackenthorpe the cuttings are mostly in glacial deposits.</p> <p>Scheme 6 mostly are in glacial tills. A potential underpass at Café 66 in the west may impact the Penrith sandstone.</p> <p>Scheme 7 – western area around Bowes where the bedrock is very shallow, a number of cuttings may go into the mudstone bedrock (Stainmore Formation). This area is primarily widening of what is already there, and so some assessment outputs will be very conservative.</p> <p>Schemes 8 and 9 will have cuttings in glacial till, and not expected to encounter bedrock and so limited impact on groundwater.</p> <p>Scheme 11 has no cuttings and so not assessed in detail.</p>	
5.2	<p>TG describes the recent groundwater surveys where the team revisited springs and took measurements and visited some new areas that were raised by stakeholders in consultation. They also visited a number of the abstraction licences; primarily agricultural for livestock but in the Kirby Thore area there were a number of industrial abstractions for the gypsum mine. Those abstractions are very close to the alignment and will likely need decommissioning and replacement.</p>	
5.3	<p>TG updated that the Ground Investigation team have collected further data in the past few weeks on groundwater levels and there is further monitoring plans in place but these results will not come before the ES chapter is completed and submitted.</p>	
6.0	AOB	
6.1	<p>All has been covered in other call discussions, especially designated funds contacts.</p>	

Minutes of Meeting

A66 NTP

Warcop Flood Risk Update Meeting

Purpose of Meeting A meeting to update the Environment Agency and Natural England on the progress of the hydraulic modelling undertaken by JBA and the flood mitigation designs being progressed for Scheme 6, potential impacts at Warcop specifically.

Location: MS Teams

Time/Date: 10-03-2022 09:00 to 10:00

Attendees: [REDACTED] (TH) – Aquatic ecologist, Chair of A66 HRA TWG
 [REDACTED] (CD) – A66 Environmental Stakeholder Relationship Deputy at Amey/Arup
 [REDACTED] (CE) - A66 Environmental Stakeholder Relationship Manager at Amey/Arup
 [REDACTED] (BW) – A66 RDWE Water Environment Support at Amey/Arup
 [REDACTED] (PCa [REDACTED]) – Planning Specialist and A66 key contact at the Environment Agency
 [REDACTED] (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England
 [REDACTED] (LD) – Biodiversity Officer (Cumbria) at the Environment Agency
 [REDACTED] – Environment Agency
 [REDACTED] (WB) – Drainage design at Amey/Arup
 [REDACTED] (NK) – Sustainability lead at Natural England
 [REDACTED] (AB) – A66 Flood Risk specialist at JBA
 [REDACTED] (OG)– Drainage design at Amey/Arup
 [REDACTED] (PC) – Consultant’s Design & Engineering Lead at Amey/Arup
 [REDACTED] (KC)– Drainage Design Lead at Amey/Arup

Apologies: [REDACTED] (FTM) – Flood Risk Support Officer at Environment Agency
 [REDACTED] (CR) - Flood & Coastal Risk Management Officer at the Environment Agency

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	PC gave an introduction to the call. He outlined the intention of the call was to provide an update on the Warcop flood modelling, current flood	

	compensation designs, to answer questions and set out our approach to DCO submission.	
1.2	OG reminded the group of previous meetings where modelling results have been presented and where potential impacts have been flagged. The team have since been working through potential impacts to update the design.	
1.3	It was agreed that the meeting would be recorded to show EA representatives that could not attend in person.	CE to save recording and insert link to minutes.
2.0	Warcop Design	
2.1	AB shared the most recent flood compensation design for Scheme 6 at Warcop. AB explained that the team had been testing different flood storage designs that aimed to replace the areas of floodplain lost due to the Scheme. The initial storage areas proposed on a volume by volume basis did offset the capacity lost for the 2 and 20 year events but not for the 100 year. Currently models and design are based on a volume basis, with a focus on the 100 year return climate change scenario. AB shared model results on screen that appeared to reduce the volume of water reaching Warcop slightly.	
2.2	AB explained that there are additional storage areas proposed for Eastfield Sike and Cringle Beck but these have not been modelled thoroughly yet, and so those increase areas seen on the outputs will be dealt with.	
2.3	AB explained that this design will store water on both sides of the channel and the intention would be to have flood culverts to pass flow back into the channel that would also be fish passible.	
2.4	KS asked for some more details on the mechanism of the design. AB expanded on her description to say that the existing flood plain will be lowered to increase storage capacity of the area and the structure will be a bund. KS inquired how the bund will cross the existing watercourse. AB answered that there is a gap, and this currently is modelled as a gap rather than a control structure. The existing banks will be maintained, and this contains the 2 year events and so for low flow the Scheme will have minimal impact on the existing watercourse.	
2.5	KS asked about how the models show change of impact on agricultural land and properties in the area. AB showed the current impact model, which indicates up to 10cm reduction in flood depths downstream around Warcop.	
2.6	GF asked if a sensitivity analysis had been done. AB explained that at this stage the focus has been on demonstrating that the scheme will cause no increase in flood volumes downstream by offsetting the volume storage lost by the Scheme.	
2.7	GF inquired about any elevation changes between the two sides of the bank, observing that the storage areas look as if they are two stages of a system. AB answered that yes there are level changes at the moment, this is initial design and so further work will be done to assess different levels and grading.	
2.8	DK voiced his concern that by lowering the floodplain, there is potential to encourage higher volumes in all return events. Also, all the proposed ponds	

	<p>are in the south floodplain which is very active, and so can aspects of the design be done in the north.</p> <p>AB responded that there are technical issues around the north being MOD land.</p> <p>OG added that the topography to the north also constrains where ponds can be located.</p> <p>OG commented that there is only one SUDs pond within the Flood Zone 2 (100 year return) and the two in the west are out with this area.</p> <p>DK responded that the west has experienced flooding in the past, even if not shown on Flood Zone mapping.</p>	
2.9	<p>DK explained that where Hayber Beck splits, as he recalled there was discrepancy in the split of flows going down the Mill Leat (Moor Beck (Offtake)) and Moor Beck in the model. He suggested that the flows were higher than in practice and asked if this had been reviewed.</p> <p>AB responded that the model has been reviewed after comments from the EA were returned but no specific comments around that. There have been previous discussions around the flow split with CR. Varied evidence from different site visits. AB suggested further meeting needed around this.</p>	<p>AB, DK, and CR to have follow up discussion about this flow split.</p>
2.10	<p>DK raised the opportunity to divert Moor Beck (Offtake) west to connect to the River Eden further downstream, and asked if this has been explored as a way to reduce flow into Warcop</p> <p>AB explained that the reason that option has not been explored is due to comments from the EA that outlined that they expected all mitigation to be done within the same WFD boundary.</p> <p>DK suggested he could take that conversation offline and follow up, as he believed it would be a good option to explore.</p>	<p>DK to follow up internally on this.</p>
2.11	<p>WB – outlined that the aim is to not increase discharge downstream of the project. Initially they looked at similar storage to Longtown and when it was originally modelled by AB it was an embankment with a control structure. However, the current design aims to keep the bank levels the same to keep geomorphology features within the channel. Then drop the levels of floodplain adjacent to the channel so that only when the high flows come are these storage areas being used.</p> <p>DK asked if there had been upstream options looked at to reduce flow and enhance biodiversity, although he recognised the complications with it being MOD land and the AONB.</p> <p>WB answered that the main complication is that the MOD pass on all responsibility of management and maintenance of the land, which creates difficult construction conditions. There have been enhancement discussions with the environmental team.</p>	
2.12	<p>PC added to the discussion that the land take agreed still leaves opportunity for enhancement at a later date. He emphasised the need for a solution in this area for DCO and suggested that documentation could set principles highlight future opportunities.</p> <p>WB further added that one of the design principles is currently to use less control structures and stick with passive design, to reduce National Highways maintenance commitments.</p> <p>DK agreed that passive structures are beneficial for a lot of reasons and the EA are also trying to reduce control structures on projects.</p>	
2.13	<p>KS told the group that she has been involved in other long term NFM and resilience projects with the MOD in other locations. For example, Dufton Gill.</p> <p>LD added that the MOD are also involved in the Warcop Conservation Group meetings, which are a mix of statutory and local interest parties with</p>	<p>KS and LD to provide MOD/Warcop</p>

	<p>the next meeting held 6th April. She notes that it has been previously suggested to the group that they reach out to the Project. PC requested for contact details from both KS and LD if possible.</p> <p><i>Post meeting note: LD passed on contact details and an invite has been extended to the project team</i></p>	<p>Conservation Group contacts to PC/CE.</p>
2.14	<p>LD raised a question around the existing Moor Beck channel and how active it currently is, and if the design of the bund would give scope for naturalisation and movement in the future. Although recognising that this would reduce the compensation volumes achieved. GF agreed that knowing the channel plan and hydromorphology would be helpful to futureproof the structure. PC asked AB if there was potential to increase the size of the flood compensation storage and extend it west. AB responded that the design team would have to look into that but in principle there wasn't a reason from her perspective that would limit that. WB reminded the group that the initial design is focused on volume of storage, but there are potentials within the storage ponds for environmental enhancement that can be explored.</p>	
2.15	<p>PC outlined to the group that the DCO documentation would outline design principles to encourage the contractors to investigate opportunities to refine the engineering designs and use more natural methods during detailed design. This is one reason for keeping the order limits larger than needed for submission.</p>	
2.16	<p>DK raised that Lowgill Beck also needs addressed in a similar way and ideally would be looked at in combination with Haber Beck and Moor Beck as they may interact and offset each other. He is supportive of de-engineering and adopting more naturalised mitigation methods.</p>	
2.17	<p>PCa [redacted] commented that from the DCO perspective and planning side, the EA's normal approach is that they would want to see the solution to the issue so that they can then make a decision to grant consent. PCa [redacted] then commented that it is unlikely that the project will be in that position, and so it is more likely to be a question of "can the project accommodate the necessary volumes within the red line boundary?", and it may be the case that this is presented at DCO through a variety of scenarios/options/opportunities. PCa [redacted] explained this could be almost like a 'pick list' that defines different solution aspects to demonstrate that while there isn't a fixed solution going through DCO, there will be a workable solution and that the EA has agreed that in principle, whatever combination of options are used the risk will be mitigated. PCa [redacted] noted that this is not the normal approach for the EA to take but as long as there is a way to ensure that post DCO the EA continues to be a part of the process to determine what the final solution is and that the local community knows the EA and LFA are still involved in the decision-making process, then that is probably the way forward. PC supported the comments and suggested approach from PCa [redacted] and recommended further discussions on the mechanisms be followed up in a further meeting. PC added that statement of common ground opportunities, capturing design principles in the DCO documents might be a method.</p>	
2.18	<p>DK asked when the project will communicate with landowners and community PC answered that the Project team has already done many different engagement and consultation activities. Additionally, the permanent</p>	

	acquisition strategy is conservative, with the aim to introduce land management contracts and pass land back into the community and landowners, sort out management contracts etc.	
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A66: CCC&EDC NTP Water Modelling

Title:	Materials and Waste	Revision / Version:	V1
Status:	ISSUE	Reason for Issue:	Information
Date:	11/03/2022		
Location:	Microsoft Teams Meeting	Time of Meeting:	3 pm – 4 pm
Drafted By:	██████████		
Attendees:	<ul style="list-style-type: none"> • ██████████ – NTP • ██████████ – NTP • ██████████ – NTP • ██████████ – NTP • ██████████ – NTP • ██████████ – NTP • ██████████ – NTP • ██████████ – CCC • ██████████ – CCC • ██████████ – CCC • ██████████ – EA • ██████████ – EA • ██████████ – NTP • ██████████ – NTP 		
Apologies:			
Material:	N/A		
Agenda			
Item	Description	Comments	
	<p>CE led on introductions</p> <p>DK noted they are wanting to understand more about the modelling works around Warcop, looking at flows and storage. They noted they have concerns of the lowering of the floodplains and queried if there is the opportunity to grab more volume from elsewhere.</p> <p>OG showed the GA's for Warcop and explained the works to existing culverts in the area. It was noted that Broomrigg Culvert will be a new culvert to be added with compensation at Low Gill. AB furthered that their will be minor impacts at Low Gill but the extent of the culverts shouldn't impact the flow.</p> <p>DK noted that the A66 NTP is working towards no detriment whilst they are working towards a benefit. Further, DK raised that were balancing points are being used by the project team this reduces the opportunities for the EA for engagement. Looking at Warcop DK noted that Haver Beck and a other beck meeting in the town and there is a need for mitigation.</p> <p>DH requested when the GA's will be sent over to CCC for review. OG noted they (DCO GA's) should be ready next week. OG to see if drawings can be produced.</p> <p>DH noted they wanted to see more detail to allow CCC to respond. Further, it was noted they are happy to receive draft of incomplete drawings if easier.</p> <p>DC raised that they do not want his and her basins. DH noted that the point has been included on the SOCGs and it is not NH policy compliant, would like to see NH move away from policy and look at benefits.</p> <p>AB noted the model is based off information from 2018 but have extended survey data beyond the A66. To understand peak flow a worst-case scenario of the</p>		

watercourses peaking at the same time was taken. For flood storage the team are working to a 1:100 year as set by the parameters by the EA.

DC questioned if the model could show nothing running through Mill Leak and put into Moor Beck. DK noted they are looking into using Mill Leak for high-level overflow and remove it from the Warcop area. By using Moor Beck this could take the water west of Warcop.

AB confirmed moving the water west of Warcop was not investigated as PhC confirmed that they made the comment for it to stay in the WFB boundary. Further AB noted that diverting the watercourse will make it more difficult to show off-setting.

DK advised the use of invert levels with further surveys of the A66. AB questioned that this would likely create issues for structures to the west such as Wheat Sheaf Farm. DK responded that this is the opportunity to work together for experimental improvements.

CE and KC noted that these are enhancements so will fall under designated funds. CE suggested to DH that they submit an application.

DH requested the correct designated funds application be send to them.

DK noted that any opportunity to store water on the north side of the route would be welcomed. Further, they advise of a pipe that they found that was designed for significant capacity from the north side of the road to the south. AB confirmed they are not aware of this pipe.

DC noted they are looking to start speaking with community groups but concerned that as soon as they do the community are likely to ask questions about the A66. HS requested that they share information before it does out so the project team can be prepared.

HS requested Ian's name be put into the minutes.

Minutes of Meeting

A66 NTP

Warcop Flood Risk Update Meeting

Purpose of Meeting A meeting to update the Environment Agency, Natural England and Cumbria County Council on the progress of the hydraulic modelling undertaken by JBA and the flood mitigation designs being progressed for Scheme 6, potential impacts at Warcop specifically.

Location: MS Teams

Time/Date: 04-04-2022 14:30 to 15:30

Attendees: [REDACTED] (TH) – Aquatic ecologist, Chair of A66 HRA TWG
 [REDACTED] (CD) – A66 Environmental Stakeholder Relationship Deputy at Amey/Arup
 [REDACTED] (CE) - A66 Environmental Stakeholder Relationship Manager at Amey/Arup
 [REDACTED] (BW) – A66 RDWE Water Environment Support at Amey/Arup
 [REDACTED] (PCa [REDACTED]) – Planning Specialist and A66 key contact at the Environment Agency
 [REDACTED] (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England
 [REDACTED] (AB) – A66 Flood Risk specialist at JBA
 [REDACTED] (KC)– Drainage Design Lead at Amey/Arup
 [REDACTED] (DC) – Cumbria County Council
 [REDACTED] (FMT) – Flood Risk Support Officer at Environment Agency
 [REDACTED] (DK) – Cumbria County Council

Apologies: [REDACTED] (CR) - Flood & Coastal Risk Management Officer at the Environment Agency
 [REDACTED] (WB) – Drainage design at Amey/Arup
 [REDACTED] (NK) – Sustainability lead at Natural England
 [REDACTED] (OG)– Drainage design at Amey/Arup
 [REDACTED] (PC) – Consultant’s Design & Engineering Lead at Amey/Arup
 [REDACTED] (LD) – Biodiversity Officer (Cumbria) at the Environment Agency

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	The meeting was recorded for circulation to those that could not attend.	

1.2	KC outlined that the aim of the meeting was to understand what current design is being submitted and hear any concerns from people that still need to be addressed. The aim is to work together to provide a successful DCO application.	
2.0	Warcop Design	
2.1	AB presented the current design and flood model as she informed the group that the 1 in 100 plus climate change (100yrCC) event has now been accommodated through additional flood compensation areas.	
2.2	AB explained that there are increases in flood depths within the compensation areas and some minor areas north of the existing A66, both of which are expected. There is no change of levels through the railway culvert and along Moor Beck (Offtake). A reduction of up to 10cm is observed through Warcop village, with an overall reduction in flow reaching Warcop.	
2.3	AB presented the additional flood compensation measures at Eastfield Sike and Cringle Beck. At Cringle beck the two compensation areas also include a flood alleviation culvert. Modelling of this proposed design for 100yrCC scenario shows no change in level upstream, and some areas of minor reduction downstream. AB confirmed that Wheat Sheaf Farm does not experience any areas of increased flood depth	
2.4	DC asked for further explanation of the two SUDs ponds south of the existing A66. KC responded that current guidance makes it necessary that National Highways drainage and local roads drainage is maintained separately but there is intention to review this at detailed design.	
2.5	DC requested that a model run be completed to simulate Moor Beck (Offtake) taking no flow and questioned the shape of the compensation areas displayed on screen. AB agreed that this can be run as a sensitivity test and added that currently the compensation areas are modelled as blocks, their design will be refined at detailed design.	
2.6	KS voiced her support for the naturalisation of the compensation areas at detailed design CK agreed that this will be undertaken at detailed design, and informed that the compensation areas are graded down by a small amount, and so will not stand out from the landscape as they appear on the current models.	
2.7	KS raised the SuDS south of Eastfield Sike and followed up on previous discussion around this area being at risk of flooding. CK explained that the current locations have been consulted on, but there is room within Order Limits to adjust their location at detailed design. AB responded that she had further investigated this area after the previous discussion and the models do not show flooding. It was suggested that AB followed up with DK who previously raised this area in discussions to gain evidence to validate the models further	AB to liaise with DK to get flooding evidence.
2.8	TH asked to confirm the proposed design at Eastfield Sike. AB confirmed that there is a new structure here rather than the previously proposed extension to the existing crossing.	
2.9	AB presented the extension of the existing crossing of Yosgill Sike and Woodend Sike, describing the flood compensation area that has been included. There are no modelled increases in flood depths downstream of this culvert.	

2.10	AB presents the crossing of an unnamed tributary of Lowgill Beck and the realignment that is proposed. There is the removal of a small existing pipe structure that provides an overland flow path to the eastern fields south of the existing A66, removing this overland flow. There is a slight increase in flood depths immediately downstream of the culvert.	
2.11	DC asks about any potential impacts at Broomrigg Farm. AB confirmed that there are no increases in flood depth or extent that impact on Broomrigg Farm. TH gave context to the displayed model, that the pool of increase is at an existing pond.	
2.12	KC outlined that the SUDs pond west of Broomrigg Farm is now shown to be within the modelled floodplain and so there is the intention to adjust the positioning of this at detailed design, so it will sit further north. This will not be included in the DCO submission but commitments to the adjustment will be.	
2.13	DC asked if any of the culvert replacements will be upsized and if so, there is a potential issue with pass forward flow. DK responded that due to best practice guidance and DMRB, the culverts will need to be upsized but that the models are not showing any increases in pass forward flow. AB confirmed that she has looked at the hydrographs for the culverts and that there shows no increase in flow at the culverts in question.	
3.0	Trout Beck Crossing Design	
3.1	KC gave an overview of the Trout Beck crossing and proposed compensation storage for this area to mitigate loss of floodplain due to the bridge piers. The flood compensation has been based on volume for volume compensation.	
3.2	PC explained that the Environment Agency do not usually suggest volume for volume compensation, and that they have accepted this approach for Warcop design but would need to see further justification for Trout Beck design.	
4.0	AOB	
4.1	KC explained that the team are aware of the upcoming rainfall climate change uplift values, but that they have not been officially published at the time of the assessment and submission. Therefore, those figures cannot be used in the design, but the modelling sensitivity tests will use the expected figures.	
4.2	KC asked the group if there were any concerns that they foresee would cause issues with the consent of the scheme. DC responded that he would like to see full details on the models and proposed designs, but that apart from the two SUDS ponds south of Eastfield Sike that will be further be looked at during detailed design he didn't foresee any issues. KC to share with DC the remaining information that Cumbria County Council require.	KC to share further information with DC and his team.
4.3	PC responded that he saw nothing that would lead to non-compliance, that the Environment Agency accepted that this way of working is not the standard approach. He confirmed that the EA are accepting of the principles that a solution will be demonstrated for DCO and that it will be refined in consultation with them at detailed design. FMT added that they would like to see justification for volume for volume flood compensation methodologies.	KC to ensure design principles and justification for flood compensation methodologies is included in

		the submission.
4.4	Another meeting is proposed for after the 20 th of April.	CE to circulate meeting invite

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Landscape Technical Working Group	File reference HE565627-AMY-ELS-S00-AG-LX-000001
Location	MS Teams	Time and date 10:00 26 April 2020
Purpose of meeting	SEB's and other stakeholder engagement	

Attendance

- (Natural England)
- (Natural England)
- (Natural England)
- (North Pennines AONB Partnership)
- (DCC)
- (NYCC)
- (EDC)
- (EDC)
- (CCC)
- (Highways England)
- (Planning Inspectorate)
- (Planning Inspectorate)
- (A66 IPT)
- (A66 IPT)
- (A66 IPT)
- (A66 IPT)

Apologies N/a

Circulation Those attending:

Action

1. Introductions

Prepared by [REDACTED]
 Date of circulation 21.04.2021

Agenda

Project title

A66 NTP

Job number

HE565627

Date of Meeting

26 April 2020

Action

2. Actions and questions from previous TWG

A brief discussion on comments received at the end of the previous TWG session.

3. Summary of viewpoint consultation

4. ZTV

Potential ZTV options to be included in the ES.

5. Effects on the setting of the AONB

High level introduction to definition of the landscape setting of the AONB to inform the assessment, to be taken forward in more detail in separate meeting to be arranged.

6. Special qualities of the Bowes Conservation Area

Provision of comments on the special attributes of Conservation Area to inform the assessment of effects on this designation.

7. Special qualities of Greta Bridge Conservation Area.

Provision of comments on the special qualities of Conservation Area to inform the assessment of effects on this designation.

8. Agenda items for the next meeting.

A brief discussion on items to be included on the next TWG meeting.

9. AOB

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Landscape Technical Working Group No. 3	File reference HE565627-AMY-ELS-S00- AG-LX-000002
Location	MS Teams	Time and date 10:00 24 May 2020
Purpose of meeting	SEBs and other stakeholder engagement	

Attendance	<div style="background-color: black; width: 100%; height: 100%; position: relative;"> (Natural England) (Natural England) (Natural England) (North Pennines AONB Partnership) (DCC) (NYCC) (EDC) (EDC) (CCC) (Highways England) (Planning Inspectorate) (Planning Inspectorate) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT) (A66 IPT) </div>
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Apologies	N/A
Circulation	Those attending:

Action

1. Introductions

Prepared by [REDACTED]
 Date of circulation 19.05.2021

Agenda

Project title

A66 NTP

Job number

HE565627

Date of Meeting

24 May 2020

Action

2. Landscape features relevant for design – Scheme by Scheme overview

A walkover through the baseline landscape features, local to each of the Schemes relevant for the landscape design and mitigation presented for the purpose of information and feedback from the consultees.

3. Options appraisal – overview of approach

An update and discussion on our proposed approach to options appraisal for Kirkby Thore and Warcop schemes.

4. AOB

A brief discussion on items to be included on the next TWG meeting.

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Technical Working Group	File reference HE565627-AMY-ELS-S00-AG-LX-000003
Location	MS Teams	Time and date 10:00 28 June 2021
Purpose of meeting	SEB's and other stakeholder engagement	
Attendance	Eden District Council Durham County Council North Yorkshire County Council Highways England Natural England Amey Arup	
Apologies	N/A	
Circulation	Those attending: Attendees	

Action

- 1. Introductions (10:00-10:10) - All**
- 2. Purpose of the meeting (10:10-10:20) - All**
 Overview of approach to landscape for the project.
 Outline of objectives of meeting: key issues and opportunities for each scheme; design considerations for each scheme, consideration of user experience and view from the road.
- 3. Workshops by local authority area and specific interest**
 Workshop 1 – Schemes 1, 2 and 3 (HE, EDC, CCC) - (10:20-10:45)
 Workshop 2 – Schemes 4, 5 and 6 (HE, EDC, CCC, NE, AONB) - (10:45-11:10)

Prepared by ██████████
 Date of circulation

Agenda

Project title

A66 NTP

Job number

HE565627

Date of Meeting

28 June 2021

Action

Workshop 3 – Schemes 7 and 8 (HE, DCC, NE, AONB) - (11:10-11:35) –

Workshop 4 – Schemes 9 and 10 (HE, DCC, NYCC) - (11:35-11:50)

4. Summary of discussions and next steps (11:50-12:00) - All

A brief overview of discussions and outline of the proposed agenda for the next TWG

5. Any other business - All

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Technical Working Group	File reference HE565627-AMY-ELS-S00-AG-LX-000004
Location	MS Teams	Time and date 10:30 – 16 August 2021 12.30
Purpose of meeting	SEB's and other stakeholder engagement	

Attendance

[Redacted]	(Natural England)
[Redacted]	(Natural England)
[Redacted]	(North Pennines AONB Partnership)
[Redacted]	(DCC)
[Redacted]	(NYCC)
[Redacted]	(EDC)
[Redacted]	(EDC)
[Redacted]	(CCC)
[Redacted]	(Highways England)
[Redacted]	(Planning Inspectorate)
[Redacted]	(A66 IPT)
[Redacted]	(A66 IPT)
[Redacted]	(A66 IPT)
[Redacted]	(A66 IPT)

Apologies

[Redacted]	(Natural England)
[Redacted]	(Planning Inspectorate)

Circulation

Those attending:
Attendees

Action

1. **Introductions**
2. **Landscape and Visual PEIR key findings**
3. **Landscape and visual mitigation review – key principles and potential resolutions**

Prepared by [Redacted]
Date of circulation 10/08/21

Agenda

Project title	Job number	Date of Meeting
A66 NTP	HE565627	16 August 2021

- 4. **AOB** Action



Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Technical Working Group – meeting 6	File reference HE565627-AMY-ELS-S00- AG-LX-000005
Location	MS Teams	Time and date 3.00- 1 December 2021 5.00pm
Purpose of meeting	SEBs and other stakeholder engagement	

Attendance

[Redacted] (Natural England)
 [Redacted] (Natural England)
 [Redacted] (Natural England)
 [Redacted] (North Pennines AONB Partnership)
 [Redacted] (NYCC)
 [Redacted] (NYCC)
 [Redacted] (EDC)
 [Redacted] (EDC)
 [Redacted] (CCC)
 [Redacted] (CCC)
 [Redacted] (National Highways)
 [Redacted] (National Highways)
 [Redacted] Planning Inspectorate
 [Redacted] (A66 IPT)
 [Redacted] (A66 IPT)
 [Redacted] (A66 IPT)
 [Redacted] (A66 IPT)
 [Redacted] (A66 IPT)

Apologies

[Redacted] (DCC)
 [Redacted] (Natural England)

Circulation

Those attending:
Text

Action

1. **Introductions and Team Update**
2. **Programme Update**

Prepared by [Redacted]
 Date of circulation

Agenda

Project title	Job number	Date of Meeting
A66 NTP	HE565627	1 December 2021

- 3. **Key Findings from Statutory Consultation**
 - 4. **ES LVIA Update**
 - 5. **Landscape Design Approach Recap and Landscape Design Interventions Update**
- Action



Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Landscape TWG 7	File reference Text
Location	Microsoft Teams	Time and date 14:00- 20 January 2022 16:00
Purpose of meeting	TWG	
Attendance	Text	
Apologies	Text	
Circulation	Those attending: Text	

Action

1. **Introductions**
The purpose of this meeting is to have a run through of the schemes from end to end, identifying and approving the proposed viewpoints and photomontage locations to be used in the LVIA.
2. **Programme Update**
General overview of design and assessment programme
3. **ZVI**
Updated ZTV based on most up to date design. Update on the way the ZTV will be developed to demonstrate key design considerations.
4. **Viewpoints and Photomontage locations**
Traverse project from east to west and look at the previously agreed viewpoints and identify those that have changed due to the now fixed alignment.

Prepared by



Date of circulation

Minutes of Meeting

A66 NTP

Landscape Technical Working Group 1

Purpose of Meeting: Landscape Technical Working Group – Meeting 1

Location: MS Teams

Time/Date: 12th March 2021 14:00-15:00

Attendees:

- ██████████ (LM) – A66 Landscape and Visual Lead at Amey/Arup
- ██████████ (RW) – A66 Landscape and Visual Support at Amey/Arup
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager Lead at Amey/Arup
- ██████████ (CDix) – A66 Environmental Stakeholder Deputy at Amey/Arup
- ██████████ (CDia) – Senior Environmental Advisor at Highways England
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (SW) – Planning and Strategy Lead and Business Manager at North Pennines AONB Partnership
- ██████████ (ACh) – Infrastructure Planning Office at Cumbria County Council
- ██████████ (MH) – Manager in the CCC area team at Natural England
- ██████████ (AG) – Senior Planning Advisor at Natural England
- ██████████ (JW) – Principal Landscape Officer at North Yorkshire County Council
- ██████████ (RP) – Planning and Policy Manager at Eden District Council
- ██████████ (NA) – Head of Development Management for Planning Services at Eden District Council
- ██████████ (AB) – Sustainability Coordinator and Biodiversity Officer at Eden District Council

Apologies:

- ██████████ (GD) – Principal Landscape Officer at Durham County Council
- ██████████ (TE) – A66 Lead Environment Advisor at Highways England

Circulation: All

Item	Minutes	Actions
1.0	Introductions	N/A
2.0	Evidence Plan Process	
2.1	CDix provided a brief overview of the Evidence Plan Process in relation to the A66.	N/A
3.0	Scheme by Scheme Overview	
3.1	LM and RW shared a screen to provide a brief overview of the 9 Schemes utilising Webmap to provide an indication of the key scheme elements and sensitive receptors. LM suggested questions could be raised at any time during the overview process.	N/A

Item	Minutes	Actions
4.0	Viewpoint Consultation	
4.1	LM shared his screen to provide an overview of the viewpoint selection process to date and invited comments. LM reminded that plans with viewpoints for consultation were sent in week 8 th -12 th of March by Amey/Arup team, however it was noted that these have not yet reached the consultees and that they are likely to be distributed shortly by the stakeholders representatives.	N/A
4.2	NA suggested that the Beacon in Penrith should be included as a viewpoint given it is locally sensitive and important to residents of the town.	To be added to viewpoint plans.
4.3	During discussions along Scheme 4/5 Temple Sowerby to Appleby – Kirkby Thore, SW suggested there should be at least one or two viewpoints situated on high points within the AONB in order for potential effects on views from the AONB to be assessed. SW suggested ‘the golf ball’ as a possible location but indicated he would be happy to liaise with the landscape team on suitable locations if required. NA concurred.	LM to liaise with SW.
4.4	NA suggested Dufton Pike as a possible viewpoint within the AONB.	To be added to viewpoint plans.
4.5	During discussions around Scheme 6 – Appleby to Brough, LM suggested the identified Viewpoint 6.8 within the AONB has proved difficult to access given surveyors have to pass through the MOD land. SW relayed that access to MOD land is only available on particular days and that he would provide access to information on this.	LM to review viewpoint.
4.6	During conversations around Schemes 8 and 9 it was suggested by JW that a ZTV should be provided with the plans in order for him to understand the viewpoint locations. LM agreed and provided assurance these would be forwarded as soon as they were made available.	The plans with the ZTV will be reissued to the Stakeholders.
5.0	Landscape Character Assessment	
5.1	LM highlighted the level of landscape character assessment suitable for Cumbria, Durham and North Yorkshire and invited comment. Generally, it was accepted that the level of Landscape Character Areas presented would reflect well the existing baseline. It was recommended that North Pennine AONB Management plan is used to inform the baseline of Landscape Character as well.	N/A
6.0	AONB Management Plan	
6.1	LM provided an insight into the approach to the PEIR following the AONB management plan, particularly the approach to biodiversity, ecosystems, road verges and historic land patterns. SW concurred that integration with the AONB team would result in a more integrated plan across the project.	N/A

Item	Minutes	Actions
6.2	LM briefly discussed the North Pennines National Character Area, its key qualities and attributes and invited comments.	N/A
7.0	Area of High Landscape Value	
7.1	LM briefly discussed the Area of High Landscape Value (AHLV) and the policies which aim to protect it, and invited comments regarding key qualities and attributes. It has been noted that a lot of key characteristics of AHLV areas will be shared with key Characteristics of the AONB area.	N/A
8.0	Integrated Design	
8.1	LM discussed the value of integrated design across the project, including landscape character; siting and orientation; scale, massing and layout; and tonality, texture and finish.	N/A
9.0	Rochdale Envelope	
9.1	LM discussed the relevance of the 'Rochdale Envelope' to the project and the importance of flexibility with the red line boundary with regards to 'worst case scenario' both with the reference to the engineering layout and mitigation measures.	N/A
10.0	Discussion	
10.1	CE noted that a number of comments had come through on the Teams call chat, and she had responded where possible regarding stakeholder communication. CE suggested other comments in the chat would be addressed by the landscape team following the call.	To be discussed at the next TWG.
10.2	JW noted that it would be interesting to understand how the landscape team were working with the engineers during the design process, particularly with regards to vertical/ horizontal alignment, cutting/ embankment slopes. JW also enquired as to when a detailed topographical survey would be available, and whether a tree survey/ arboriculture assessment would be taking place. JW expressed concern regarding the short window for winter viewpoint photography that will be available this season.	To be discussed at the next TWG.
10.3	CDia enquired whether any road user viewpoints had been considered as they are within Table 3.4.1 and therefore there is an expectation road user would be included. LM explained that road users will be included in the assessment.	There is a number of viewpoint locations identified from roads and they are usually also representative for residential receptors. This will be clearly stated. In these cases, sensitivity assessment would

Item	Minutes	Actions
		refer to the more sensitive receptor and usually residential receptor.
10.4	AB enquired whether the project would have scope to improve or mitigate parts of the A66 which are not being dualled. CDia responded that Highways England (HE) cannot purchase land for enhancement, but only for the purposes of mitigation and that currently options are being explored with regard to how additional land could be made available for enhancements.	N/A
10.5	LM thanked all for their attendance and asked whether a particular topic should be looked at for the next meeting. All agreed the AONB was still the main focus at present.	N/A
10.6	The next full TWG will be approximately in one months' time. The group are welcome to put forward discussion points for the next meeting agenda. CD to issue minutes.	CD to issue minutes.

Minutes of Meeting

A66 NTP

Landscape Technical Working Group 2

Purpose of Meeting	Landscape Technical Working Group – Meeting 2
Location:	MS Teams
Time/Date:	26 th April 2021 10:00-11:10
Attendees:	<p>██████████ (LM) – A66 Landscape and Visual Lead at Amey/Arup</p> <p>██████████ (RW) – A66 Landscape and Visual Support at Amey/Arup</p> <p>██████████ (RH) – A66 Landscape and Visual Support at Amey/Arup</p> <p>██████████ (RA) – A66 Landscape and Visual Support (RSK) to Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager Lead at Amey/Arup</p> <p>██████████ (AW) – A66 Deputy Environmental Lead at Amey/Arup</p> <p>██████████ (CD) – Senior Environmental Advisor at Highways England</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (SW) – Planning and Strategy Lead and Business Manager at North Pennines AONB Partnership</p> <p>██████████ (MH) – Manager in the CCC area team at Natural England</p> <p>██████████ (AG) – Senior Planning Advisor at Natural England</p> <p>██████████ (GD) – Principal Landscape Officer at Durham County Council</p> <p>██████████ (JW) – Principal Landscape Officer at North Yorkshire County Council</p> <p>██████████ (NA) – Head of Development Management for Planning Services at Eden District Council</p> <p>██████████ (AB) – Sustainability Coordinator and Biodiversity Officer at Eden District Council</p>
Apologies:	<p>██████████ (TE) – A66 Lead Environment Advisor at Highways England</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (RP) – Planning and Policy Manager at Eden District Council</p> <p>██████████ (ACh) – Infrastructure Planning Office at Cumbria County Council</p> <p>██████████ (CDix) – A66 Environmental Stakeholder Relationship Manager Deputy at Amey/Arup</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introductions	
2.0	Questions from TWG No. 1	
2.1	LM summarised questions and comments from TWG 1.	
2.2	<p><u>Published landscape character assessments</u> NA – For Cumbria, the Cumbria Landscape Character Guidance and Toolkit would be a good starting point for the base assessment information. JW – Richmondshire does not have a district level character assessment so it would be the North Yorkshire and York landscape character assessment. LM – Agreed.</p>	
2.3	<p><u>Road users – visual receptors</u> CD - Have any road user viewpoints been proposed? LM – AT this stage no specific views from A66 have been identified but will look to identify key views. May not be possible to assess in same way as other viewpoints but this will be discussed further.</p>	
2.4	<p><u>Green bridges</u> AB - A66 is a 'barrier', but an incomplete one, the dualling will mean less 'crossing' opportunities - it might be better to create green bridges along the whole route, less road kill – red squirrel, badger hedgehogs. CD – Noted that the Highways England guidance is being finalised for Green Bridges and it is likely that decision on their inclusion would have to include more than one purpose/function. AB - asked if bridges could be made wider to incorporate green features. CD noted that if a bridge is already required and the need for green features is demonstrated, this can be included.</p>	CD to check status of Highways England Green Bridges Guidance
2.5	<p><u>Design interface</u> JW - will be interesting to see how the team is working with the engineers, particularly vertical / horizontal alignment, cutting / embankment slopes. When will a detailed topographical survey be available? Is a tree survey arboricultural impact assessment being undertaken? Noted there only a very short window left this season for viewpoints and winter photos. LM – The team has prioritised site visit photography. The tree survey will be carried out to inform both design and the assessment at the ES stage. The design is still emerging, and the landscape team will align more closely with the designers over the coming months to influence the alignment and interface of earthworks with surrounding landscape.</p>	

Item	Minutes	Actions
2.6	<u>Long term mitigation details</u> NA - assume that mitigation details (planting etc.) will also include longer term management details? JW – These should be included within Environmental Management Plan (EMP)/Landscape Environmental Management Plan (LEMP).	LM to include in scope of EMP/LEMP
2.7	<u>Views from Beacon in Penrith</u> NA – For scheme 1 please include photos and assessment in relation to the Beacon in Penrith, which is locally sensitive and important to the residents of the town. LM – Agreed.	LM to include in scope of assessment
2.8	<u>Mitigation</u> AG – noted that mitigation may be wider than just along the route. MS – highlighted that mitigation relied upon in the Environment Statement (ES) has to be within the Development Consent Order (DCO) boundary. Enhancement does not need to be in the redline boundary.	
2.9	<u>Road user viewpoints</u> CD – questioned whether the selection of viewpoints included any that represent the A66 specifically. LM stated that they could look to include some, but it would not be possible to assess in the same way. In part due to Health and Safety (H&S) issues with capturing photography. CD – highlighted that DMRB LA 107 does require the consideration of views experienced by road users – Table 3.41 Visual Sensitivity identifies road users as receptors.	LM – to look to include some views from A66 within the assessment
3.0	Zone of Theoretical Visibility (ZTV)	
3.1	LM – discussed broadly the benefits and limitations of the ZTV.	
3.2	GL – stated preference for a bare ground approach to the ZTV as buildings are of little use in providing screening in this landscape and trees can be difficult to accurately include. CD – explained that while DMRB LA 107 does require buildings to be included in the ZTV it might not be useful in this instance. If they are to be omitted this must be carefully justified in the ES.	LM to confirm if buildings are to be included in ZTV for ES
3.3	JW – highlighted that it would be helpful to illustrate the visibility of the schemes separately.	

Item	Minutes	Actions
	LM – explained that ZTV would be produced for each section of the scheme.	
3.5	<p><u>Light pollution</u></p> <p>AB – flagged that light pollution could be an issue and queried whether it would be possible to produce light pollution mapping for the project.</p> <p>LM –explained that lighting would be considered in the assessment, but light pollution would not be mapped.</p>	
4.0	Definition of North Pennine Area of Outstanding Natural Beauty (AONB) Setting	
4.1	<p>LM – asked about definition for the North Pennine AONB setting.</p> <p>GL – replied that the definition of setting is included in North Pennines AONB Management Plan 2019-24 and refers to the impact of development on views into and out of the AONB.</p> <p>LM – discussed the need to identify the area of the AONB that may be affected by the project to illustrate potential intervisibility between the AONB area that may be affected. It was agreed that the affected area of the AONB will stretch up to 5km in the western part of the AONB and in the eastern part it will follow the ridge line.</p> <p>ZTV to be colour coded for each of the schemes and to illustrate:</p> <ul style="list-style-type: none"> • Existing ZTV – visibility of the existing road surface, Heavy Goods Vehicles (HGVs), cars, buildings, and woodland. • Proposed ZTV – visibility of the proposed road surface, HGVs, cars, buildings, and woodland. 	
5.0	Special Qualities of the Great Bridge and Bowes Conservation Areas	
5.1	<p>LM outlined that Greta Bridge and Bowes Conservation Areas do not appear to have published Conservation Area Appraisal and Management Proposals but would like to gain an understanding of their special qualities.</p> <p>GL noted that the officers who deal with Conservation Areas were not on the call so would need to be taken up with them.</p> <p>GL noted that Greta Bridge Conservation Area links to Rokeby Registered Park and Garden, which forms part of the wider setting and context of the Conservation Area; while Bowes Conservations Area is more contained with the special qualities potentially more linked to the built environment.</p>	LM to contact DCC Conservation Officer to discuss and agree special qualities of the Great Bridge and Bowes Conservation Areas.

Item	Minutes	Actions
6.0	Agendas for future meetings	
6.1	<p>LM asked if there were any particular topics that people would like discussed at the next TWG.</p> <p>LM suggested discussions around the options appraisal work, which has been ongoing.</p> <p>CE flagged that people could send an email if they wanted to raise any other discussion items.</p>	ALL to email CE with requests
10.6	<p>The next full TWG will be approximately in one months' time. The group are welcome to put forward discussion points for the next meeting agenda.</p> <p>CE to issue minutes.</p>	CE to issue minutes.
	<p><i>Post meeting note:</i></p> <p>SW shared a link to the North Pennines AONB Planning Guidelines ([REDACTED])</p> <p>[REDACTED] noting that "Page 61 onwards is likely one of the most useful parts as mentioned by [REDACTED] but earlier sections on tranquillity, light, noise etc will be of use."</p>	

Minutes of Meeting

A66 NTP

Landscape TWG 3

Purpose of Meeting	Landscape TWG 3 - To discuss options for character-led mitigation potential across all schemes
Location:	MS Teams
Time/Date:	24-05-21 at 10:00-11:50
Attendees:	<p>██████████ (MH) – Manager in the CCC area team at Natural England</p> <p>██████████ (AG) – Senior Planning Advisor at Natural England</p> <p>██████████ (SW) – Planning and Strategy Lead and Business Manager at North Pennines AONB Partnership</p> <p>██████████ (DG) – Project Representative at WSP on behalf of Eden District Council</p> <p>██████████ (TE) – A66 Lead Environment Advisor at Highways England</p> <p>██████████ (CD) – Senior Environmental Advisor at Highways England</p> <p>██████████ (JW) – Principal Landscape Officer at North Yorkshire County Council</p> <p>██████████ – Principal Landscape Officer at Durham County Council</p> <p>██████████ (CE) - A66 Environmental Stakeholder Relationship Manager Lead at Amey/Arup</p> <p>██████████ (AW) – A66 Deputy Environmental Lead at Amey/Arup</p> <p>██████████ (LM) – A66 Landscape and Visual Lead at Amey/Arup</p> <p>██████████ (RW) – A66 Landscape and Visual Support at Amey/Arup</p> <p>██████████ (RA) – A66 Landscape and Visual Topic Support at RSK</p>
Apologies:	<p>██████████ (CDix) – A66 Environmental Stakeholder Relationship Manager Deputy at Amey/Arup</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (NA) – Head of Development Management for Planning Services at Eden District Council</p> <p>██████████ (AB) – Sustainability Coordinator and Biodiversity Officer at Eden District Council</p> <p>██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introduction	
1.1	LM outlined the purpose of the meeting. Two topics were outlined for discussion: <ul style="list-style-type: none"> existing landscape features; and approach to options assessment. 	
1.2	TE questioned the purpose of the presentation in order to fully understand the requested outcome. LM explained that the purpose of the presentation was to analyse the key features and characteristic of the existing landscape, that could inform design and mitigation.	
1.3	CD requested whether LM was able to offer comment on the existing landscape character and whether it was seen as poor/good and where mitigation proposals sat within this. LM explained that details of landscape condition will be verified through desktop studies and verified through the work on the Site.	
2.0	M6 Junction 40 Penrith	
2.1	LM provided an overview of landscape features around the scheme and invited comments on valuable landscape features. LM reiterated the masterplans for these early schemes are in progress but not yet available for sharing.	
2.2	JW noted he was not happy to comment on mitigation proposals based only on aerial images of scheme areas, and asked when more detailed proposals would be available to allow informed comment. CE explained that the design is evolving and we will share when available. CE also explained that the Evidence Plan is being prepared to identify where we have reached areas of agreement or not, and a draft will be shared in due course.	
2.3	LM then explained the purpose of the exercise and accompanying slides was to obtain initial high level comments and observations on the existing landscape features and landscape character that would be important for design and mitigation.	
3.0	Kemplay Bank Roundabout	
3.1	LM presented and discussed landscape features around the scheme.	
4.0	Penrith to Temple Sowerby (Center Parcs) - West	
4.1	LM presented and discussed landscape features around the scheme.	
4.2	TE enquired as to design discussions/opportunities around the entrance to Center Parcs as this will be a large intervention. LM discussed the importance of nearby receptors in assessing the impacts of the new entrance to Center Parcs and how the existing landscape pattern could drive the landscape design around the Center Parcs.	
5.0	Penrith to Temple Sowerby (Center Parcs) - East	
5.1	LM presented and discussed landscape features around the scheme.	

Item	Minutes	Actions
5.2	TE re-iterated the need to see proposed mitigation to understand the relationship between existing and proposed.	
5.3	LM requested RW share his screen to show the landscape WebMap with mitigation.	
5.4	TE noted that high level mitigation mark up to inform Rochdale Envelope was not up to date. LM agreed and stated that indicative mitigation will be updated shortly following the recent design snapshot for PEIR.	
5.6	CD inquired how landscape team is approaching the question about whether the baseline landscape conditions can be considered good or bad. LM explained that the Scheme generally passes through a landscape of good or very good condition and consideration to landscape condition is being given within the assessment work.	
5.7	GL enquired as to whether anyone from Cumbria County Council (CCC) was on the call as if not it would be difficult for anyone to comment on areas outwith their own remit. DG commented that although he was representing Eden District Council he is a Town Planner and therefore not confident in commenting on landscape matters. He suggested that a meeting with the CCC Landscape Team could also be useful to discuss matters in more detail. Post meeting note: landscape matters to continue to be discussed at the TWG sessions. Looking to break down to scheme specific sessions within the TWG to allow nmore focuissed discussion where appropriate.	
5.8	CE explained this workshop should be used as a high-level discussion only at this point – DG concurred.	
6.0	Temple Sowerby to Appleby	
6.1	LM presented and discussed landscape features around the scheme.	
6.2	SW commented that although he understands the British Gypsum Works are a dominating influence to the north of Kirky Thore. It must be ensured that views to the north from the village towards the AONB are maintained.	
6.3	CD enquired as to whether the landscape team had taken into consideration the Eden Rivers Trust report at Trout Beck and whether the bridge design had changed as a result. CE commented that there is a meeting planned with Eden Rivers Trust later in the week	
7.0	Appleby to Brough (Warcop)	
7.1	LM presented and discussed landscape features around the scheme.	
7.2	SW mentioned the MOD has previously been open to the idea of sensitive tree planting in the past around their land at Warcop.	
7.3	GL commented that open views around Warcop should be considered in addition to screening planting to ensure open views towards the AONB are still available.	
8.0	Bowes Bypass (A66/ A67)	
8.1	LM presented and discussed landscape features around the scheme.	

Item	Minutes	Actions
8.2	GL commented that it would be worth considering existing field patterns in relation to any proposed blocks/copses of woodland around Bowes (and across the project) as opposed to following the linearity of the route. He also mentioned that SuDS locations would be important to the surrounding character.	
8.3	CD noted that the landscape team needs to be aware of recently updated Highways Standards with regards to stand-offs and how that may impact subsequent mitigation planting. LM replied that the team is working with the knowledge of these requirements, and noted there will be opportunities to replicate the existing landscape character where possible.	
9.0	Cross Lane to Rokeby	
9.1	LM presented and discussed landscape features around the scheme.	
9.2	LM asked for general comments on the treatment of underpasses with regards to mitigation. GL advised that species-rich grassland would be suitable for underpasses and include other planting, ideally in the form that would not reinforce the outline of earthworks with consideration to the adjacent landscape pattern including woodland.	
9.3	GL also provided comment on planting at junctions and advised that tree blocks/ copses should be designed in a way to allow them to assimilate into the surrounding landscape. GL also advised that consideration should be given to the existing meander at Tutta Beck, and opportunities should be discussed with the engineers to ensure it does not become a ditch that follows earthworks. Bold planting would be acceptable at Rokeby Park in line with the existing landcover pattern. GL noted that the single-sided tree planting along the B6277 is a result of estate boundary planting.	
10.0	Stephen Bank to Carkin Moor	
10.1	LM provided an overview of landscape features around the scheme.	
10.2	JW suggested that it will be important to build on what is already present with regards to landscape features, and commented that roadside trees are an important factor. JW also mentioned a tree survey would be important. LM noted that tree survey will be carried out to inform the ES.	
10.3	JW asked how the red line boundary works. LM explained the red line boundary, and highlighted that for the PEIR assessment there will be an assumption of total loss of vegetation to represent a worst case scenario.	
10.4	JW raised the question of whether disturbed land would be returned to agricultural use, and that a clear strategy for post-operation land-use would be required. CE noted that the decision on future landscape use is driven by the landowners, and discussions are currently ongoing with regards to this.	
10.5	GL suggested that the design team aims to keep the project footprint to a minimum, and to include hedgerows at shallow cuttings in a way that does not make the road lineage too obvious.	

Item	Minutes	Actions
10.6	<p>JW agreed that cut/fill exercises across the project require a fine balance and commented that the engineers would likely have a strategy in place to minimise bringing extra soil to site or disposing of excess.</p> <p>LM noted that feedback on earthworks will be fed to the engineers and highlighted the importance of feedback from landowners.</p> <p>JW suggested it was important to engage with project engineers as soon as possible and enquired as to whether the landscape team were providing input into the design or just responding to what they are given.</p> <p>LM confirmed the landscape team will engage fully with the engineers between PEIR and ES stages.</p>	
10.7	<p>LM provided a brief overview of Selected Opportunities slide (possible landscape strategies across the project) and Landscape User Experience' slide (overview of users and their experiences across the schemes).</p> <p>LM passed the presentation over to RA.</p>	
11.0	Options appraisal – overview of approach	
11.1	<p>RA gave an overview of the approach to the options appraisal.</p> <p>RA discussed the approach to differing landscapes within individual landscape types using images gained from recent fieldwork.</p> <p>RA explained the approach used within the methodology to evaluate landscape sensitivity by combining a value profile and susceptibility profile.</p>	
11.2	<p>GL commented that County Durham have undertaken a landscape assessment and asked whether RA was aware. RA confirmed the project team is aware and has reviewed it.</p>	
12.0	AOB	
12.1	<p>CD re-iterated the fact it was important that the design team work alongside the engineers to develop an overall strategy, including the approach to earthworks. JW concurred.</p> <p>RA assured CD and JW they would be feeding all information back to engineers and other disciplines i.e. cultural heritage, ecology, noise.</p>	
12.2	<p>GL enquired as to whether the archaeology team has been contributing to the discussion – for instance are road boundary qualities being looked at; e.g. historic hedgerows.</p> <p>RA replied he has looked at historical characterisation but suggested Cultural Heritage would consider further.</p>	
12.3	<p>CD commented that the 'worst-case scenario' red line boundary may not be appropriate in that it would be preferable to relate to the mitigation hierarchy when progressing with mitigation and design.</p> <p>LM concurred and re-iterated the landscape team need to work alongside the engineers regarding the mitigation hierarchy.</p>	
12.4	<p>LM thanked everyone for attending and ended the call.</p>	

Minutes of Meeting

A66 NTP Landscape TWG4

Landscape Review

Purpose of Meeting	To discuss an overview of approach for the user experience
Location:	MS Teams
Time/Date:	28-06-21 at 10:00-12:00
Attendees:	<p>██████████ (SW) – Planning and Strategy Lead and Business Manager at North Pennines AONB Partnership</p> <p>██████████ (AW) – Project Representative at WSP on behalf of Eden District Council</p> <p>██████████ (LJ) – Project Representative at WSP on behalf of Eden District Council</p> <p>██████████ (TE) – A66 Lead Environment Advisor at Highways England</p> <p>██████████ (CD) – Senior Environmental Advisor at Highways England</p> <p>██████████ (GR) – Landscape Officer at Durham County Council</p> <p>██████████ (GL) – Principal Landscape Officer at Durham County Council</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (RA) – A66 IPT Landscape and Visual Lead at RSK</p> <p>██████████ (AT) - A66 IPT Landscape and Visual Specialist at RSK</p> <p>██████████ (CE) – A66 IPT Environmental Stakeholder Relationship Manager Lead at Amey/Arup</p> <p>██████████ (HJ) - A66 IPT Design Report at Amey/Arup</p> <p>██████████ (AWa) – A66 IPT Deputy Environmental Lead at Amey/Arup</p> <p>██████████ (AAM) - A66 IPT Landscape and Visual Support at Amey/Arup</p> <p>██████████ (RW) – A66 IPT Landscape and Visual Support at Amey/Arup</p>
Apologies:	<p>██████████ (JW) – Principal Landscape Officer at North Yorkshire County Council</p> <p>██████████ (MH) – Manager in the CCC area team at Natural England</p> <p>██████████ (AG) – Senior Planning Advisor at Natural England</p> <p>██████████ (KS) – Lead Advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (NA) – Head of Development Management for Planning Services at Eden District Council</p> <p>██████████ (AB) – Sustainability Coordinator and Biodiversity Officer at Eden District Council</p>
Circulation:	All attending

Item	Comments	Actions
1.0	M6 Junction 40 Penrith/ Kemplay Bank Roundabout	
1.1	AW and LJ both offered to take any findings and approaches back to Cumbria CC.	
1.2	CD asked about proposed approach to woodland within estate grounds – replacement? RA suggested final solution would be down to estate owners but the proposals are still in development.	
1.3	CD asked whether attenuation ponds would be wet or dry. RA to confirm with engineers.	RA to confirm
2.0	Penrith to Temple Sowerby	
2.1	CD asked what the approach is across the overall scheme as opposed to individual elements – legibility – how easy is it to find junctions etc. RA responded that the lone pine tree is a potential wayfinder and that views to the Lakeland Fells are generally of short duration.	
2.2	CD asked whether the existing A66 sits well in the landscape or is it obtrusive. RA suggested it is less obvious from east to west.	
2.3	CD asked what will change following the introduction of the new road. RA commented that the overbridge would be the main source of visual impact at this location.	
2.4	AW suggested that one approach to lessen visual impact may be to reduce the overall size of the structures where possible.	RA to feedback to Design Team
3.0	Temple Sowerby to Appleby	
3.1	AW asked whether landscape character would be discussed in detail within the PEIR. RA confirmed it would, and that part of the landscape team had been on-site the previous week. Value and susceptibility will be assessed within the PEIR.	
4.0	Appleby to Brough	
4.1	SW outlined that the AONB Partnership is pulling together a response to scoping. SW stated the importance of views out of the AONB but also suggested that there is a particular ridge of land which precludes some views towards the existing A66 from elevated locations. SW also commented that there are some community concerns regarding alignment of the proposed scheme.	
4.2	RA pointed out that he is involved in the consideration of alternatives for Scheme 6 and that mitigation is not as advanced as Schemes 1, 2 and 3, it is still developing.	
4.3	RA noted that the design of SuDS can be influenced by input from other disciplines.	
5.0	Bowes Bypass	
5.1	GL enquired as to whether landworks as part of the scheme will be substantially different/like-for-like/minor amendments. GL commented that the SuDS pond south of the main intervention is	

Item	Comments	Actions
	within the setting of Bowes Hall to the south. GL asked whether we can get SuDS to sit within existing field pattern. RA responded that the SuDS will be tested for suitability – i.e. why are they situated in these locations?	
5.2	GL suggested accommodation tracks to the east of Bowes should be simple and follow field patterns if possible – less trees in cutting with sparser planting.	
5.3	RA suggested that opening up views for some residents may be beneficial.	
6.0	Cross Lane to Rokeby	
6.1	GL noted that the former estate boundary is further west than initially thought which could pave the way for more block woodland planting as being characteristically suitable. GL suggested user experience of secondary roads should also be considered.	To be investigated further
6.2	GL commented that a slight landform change in views from Rokeby Park gatehouse towards St. Mary’s Church would be acceptable. RA concurred that views towards the church from the gatehouse are important and had been commented on previously. The woodland block currently in place often precludes views between the two elements. RA also suggested planting on the slip road (red alternative) would not be appropriate.	
6.3	GL enquired as to whether RVAA will be undertaken as part of the PEIR/ES as a number of properties in close proximity to the scheme will be affected. Post meeting note: high level effects on residential properties will be considered at PEIR and it will be considered further how to approach for ES in due course.	
7.0	Stephen Bank to Carkin Moor	
7.1	GL suggested that the present character should be maintained with a light touch to mitigation. RA concurred that minimal intervention is required.	
7.2	GL then suggested that fencing needs to be considered – if no livestock present then perhaps a stone headland would suffice?	To be considered within mitigation design where appropriate

Minutes of Meeting

A66 NTP Landscape TWG 5

Key PEIR Findings

Purpose of Meeting: To discuss an overview of significant PEIR findings and approach to mitigation

Location: MS Teams

Time/Date: 16-08-21 at 10:30-12:45

Attendees:

- ██████████ (CD) – Senior Environmental Advisor at Highways England
- ██████████ (GR) – Landscape Officer at Durham County Council
- ██████████ (GL) – Principal Landscape Officer at Durham County Council
- ██████████ (RK) – A66 EIA Support at PINS
- ██████████ (RA) – A66 Landscape and Visual Topic Lead at RSK
- ██████████ (AT) – A66 Landscape and Visual Topic Specialist at RSK
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
- ██████████ (JW) – Principal Landscape Officer at North Yorkshire County Council
- ██████████ (MH) – Manager in the CCC area team at Natural England
- ██████████ (AG) – Senior Planning Advisor at Natural England
- ██████████ (AB) – Sustainability Coordinator and Biodiversity Officer at Eden District Council
- ██████████ (RW) – A66 Landscape and Visual Support at Amey/Arup

Apologies:

- ██████████ (SW) – Planning and Strategy Lead and Business Manager at North Pennines AONB Partnership
- ██████████ (TE) – A66 Lead Environment Advisor at Highways England
- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (LJ) – Project Representative at WSP on behalf of Eden District Council

Circulation: All attending

Item	Comments	Actions
1.0	Introduction	
1.1	RA gave an overview of the purpose of the meeting, to outline key findings from the PEIR assessment.	
2.0	M6 Junction 40 to Kemplay Bank (Scheme 01/02)	
2.1	AG enquired as to whether although the Lake District National Park (LDNP) would not be affected by the proposals, had the LDNP planning authority been involved during scoping as a stakeholder?	

Item	Comments	Actions
	RK replied that the LDNP planning authority was a relevant stakeholder and had been consulted previously.	
3.0	Penrith to Temple Sowerby (Scheme 03)	
3.1	RA gave an overview of Scheme 3. No comments/ queries from stakeholders.	
4.0	Temple Sowerby to Appleby (Scheme 04/05)	
4.1	AB noted the cutting to the north of Kirkby Thore and suggested green bridges may be an appropriate intervention – not solely for Kirkby Thore but across the project where appropriate. AT replied there was some discussion to be had regarding this as part of the detailed design process.	
4.2	AB enquired whether the ‘crinkly church’ had been considered with regards to mitigation. CE noted this would be discussed with the cultural heritage team in future and addressed where necessary in the ES.	
4.3	CD commented that islanded land by its definition does not lead to connectivity between areas of green infrastructure. AT replied this was still being looked at and there would be a multi-function approach at the detail design level.	
4.4	JW asked whether night-time effects had been considered (lighting in particular). RA replied that existing lighting effects had been discussed for schemes 1, 2 and 11 and that the potential effects of moving lights as a result of traffic in more rural areas would be discussed at the ES stage.	
5.0	Appleby to Brough (Scheme 06)	
5.1	AG enquired as to whether the potential effects on the special qualities of the AONB had been looked at. RA commented that they had been, and the process was ongoing.	
5.2	CD commented that she was looking for more detail from the presentation in terms of effects on landscape and mitigation. RA replied that there was more information within the PEIR. CE added that future TWG meetings would take the form of mitigation workshops, which would yield more specific solutions to any issues identified.	
6.0	Bowes Bypass (Scheme 07)	
6.1	GL commented that the general approach to mitigation described in the presentation was suitable. GL then asked whether a north to south alignment of an accommodation access off the A67 had been considered at Bowes. RA commented that it had been raised with the engineers previously as an option and could find out the reasons why it hadn’t been pursued. GL replied that as long as it had been considered that was fine.	
7.0	Cross Lanes to Rokeby (Scheme 08)	
7.1	GL commented that the estate character of Rokeby could be retained using appropriate woodland planting, and enquired as to whether wet woodland SuDS applications had been discussed as an option. RA replied that the landscape team would like to see appropriate planting, although engineers prefer to see less planting as it equals less maintenance. RA commented it may depend on who is	

Item	Comments	Actions
	adopting them. Shapes/orientation of SuDS were also still being discussed.	
8.0	Stephen Bank to Carkin Moor (Scheme 09)	
8.1	<p>JW noted that there would be substantial change as a result of the scheme, and raised concerns over ponds being too engineered. JW added that he would be looking for better integration overall including opportunities for recreation, and also expressed maintenance concerns.</p> <p>RA replied that more discussions are still to be had with other topics and local authorities, and also raised the point that there appeared to be too many ponds at times at inappropriate locations. CE added that she had received a response from the engineers that they were looking to reduce the number of ponds across the project.</p>	
8.2	CD added that there was appropriate guidance and standards available from HE regarding SuDS.	
9.0	Scotch Corner (Scheme 11)	
9.1	<p>JW enquired as to whether there may be opportunities to improve what is an uninspiring junction and whether this had been considered.</p> <p>RA replied that it had not been considered within the PEIR as there were no concerns over significant effects.</p> <p>CE commented that we can only mitigate for impacts – improving the junction would be seen as enhancement but there may be opportunities to raise this in future.</p>	

Minutes of Meeting

A66 NTP

TWG 6: Landscape Hot Spots and ES Update

Purpose of Meeting	To discuss landscape 'hot spots' along the project and provide Landscape and Visual Impact Assessment (LVIA) update
Location:	MS Teams
Time/Date:	01-12-21 at 15:00 - 16:30
Attendees:	<p>██████████ (AG) – Senior Planning Advisor at Natural England</p> <p>██████████ (MH) – Manager in the Cumbria area team at Natural England</p> <p>██████████ (NK) – Sustainable Development Advisor at Natural England</p> <p>██████████ (JW) – Principal Landscape Officer at North Yorkshire County Council</p> <p>██████████ (DG) – Consultant support from WSP for Eden District Council</p> <p>██████████ (SW) – Planning and Strategy Lead and Business Manager at North Pennines AONB Partnership</p> <p>██████████ (AW) – Consultant support from WSP for Eden District Council</p> <p>██████████ (CD) – Senior Environmental Advisor at National Highways</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (JS) – Landscape and Visual Lead at JSLA</p> <p>██████████ (AT) – Landscape Design Advisor at RSK</p> <p>██████████ (PM) – Landscape and Visual Support at Axis</p> <p>██████████ (CE) – Environmental Stakeholder Relationship Manager Lead at Amey/Arup</p> <p>██████████ (AAM) – Landscape Design Lead at Amey/Arup</p> <p>██████████ (RW) – Landscape and Visual Support at Amey/Arup</p> <p>██████████ (CDix) – A66 Environmental Stakeholder Deputy at Amey/Arup</p>
Apologies:	<p>██████████ – Principal Landscape Officer at Durham County Council</p> <p>██████████ - Lead advisor (River Eden and SAC) and wider A66 input at Natural England</p> <p>██████████ (AB) – Sustainability Coordinator and Biodiversity Officer at Eden District Council</p>
Circulation:	All attending

Item	Minutes	Actions
1.0	Introductions	
2.0	Programme Update	
2.1	CE gave an overview of updates to the A66 programme.	
3.0	Key Findings from Statutory Consultation (Stat Con)	
3.1	JS noted that comments from Stat Con were being collated and would be addressed accordingly.	
4.0	ES LVIA Update	
4.1	JS explained that the LVIA front end had been drafted by RW and was now under internal review. JS also mentioned that the baseline would include 'the journey' along the A66, taking in landscape character and important points which would provide an overview of receptors experience across the whole route. A revised Zone of Theoretical Visibility (ZTV) will be produced following design freeze (currently Dec 10 th).	
5.0	Landscape Design Approach (Landscape Hotspots)	
5.1	Scheme 09 – Warrener Lane: AT/CE commented that the two westernmost ponds would be removed, which would lead to the pond at Mainsgill increasing in size. JW commented ponds would need to be designed sensitively/naturally where possible and mentioned they can perform a number of functions such as linking footpaths and providing public amenity.	
5.2	Scheme 09 – West Layton: JW asked how the structures would fit in with their surroundings as there are currently few structures along the route. AT responded that the Project Design Report (PDR) would provide some detail/design parameters. CD asked when these aspirations become realised – would they be deliverable. JS commented that the PDR contains a certain amount of detail, but mitigation must ultimately align with the PDR.	
5.3	Scheme 08 – Cross Lanes: AT provided commentary on notable trees in the area, particularly around Rokeby Park, the scale of landscape interventions and the need to provide slackened embankments. No-one from DCC was available for comment.	
5.4	Scheme 04/05 – Kirkby Thore/Roman Road: AT commented on the earthworks exploration that was underway with the design engineers, with potential false cuttings/consideration of rise and fall.	
5.5	AW agreed that the suggested earthworks would be suitable, but suggested these were not overplanted to retain views towards the AONB and surrounding area.	
5.6	CD asked about noise attenuation along the Roman Road north of Crackenthorpe for users of the PRoW (bridleway), particularly startled horses which could endanger users.	
5.7	JS replied that noise would be difficult to alleviate given the proximity of the road to the PRoW, but suggested that a study of the historic landscape character may provide clues as to whether woodland was previously present which may aid mitigation whilst retaining historic character.	

5.8	Scheme 03 – Center Parcs/Whinfell Park: AT commented on the views towards the Lakeland Fells and that consequently sensitive earthworks design would be required along with appropriate planting, particularly around the ponds.	
5.9	JS suggested the ‘hole’ created as a result of earthworks at the Center Parcs junction could be filled to grade and planted – possibly to simulate the ‘lone pine’ which would be lost. AW agreed and noted the ponds would offer good opportunities for appropriate planting, and that stone walls would also be appropriate for the scheme given their prevalence along the nearby field boundaries.	
5.10	CD enquired whether wider landscape integration had been considered. JS said it had, but there was also a need to be careful with green corridors and forming connections following consultations with the Ecology team. AT suggested that a layered landscape approach would be appropriate.	
5.11	JW asked whether there would be lighting at these junctions. CE replied that it was her understanding that lighting would only feature at the Penrith and Scotch Corner schemes, but that she will check this with the engineers.	CE to check with engineers
5.12	AT suggested subtle grading and drystone walls would be appropriate at Whinfell Park. AW suggested subtle changes to the accommodation tracks north of Whinfell Park Cottages may work better. AW asked whether the alignments needed to be so sinuous. CD asked that the design team check offsets of walls against NH standards and whether structures across the project can be ‘greened up’. AT/JS agreed potential greening of structures could be looked at.	AT/JS to raise with engineers

Minutes of Meeting

A66 NTP

TWG 7 Part 1: Viewpoint location discussion Schemes 06,07,08 and 09

Purpose of Meeting To discuss proposed viewpoint locations – in particular photomontage locations for the Landscape and Visual Impact (LVIA) Assessment chapter of the A66 ES.

Location: MS Teams

Time/Date: 20-01-22 at 14:00 - 16:00

Attendees:

- ██████████ (AG) – Senior Planning Advisor at Natural England
- ██████████ (MH) – Manager in the Cumbria area team at Natural England
- ██████████ (NK) – Sustainable Development Advisor at Natural England
- ██████████ (JW) – Principal Landscape Officer at North Yorkshire County Council
- ██████████ (GL) – Principal Landscape Officer at Durham County Council
- ██████████ (LJ) – Consultant support from WSP for Eden District Council
- ██████████ (CCP) – Sustainable Development Coordinator at Eden District Council
- ██████████ (HR) – Consultant support from WSP for Eden District Council
- ██████████ (CD) – Senior Environmental Advisor at National Highways
- ██████████ (JS) – Landscape and Visual Lead at JSLA
- ██████████ (PM) – Landscape and Visual Support at Axis
- ██████████ (CE) – Environmental Stakeholder Relationship Manager Lead at Amey/Arup
- ██████████ (RW) – Landscape and Visual Support at Amey/Arup
- ██████████ (CDix) – A66 Environmental Stakeholder Deputy at Amey/Arup

Apologies:

Circulation: All attending

Item	Minutes	Actions
1.0	Introductions	
2.0	LVIA Update	
2.1	JS gave an overview of how the Zone of Theoretical Visibility (ZTV) layers on Webmaps, and subsequently the Environmental Statement (ES) Figures, will inform the study area and assessment. There is a particular interest in the theoretical visibility comparison of the existing A66 with the project.	
3.0	Scheme 06 Appleby to Brough (Warcop)	
3.1	The viewpoint (VP) locations were presented using Webmaps. JS explained that the direction arrows on the VP markers should be ignored as the photography has been taken for a full 360 degrees	

	and the direction of view in a number of cases has changed following design updates.	
3.2	CD asked whether the ZTV being presented was bareground. PM explained it was 2m DSM with 0m offset, and compiled using the best available data.	
3.3	CD commented on some of the VPs being close to the various scheme extents. PM explained that a number of VPs had been taken from more distant locations, including from Murton Pike and Great Dun Fell at the request of stakeholders. JS added that VPs can be moved if the wirelines show they are too close to scheme extents.	
3.4	AG enquired whether members of the North Pennines Area of Outstanding Natural Beauty (AONB) had seen the proposed VP locations. JS explained [REDACTED] had been present at previous TWGs where VPs had been discussed.	
3.5	CD enquired as to whether the ZTVs will illustrate any visibility overlap between schemes. JS commented that the ZTVs can be produced to show any scheme overlap.	
3.6	CD asked whether schemes would have gantries/lighting/signage. JS and CE explained that there would be no gantries (these tend to apply to motorways only) and lighting would only be used at Schemes 01/02 and Scheme 11 – with the possibility of lighting at Scheme 07 (Bowes Bypass). CD commented that headlight glare would need to be considered within any nighttime assessment. JS replied that this has been considered at specific locations where it affects receptors. <i>Post meeting note: Lighting has been included within the assessment of effects at Bowes</i>	
4.0	Scheme 07 Bowes Bypass	
4.1	GL commented that he was keen to understand the views that might be experienced towards the overbridge from VP 7.7. PM explained that designs are ongoing in this area, given that if the accommodation track currently shown were to go ahead, the loss of roadside trees would mean clear views towards the overbridge to the east. However, if the trees were retained then these views would be limited.	
4.2	CD asked whether views from the road had been considered and that this was a requirement of DMRB. CD and GL suggested Google Earth street view could be utilised to illustrate driver experience at pertinent points along the route, alongside a narrative of the journey. CD advised liaison with Highways England focal point advisor may prove fruitful.	CD to supply contact details for focal point advisor
4.3	GL raised concerns over views towards overbridges. CE replied that these aspects would be covered in the Design Report. JW also raised the point that design quality is important and should be part of the mitigation proposals.	
5.0	Scheme 08 Cross Lanes to Rokeby	
5.1	GL queried the location of VP 8.4 and asked whether it might be better moved to the front gate within the grounds of the chapel to provide improved views towards the proposed grade separated junction. JS agreed it could be moved.	

	<i>Post meeting note: Landscape team have moved this assessment point to the front gate of the chapel.</i>	
5.2	GL raised concerns over the entrance to Rokeby Park and how transformative it may prove to be. PM commented that a series of photos will be taken from the verges at the existing entry point at Abbey Road. PM also mentioned that access to the grounds of Rokeby Park for VP photography has been sought and refused thus far.	
6.0	Scheme 09 Stephen Bank to Carkin Moor	
6.1	JW raised concerns regarding the 'over-engineering' of balancing ponds, and identified the pond south-west of Collier Lane. JS and PM explained that the pond was moved to within the confines of the existing field boundary following conversations with the schemes engineering team. JS further commented that pond design is broadly defined by engineering requirements and adoptability standards; however the Project Design Principles document will identify opportunities for further refinement of the design of these ponds. CD commented that DMRB LD 117 requires enhancement so this will need to be taken into account in any design.	JS to ensure included in Design Principles Report
6.2	JW enquired as to whether a tree survey/arboriculture report had been undertaken. JS explained there had been no survey undertaken as yet, but important veteran trees had been identified along the route.	
6.3	JS suggested an additional VP along the PRoW (20.55/1/1 footpath) north of Greenbank Farm or along Waitlands Lane in order to better understand the proposals around West Layton. PM agreed this could be looked at. <i>Post meeting note: The landscape team have added another viewpoint in this location</i>	
6.4	CD asked whether vehicle restraint systems (VRS) could be 'designed out'. JS noted that wherever possible we would seek not to use VRS however there will be a need to follow National Highways safety requirements.	
6.5	JW asked if we were close to the final design. JS replied that we were, and the DCO boundary was being worked on along with the final design inputs. JW then asked whether he could receive the latest layout along with proposed VPs to help make an informed decision and provide detailed comments. CE advised that she would check with the relevant members of the team as to whether this was possible.	CE to check whether layout can be shared with local authorities before complete.
7.0	AOB	
7.1	At this point it was decided that another call would be required in order to discuss VPs across Schemes 01-05 as time was running out. Post meeting note: This meeting took place at 15:00 on 31 st January.	

Minutes of Meeting

A66 NTP

TWG 7 Part 2: Viewpoint location discussion Schemes 01/02, 03, 04/05

Purpose of Meeting To discuss proposed viewpoint (VP) locations – in particular photomontage locations for the Landscape and Visual Impact (LVIA) Assessment chapter of the A66 ES.

Location: MS Teams

Time/Date: 31-01-22 at 14:00 - 16:00

Attendees: ██████████ (LJ) – Consultant support from WSP for Eden District Council
 ██████████ (AW) – Consultant support from WSP for Eden District Council
 ██████████ (CCP) – Sustainable Development Coordinator at Eden District Council
 ██████████ (HR) – Consultant support from WSP for Eden District Council
 ██████████ (CD) – Senior Environmental Advisor at National Highways
 ██████████ (JS) – Landscape and Visual Lead at JSLA
 ██████████ (PM) – Landscape and Visual Support at Axis
 ██████████ (CE) – Environmental Stakeholder Relationship Manager Lead at Amey/Arup
 ██████████ (RH) – Landscape and Visual Support at Amey/Arup
 ██████████ (RW) – Landscape and Visual Support at Amey/Arup
 ██████████ (CDix) – A66 Environmental Stakeholder Deputy at Amey/Arup

Apologies:

Circulation: All attending

Item	Minutes	Actions
1.0	LVIA Update	
1.1	JS gave a brief overview of the meetings purpose and also gave an outline of how the landscape and visual assessment and design was developing for the project.	
2.0	Scheme 01/02 M6 Junction 40 to Kemplay Bank	
2.1	AW enquired about land take around VP 2.2. JS explained that land to the south of the VP had been marked for retention/enhancement to offset loss elsewhere within the country park. JS then explained that areas shown throughout the project included permanent and temporary land take.	
2.2	JS switched on the ZTV layer within Webmaps to better understand theoretical visibility.	
2.3	CD raised a query regarding a previously mentioned VP along the PRoW south-west of the M6 Junction 40. JS agreed that an	RW to add 1.3A to VPlist

	additional VP could be included in advance of the remaining photography to be undertaken.	
2.4	AW raised concerns over views towards construction activity for residents along Carleton Hall Road. JS suggested the landscape team could check street view for any potential visibility. <i>Post meeting note: Landscape team have reviewed this location and confirm it looks like vegetation will screen views here.</i>	
2.5	RW pointed out there were more distant viewpoints along this scheme taken at the request of stakeholders; namely VP 2.7 and VP 2.8.	
3.0	Scheme 03 Penrith to Temple Sowerby	
3.1	AW commented that mitigation would require some care at this scheme, in particular treatment of stone walls. RH commented that in this area double banding of stone walls would be appropriate.	JS will include stone wall typology will be included in the PDP document
3.2	CD asked whether views from Brougham Castle had been considered, as the ZTV was showing visibility from its tower. JS explained that the castle had been closed during previous site visits due to COVID restrictions, but the team could check during upcoming visits. PM added that there would be no views towards or from the castle at the location of the scheme extents. <i>Post meeting note: PM has checked this location.</i>	
3.3	AW enquired about areas earmarked for land take where pylons pass through. JS explained that land take shown is worst case scenario, and that consideration has been given to pylon location, in terms of stand offs for planting etc.	
3.4	CD commented that VPs 3.1 and 3.2 were close together. RW commented that they represented different elevations of view. JS considered that VP 3.2 would be representative of residential, whilst VP 3.1 is recreational.	
3.5	AW commented that VP 3.4 appeared 'tucked away'. PM replied that it was located in an area which represented the best visibility whilst remaining on the PRoW.	
3.6	CD raised the question of views from the road which had been discussed previously. JS commented that views from the road would be discussed in the Project Design Report (PDR). CD reiterated that it was important these views be assessed as per DMRB standards and that images from Google Street View would be acceptable given the safety issues associated with moving traffic. JS then confirmed that there would be a level of assessment within the ES and also within the PDR.	GIS team to check Street View compatibility
4.0	Scheme 04/05 Temple Sowerby to Appleby	
4.1	AW asked about views from the north towards the scheme. JS explained there were opportunities to mitigate views north towards the British Gypsum Plant for residents of Kirkby Thore by way of earthform and planting.	

4.2	AW commented that he would like to see an additional VP along the bridleway east of Maiden Way. JS agreed to check and provide additional photography if suitable.	RW to add VP to VP list
4.3	CD asked whether green bridges had been considered. JS replied that green bridges had been discussed throughout the project and the team are awaiting feedback from engineers.	
4.4	AW and CD suggested that VP 4.7 be moved to the west of Sandersons Croft to better represent residential receptors. HR mentioned that the layout at Scheme 04 is still being consulted. JS added that he would consult with PM on the revised location.	RW to add revised location to VP list
4.5	AW enquired as to whether the landscape team would be using VP 4.9 or VP 4.9A for assessment. PM/JS commented they would consider both and choose which gives the most robust assessment.	PM/JS to decide once photography is complete
4.6	CD pointed out that VP 4.10/4.10A would not be suitable for assessment of construction effects as it lies within the footprint of the scheme. AW suggested the VP be moved along the PRow south of Dunelm/Powis House, and that VP 4.22 be discarded.	RW to revise VP list as required
4.7	AW enquired as to whether an additional VP along Powis Road (Long Marton Road?) would provide suitable views towards the junction along the Roman Road in lieu of a view from the Roman Road. JS/PM/CD agreed this would provide suitable views, and JS added that effects on users of the Roman Road itself would also be considered.	RW to add VP to list

A66: CCC&EDC Approach to Project Design Principles [Session 1]

Title:	Approach to Project Design Principles [Session 1]	Revision / Version:	V1
Status:	ISSUE		
Date:	18/01/2022	Reason for Issue:	Information
Location:	Microsoft Teams Meeting	Time of Meeting:	10 am – 11:30 am
Drafted By:	██████████		
Attendees:	<ul style="list-style-type: none"> • ██████████ – T&T • ██████████ – NH • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – IPT • ██████████ – CCC • ██████████ – CCC • ██████████ – WSP • ██████████ – WSP 		
Apologies:	██████████		
Material:	N/A		
Agenda			
Item	Description	Comments	
1	<p>Introductions</p> <p>SS led introductions</p>		
2	<p>Environmental Mitigation Walkthrough</p> <p>CE noted that the presented Environmental Mitigation is not complete, and some changes are still being made.</p> <p>CL noted that they are working to set rules which includes offsetting distances from the road and woodland planting to ensure safety of users. Further, precise details of mitigation works are being reserved for the detailed design stage.</p> <p>DH noted that at present, Skirsgill depot is to be reinstated to former condition post use as a construction compound. DH advised that as it is an employment site for the Council there is a preference for it it not to be reinstated.</p> <p>DH advised that CCC members are wanting clarity for the proposals at Wetheriggs Park and to be aware if mitigation will be for compensatory land or enhancements to the existing site. Further, DH noted that enhancements might be the preferred method. JS responded that the current boundary includes land for compensation</p>		

to make sure it remains a future option if compensation is preferred over enhancement.

PC noted that [REDACTED] may be in touch with DH in the near future to discuss.

CL and JS ran through the mapping and explained the replanting process noting that photomontages will be used to illustrate the removal of mature trees.

CC questioned if the removed trees are being replaced. JS confirmed they will be replaced where possible noting that the plans currently show worst case scenarios.

DH questioned if a vegetation management plan was being developed to manage the mitigation over the next few years. PC responded noting that agreements are being set-up with landowners and possibly CCC.

DH questioned if engagements has been had with the Police. PC confirmed that there has been engagement.

SS ran through the ecological considerations. The BNG calculations shown are in the process of being updating to reflect current designs. Further SS noted the consideration is being given for red squirrels and their habitat. In addition SS noted that they are looking to create a canopy for Barn Owls at mortality points.

DM On the BNG its at 0% is what the stat is. Has there been any net gain convo.

DM questioned there was any consideration for achieving a positive BNG. SS responded stating that NH does not have statutory powers to create a positive net gain. Although it was noted 0 is the minimum and that with all the mitigation added together that there will be some net gain.

DH suggested that SS reviews the work packages sent across. Furthermore, DH noted that it would be good to work together on some elements to see if a positive BNG can be achieved.

JS and CL noted that planting is being carried out work with the drivers experience such as screening earth works where required.

DH questioned if there have been any improvements of access (physical and visual) to the Castle. CL and JS confirmed that not considered for the Castle but has been for the pillar.

DH advised that it would be good to see engagement with the local education centres to see if students can help with surveys.

SS noted that along the route that not all verges can be replaced with planting. At the Centre Parcs junction SS advised that there will be more connectivity for bats and squirrels.

SS advised there are Otters in scheme 3 so ledges will be added where possible with culverts to allow otters and bats to cross. In scheme 3 there are also badgers and GCN which are being considered where appropriate.

3	<p>Approach Project Design Report</p> <p>LK advised that the PDR is being updated and ran through the principles of design. Further LK noted that a check list approach may be taken to take on board comments from CCC & EDC.</p> <p>DH questioned the number of ponds being constructed and how the Council ensure the principles are upheld.</p> <p>CE noted that the mitigation is secured through three documents.</p> <p>DM noted that the CEMP will be a conditioned document.</p>	
4	<p>AOB</p> <p>DH requested information on the de-trunking strategy of the A66.</p>	
Minutes		
Item	Minutes and Action	Action Owners

Environmental Mitigation Walkthrough

AC and JS went through the works happening to Kirby Thore. It was noted that the embankments will all be species rich grassland and returned to grazing where possible.

AC noted that planting is being proposed in consideration of local views of the landscape but of sites of interests such as the Roman Fort. Further it was noted that with the ground works the aim is to retain the image of undulating fields.

JS advised that further work is needed to reduce the impact from noise.

AC advised on one of the most difficult designs challenges being creating a cut tight around the village.

AC noted that at Trout Beck there will be larger scale engineering works as it differs from the River Eden and local landscape character.

DH noted that works must be conscious of the community at Kirby Thore. DH questioned what will happen to the small sections of land that are not included in the designs. JS noted that be used for some mitigation with landowners largely taking on the role of maintenance where agreed.

DH noted that one of their comments will be wanting to use the large verges to improve biodiversity. SS noted that the BNG will very likely be above 0 but cannot but a % figure at the moment.

HR questioned why some of the cuttings are higher than required. JS noted that there is a balance needed between the depth of the cutting and the size of the building/structures proposed.

AC noted that at Trout Beck the crossing will have planted abutments either side. In addition, there is the opportunity for some wet woodland planting.

AC noted that for the Roman Road the primary mitigation is to align the A66 to the Roman road as much as possible to minimise planting. JS furthered that screen-planting would minimise the grand avenue in the area.

DH questioned what level of information the LPAs will received during the upcoming consultations. CE noted that they will take the question away and respond.

SS noted that specialist land has yet to be considered into the Not Net Loss calculations and therefore it is likely that it will deliver some BNG.

SS advised that north of Kirby Thore there are plans for two overbridges that will be green overbridges to allow bats and Lapwings to move around.

SW and SS discussed issues of ground nesting bird habitat being close to trees with populations of predator birds.

DH questioned if a phasing plan will be in place. SS noted there will be but further details are needed with additional surveys next season.

AC noted that east of Appleby there are clear character distinctions between the north and south of the road. As there is a rather panoramic view of the landscape for drivers AC noted that planting would be inappropriate. Further, AC noted planned works and planting on the Heathland as they seek to create a mosaic effect.

AC noted that east of Appleby there are significant views of the AONB and that works have to accommodate these views as well as the topography and Eden

	<p>Railway. Woodland and habitats will be created to support local wildlife including reptiles and red squirrels.</p> <p>CW noted that there are potential dangers created from the habitat creation on the biodiversity that use it. JS responded that it was better to create it than not too. Linkages will be added where possible.</p> <p>JS advised that where possible lights will not be used on the road to minimise the impacts on the AONB. The engineering will only include lights where needed for safety reasons.</p> <p>At Scheme 6, SS noted that there will be some woodland lost but habitat creation will mitigate. It was also noted that red squirrels and GCN have been identified in the area. Concerns were raised that the land might not be ready in time for completion and therefore some MOD land may need to be used.</p> <p>CW questioned if planting has taken into account archaeology. SS confirmed that it has and is being reviewed by the Cultural Heritage team.</p> <p>CW question if Natural England and Cumbria Wildlife have also been consulted. CE confirmed that discussions have been had with Natural England.</p>	
4	AOB – None	
Minutes		
Item	Minutes and Action	Action Owners

A66: NYCC and RDC - Approach to Project Design Principles

Title:	Approach to Project Design Principles	Revision / Version:	V1
Status:	Draft	Reason for Issue:	Information
Date:	25/01/2022		
Location:	Microsoft Teams Meeting	Time of Meeting:	10:00
Drafted By:	██████████		
Attendees:	<ul style="list-style-type: none"> • ██████████ - NYCC (JC) • ██████████ - NYCC (MR) • ██████████ - NYCC (JW) • ██████████ - NYCC (JC) • ██████████ - JSLA (JS) • ██████████ - RSK (AT) • ██████████ - IPT (SR) • ██████████ (HS) • ██████████ - IPT • ██████████ - IPT (LK) • ██████████ - IPT (TE) • ██████████ - IPT (CE) • ██████████ - IPT (AAM) • ██████████ - IPT (SS) • ██████████ - IPT (LW) • ██████████ - IPT (DB) 		
Apologies:	<ul style="list-style-type: none"> • ██████████ - NYCC • ██████████ - NYCC • ██████████ - RDC • ██████████ - WSP • ██████████ - HE • ██████████ - HE • ██████████ - HE • ██████████ - HE • ██████████ - IPT • ██████████ - IPT • ██████████ - IPT • ██████████ - IPT • ██████████ - IPT 		
Material:	Presentation on Project Design Report circulated with meeting Minutes		
Agenda			
Item	Description	Comments	
1	Introductions		
2	Environmental Mitigation Walkthrough		
3	Approach to Project Design Report		
4	AOB		
Minutes			
Item	Minutes and Action	Action Owners	
	<p>Introductions</p> <p>CE provided an overview of the purpose of the meeting and the information proposed to be presented, highlighting that at this stage, the environmental mitigations a snapshot of where we are as of today in terms of Design. We wanted to present this now, so that there is time from NYCCs comments to be and input to be embedded into the Scheme. The red line boundary is currently indicative and is being determined.</p>		

The Plans shown today are demonstrative to show that the mitigation proposed can be accommodated within the DCO area, but they will not form part of the statutory document approved as part of the DCO. The key documents that will be included are:

- The Project Design Report
- The Environmental Management Plan (which will include a Landscape and an Ecology Management Plans
- The Mitigation schedule, setting out the mitigation proposed to be delivered by the Scheme

Landscape

JS and DB provided an overview of the landscape mitigation running from west to east using the online mapping system.

JW asked how many trees are we expected to lose and with the current highways requirements for tree planting, will there be enough land within the boundary to allow these to be replanted.

DB advised that the project is looking to retain trees wherever possible, and have amended the design where possible to accommodate veteran trees. Where this is not possible, they will be replanted within the Scheme area.

SS added that the approach we are taking towards biodiversity is a 0% net loss, in line with current guidance. However we will be looking at opportunities to introduce enhancements. For tree replacement, we are looking at between a ratio of 1:2 to 1:6 for tree replacement.

JW added that we would need to make sure there is enough space within the scheme to allow the planting of a range of trees and sizes

JS agreed and set out that we have taken a worst case scenario approach with regards to this. We will be looking at options locally and on a case by case basis to see if specific trees are necessary to be removed. As set out before, we have undertaken a veteran tree survey to ensure they are given the highest level of protection.

SS added that we are also looking at options to introduce barn owl crossing measures, which involves planting trees closer to the road than is currently allowed though DMRB guidance, to provide some canopy protection to allow them to fly over the scheme.

TE identified that there is one PROW near West Layton which is currently severed by the A66, As part of our scheme we will be reconnected this via the proposed new West Layton overbridge.

JS explained the approach taken to the Scheduled Monument at Carkin Moor, as well as the wider scheme is to try and fit the scheme into the surrounding landscape and field patterns as well as improving the overall driver experience AT agreed adding that we also need to try to mirror the scale of the surrounding infrastructure as well

JW added that the hill (cut through for the current A66 alignment) is a nice feature and there is the potential for interpretation to be provided, adding that he would be interested in seeking wider green infrastructure benefits to create local amenity element. It looks like there is the space to give it the attention it deserves and incorporate it into the setting. Some of the structures, particularly the balancing ponds look, (on plan and siting some previously installed ponds on other schemes) very engineered.

JS added that on the Integration, we have sought to make sure the side of the slopes of the embankments blend in to the landscape and that we are looking to ensure that this is incorporated.

MR added that there were some initial discussion around minimising the number of drainage ponds to reduce the overall number, and had this been considered?

TE advised that there was a review and a ratification and a reduced number of ponds were being put forward, with some being either combined or removed. The ponds themselves have been designed under DMRB guidance and in line with this we need to provide one pond for NH assets, and a separate pond for NYCC

HS added that what's important here is that we ensure there is sufficient space to deliver the scheme within the boundary so that this can be further developed, detailed and delivered following DCO.

MR asked what position had been taken regarding these ponds.

TE added that what is shown will be taken forward as they represent a worst case scenario, but there is the opportunities down the line to come to agreement between NYCC and NH to find a more holistic solution.

JW advised he was not necessarily happy with the ponds at this stage as they risk looking like an engineering structure that may not be in keeping with the local landscape, detracting from the scheme.

TE added that the design has been driven from an engineering perspective to ensure the capacity is there for the scheme to ensure it can operate accordingly, and that now the work with the landscape team is looking to address these types of concerns.

JW added that we should look at the opportunities the ponds provide to bring amenity and local attractiveness into the area, ensuring its part of the setting and experience

TE added that this would need to be balanced against the need to accommodate maintenance and will drive the shape and appearance.

LK added that will be updating NYCC on the design report and the overall approach to this and other features and will be presenting on later on this meeting.

Ecology

SS provided an overview of the key ecological elements of the scheme, running west to east identifying the habitats that are present, that will be lost and replaced as a result of the scheme. It's important to highlight that the figures and numbers presented at the meeting regarding area and numbers of lost habitat are not current (reflecting the previous design) and are in the process of being updated following the design freeze.

JC asked in relation the proposed balancing pond at Dick Scott Lane needs to be in the specific area at west of the scheme if there is limited habitat replacement opportunity in that area.

TE advised that the pond was initially closer to the road, but if was felt its location would become a scar on the landscaping due to the road and the land immediately surrounding is on top of a hill. It was identified that the location further down the hill would have a smaller visual impact with the opportunity identified though discussions with the landowner. This was in advance of the commercial plantation and the reed bed issues been highlighted at a later stage.

SS advised that we are looking at some potential areas in the adjacent field, but as this falls outside of the consulted red line boundary, there needs to be some additional targeted consultation,

JC advised that there may be some other partner companies or officers who may be able help to compensate here and in other locations and should be investigated.

SS identified the Barn Owl mortality area and that we are looking in this area to bring planting closer to the road to limit this but as this is a departure from guidance it required NH approval and is not confirmed.

SS presented on the proposals at and surrounding West Layton.

JC asked if the severance of woodland at west Layton were taking account of the severance impacts, making sure that we are not isolating small areas of woodland and increasing mortality risk for bats and birds, adding that the actions may not impact in the immediate area but might cause issue elsewhere.

SS advised that the schemes species leads have been looking at these risks and opportunities. The West Layton bridge has been proposed to be a green bridge to maintain connectivity. There is also an existing culvert that will be used for otter connectivity which could also be used by bats. This would also prevent other mammals getting onto the carriageway.

JC added that it's good to hear the opportunity to include a green bridge was been considered

SS reiterated that is not a fully realised option but had been appropriately sized so that the option could be fully detailed and developed at the detailed design stage.

SS advised that there was an opportunity to include a reptile receptor site in a field not wanted by landowner following scheme completion. The schemes reptile specialist is keen to use the field and the proximity of the local detrunked former A66 road was not seen as a likely area for mortality if it were.

JC advised that she had no significant concerns but would need to look at how it were designed, however it was worth investigating going forwards.

SS presented on the proposals at and surrounding Moor Lane.

JC asked if the Moor Lane option was proposed to be at grade.

TE advised that Moor ls, and undulates between 1 and 2 meters due to the existing land undulation. Initially it was proposed to be above this level and we have sought opportunities to bring the height down, which has only been limited by the requirements to enable the drainage ponds be served by gravity.

JC asked if the if the woodland surrounding Moor Lan would be compensated with some more mature planting

SS advised that there was and some hedgerow was also proposed to be included

TE added that there is a lot of width either side to enable planting.

JC asked if there was likely to be much lighting proposed as part of the Scheme

TE advised that the intention is that the A66 won't be lit, but that the underpass' may require some security lighting but to be confirmed at Detailed design.

JS, JB and SS presented the proposals around Scotch Corner (Scheme 11)

SS advised asked if it would be acceptable to replant any woodland lost at Scotch Corner further westwards as part of Scheme 9, but that opportunities to retain it were being explored.

JC advised she had no major concerns, highlighting that she was keen to keep the connectivity where we can, but that scheme 9 is close enough to accept that if it were needed.

JW added from a landscape perspective that it would be good to demonstrate the qualitative design around Scotch Corner but would like to see some improved quality in this area if possible

JS advised that the landscape and ecological mitigation, and the improvements overall are bound by the impact of the road works, but agreed that this consideration should be explored.

JW added that if we can keep this in mind to see what we can achieve through the design principles, NYCC would be welcome of it.

Project Design report

LK provided a summary of the Project Design Report (PDR), a draft of which was submitted as part of Stat Con, highlighting that the PDR and PDP will be landscape led documents.

JW added that he would be very supportive of this document which explains the qualitative design alongside the engineered solution as well as providing a commitment to the mitigation proposed.

AOB

No AOBs were raised.

A66: DCC - Approach to Project Design Principles

Title:	Approach to Project Design Principles	Revision / Version:	V1
Status:	Draft	Reason for Issue:	Information
Date:	27/01/2022	Time of Meeting:	10:00
Location:	Microsoft Teams Meeting		
Drafted By:	██████████		
Attendees:	<ul style="list-style-type: none"> • ██████████ - DCC (CT) • ██████████ - DCC (BH) • ██████████ - DCC (DL) • ██████████ - DCC (GL) • ██████████ - HE (HC) • ██████████ - JSLA (JS) • ██████████ - RSK (AT) • ██████████ - IPT (SR) • ██████████ - IPT (AM) • ██████████ - IPT (CE) • ██████████ - IPT (AA) • ██████████ - IPT (SS) • ██████████ - IPT (LW) • ██████████ - IPT (AR) • ██████████ - IPT (JB) • ██████████ - IPT (DB) 		
Apologies:	<ul style="list-style-type: none"> • ██████████ - DCC • ██████████ - DCC • ██████████ - HE • ██████████ - HE • ██████████ - HE • ██████████ - IPT • ██████████ - IPT • ██████████ - IPT • ██████████ - IPT • ██████████ - IPT • ██████████ - IPT • ██████████ - IPT 		
Material:	N/A		
Agenda			
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- The Mitigation schedule, setting out the mitigation proposed to be delivered by the Scheme

Project Design report

AM provided a summary of the Project Design Report (PDR), a draft of which was submitted as part of Stat Con, highlighting that the PDR and PDP will be landscape led documents. A copy of this presentation is provided with these Meeting Minutes.

No comments were raised regarding the PDR.

Bowes Landscape

JS and DB provided an overview of the landscape mitigation for Bowes running from west to east using the online mapping system.

JS identified that the lidar data which has been requested will help the scheme be more specific with regards to tree removal, and we are looking at opportunities to save as many as possible also. We have also undertaken a veteran tree survey and sought to provide them with the highest level of protection.

JL identified that we are constrained by NH requirements for planting trees close to the carriageway, and any planting that may be required or requested within 4m of the carriageway would require an additional barrier to protect the tree and an agreement for a formal departure from guidance.

GL asked in relation to field boundaries, if there are any drystone walls near the underpass being picked up and will they require additional field rationalisation JS advised that we are aware of this and will be looking at this going forwards, seeking to restore the field patterns as best we can. Generally, hedges will be replaced with hedges and stone wall with stone wall. There is one instance where an existing stone wall is required to be removed, but this stone is going to be reused to form another stone wall.

GL how far developed is the SUDS design, and stated that there was a concern that these would not look natural in the surrounding landscape

JS advised that the PDR would look to establish the landscape design requirements for these going into detailed design. Currently the balancing ponds have being developed from a technical requirement standpoint to ensure there is enough capacity in the design being taken forward. There and we will be further work undertaken to soften and naturalise these to become integrated.

GL asked if we were happy that there is space to amend the design of these balancing ponds

JL advised we were as they can be made smaller by deepening the ponds to retain the overall capacity, and it's an option we will look to develop further.

GL asked if the ponds were all proposed to hold water or will have reed beds

JL advised they will all be holding water, but we have been discounted their inclusion from the ecological mitigation calculations to allow for maintenance of these, as required.

CE also advised that at this stage the boundary on screen is not the DCO red line boundary which has not been fixed and is subject to change.

GL asked in relation to the western pond, located to the east of Bowes, will we seek to limit the field boundary here as the potential land left over may be impractical for a farmer to use without rationalising the field boundary

JL advised that we will be looking to advise here as part of the PDR take the whole filed for the balancing pond

GL added that a review of the visualisations of the of the proposed bridge near the Killmond Wood quarry would be needed. We should look and consider the

potential for tree and scrub planting on the bridges embankment to screen and soften it.

DB agreed to this proposal

Bowes Ecology

SS provided an overview of the key ecological elements of the Bowes scheme, running west to east identifying the habitats that are present, that will be lost and replaced as a result of the scheme. It's important to highlight that the figures and numbers presented at the meeting regarding area and numbers of lost habitat are not current (reflecting the previous design) and are in the process of being updated following the design freeze.

GW asked if any of the tree planting proposal had been run past archology and heritage

SS advised that at this stage discussions hadn't taken place but were planned in the future.

GW asked if the proposed tree planting in Bowes near the western mons pond, would it constrain the view and setting of Bowes Castle?

SS advised that there were other options that we wanted to seek DCC's views on, as the Bowes scheme is constrained for appropriate areas for tree planting, and whether it would be acceptable to DCC for replacement planting be delivered as part of the Cross Lanes to Rokeby Scheme if it were to be more ecologically valuable

GW advised that he believe that this would be acceptable as you will be compensating for the loss and would rather see it in a location where its going to provide benefit.

BH advised that he also agreed with this view as there may also be issues with the impact of the conservation area.

GW agreed and reiterated the need to plant trees elsewhere where necessary.

Cross Lanes to Rokeby: Landscape

GW asked if the positioning of the road and balancing pond in an arable field, north of the A66 at the Gamekeep Shop off the B6277 would be useable by the local farmer, given the likely triangular shape the field would be left in.

JS advised that the communities' team would be able to speak to the landowner and farmer to establish this

GW added that there is the potential to remove the tree boundary between the field to the south providing the tree is not of good or significant value.

SS added that if we are looking for a location for woodland planting, this location may present a good opportunity

GW agreed and that the SUDS looks somewhat isolated and could potentially be screened.

JW identified that an access track to a balancing pond would run parallel with the A66 Carriageway

GW asked if there were any measures, such as a fence or landscape strip proposed to minimise and reduce headlight glare

JS advised that only a fence was proposed as the track would only be used infrequently.

GW asked in which case, would a fence be needed.

JS added that it would as it would delineate ownership

GW added that this should not be problematic due to land form and existing screening, highlighting that by taking the whole field in this location presents an opportunity to prevent field rationalisation.

JL advised that there were proposals being considered to consolidate the woodland near the Rectory by removing the existing conifers

GW agreed with this and welcomed more visual separation, and asked if we would have control of this work being undertaken

JL advised that we would as NH has bought the rectory

GW asked if we were proposing to reduce the carriageway at Rokeby Park

AR advised that there was no formal reduction proposed but there will be less tarmac and features such as crossings being removed and reorientated.

GW asked what the overall look in the area was going to be, specifically in terms of Armco barrier installation and landscape form to prevent dazzling

	<p>AR advised that there is a 1.5m height difference and we are looking at landscaping to try and manage the potential headlight dazzle. It is quite constrained and would need to be looked at to try and alleviate this during detailed design</p> <p>GW stated that he would want to view visualisations here to help visualise and develop a suitable design</p> <p>JL advised that there are some valuations submitted on the virtual engage platform, but highlighted that the design is the previous version (more specifically highlighting that the inclusion of the roundabout) but does help visualise the setting</p> <p>CT asked if DCC officers have time to see these plans before the DCO is submitted and finalised</p> <p>CE advised that we would need to check and report back to see what can be shared due to tight timescales on the submission</p> <p>Action: CE to advise on which documents can be shared with DCC Officers ahead of the DCO</p> <p>Cross Lanes to Rokeby: Ecology</p> <p>SS advised that there was the potential for a red squirrel crossing point to be installed via two bridges</p> <p>GW asked what was proposed, an overbridge or something more bespoke</p> <p>SS presented an example of the overbridge / gantry, which will provide a safer crossing. This has been discussed with cultural heritage and no concerns were raised</p> <p>GW asked if this was to assimilate two populations to join up habitat</p> <p>SS advised that it was for habitat connection but would also allow for future disbursement.</p> <p>In relation to bats at Rokeby GW asked if there is going to be some tree removal along the A66 which could increase bat mortality due to the loss of the tree canopy</p> <p>SS advised that we had proposed to introduce planting, but this was not requested by the park. We would typically include a bat gantry, but recent report has shown that they are ineffective. As a result, it is likely that the ES will report a temporary impact to roost</p> <p>TH clarified that it is not our intention to remove existing trees in between the carriageway in this location and we are hopeful that our scheme here will not eat into the verge requiring their removal.</p> <p>GW added that at the SUDS location here if there is going to be an impact in the short term, in terms of design is there an opportunity to replicate the planting in the parkland</p> <p>JS advised that speaking to the Heritage team they didn't want to try and replicate parkland in this area where it isn't authentic.</p> <p>GW advised that looking at this opportunity to recreate this with a clear, strong separation may help with the bat impact</p> <p>SS agreed and that it would be useful to go back on this heritage on this point.</p> <p>AOB</p> <p>CT asked to please forward though any other material with the meeting minutes so that it can be shared with the ecology team for further comment.</p>	<p>CE</p>
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Annex E.3.5

From: [REDACTED]
Sent: 02 March 2022 16:32
To: [REDACTED] [REDACTED]@historicEngland.org.uk
Cc: [REDACTED] [REDACTED] [REDACTED] [REDACTED]
Subject: FW: Rokeby design meeting with HE

Hi [REDACTED] and [REDACTED],

Thanks very much for attending the meeting about the emerging landscape design on 4 February. Apologies for the delay in getting back to you with some notes.

- JS talked through the design at Rokeby: retain pollarded sycamores, retain line of Roman road , soften engineered slopes, reinforce group of estate buildings (remove conifers at Old Rectory), woodland planting south of the road, ecological mitigation in Church Plantation.
- CM noted 80% of current replanting in Church Plantation has failed. Discussion of aesthetics of emerging from the moor into Arcadia. Country Life 18th C map shown showing woodland forming tunnel approach towards viewpoint into parkland. Detail should be given in justification for preferred route.
- Proposal for south side similar to north with scalloping of south edge - (CM advised that this should replicate planting for north to produce a sense of driving down a corridor. JS noted need to keep tree planting beyond 9m of carriageway.
- CM noted people/church/Roman road movement corridor was part of heritage significance at this location. CM suggestion that back up planting in south will limit flicker effect. LM advised noting on env masterplan to identify/plot stumps in order to recover pattern for future planting.

Hope these notes captured the essence of the conversation. [REDACTED] and I certainly felt that it was a very positive and helpful meeting.

Regards

[REDACTED]

[REDACTED]

Senior Consultant | Cultural Heritage
BA (Hons) Dunelm MCifA

Arup
8 Fitzroy Street London W1T 4BJ United Kingdom
d: [REDACTED] m: [REDACTED]

[REDACTED]

Connect with me on [REDACTED]



Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Heritage TWG 3	File reference HE565627-AMY-HER-S00-AG-LH-000001
Location	Online Teams meeting	Time and date 14:00 14 April 2021
Purpose of meeting	Technical Stakeholder Engagement	

Attendance

- A66 IPT
- A66 IPT
- A66 IPT
- A66 IPT
- A66 IPT
- Historic England
- Historic England
- DCC
- DCC
- CCC
- NYCC
- EDC
- Highways England
- Planning Inspectorate
- Planning Inspectorate

Apologies CCC

Circulation Those attending: CCC; , CCC; EDC; NYCC; Highways England

Action

1. **Evidence and Survey Strategy Document**
Document purpose and expected delivery date

Prepared by
Date of circulation 9th April 2021

Agenda

Project title

A66 NTP

Job number

HE565627

Date of Meeting

14 April 2021

Action

2. Environmental Scoping Report

Programme

Approach

3. Further Options Assessment

4. Research Framework and Geoarchaeological Modelling

5. Further Options Assessment

6. AOB

Meeting format discussion

Date and time of next meeting

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Heritage TWG 4	File reference n/a
Location	Online	Time and date 1000 8 June 2021
Purpose of meeting	Technical Stakeholder Engagement	
Attendance	TBC	
Apologies	TBC	
Circulation	Those attending	

		Action
1.	Research Framework Dr [REDACTED] introduction and brief on work to date.	PRW
2.	Option Appraisal – Kirkby Thore and Warcop Summary and discussion	DL
3.	Evidence and Survey Strategy Summary of the approach Challenges posed by option appraisal	DL
4.	Geoarchaeological Modelling Update on progress	DL
5.	AOB	

Prepared by [REDACTED] Topic Lead
Date of circulation

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Heritage TWG 5	File reference Text
Location	Microsoft Teams	Time and date Time 5 August 2020
Purpose of meeting	Discussion of key PEIR findings	

Attendance

[REDACTED] (DL) – A66 Heritage Topic Lead at Amey/Arup
[REDACTED] (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
[REDACTED] (AD) – Inspector of ancient monuments for the North West at Historic England
[REDACTED] (JH) – Principal Cultural Heritage Advisor at Highways England
[REDACTED] (LM) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66
[REDACTED] (DOM) – Inspector of Ancient Monuments and Lead Science Advisor at Historic England and primary science advisor for A66
[REDACTED] (PR) – Principal Archaeologist at North Yorkshire County Council (also covering Richmond District Council)
[REDACTED] (JP) – Historic Environment Officer at Cumbria County Council
[REDACTED] (DM) – Principal Archaeologist at Durham County Council
[REDACTED] (PW) – Independent Consultant on behalf of Amey/Arup
[REDACTED] (LJ) – Senior Infrastructure Planner at WSP on behalf of Eden District Council
[REDACTED] (AW) – A66 Environmental Deputy at Amey/Arup
[REDACTED] (BH) – Senior Conservation Officer at Durham County Council
[REDACTED] (EM) – Principal Heritage Consultant for Eden District Council and Cumbria County Council
[REDACTED] (NP) – Regional Lead at WSP on behalf of Eden District Council

Apologies

[REDACTED] (EP) – A66 EIA Support at PINS
[REDACTED] (PS) – Conservation Officer at Eden District Council
[REDACTED] (EM) – Conservation Officer at Eden District Council

Circulation

All TWG members

Action

1. **Introductions (if required)**
2. **Key PEIR Findings**
3. **AOB**

Prepared by

Date of circulation

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Heritage TWG 6	File reference Text
Location	On Line	Time and date 1030 2 November 2021
Purpose of meeting	Technical Stakeholder Engagement	

Attendance

[Redacted] (Amey/Arup)
[Redacted] (Historic England)
[Redacted] (DCC)
[Redacted] (CCC)
[Redacted] (WSP)
[Redacted] (CCC)
[Redacted] (WSP)
[Redacted] (WSP)

Apologies

[Redacted] (DCC)
[Redacted] (EDC)

Circulation

Those attending:
Text

Action

- 1. Introductions**
Any new attendees
- 2. Stakeholder feedback on Statutory Consultation**
- 3. Updates on Research Framework, geoarchaeological modelling and surveys**
- 4. AOB**


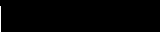
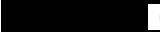
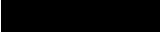
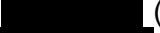
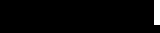
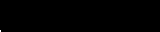
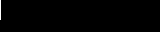
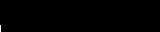
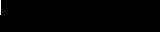
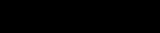
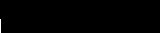

Prepared by [Redacted] ES CA Lead Author
Date of circulation 01 November 2021

Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	HeritageTWG 7	File reference HE565627-AMY-GEN-NLA-TE-ZX-9100004_Heritage TWG 7_AGENDA.doc
Location	On Line	Time and date 1000 18 January 2022
Purpose of meeting	Technical Stakeholder Engagement	

Attendance

 (Amey/Arup)
 (Amey/Arup)
 (Wessex Archaeology)
 (HE)
 (NH)
 (NYCC)
 (DCC)
 (DCC)
 (CCC)
 (CCC)
 (WSP)
 (EDC)
 (WSP)

Apologies

 (DCC)
 (EDC)
 (WSP)

Circulation Those attending

		Action
1.	Introductions As required	DL
2.	Geoarchaeological modelling exercise	DY
3.	Survey updates	DL

Prepared by  ES CA Lead Author
 Date of circulation

Agenda

Project title	Job number	Date of Meeting
A66 NTP	HE565627	18 January 2022

		Action
4.	Design updates	DL
5.	AOB	All



Agenda

A66 NTP

Project title	A66 NTP	Job number HE565627
Meeting name	Heritage TWG 8	File reference Text
Location	Microsoft Teams	Time and date 10:00- 1 March 2022 12:00
Purpose of meeting	Progress update and Delivery Partners information	
Attendance	Text	
Apologies	Text	
Circulation	Those attending: All	

Action

1. **Introductions**
2. **Delivery Partners – [REDACTED]**
3. **Research Framework Update – [REDACTED]**
4. **Evidence Plan – [REDACTED]**
5. **Survey Update – [REDACTED]**
6. **Mitigation Strategy – [REDACTED]**
7. **Date of next meeting – [REDACTED]**
8. **AOB**

Prepared by [REDACTED]

Date of circulation

Minutes of Meeting

A66 NTP

Heritage Technical Working Group 1

Purpose of Meeting: Heritage Technical Working Group – Meeting 1.

Location: MS Teams

Time/Date: 09-02-21 at 3:00-4:30

Attendees:

- ██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup
- ██████████ (JK) - A66 Heritage Topic Deputy at Amey/Arup
- ██████████ (CD) – A66 EIA Coordinator and Environmental Stakeholder Deputy at Amey/Arup
- ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
- ██████████ (MB) – Historic Environment Lead at Cumbria County Council
- ██████████ (BH) – Conservation Officer at Durham County Council
- ██████████ (DM) – Principal Archaeologist at Durham County Council
- ██████████ (AD) - Historic England
- ██████████ (EM) – Conservation Officer at Eden District Council
- ██████████ (TE) - Highways England
- ██████████ (JH) – Principal Cultural Heritage Advisor at Highways England
- ██████████ (LM) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66
- ██████████ (DOM) - Inspector of Ancient Monuments and Lead Science Advisor at Historic England and primary science advisor for A66
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (PR) - Principal Archaeologist at North Yorkshire County Council (also covering Richmond District Council)

Apologies:

- ██████████ (MS) – A66 EIA Lead at PINS
- ██████████ (KW) – A66 Environment Lead at Amey/Arup

Circulation: All

Item	Minutes	Actions
1.0	Introductions	N/A
1.1	Introductions from all attendees and introduction to the intent of the TWG by DL.	
2.0	Evidence Plan – Objectives	
2.1	Overview of the Evidence Plan by DL: <ul style="list-style-type: none"> • To consolidate and support formal scoping process. • Agree and document specific matters that the evidence plan process aims to address. 	

Item	Minutes	Actions
	<ul style="list-style-type: none"> • Agenda for future meetings is flexible and DL welcomes input from attendees. • Seek agreement on how evidence will be collected and analysed. We will expand on this later today with archaeological trenching. • Achieve a common understanding of the challenges posed by the programme. DL notes that the TWGs can be a means of ironing out some of the challenges earlier on. • Seek to reach agreement on key matters where possible. • Work towards agreements where gaps exist currently, and document points that are not agreed. • Discuss approaches to design development and to resolve and refine the assessment where possible. 	
2.2	<p>DL invited questions from the group.</p> <p>JH related that Highways England approaches this from the view that archaeological costs can sometimes come as an unexpected cost too late in the project programme, and that HMG will be expecting this issue to be resolved as early as possible with mitigation and research strategies that all parties agree with. This needs to be costed as far as possible as past experience shows that archaeological field costs can become a higher proportion of project costs than anticipated and lead to uncertainty about affordability. JH related the importance of seeking agreement, where possible, to the research agenda and consultation and it is positive that these meetings are to include a wide range of consultees so issues can be resolved early.</p> <p>DOM noted in response that the project needs to be very clear that very late design changes can impact on archaeological plans and therefore cost (A1 widening to Leeming scheme was noted as an example, where some work was agreed not to be needed and this requirement was changed quite late and was not due to poor planning). JH agreed, and where design changes occur late in the programme there needs to be joined-up thinking on how this affects work to date.</p>	
2.3	<p>CD added that the process of the Evidence Plan aims to supplement and consolidate consultation, not to repeat any of the formal channels as part of the process. DL agreed that engagement of this kind on other projects would have been of benefit to all parties.</p>	
3.0	Project Overview	
3.1	<p>The project team gave an overview of the project with reference to heritage features in particular across the length of the A66, using the online Webmap tool and sharing screens.</p> <p>DL invited questions, none raised.</p>	
4.0	Update on reports for geophysics + AP & LiDAR	
4.1	<p>We have commissioned geophysical surveys on all schemes except the two at either end (1 and 11, the motorway roundabouts). The survey was undertaken before Christmas 2020 and the report is in draft with DL for review. DL intends to be able to share with the group soon.</p> <p>Two important points of note:</p>	<p>DL/CD to share Geophysical survey report with the group</p>

Item	Minutes	Actions
	<p>1. It was not possible to reach 100% of the area scoped into the survey due to landowner access (access was prevented at ~25% of the land).</p> <p>2. Because the geographical scope had to be defined early in the project it was based on the work received from PCF Stage 2 and we have had several design iterations since then. As a result, the DCO boundary looks different now and there may need to be further consideration of how gaps can be filled. DL noted that one of the gaps was at Crackenthorpe. Progress has been made with the affected landowner and it is hoped this information gap can be filled.</p> <p>DL noted that anyone who wants to receive the report should let CD know a preferred method of file transfer as the files are large.</p>	<p>once available.</p> <p>ALL to confirm preferred file share method to DL/CD.</p>
4.2	DL awaiting AP & LiDAR report for review and hopes to be able to share with the group soon. Coverage was 500m either side of the 'model freeze A', which is likely to capture most but possibly not all changes that have occurred since (now at model freeze D).	DL/CD to share the AP & LiDAR report with the group once available.
4.3	DL invited questions. LMF asked once the group has considered these reports, specifically AP & LiDAR, can the group raise any issues and feedback? DL confirmed that feedback could be raised but noted that the ability to make changes may depend on the specific issue, programme and budget.	
4.4	PR raised a procedural question about when the data collected could enter the public domain and the Historic Environment Records. DL deferred to JH, who responded that these are likely to remain confidential until the DCO documentation enters the public domain. PR noted that other projects in the area – e.g. works at Scotch Corner – that might benefit from seeing the results early. JH replied that these are normally released into the public domain when the DCO application is submitted, but there may be an opportunity to confidentially provide certain aspects of the work early if specifically requested to do so. This would need to be considered on a case-by case-basis.	
5.0	<p>Discussion of developing design at:</p> <ul style="list-style-type: none"> • Brougham • Rokeby • Carkin Moor 	
5.1	<p><u>Brougham</u></p> <p>DL shared a drawing showing the western part of Scheme 3 between Brougham and Centre Parcs, noting the location of Brougham Castle. DL highlighted how the design interfaced with the scheduled monuments (settlements associated with Roman Forts) at Brougham and a Roman camp, as well as the Countess Pillar, which is also a listed building. The proposal shows an accommodation overbridge that allows a farmer to retain access between land north and south of the A66 (as current access via an underpass will no longer be viable). The overbridge uses the</p>	

Item	Minutes	Actions
	<p>existing cutting here with access tracks to the north and south. In the south, this access would be supported on embankments built up, which may impinge on the scheduled area, and may impact on the setting of The Countess Pillar. DL also noted the need for some temporary excavation to the south of the existing carriageway. DL shared a cross-section of the temporary works proposed.</p> <p>DL invited questions, none raised.</p>	
5.2	<p><u>Rokeby</u></p> <p>DL shared the Webmap with heritage features visible alongside the alignment. A proposal from the landowner (Mortham Estates) has been put forward as they would prefer the road stays on its current alignment with changes to the turning to Barnard Castle. DL noted this is a very tight junction and there have been accidents resulting in collisions with the listed railings and gate in this location. Mortham Estates has proposed an off-slip road further west that would reconnect with Barnard Castle road later. DL noted that the team is discussing the historic environment effects of the evolving scheme with designers, but acknowledges that there are notable arguments in favour of it on the grounds of safety and severance.</p> <p>DL invited questions. LMF asked for clarification that Mortham Estates proposal is for the route to stay online at the grade II listed church with a new access cutting across the access to the church and the Rokeby park and garden access. DL confirmed correct. LMF asked if this would impact on the non-designated vicarage and DL confirmed that it would require demolition of the rectory. DL noted that this alternative was not currently under active consideration and is noted to this group for information only. BH noted the DCC stance would likely not support the Mortham Estates proposal given the potentially important link between the church and the rectory. BH also noted from memory only one incident between a vehicle and the listed walls. DL acknowledged the DCC approach.</p> <p>LMF noted that Historic England position would likely agree and would not support cutting across the park and garden to rearrange the junction. LMF also noted that Historic England has given advice previously on an option similar to this alternative proposal, noting that the heritage impacts could be significant.</p>	
5.3	<p><u>Carkin Moor</u></p> <p>Would have been included in the public information brochure but was not as developed at the time. The aim is to allow traffic coming up Warren Lane to access the new A66 rendering the current arrangements to allow traffic to turn right across the dual carriageway unsafe. The proposals would avoid the scheduled monument, but pass around and quite close to it. There would also be other design elements such as attenuation ponds, so the group may wish to consider this location more closely as the proposals evolve.</p> <p>DL noted that the new carriageway would be within the existing cutting other than impinging slightly on the scheduled monument, as the route exits west of the fort and turns northwards (by a matter of a few metres).</p>	

Item	Minutes	Actions
	DL invited questions, none raised.	
6.0	Archaeological trenching	
6.1	<p>To provide some ground truthing on the AP & LiDAR, trenching is proposed across the project. Outline trenching plan is being developed and expressions of interest being invited from sub-contractors. To confirm the approach is appropriate and in line with our evidence plan, DL recommends a separate meeting with the group to discuss trenching soon. To meet the project deadlines, trenching would ideally need to start in April 2021, which will be challenging given procurement timelines. DL asked when it would be suitable to discuss the trenching strategy. PR noted that it would be useful to have sight of plans beforehand and asked if there were any off-route areas that might need trenching, such as areas for ecological mitigation. On the point of ecological mitigation, DL noted that this is being developed at the current design stage (model freeze D) and we need a particular approach to trenching that might require two batches - one for the road scheme and the other for mitigation locations. Mitigation will develop over time so may be worth doing this slightly later in the programme.</p> <p>JH asked if the team was aware of the archaeological framework standstill letters issued yesterday. Rather than individual tenders for archaeological fieldwork it may be more appropriate to appoint through the framework. DL and JH to consider this approach further.</p> <p>MB asked if there might also be the same (~25%) land access issues for trenching. Concern around informal EIA scoping report which noted there may be no geophysics or evaluation in some areas – is the geophysics something that the team will continue to work on? DL replied that the intention is to complete geophysics across the project. Land access issues for non-intrusive work are mostly resolved now, but will need to be renegotiated for intrusive surveys. DL noted 100% access is very unlikely, and time taken to negotiate may mean trenching would continue beyond the DCO submission (resulting in an addendum). DL asked for attendees to consider the level of completion that is likely to be acceptable for further discussion in this forum. MB noted that the geophysics would provide reassurance and could also inform the trenching strategy. The more geophysics coverage the better to minimise the risk of sub-surface discoveries late in the programme.</p> <p>DOM asked if there would be consideration of a single geoarchaeological model of the route between geophysics and trenching, to frame the discussions and give indication of deposits that could be encountered project-wide. DL noted trenching needs to be done quickly and the GI won't report until May. So trenching may be used to feed into GI model. DOM noted that this could be perceived as the wrong way around. Drift geology needs to be considered in terms of geophysics. DOM suggested contacting a geoarchaeologist to understand what could be done this year – this is a region where a lot of work has been done and there are people with a lot of experience.</p> <p>LMF queried if any of the county archaeologists or Amey/Arup have a general sampling strategy for trenching, as requirements</p>	DL/JH to catch up on framework.

Item	Minutes	Actions
	<p>may differ. DL agreed and would like to arrange a meeting to discuss as soon as possible.</p>	<p>DOM to send contact details to DL/CD. DL to contact</p>
7.0	Discussion	
7.1	No additional discussion.	
8.0	Next meeting	
8.1	<p>DL suggests email exchange between those interested in trenching, with follow up call to be arranged. MB noted it would be useful to see the geophysics prior to this meeting. DL noted that the geophysics report does not provide much additional information although there are points to note at Brougham. DL reiterated for the group to confirm preferred method of data sharing. CD to circulate meetings and recordings in due course. The next full TWG will be approximately in one months' time.</p>	<p>ALL CD to circulate minutes and recording.</p>

Minutes of Meeting

A66 NTP

Heritage Technical Working Group 2

Purpose of Meeting Heritage Technical Working Group – Meeting 2.

Location: MS Teams

Time/Date: 12-03-21 at 11:00-12:15

Attendees: ██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup
 ██████████ (JK) – A66 Heritage Topic Deputy at Amey/Arup
 ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
 ██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup
 ██████████ (MB) – Historic Environment Lead at Cumbria County Council
 ██████████ (BH) – Conservation Officer at Durham County Council
 ██████████ (AD) – Inspector of ancient monuments for the North West at Historic England
 ██████████ (EM) – Conservation Officer at Eden District Council
 ██████████ (JH) – Principal Cultural Heritage Advisor at Highways England
 ██████████ (LM) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66
 ██████████ (DOM) – Inspector of Ancient Monuments and Lead Science Advisor at Historic England and primary science advisor for A66
 ██████████ (EP) – A66 EIA Support at PINS
 ██████████ (PR) – Principal Archaeologist at North Yorkshire County Council (also covering Richmond District Council)
 ██████████ (JP) – Historic Environment Officer at Cumbria County Council
 ██████████ (AC) – Infrastructure Planning Officer at Cumbria County Council
 ██████████ (VA) – Heritage Schools Programme Officer for NE England Historic England

Apologies: ██████████ (MS) – A66 EIA Lead at PINS
 ██████████ (KW) – A66 Environment Lead at Amey/Arup
 ██████████ (DM) – Principal Archaeologist at Durham County Council
 ██████████ (TE) – A66 Environment Advisor at Highways England

Circulation: All

Item	Minutes	Actions
1.0	Apologies and Introductions	N/A
1.1	CD to follow up with Richmond Council.	

Item	Minutes	Actions
	<i>Post meeting note: CD has followed up with Richmond Council to invite attendance again.</i>	
2.0	Research Agenda	
2.1	Historic England requested an update on progress with the research agenda. DL informed the group that the project team have raised an early warning with Highways England, and funding is to be agreed. LM has provided A303 DAMS report as an example, which contains a detailed archaeology mitigation strategy.	
2.2	LM asked JH to update on progressing this given A66 will be considered as exemplar in future, and noted that the research agenda is critical. DL is working up a cost for Highways England. LM noted this needs to be addressed ASAP and Historic England sees this as a critical item. It should be pushed up the agenda of Highways England and Amey/Arup. LM noted that this will also be raised today at a meeting between Historic England and Highways England, which [REDACTED] from Historic England will attend. JH is aware [REDACTED] is attending and agrees with LM on the need to progress the research agenda. LM added that she wants to avoid this not being done early enough. JH agreed and added he is keen to avoid unexpected costs relating to heritage. DL to update LM ASAP. LM said Historic England would be happy to give advice on what they would expect to see in this – A303 is a good example but LM is also happy to discuss further.	DL to finalise fees for JH and update LM ASAP.
2.3	The group discussed the timeline for the research agenda, which DL noted will not be done ahead of the ES. LM asked about timescales for when this could be achieved and DL replied based on previous discussions this may be an iterative process as knowledge increases. A few weeks possible depending on [REDACTED] availability. [REDACTED] PhD, FSA, FSA Scot, MCIfA is an independent Archaeological Consultant and Research Associate in the Dept of Archaeology at the University of York. Until June 2016, he was Head of Research Policy (Roman Archaeology) for English Heritage and latterly Foresight Coordinator for Historic England.] PR – agrees with LM, [REDACTED] is a good choice to carry out this work. DL proposed that first draft would be reviewed by members of the TWG to identify any gaps, and would welcome suggestions of who could help fill any gaps that may be identified given there are some medieval aspects at scheme 3 that may need further discussion.	
3.0	Designated Funds Opportunities	
3.1	DL gave a general introduction on designated funds, stating they are separate pots of money from other Highways England funding to deliver lasting benefits. CE has more detailed notes on designated funds from Highways England, TE has said these could be shared. DL noted applications for designated fund ideas are welcome from all – ideas must be able to be completed by end of RIS 2 (31 March 2025). CE shared link to Highways England guidance: [REDACTED]	CE to share notes on designated funds.

Item	Minutes	Actions
3.2	<p>JH added that in RIS 2 funds are linked to Highways England's metrics. Metrics for heritage apply mainly to heritage assets that are within Highways England's ownership – whereas in RIS 1 money (£300K) was given to wellington Monument in Somerset as it can be seen from the M5, despite being owned by the National Trust as it is seen as an important landmark. Highways England are still doing this kind of designated fund idea but the emphasis has changed to projects that involve assets within Highways England's ownership – E.G. milestones on the strategic road network would go through without any difficulty, whereas grants to repairs of a stately home that can be seen from Strategic Road Network but are not within ownership are less likely to go through (particularly if for large scale funds). However, for smaller amounts, it is likely to be easier to persuade the funding committee, E.G. if the setting is affected Highways England could contribute towards this.</p> <p>JH gave example from RIS 1 that may also be applicable to RIS 2. On the A14 scheme, Homes England asked if Highways England wanted to contribute towards a new headquarters building, they were constructing that would have an exhibition space for post excavation work that people can visit.</p> <p>DL welcomes comments on initial ideas from JH and ideas from the group.</p> <p>VA added that she is still new to the project, but working with teachers, exploring heritage along the route could be good options and could be in partnership with other groups. VA will get back to DL with any ideas.</p> <p>JH noted that applicants are more likely to get funds for physical ideas.</p> <p>BH asked JH to clarify the revised approach to only funding ideas relevant to Highways England owned assets – would this exclude many ideas? JH clarified that assets not owned by Highways England would not be excluded, just less likely to find favour. BH noted this sounds restrictive.</p> <p>DL shared some examples with the group:</p> <ol style="list-style-type: none"> 1. War memorial refurbishment: where some conservation is needed. One example is the memorial hall in Kirby Thore, which is not a traditional war memorial. The local playing field is also part of this. DL has not spoken to the Parish Council yet on if/what refurbishment is needed but the idea fits. This could also include work with the war memorial trust. JH asked if the A66 runs past these memorials. DL noted that Eamont Bridge is offline but not far. Penrith and Appleby are outside RLB but within study area. JH asked if A66 has run past them in the past? Could be a legacy feature of the network, which could be a good argument in favour of this idea. The Kirby Thore Memorial Hall is on the road leading to British Gypsum site, very close link to A66. 	<p>VA to send any designated fund ideas to DL.</p> <p>CE to find out which information</p>

Item	Minutes	Actions
	<p>JH noted that if a site is affected by the road now or was affected by the road in the past then there is a very good case for restoring them.</p> <p>EM asked how the group can gather information on which assets would be affected and which could be targeted. DL asked CE what can be shared. CE to collate and send info out.</p> <p>2. Legionary Road: Replica distance milestones. Care would be needed to distinguish between genuine articles and replicas. Signage at key interfaces with PRoWs would be another possibility and is relevant to how Non-Motorised Users (NMU) might use the route. Art is another possibility around NMUs and PRoW. Innovation through virtual reality or things that can be downloaded ahead of a visit are other possibilities. This could work with the Roman Roads Association. JH agreed this would be a very interesting proposal and there is a lot to be said to helping Highways England customers understand the route – adding that information and signage would not be expensive so would be possible and not difficult.? DL said he will review the possibility of partnering with other organisations that might have funds. JH noted that Highways England are more likely to find favour with an idea if other groups are funding too.</p> <p>This type of idea helps people get a better sense of history and place – JH noted that this is the kind of thing Highways England should be doing and JH would support this. In terms of public art as points could be gained for this if on Highways England land, there is potential for this and an example is on the M5 with the ‘wicker man’ art. Potential for a service station information in North Yorkshire (Scotch Corner) to tell people they are driving on the Roman Road, otherwise may not be noticed. Could then create a trail to highlight to people. DL added that a potential ‘Gateway’ location would be needed for this and Scotch Corner would be good idea and the group could think of an equivalent at the Penrith end too. JH added that going forward Highways England want to provide more digital information to customers and this kind of thing could be integrated with that.</p> <p>3. St Ninian’s Church: currently accessed by a layby and bridleway. The layby being moved but reinstated as part of the project – mitigation will be regarding maintaining access during construction. DL noted that one consideration could be around how to enhance this site once the project is operational. Signage could be included to emphasise unusual/rare medieval activity in the area and could also link to St Wilfred’s Church at Brougham. St Ninian’s is on the heritage risk register.</p> <p>JH agreed that this is very worthy project and would be happy to work with DL to find a way to make this work with</p>	<p>can be shared on assets likely to be affected.</p>

Item	Minutes	Actions
	<p>funding. DL added it is clearly linked to A66 and likely to be inexpensive.</p> <p>Heritage Risk Register – this will also show opportunities along the route but DL notes they are more likely to be difficult to achieve and more expensive. None seem to be owned by Highways England.</p> <p>BH noted potential issues for St Mary’s at Rokeby, as current proposals could benefit the building and help find a use for it. BH notes this could be a good choice for Durham County Council (DCC) but doesn’t seem to meet the requirements outlined by JH so not sure if worth pursuing. LM would support DCC in looking at St Mary’s Rokeby – it is close to the A66 and there is negative road traffic impact on setting and on its use. Could the building be made watertight so it can find a new use? JH suggested if there are legacy issues such as road proximity, which has caused part of deterioration this could have potential.</p> <p>AD raised the Augill site, remains of a Roman signal station, which sits adjacent to lead smelting mill, an important structure but in very poor condition. This has always been a problem in terms of repairs as it is owned by a Wildlife Trust who can’t put money into heritage features. Could be a good idea that this structure be repaired. Could be a joint proposal with the Biodiversity team. DL noted the teams are reviewing own topic opportunities first but experience from A30 showed that multi-disciplinary ideas were well received so this will be looked at.</p>	<p>DL to review designated fund ideas with other topic teams.</p>
4.0	Discussion of developing design at Brougham	
4.1	<p>Design team would welcome inputs to the design here, particularly from Historic England. DL suggested a separate meeting with those for whom this would be relevant. MB noted that any design options to review in advance would be appreciated. AD agreed he would be keen to look at this with DL.</p> <p><i>Post meeting note: this meeting has now been held.</i></p>	DL to arrange.
6.0	Archaeological trenching	
6.1	<p>The Project Team have had a good number of responses to the expression of interest. Top 6 from 13 have been selected and have gone to invitation to tender. Tender documents are being prepared. This does require the project team to agree a scope of works with the TWG members. Development of the design has meant this isn’t ready yet. Could have an interim meeting with archaeological members to discuss. JP agreed with this. LM clarified if this was to agree the scope of works. DL said he wants to agree with the group first before we appoint contractors to get an accurate idea of process/cost as possible.</p> <p>MB, JP, DL, PR, LM, JH to take part.</p>	DL to arrange.
7.0	AOB	
7.1	DL has begun consultation with other organisations such as Milestone Society and the Churches Conservation Trust. Preparing to reach out to the Roman Roads Research Association.	

Item	Minutes	Actions
7.2	<p>MB – raised difficulty accessing the reports Amey/Arup. Asked team to resolve. CD said she has requested a SharePoint site and the project team are working to resolve this.</p> <p><i>Post meeting note: CD and stakeholder team are trialling methods of sharing currently.</i></p>	CD to setup means of data sharing.
7.3	<p>LM – Historic England have some concerns with the geophysics report that need to be addressed ahead of defining the scope for trenching. LM or DOM will provide written comments, generally around the lack of interpretation. DOM noted the accepted guidance hasn't been followed, and the report's own objectives aren't met. Historic England are concerned this could give a false understanding of the sites.</p> <p><i>Post meeting note: LM and DOM have provided comments to DL.</i></p>	LM/DOM to provide comments.
7.4	PR queried the second report that was shared with the group – DL confirmed that this was the LiDAR report.	
7.5	DOM raised geoarchaeological model previously – has any progress been made on this? DL has raised an early warning with Highways England and is investigating if/how to be taken forward and develop process and cost. Geomorphology is part of recommendations and understanding of drift geology would be useful to tie everything together and a project model that could be developed iteratively throughout would be useful. DL suggested something high-level now that could be developed quickly, and then something more detailed that could be developed further later.	DL to look into progress of the geoarchaeological model with Highways England.
8.0	Next meeting	
8.1	<p>The next full TWG will be approximately in one months' time.</p> <p>Next meetings to be arranged for 2 hours and cut back if needed.</p>	CD to circulate minutes.

Minutes of Meeting

A66 NTP Heritage TWG 3

A66 NTP Heritage TWG 3

Purpose of Meeting	Heritage Technical Working Group – Meeting 3.
Location:	MS Teams
Time/Date:	14-04-21 at 14:00-15:55
Attendees:	<p>██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup</p> <p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ - A66 Stakeholder Integration Assistant (Amey/Arup)</p> <p>██████████ – A66 Environmental Deputy at Amey/Arup</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (AD) – Inspector of ancient monuments for the North West at Historic England</p> <p>██████████ (MB) – Historic Environment Lead at Cumbria County Council</p> <p>██████████ (EM) – Conservation Officer at Eden District Council</p> <p>██████████ (TE) – A66 Environment Advisor at Highways England</p> <p>██████████ (JH) – Principal Cultural Heritage Advisor at Highways England</p> <p>██████████ (PR) – Principal Archaeologist at North Yorkshire County Council (also covering Richmond District Council)</p>
Apologies:	<p>██████████ (LM) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66</p> <p>██████████ (JK) – A66 Heritage Topic Deputy at Amey/Arup</p> <p>██████████ (MS) – A66 EIA Lead at PINS</p> <p>██████████ (DM) – Principal Archaeologist at Durham County Council</p> <p>██████████ (BH) – Conservation Officer at Durham County Council</p> <p>██████████ (JP) – Historic Environment Officer at Cumbria County Council</p> <p>██████████ (AC) – Infrastructure Planning Officer at Cumbria County Council</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introductions	
1.1	Introduction to TWG members	
2.0	Evidence and Survey Strategy Document	
2.1	DL noted the current status of the project. A document is being prepared to outline the strategy for the project, including survey techniques and where they will be used. This document should be ready before the next meeting and used for discussion.	DL to circulate document before next meeting.
2.2	DL advised that the team is looking at non-intrusive surveys to fill information gaps in areas which are still undergoing assessment of alternative alignment routes. No re-resurveying of areas already covered is to be undertaken.	
2.3	JH noted the more information the better when it comes to route selection. Despite there being a preferred route (Warcop) the other options should be looked at as it will be factored into further considerations – however, JH cautioned against blanket surveys of large areas as this could be a waste of resources.	
2.4	AD stated that the use of magnetometry could be included in the draft strategy document.	
2.5	MB stated that CCC would wish to see more information on archaeology being considered. CCC has identified in the geophysical survey report a number of features which it would wish to see investigated further.	
2.6	DL requested the views of attendees on use of resistivity as a targeted form of data collection to look for potential settlement sites etc. AD agreed, noting that the technique should not be used over a wide area.	
2.7	DL asked if fieldwalking surveys would be a plausible alternative method. MB noted this has been done previously with mixed results. DL responded that it might be good to use the field survey to identify hotspots. MB advised to time surveys for when fields had been ploughed.	
2.8	MB stated that all Historic England information is now with the Design Team, DL confirmed the GIS data is with them.	
2.9	AW confirmed that the programme needed updating (as it was working until the end of February). DL noted constraints for further geophysical surveys with the window to look at arable fields now closed until the summer. Furthermore, DL stated that trenching will take place.	
2.10	DL invited comments on the strategy document following circulation.	
3.0	Environmental Scoping Report (ESR)	
3.1	DL noted that an informal ESR was circulated last year for comment. ESR will be issued to PINS with a formal EIA scoping request soon. PINS will then formally issue to all consultees.	
3.3	EP noted that as soon as PINS receives the request letters will be issued to the relevant bodies. There is a 30 day consultation period for letters to ensure they arrive.	
3.4	DL noted there have been edits to the ESR cultural heritage chapter since previous issue. The chapter now reflects some of the schemes where alternative alignments are being considered.	

Item	Minutes	Actions
4.0	Further Options Assessment	
4.1	DL provided further context on the project stating that Scheme 4 and 5 are subject to further assessment of alternative alignment routes and Scheme 8 and 9 are considering alternatives to specific design development issues.	
4.2	AW noted that for scheme 6, PINS has provided advice (NPSNN 5.151) relating to the potential for development within the AONB only where an “exceptional circumstances” case can be made.	
5.0	Research Framework and geo modelling	
5.1	DL highlighted that the team is developing a proposal for research to be undertaken. [REDACTED] is being asked to review the knowledge base of the report. He will review regional research frameworks in order to develop a project research framework.	
5.2	PR noted along the route it should be expected that native, Roman and medieval (early and post) archaeology could be found.	
5.3	JH noted from a Historic England view they would want specific research questions and a focus on archaeological investigation at sites that will provide the most value.	
5.4	In regards to geo-archaeological modelling, DL stated there is a proposal ready that could work. The model could better inform what and where trenching should be used.	
5.5	DL advised that as a result of the return to alternative alignments assessment for some schemes the programme for ground investigation (GI) has changed. There might be an opportunity to obtain focused archaeological data that would supplement the information for the scheme wide GI.	
6.0	AOB	
6.1	MB raised the question of gaps in the geophysics and if there is further information related to the works compounds of their activity, and how they will be assessed. DL noted that the Model Freeze D design does identify soil placement areas and compounds within the indicative DCO boundary. This is not confirmed for schemes 4,5 and 6 where the design has returned to option appraisal.	
6.2	JH agreed there are some gaps and need to avoid a situation of locating soil placement where the route has been careful to avoid archaeology. The heritage team will communicate with other teams regarding this.	DL to liaise with design teams in S4/5 and S6
6.3	DL raised the concern around schemes 4, 5 and 6 where alternative alignments are still being considered and there may not be sufficient time for for trenching to take place. JH noted that trenching would not likely be needed nor would landowners be amenable to it on their land if the land was not subsequently required for the project. It was however noted that if an alignment goes through an area of substantial interest to the heritage team and, for example, preservation in situ is proposed, trenching may need to be revisited if required to assist in understanding the viability of the proposed design solution.	
6.4	MB agreed and advised that south of Kirby Thore has little investigations historically and could warrant early consideration.	
6.5	DL confirmed th team is working to fill the information gap associated with the hitherto inaccessible land south east of Kirkby Thore .	

Item	Minutes	Actions
6.6	In regards to future meeting formats with LA's it was suggested that a timed 'drop in' session could be used to avoid some officers being sat through long meetings that may not relate to them, or, a few larger less frequent meetings in place of smaller more frequent.	
6.7	CD confirmed they would forward the meeting programmes and will share agendas in advance of the meetings.	

Minutes of Meeting

A66 NTP Heritage TWG 4

A66 NTP Heritage TWG 4

Purpose of Meeting: Heritage Technical Working Group – Meeting 4.

Location: MS Teams

Time/Date: 08-06-21 at 10:00-11:30

Attendees:

- ██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup
- ██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
- ██████████ (AD) – Inspector of ancient monuments for the North West at Historic England
- ██████████ (JH) – Principal Cultural Heritage Advisor at Highways England
- ██████████ (LM) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66
- ██████████ (DOM) – Inspector of Ancient Monuments and Lead Science Advisor at Historic England and primary science advisor for A66
- ██████████ (EP) – A66 EIA Support at PINS
- ██████████ (PR) – Principal Archaeologist at North Yorkshire County Council (also covering Richmond District Council)
- ██████████ (JP) – Historic Environment Officer at Cumbria County Council
- ██████████ (DM) – Principal Archaeologist at Durham County Council
- ██████████ (PW) – Independent Consultant on behalf of Amey/Arup
- ██████████ (LJ) – Senior Infrastructure Planner at WSP on behalf of Eden District Council
- ██████████ (AW) – A66 Environmental Deputy at Amey/Arup
- ██████████ (PS) – Conservation Officer at Eden District Council
- ██████████ (BH) – Senior Conservation Officer at Durham County Council
- ██████████ (EM) – Principal Heritage Consultant for Eden District Council and Cumbria County Council
- ██████████ (NP) – Regional Lead at WSP on behalf of Eden District Council
- ██████████ (CM) – Heritage Topic Support at Amey/Arup

Circulation: All

Item	Minutes	Actions
1.0	Introductions	N/A
1.1	Introduction for new attendees (LJ, EM, PS, NP, and CM).	
1.2	DL introduced TWG 4 agenda.	
2.0	Research Framework	
2.1	PW presented his work on the forthcoming Research Framework (RF). PW is focusing on making the RF appropriate for the area of investigation in respect to its time depth. Needs to identify key	

Item	Minutes	Actions
	issues, including but not limited to the incorporation of social history, to provide adequate context for what is being investigated. To this end, PW proposed identifying a series of “key themes” (e.g., “Transport and Trade”) that run through various or all time periods.	
2.2	PW is currently taking information already identified in existing RFs for the Northwest and Northeast, and comparing against results from archaeological investigations and the Historic Environment Record to create a structure that will identify the “key themes”.	
2.3	LM responded positively to “key themes” approach, as it can be applied to WSIs as they are developed by archaeological contractors. These would also help with public engagement, which is a key benefit.	
2.4	JH suggests looking at RF that was developed for A428 scheme, as consistency across similar RFs would be ideal.	PW to liaise with [REDACTED] from A428 project
2.5	DOM also responded positively to idea of “key themes,” especially as a tool for directing the archaeological investigations and highlighted that these should be agreed upon soon. Also underlined the need for consistent methods and approaches for the archaeological investigations (i.e., for sampling strategies, artefact policies, etc.) based on the nature type of material/features expected.	PW, DOM, and DL to meet to discuss developing a basic framework based on archaeological investigations in the area
2.6	PR noted that learning from earlier phases of work along the A66 will be helpful. Also highlighted the potential for evidence relating to industrial activity, not just trade and transport, along the road.	
3.0	Option Appraisal – Kirkby Thore and Warcop	
3.1	DL presented the current options to be taken to appraisal, comprising three options around Kirkby Thore (two variants on preferred route selected at Stage 2 and third is following existing A66) and options around Warcop (approximately 50% of scheme is common to preferred route selected at Stage 2, and options being assessed are located in the centre and east of the scheme).	
3.2	DL showed the route options on webmaps. Around Kirkby Thore, three were shown: <ul style="list-style-type: none"> • Blue – preferred options, circumvents Kirkby Thore to west and north before re-joining A66 north of Appleby • Red – proceeds further to east and north from Blue alignment to the east of Kirkby Thore • Orange – principally online with A66, with access to British Gypsum plant north of Kirkby Thore and other alignments to improve access, junctions, etc Highlighted areas in common between all routes, primarily to the southeast of Crackenthorpe and the northwest of Kirkby Thore.	
3.3	LM inquired about the orange route lines around the Scheduled Monument south of Kirkby Thore (DL stated they are likely to be junctions). DOM and AD note that this area will likely have high amounts of archaeology, and that areas of the orange route will also encounter areas that have not been as highly impacted as those along the existing road.	
3.4	DL also presented scheme options around Warcop on webmaps:	

Item	Minutes	Actions
	<ul style="list-style-type: none"> Blue – pushed north of current carriageway, less than 100m or so Black – roughly stays online with existing A66 route Orange – pushes to the south of the existing route, approximately 300m 	
3.5	<p>JP raised that previous archaeological investigations on the A66 (unpublished but on the HER) found Roman burials beneath the existing carriageway. Suggests it will be good to get a scope on the online routes to address how these would be evaluated.</p> <p>DL confirmed knowledge of these previous investigations and agreed that online routes will be difficult to access, but no work specific to this issue has been done yet.</p> <p>DOM notes that having a project position on human remains clearly stated the RF would be helpful in this instance.</p>	
3.6	<p>LM asked about other environmental and economic issues that are being considered that may affect historic environment concerns. DL and AW outlined concerns held by Natural England regarding impacts to the Trout Beck river and the floodplain, particularly the embankments needed by the Stage 2 design. Thus, ecological and biodiversity impacts are very much being considered in addition to the historic environment, especially in regard to the orange option which comes into close proximity to both the Scheduled Monument but also to the River Eden.</p>	
4.0	Evidence and Survey Strategy	
4.1	<p>DL apologised for late delivery of the document and proposes that an overview be presented today followed by a more in-depth meeting to follow in 10-14 days.</p>	<p>Attendees to comment on document and regather</p> <p>CD to circulate potential meeting times for WC 21 June. Include PW, though he may not be available</p>
4.2	<p>The strategy will utilise a multi-strand approach to provide the most robust evidence base to support ES. Major constraints will be land negotiations/access and the ES timetable.</p>	
4.3	<p>A mix of intrusive and non-intrusive techniques will be used:</p> <ul style="list-style-type: none"> Additional geophysics – balance of land not surveyed in phase 1 and all route option corridors in S4/5 and S6 <ul style="list-style-type: none"> Magnetometry will be used to fill in blank areas, including survey within all option corridors in Kirkby Thore and Warcop (though noted this may not be helpful with online options) More detailed geophysics using resistivity in a number of areas identified where this would be valuable Review of topographical drone data and refreshed remote sensing report. <ul style="list-style-type: none"> Will need to check coverage, as the parameters set for the corridors captured everything at Warcop but 	

Item	Minutes	Actions
	<p>not the middle portion of the online route at Kirkby Thore</p> <ul style="list-style-type: none"> ○ AP library visits at Swindon and Cambridge to be undertaken when they are open ○ Additional HER information to be added ● Fieldwalking for artefact collection <ul style="list-style-type: none"> ○ Given the timing, will likely be undertaken as soon as preferred routes are selected (October-November) ○ Will also consider how to fit this in alongside trial trenching ● Trial Trenching <ul style="list-style-type: none"> ○ Looking to appoint contractors for S1-3 in Cumbria and 7-9 in Yorkshire/Durham ○ Aiming to commence works on site at end of July 	<p>Further consultation with the TWG will be required as Written Schemes of Investigation are produced</p>
4.4	DL outlined challenges posed by Option Appraisal at Kirkby Thore and Warcop – preferred route will not be selected in time to include results of the trial trenching in the ES.	
4.5	DOM highlighted concerns about the quality of the previous geophysics report, mainly surrounding missed remains and the interpretations. Also noted that the Heritage Evidence Strategy Document needed to clarify the differing outputs among geophysics methods. Finally noted that areas selected for fieldwalking must consider the geomorphology of the landscape (i.e., presence of colluvium/alluvium obscuring features, etc.).	DOM, DL, and contractor to speak about the existing geophysics data/report and next steps
4.6	LM inquired regarding the building assessment of the Old Rectory at Rokeby and when that will be undertaken. DL responded that it is currently on hold until issues between landowner and Highways England are resolved. A photographic portfolio has been provided so a desk-based exercise may be produced in the meantime, with the results appropriately caveated.	
4.7	JP inquired about whether information was yet available for compounds and construction infrastructure, and whether there was sufficient time to include this in the geophysics. DL said that they are included for S1-3 and 7-9 but not where Option Appraisal is going forward. AW stated that SRM is involved and working on options for all routes. Likely will need to conduct geophysics surveys over the entirety of the 250m corridor as there is not enough time to draft the red line boundary.	DL to supply a figure of HER information overlying trench locations
6.0	Geoarchaeological Modelling	
6.1	Scope of service and invitations to tender are ready to be issued to contractors this week with work to commence in July. Output is expected in time to support ES and will potentially be available in time for fieldwalking but not for the first round of trial trenching.	
7.0	AOB	
7.1	No other business raised.	
8.0	Next meeting	
8.1	Meeting will be scheduled for w/c 21 st June to discuss Evidence and Survey Strategy in more detail.	

Item	Minutes	Actions
8.2	Minutes for TWG3 and TWG4 will be circulated.	CD to circulate minutes.

Minutes of Meeting

A66 NTP

Heritage Technical Working Group

Purpose of Meeting	Heritage Technical Working Group – Discussion of key PEIR findings.
Location:	MS Teams
Time/Date:	18-08-21 at 14:00-16:00
Attendees:	<p>██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup</p> <p>██████████ (CE) – A66 Environmental Stakeholder Relationship Manager at Amey/Arup</p> <p>██████████ (AD) – Inspector of Ancient Monuments for the North West at Historic England</p> <p>██████████ (JH) – Principal Cultural Heritage Advisor at Highways England</p> <p>██████████ (LMF) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66</p> <p>██████████ (DOM) – Inspector of Ancient Monuments and Lead Science Advisor at Historic England and primary science advisor for A66</p> <p>██████████ (PR) – Principal Archaeologist at North Yorkshire County Council (also covering Richmond District Council)</p> <p>██████████ (JP) – Historic Environment Officer at Cumbria County Council</p> <p>██████████ (DM) – Principal Archaeologist at Durham County Council</p> <p>██████████ (LJ) – Senior Infrastructure Planner at WSP on behalf of Eden District Council</p> <p>██████████ (AW) – A66 Environmental Deputy at Amey/Arup</p> <p>██████████ (EMu) – Principal Heritage Consultant for Eden District Council and Cumbria County Council</p> <p>██████████ (MB) – Historic Environment Lead at Cumbria County Council</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (SBB) – A66 Heritage Topic Support at Amey/Arup & minutes</p> <p>██████████ (TE) – A66 Environment Advisor at Highways England</p>
Apologies:	<p>██████████ (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (EP) – A66 EIA Support at PINS</p> <p>██████████ (PS) – Conservation Officer at Eden District Council</p> <p>██████████ (EMa) – Conservation Officer at Eden District Council</p> <p>██████████ (BH) – Senior Conservation Officer at Durham County Council</p> <p>██████████ (PW) – Independent Consultant on behalf of Amey/Arup</p> <p>██████████ (NP) – Regional Lead at WSP on behalf of Eden District Council</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introductions	N/A
2.0	Purpose of Meeting - Key PEIR Findings	
2.1	<p>CE – PEIR is going through review process, but we are not expecting drastic changes. This meeting is designed for the dissemination of information. Mitigation workshops are planned, where various environmental specialists from the project team will present the mitigation proposals to allow an ‘in the round’ discussion in advance of statutory consultation (stat con).</p> <p>DL – This meeting will be a run through using the web mapping – moving west to east, to run through key findings from the PEIR.</p>	
2.2	Scheme 1-2 - M6 J40 to Kemplay Bank	
2.3	<p>DL gave an over of schemes 1 and 2, noting they have now been combined into a single scheme given their proximity.</p> <p>The heritage team are not expecting any significant effects around the M6 J40, but there will be temporary impacts at two locations – Carleton Hall & Toll Bar Cottage - associated with construction activities in close proximity. No significant permanent construction or operational effects anticipated.</p>	
2.4	Scheme 3 – Penrith to Temple Sowerby	
2.5	<p>DL – The heritage team have identified physical impacts on a number of assets including the Scheduled Monument (SM) at Brougham, from the construction of the overbridge for the landowner. It was agreed that this will need a conversation with AD to discuss the potential impacts and appropriate mitigation.</p> <p>The approach has been to identify where there are assets within the overall DCO boundary, and then identify if they are within the engineering boundary, where physical impacts are fairly certain, or the environmental mitigation boundary, where impacts may or may not be present or significant.</p> <p>DOM – to clarify, it’s to differentiate between where there will be impacts and where they might be impacts.</p>	DL to arrange meeting with AD RE Brougham SM
2.6	<p>EM – On the web mapping shown, is that just the HER shapefiles or also other identified assets?</p> <p>DL – clarified it’s only HER / designated data, not the remote sensing or geophysical impacts.</p> <p>EM – Have impacts on other assets have been assessed too?</p> <p>DL – Confirmed this has occurred.</p> <p>EM – How has the value of any potential archaeology assessed?</p> <p>DL – Precautionary approach taken and where judged appropriate low or moderate value assigned, which may change after evaluation, etc.</p>	
2.7	<p>AD – Raised the concern that mitigation for other environmental effects could introduce a harmful effect for archaeology. Would have hoped for a process that avoided such conflicts.</p> <p>DL/AW – The mitigation is still fluid, and the project will use the design process to help to drive out conflicts. Ongoing surveys will help by providing better understanding of the historic environment. The DCO boundary for PEIR is a worst case and is expected to reduce at ES.</p> <p>JH – It’s an evolving design process, with different disciplines having clashing designs, which will be resolved through the design</p>	

Item	Minutes	Actions
	<p>process. The process of PEIR is to give all the consultees an early look at what all the issues are, so they can contribute to a resolution through the design process.</p> <p>AD – Encouraged to hear that and will keep an eye on it whilst the process develops.</p> <p>DOM – Observed that small engineering change can be the difference between a light touch for archaeology and something more significant, so good to see the preliminary design, and to be mindful of that.</p> <p>DL – The PEIR and statutory consultation is designed to flag such things up. But noted there can be a limited scope for change in some areas of the road scheme, with knock on effects elsewhere & with other disciplines.</p>	
2.8	Scheme 4-5 Temple Sowerby to Appleby	
2.9	<p>DL – PEIR is looking at three options for this scheme: Blue, Red & Orange. DL briefly outlined the routes taken by each options. For this presentation Blue is being presented as the base scheme. with impacts from the other options identified where they differ.</p> <p>AW – also worth noting that it is intended to present a preferred option at stat con.</p> <p>Scheme 4-5 Blue</p> <p>DL outlined the potential for physical impacts on a number of assets.</p> <p>The Blue design comes very close to the SM Roman camp at Redlands Bank the mapped extent of which is not correct. (DL shared images of mapped extent of SM and transcribed Lidar data). Short lengths of bank, tituli, lie in front of the camp and are not included in the scheduled area. The present road design crosses at least one of these features, with impacts on others anticipated. Designers were not aware of these features as they came to light only when it was noted that scheduled area did not fit the LiDAR. This has been assessed for PEIR & statutory consultation.</p> <p>AD – Clear we’re in a situation where undesignated but nationally important features are present.</p> <p>DL – We have treated these areas as part of the SM for assessment (supported by AD). The design will be developed with this in mind.</p> <p>AW – There is a section in the PEIR introduction about this type of scenario and that the developing design process will review this.</p> <p>TE – Does the PEIR explain the process of designing out impacts? Or that it is the worst case scenario?</p> <p>DL – We have taken a worst case scenario.</p> <p>EM – A broader question, is there a wider cumulative assessment of the impacts along the road? If there are small impacts all along the scheme this can be more significant.</p> <p>AW/DL – Our approach for cumulative assessment would be the A66 + other developments, rather than the cumulative along the A66.</p>	<p>DL - note heritage cumulative impacts question and pass this on to [REDACTED]</p>

Item	Minutes	Actions
	<p>DOM – Cumulative impacts is where PW’s research doc will be useful as it treats the scheme as a whole. Will help with this issue and focus resources where they can be best used.</p> <p>EM – does the current A66 stay online? And are there any setting impacts from creating an ‘island’ between the routes?</p> <p>DL – The A66 does stay online. Haven’t specifically looked at it from that perspective, noting one such feature is the bridleway on the Roman Road to Kirkby Thore.</p> <p>CE – Setting impacts come up more around Scheme 6, but from more of a landscape perspective around the Area of Outstanding Natural Beauty but hasn’t been looked at from heritage.</p> <p>EM – What about churches and intervisibility?</p> <p>DL – Church intervisibility may be something to look at. Noted that the offline options have the greatest impacts on the landscape although substantial portions of the offline options are in cutting, but with embankments and a viaduct over Trout Beck. Options have been limited by land stability constraints and crossing points of the Trout Beck.</p>	
2.10	<p>Scheme 4-5 Red</p> <p>DL noted that the same effects are present where the scheme is common with Blue. No effect on the Redlands Bank camp. Impacts from environmental mitigation on non-designated earthworks at Long Marton & a sub-circular enclosure may not have impacts, but if they do it will be moderate significance. Design process may drive it out the likely significant effect.</p>	
2.11	<p>S4-5 Orange</p> <p>DL summarised the likely impacts from the Orange option.</p> <p>EM – The impacts assessed so far are based on the scheme overlying assets or have changes in hydrology been factored in or assessed?</p> <p>DL – As we don’t yet know what deposits are present and what impacts likely we can’t yet say. If the geoarchaeological model shows this a possible issue, we may have to return to question for ES.</p> <p>DOM – The geoarchaeological model will highlight the deposits and what impact the hydrology will have on any assets. A conversation to be had.</p> <p>DL – Noted that major changes with the Trout Beck will also not sit well with other disciplines.</p> <p>DOM – Agreed.</p> <p>DL – In short, heritage aspects of hydrology not assessed for PEIR, and to be discussed for the ES.</p>	
2.12	<p>Scheme 6 - Appleby to Brough</p>	
2.13	<p>DL described the three options and the small number of likely significant effects in Scheme 6.</p> <p>MB – Geophysics isn’t clear at the site of the prehistoric monuments, the barrows and now missing stone circle (ring cairn), so evaluation and understanding the level of disturbance is needed.</p> <p>DL – Confirmed it’s a precautionary likely significant effect but is being looked at for evaluation.</p>	

Item	Minutes	Actions
	<p>MB – Confirmed there is a knowledgeable and active individual in the local archaeological community. The ring cairn site, close to the barrows, is recorded by the HER to north of A66 but location can't be trusted and geophysics is blank, so could be anywhere.</p> <p>DL – In the east of the Black route, the engineering boundary brings in a listed boundary stone. Will have to be removed, kept safe, and then replace as close as possible to current location. Assessed a likely significant effect, but possibly less so post-mitigation. Comments invited on this approach.</p> <p>EM – Has seen and approved this approach for other schemes.</p> <p>DL – Confirmed the heritage have been engaging with the Milestone Society, with no concerns expressed by them, and attempting to engage with them for designated funds for betterment.</p>	
2.14	Scheme 7 - Bowes	
2.15	<p>DL described the proposed route and likely significant effects on the setting of Stonebridge Farm, with a proposed junction to the east of Stonebridge and the disused Bowes Railway station.</p> <p>LMF – Recalled impacts to non-designated barrows at the western end. Is that no longer an impact?</p> <p>DL – The snapshot for PEIR has the barrows outside of the project boundary, near a balancing pond, but if the pond moves that would be a concern, but assessed as is for PEIR. Note there are quarries within the DCO boundary, which are expected to have removed prehistoric evidence in their footprint.</p> <p>DOM – RRRRA thinks the Roman road from Barnard Castle lies more to the south.</p> <p>DL – The older projected line of the road is to the south, but RRRRA thinks may lie to close to the farm but hasn't been plotted. Not a likely significant effect at the moment, but if the trenching picks it up this may change.</p> <p>There is possibly another road that's not included as it's more a hypothetical route. But roads are on the radar for the trenching & further geophysical surveys.</p>	
2.16	Scheme 8 – Cross Lanes to Rokeby	
2.17	<p>DL described the three options assessed for PEIR, Black (the preferred option from Stage 2) , Blue and Red.</p> <p>CE / DL – Confirmed there can be a combination of colour options for the junctions.</p> <p>DL – Black will see a likely significant effect for Cross Lanes Farm (reduced if Blue option adopted). Two milestones, one at the western end and one about mid-way along the route, will be impacted. Both are within the engineering boundary, and as per the boundary stone in Scheme 6 it is proposed to remove and then reinstate them as close of possible.</p> <p>The Black option at Rokeby will have effects on the setting of Rokeby Park and St Mary's Church. The Red option will have a lower impact on St Mary's Church, but a greater impact on the RPG. A likely significant effect will result from either option.</p> <p>Key things for PEIR: both options will have a likely significant effect.</p>	

Item	Minutes	Actions
	<p>CE – To check if the boundary is correct at Rokeby Grove, as it shows earth movement on the design.</p> <p>RK – From a meeting with Pinsent - Rokeby is very much on the radar with difficulties with Likely Significant Effects from all options. Took an action to see precedents for impacts on RPGs, and conversations with Highways England are happening. Might help shape thinking beyond the PEIR.</p> <p>LMF – When looking to have a discussion around the impacts, will Durham (CC) also be included? Will be beneficial to have a round table discussion.</p> <p>CE – To clarify, as has also been queried about having a landscape architect present.</p>	<p>CE – check if the boundary is correct at Rokeby Grove</p> <p>RK – Check with Highways England for precedents for impacts on RPGs</p>
2.18	Scheme 9 – Stephen Bank to Carkin Moor	
2.19	<p>DL - preferred route goes through the SM at Carkin Moor. The engineering design is such that it can't get through the existing gap without further impacts, the road surface has to be elevated with an embankment construction, with sections needing to be taken from the scheduled area. Design proposals sent to PR and LMF.</p> <p>CE – Confirmed sent by ██████ in July, as technical note, LMF / PR to comment where needed.</p> <p>DL – A likely significant effect on non-designated remains of a roadside settlement, recorded at Mainsgill, extent of remains to be confirmed by evaluation</p> <p>A non-designated milestone west of Carkin Moor fort will be removed and relocated.</p> <p>PR – A scheduled area, with non-designated area of remains, is probably a continuum to be treated as a whole, with much more likely. Treat whole area of the route as a continuum of potential Roman archaeology.</p> <p>DM – No comments in addition to PR.</p>	
2.20	Scheme 11- Scotch Corner	
2.21	<p>DL - No likely significant effects identified.</p> <p>At last review, the DCO boundary was slightly smaller. Assured that works are restricted to existing highway boundary.</p>	
3.0	AOB	
3.1	<p>MB – Believed ██████ submitted brief comments on rationale of trench locations. Wessex WSI for Schemes 1-3 (from ██████ went direct to ██████, want to check others at Historic England have received it.</p>	<p>DL – check with JK and ensure WSIs are issued to all at HE.</p>
3.2	<p>JP – Up-coming meetings re mitigation, will they provide any further info than we've had today?</p> <p>CE – Looking to have representatives from the historic environment present to comment when other disciplines input on their mitigation, so a conversation can happen in the round. Being done based on local authorities over several sessions.</p> <p>JP – Raised that there may be a more effective way of doing it.</p> <p>CE – Stated that comments can't be addressed for PEIR, but they will be acknowledged and taken forward for ES. Meetings are</p>	

Item	Minutes	Actions
	being done in advance of statutory consultation, as an advance 'heads up' to talk through issues and explain approach.	

Minutes of Meeting


A66 NTP

Heritage TWG 6

Purpose of Meeting	Update for Statutory Consultees
Location:	MS Teams
Time/Date:	2 nd November 2021 at 10.30 to 12.30
Attendees:	<p>██████████ (CE) – A66 Environmental Stakeholder Manager at Amey/Arup</p> <p>██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup</p> <p>██████████ (VD) – A66 Heritage topic support at Amey/Arup</p> <p>██████████ (LM) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66</p> <p>██████████ (DO) - North-East Science Advisor at Historic England</p> <p>██████████ (AD) - North-West Principal Inspector of Ancient Monuments at Historic England</p> <p>██████████ (MB) – Lead Officer Historic Environment and Commons, Cumbria County Council</p> <p>██████████ (DM) – Principal Archaeologist, Durham County Council</p> <p>██████████ (JH) – Principal Cultural Heritage Advisor at National Highways</p> <p>██████████ (LJ) – Senior Infrastructure Planner at WSP on behalf of Eden District Council</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (EMu) – Principal Heritage Consultant for Eden District Council and Cumbria County Council</p> <p>██████████ (JP) – Historic Environment, Cumbria County Council</p> <p>██████████ (PS) – Conservation Officer, Eden District Council</p> <p>██████████ (NP) – Regional Lead at WSP on behalf of Eden District Council</p> <p>██████████ (DG) – Senior Infrastructure Planner representing EDC and CCC</p>

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Stakeholder feedback on Statutory Consultation	
2.1	No points raised.	
3.0	Updates on Research Framework, geoarchaeological modelling and surveys	
3.1	<p>Research Framework update (DL reading PW notes):</p> <ul style="list-style-type: none"> Apart from ‘honeypot’ Roman sites, there is very little known archaeology. Phase 2 geophysics and trial trenching to fill in this picture but may be confirming absence. 	

	<ul style="list-style-type: none"> Therefore, research framework suggests targeting data/techniques not available to earlier researchers i.e. at north Kirkby Thore. Also an opportunity for developing cultural heritage resource. <p>Potential for cultural overlap and regional/local chronological disparity.</p>	
3.2	<p>Discussion on purpose and remit of a research framework in a planning context:</p> <p>DO: Clarifying that that Research Framework is an umbrella. As is usual, only the minimum amount of work would be undertaken to reach decisions but ensures the project is dealt with holistically. This is an efficient way of ordering the wide range of work using a single framework.</p>	
3.3	<p>Geoarchaeological modelling update (DL): Geoarchaeological data has been reviewed and modelling run. Expecting the first draft of the report at the end of November.</p>	
3.4	<p>Geophysics update (DL):</p> <ul style="list-style-type: none"> Green waste is an issue at Kirkby Thore. Geological features visible around Trout Beck, most likely palaeochannels? <p>A circular feature visible near Crackenthorpe, c. 70m across, potentially a henge? MB asks what is planned for that area, DL replies that at Stat Con the area is marked down as ecological area for invertebrate movement and therefore non-intrusive.</p> 	
3.5	<p>Trial trenching update (DL):</p> <ul style="list-style-type: none"> Trenching has started Schemes 2 to 6, and about to start Schemes 7 to 9. Compound established for 7-9 last week. <p>Delay at western end of route due to some land access issues.</p>	
3.6	<p>JP: Monitoring visits have been undertaken by MB & JP which have raised a couple of issues. These have been raised with [REDACTED] (JK):</p> <ul style="list-style-type: none"> Some geophysical anomalies have not been targeted, due to ecology restrictions. Some of these have been resolved as managed to target after all where possible. The depth of trenches and trial trenching methodology design. The Principal Contractor in Lot 2 (S4/5-6) is concerned about the depth for 	<p>Action: DL to follow up with JK regarding depth of trial</p>

	<p>some of the works and is imposing a limit on hand excavation. This does not allow the archaeologists to fully investigate the deep ditches found on some sites. Augering has been proposed but would not give as useful results as excavating these features. The opportunity to extend trenching to allow a 'stepped' excavation is suggested.</p> <p>DL: The lack of flexibility in trench depth/location is a result of the access licenses wording and will require renegotiation on an individual trench basis. Consultation with the land access team required. A solution may not be available in time for the current trenching.</p>	<p>trenching (stepping)</p> <p>Action: DL to follow up with [REDACTED] (JM) (land access team) to discuss potential to vary the protocol set up with landowners regarding flexibility in trenching.</p>
3.7	<p>Discussion of preferred options at Warcop and Sandford:</p> <p>MB raises that the trial trenching at Warcop and Sandford is currently offline from where the geophysics took place as the design there has changed. Is there now a preferred design going forward?</p> <p>DL: The project is evaluating a snapshot design which may not be identical to the final design for DCO. Therefore, areas not trial trenched or without geophysical survey but within DCO will end up trenched or geophysics at a future phase, so that all areas with DCO boundary will be investigated.</p> <p>CE: DCO boundary may include areas where only change is that speed limits will change. Will these areas need archaeological investigation?</p> <p>DL: Clarifies that if the DCO area includes existing carriageway, it will not be subject to geophysics or trial trenching.</p>	
3.8	<p>Scheduled Monument applications: the Brougham SM application is still in progress– Wessex has submitted. If any refinements required, still time to update the application.</p>	
3.9	<p>Resistivity surveys:</p> <p>What does resistivity survey show? Much better for solid features, as mag survey can be disrupted with brick and iron working etc.</p> <p>CE to set up a meeting with engineer and design team and Historic England to discuss results of resistivity surveys, end of next week.</p>	<p>Action: CE to arrange meeting with engineer and design team with LM, at the end of next week.</p>
4.0	<p>AOB</p>	
4.1	<p>CE will be sharing the Evidence Plan as soon as possible.</p>	<p>Action: CE to circulate evidence plan</p>
4.2	<p>RK: Project Speed and the PIER, clarifying what is in the PIER? His role is trying to safeguard the examination, pick out the points that will probably be picked out at examination.</p>	<p>Action: CE will ask National Highways if Historic</p>

	<p>LM clarifying that i.e. Rokeby advice is regarding the impact on the heritage and not the wider public benefits or other issues. Using that metric, the black route currently causes the least harm.</p> <p>CE: will ask National Highways if they can share Historic England's statutory response to PINS so that Project Speed is assisted.</p> <p><i>Post meeting note: Historic England has agreed its Stat Con response can be shared with PINS.</i></p>	<p>England stat con responses can be shared with PINS</p>
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Minutes of Meeting

A66 NTP

Heritage Technical Working Group 7

Purpose of Meeting	Technical Stakeholder Engagement
Location:	MS Teams
Time/Date:	18-01-21 at 10:00 - 12:00
Attendees:	<p>██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup</p> <p>██████████ (CM) - A66 Heritage topic support at Amey/Arup</p> <p>██████████ (CD) -A66 Environmental Stakeholder Deputy at Amey/Arup</p> <p>██████████ (DY) (Wessex Archaeology)</p> <p>██████████ (AD) - North-West Principal Inspector of Ancient Monuments at Historic England</p> <p>██████████ (LM) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66</p> <p>██████████ (DOM) - North-East Science Advisor at Historic England</p> <p>██████████ (JH) – Principal Cultural Heritage Advisor at National Highways</p> <p>██████████ (LJ) – Senior Infrastructure Planner at WSP on behalf of Eden District Council</p> <p>██████████ (PS) – Conservation Officer, Eden District Council</p> <p>██████████ (DM) – Principal Archaeologist, Durham County Council</p> <p>██████████ (JP) – Historic Environment, Cumbria County Council</p> <p>██████████ (MB) – Lead Officer Historic Environment and Commons, Cumbria County Council</p> <p>██████████ (RK) – Project Speed lead at PINS</p> <p>██████████ (EM) – Principal Heritage Consultant for Eden District Council and Cumbria County Council</p>
Apologies:	<p>██████████ (EMa) – Conservation Officer at Eden District Council</p> <p>██████████ (BH) – Senior Conservation Officer at Durham County Council</p> <p>██████████ (HR) – Environmental Consultant at WSP on behalf of Eden District Council</p> <p>██████████ (PR) – Principal Archaeologist at North Yorkshire County Council (also covering Richmond District Council)</p>
Circulation:	All

Item	Minutes	Actions
1.0	Introduction	
1.1	Introduction of agenda.	
2.0	Geoarchaeological modelling exercise	
2.1	Introduction of ██████████ from Wessex Archaeology, who gave presentation on the Geoarchaeological DBA (GDBA). Slides attached.	
2.2	DOM – for final consideration of the report, geoarchaeological model should incorporate results of geophysical surveys and overlap with other elements. Specific consideration should be given in the report for the masking of Prehistoric deposits of higher potential. Would also be helpful to include consideration of preservation, to provide something that divides out schemes into areas where waterlogging is expected (for example). Also asked if peat deposits are known to be well preserved.	

	<ul style="list-style-type: none"> DL noted there will be an all-surveyors workshop 26th January 2022 to cross reference all results at a stage where reports can reflect new information before finalisation. DY: outlining areas of waterlogging would be particularly useful and can pull map together showing areas of preservation. Regarding preservation of peat, difficult to tell because usually not described in logs but there are things that suggest its fairly well preserved in places. <p>DL: data gap near Trout Beck is due to ongoing delays in securing land access. Access was not available for first GI phase and unlikely to be available for second GI phase. This will likely affect possible trenching locations as well as work to inform agricultural land classification. This could remain a data gap within DCO application.</p>	
3.0	Survey Updates	
3.1	<p>Trenching:</p> <p>Lot 1 (Package B, Schemes 1-3)</p> <ul style="list-style-type: none"> Finished December 2021 and interim report received. Full report expected early March 2022. <p>Lot 2 (Schemes 4,5,6)</p> <ul style="list-style-type: none"> Initial batch of 500 trenches completed before Christmas 2021. Works remobilised in January 2022, previously paused due to route selection, and now complete except for approx 30 trenches where access was not available. These are currently still demobilised. Interim report on 500 trenches received, full report expected in early March 2022. <p>Lot 3 (Schemes 7-9)</p> <ul style="list-style-type: none"> Ongoing, paused over Christmas. Expecting to complete by end of January 2022, depending on Carkin Moor Scheduled Monument Consent. Could continue into February. 	
3.2	<p>Geophysical Survey Phase 2 complete as of December 2021. One additional area of 4.5ha proposed around Carkin Moor, depending on Section 42 license agreement, which will ideally completed asap with report to follow.</p>	
3.3	<p>Geochemical survey for Schemes 4,5 scheduled to begin on 31st January 2022 but may start sooner.</p>	
3.4	<p>AP & LiDAR assessment completed 2021 with a refresh commissioned because initial review was unable to access material Aerial Photography (AP) libraries. An opportunity to access the AP libraries became available in autumn 2021. QA process was being completed before Christmas 2021 and will be issued shortly. Minor additions to each scheme as result of the review. Results will be shared once report is available.</p>	
3.5	<p>DL also noted again that there is going to be an all contractors meeting to present results (next Wed, 26th Jan)</p>	
3.6	<p>JP: when monitoring trial trenching, there was an ankle breaker with Roman pottery found. JP spoke with [REDACTED] and recommended geophysical survey around these features as not included in original phase. When checked back in December 2021</p>	

	<p>it had not yet been undertaken but wanted to inquire about the status. Would be good to clarify extent of features and potentially their relationship.</p> <p>DL clarified this was around Temple Sowerby. Suggestion of more geophysical survey was not passed to DL at the time but will chase up. Might be able to include in existing contract with Headland, subject to access. JP happy for DL to answer him directly later.</p>	<p>DL to follow up on additional geophysical survey and reply directly to JP</p>
3.7	<p>LM: Will the new features identified in the AP have ramifications for trenching? DL: yes possibly, there are some features that have not been evaluated, especially the rectangular feature NW of Kemplay Bank roundabout LM: will those be impacted? DL: area will appear in land take map but will be kept as open land rather than being built upon or having any ecological mitigation. JH: need make clear to contractor that nothing can impact that area. DL: agreed. JH: there is the general problem that promises made at DCO about the use of land turn out not to be able to be kept when it comes to project handover. Provided example of A14 with public land being given back to original landowner, so it needs to be clear that areas being set aside are genuinely being set aside. DL: in the case of public open space land, presumably that will be purchased by National Highways? JH: yes, it should be okay but depends on how it is being purchased and the mechanism used.</p>	<p>JH to write up a description of technical issues encountered on A14 and send to DL</p>
3.8	<p>RK: noted useful feedback from JH and suggested that it should be fed back to biodiversity team, sounds like a material change issue. Would be good to consider while there is time to avoid these same mistakes.</p>	<p>Once received by DL, CD can circulate the 'lessons learned' notes from JH to wider team.</p>
4.0	Design Updates	
4.1	<p>Some in the meeting will have had previews of changes post statcon, but useful to get show how certain elements have evolved since last TWG:</p> <p>Kirkby Thore</p> <ul style="list-style-type: none"> • Access to British Gypsum site will be via Fell Lane • Junction previously located at Main Street, now moved westward <p>Crackenthope</p> <ul style="list-style-type: none"> • Alignment shifted northwards and Long Martin Lane junction has moved southeastwards • Previously the alignment was very close to the Scheduled Monument. Junction was also previously very close to SM. 	

	<ul style="list-style-type: none"> Will probably would impinge on elements of the marching camp that lie outside SM. <p>Appleby end of Scheme 5</p> <ul style="list-style-type: none"> End of scheme has shrunk in westward and link road between new and old A66 removed Trenching was showing activity in area of link road, which has now been removed <p>Alignment at Warcop</p> <ul style="list-style-type: none"> Road alignment shifted northwards to be further from properties to south and to avoid area of woodland Still has impacts on the SM at Warcop Camp/Roman Road 	
4.2	<p>LJ: regarding the first change near Kirkby Thore, do you have any information on the compound that is proposed there? There are proposals to keep that permanent and have we looked at the impact?</p> <p>DL: new construction proposals from SRM recently received by not yet reviewed.</p> <p>LJ: need to make sure impacts are continued into operational as well as construction.</p>	DL to review construction proposals and follow up with LJ
5.0	AOB	
5.1	<p>CD will be sharing evidence plan soon, after internal review.</p> <p>CD asked DL if stat con responses were worth raising?</p> <p>DL: received consolidated list of responses referencing heritage, with a turnaround date of the end of January. Not sure how it will be fed back to consultees?</p> <p>CD: due to volume of responses, individuals will not be addressed specifically but everything will be collated into one document that will then be shared</p>	
5.2	<p>MB: regarding the overall scheme timetable, is it still on track with DCO submission in spring?</p> <p>DL: Yes still on track for proposed DCO in spring (May 2022).</p> <p>MB: final scheme for compounds have not been seen, are they still in pipeline?</p> <p>DL: yes, the construction elements are being developed by SRM.</p>	
5.3	<p>RK: still interested in wider DCO perspective around Rokeby and the Royal Park & Garden, and the positions of Durham and Historic England. Acknowledged that there hasn't been further consultation but to put a mark down that there is still interest in the progression of that to making sure the evidence base and the positions of all sides are well established going into the examination. Has anything happened since statcon regarding Rokeby or refining the scheme/route selection?</p> <p>DL: only task regarding heritage is to follow up on Durham CC's point on traffic flow changes to bridge.</p> <p>RK: not necessarily saying there is a gap but want to make sure no stone left unturned when looking at evidence and creating a defensible position.</p>	CD will feedback RK's concerns to rest of team
5.4	<p>DL: proposing date of next meeting in February, around one month from now.</p> <p>Potential item for the agenda is research framework briefing.</p>	CD/DL to circulate new date and agenda

Minutes of Meeting

A66 NTP

Heritage Technical Working Group 8

Purpose of Meeting: Progress update and Delivery Partners information

Location: MS Teams

Time/Date: 10-03-22 at 10:00 - 12:00

Attendees: [REDACTED] (DL), A66 Heritage Topic Lead at Amey/Arup
 [REDACTED] (CD), Environmental Stakeholder Deputy at Amey/Arup
 [REDACTED] (CM), A66 Heritage Topic Support at Amey/Arup
 [REDACTED] (EMu), Principal Heritage Consultant for Eden District Council and Cumbria County Council
 [REDACTED] (LM), Inspector of Ancient Monuments and A66 Lead at Historic England
 [REDACTED] (TM) – Design Integration Partnership team
 [REDACTED] (DOM), North-East Science Advisor at Historic England
 [REDACTED] (JP), Historic Environment at Cumbria County Council
 [REDACTED] (DG), WSP
 [REDACTED] (CT), Balfour Beatty
 [REDACTED] (EP), A66 EIA Support at PINS
 [REDACTED] (EMa), Conservation Officer at Eden District Council
 [REDACTED] (NP), Regional Lead at WSP
 [REDACTED] (DM), Principal Archaeologist at Durham County Council
 [REDACTED] (JH), Highways England
 [REDACTED] (AF), Principal Archaeologist at Atkins
 [REDACTED] (PW), Independent Consultant
 [REDACTED] (MB), Lead Officer, Historic Environment and Commons at Cumbria County Council
 [REDACTED] (PR), Principal Archaeologist at North Yorkshire County Council

Apologies:

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
2.0	Delivery Partners – AF	
2.1	AF presented the proposed compound locations, comprising three main sites and three satellite sites (slides to be circulated)	
2.2	CT: Important to discuss how this fits in with archaeological mitigation strategy. Compounds will run through DCO process but will also have a separate planning application	
2.3	JH requested initial response from Historic England? Notes that some of the compound areas are large and if DCO for the A66 were not to be granted, the only threat to archaeology would have been doing the compounds early	

	<p>LM: notes that none of the compounds are on Scheduled Monuments, so concern from Historic England is lower but going through permitted development or other mechanism could disturb archaeology unnecessarily if DCO doesn't go through. Also haven't seen all evaluation reports to understand archaeology in compound areas, so cannot yet advise whether there will be significant concerns. County archaeologists might feel differently.</p> <p>DM, DL and AF: Comment on final interpretative reports from trenching.</p>	
2.4	<p>MB: have all compound locations been covered by geophysics or evaluation?</p> <p>CT: that will be next stage, proposed compound locations are only the first stage and can be amending based on further details</p>	
2.5	<p>DL: compound locations and implications are being assessed as part of ES</p>	
2.6	<p>JH: applying for Town & Country Act planning permission could open it to challenge if there are any well funded objectors to the scheme.</p>	
2.7	<p>LM: have you had any discussions with local planning authorities?</p> <p>CT: this group is the first to sound out, next step will be to speak to the local authorities and then to work on pre-applications.</p> <p>TM: Eden District Council for compound at Warcop has been initially approached</p> <p>CT: they advised toward a pre-application and to speak with other authorities</p>	
2.8	<p>CT presented slide on A66 enabling works that have been identified as being possible to carry out without compromising the outcome of the DCO</p> <p>In regards to heritage, the following activities were identified:</p> <ul style="list-style-type: none"> • Archaeology to enable key Statutory Utility diversions to be carried out • Archaeology to enable compounds to be constructed • Long duration/complex archaeology • Trial Trenching not currently undertaken <p>Strip, Map & Sample not being proposed as enabling works</p> <p>CT: If complex archaeology were to push programme out, is there opportunity on specific sites to start that as an enabling work? Would be helpful to identify possible sites for this through evaluation reports.</p> <p>LM: would likely need planning advice before commenting</p>	

	<p>DG: obvious risk is doing works and the scheme not going ahead, not sure if they could be delivered under permitted development right. The sooner you liaise with authorities, the better.</p>	
2.9	<p>DL: CD to investigate process for engaging with technical stakeholders as we move through handover.</p> <p>AF happy to attend meetings moving forward even before he will need to start chairing meetings</p>	<p>CD to follow up on how technical partner engagement will work moving forward</p>
3.0	Research Framework (RF) Update – PW	
3.1	<p>Version 2 of RF has been circulated by DL</p> <p>PW: Challenge in developing RF has been that Historic England asked it cover a series of points that lie outside conventional RFs, including a broad definition of cultural heritage, intangible heritage, and proposed opportunities for public engagement</p> <p>Discussions with DOM helped identified themes: chronology, environment, and artefacts</p> <p>Starting from a low knowledge base – a lot of knowledge only about specific times and/or specific sites</p> <p>Dating of sites is an issue in most periods, as material for traditional artefact dating is limited. Large areas where there is apparently no archaeology (at least when RF was begun)</p> <p>Wants RF to be possible for non-specialists to engage with</p> <p>To address lack of archaeology, approach has been to think about a broad A66 route corridor that is wider than DCO boundary and includes assets beyond those included in gazetteer to provide context for potential archaeological resource, especially for areas where we have limited knowledge.</p> <p>PW flagged that the current draft RF hasn't incorporated emerging survey results. Proposes incorporating results in one go alongside stakeholder comment rather than adding them as they arrive.</p>	
3.2	<p>NP: How was route corridor defined?</p> <p>PW: Broadly defined by Barnard Castle and Scotch Corner to the north and south at eastern end and by the northern and southern extents of Penrith at the western end, then narrows in centre. River valleys are somewhat a guide but with wider context from sites further afield, particularly for Prehistoric sites</p>	<p>AF to make sure RF is shared widely with contractors</p>
3.3	<p>LM confirms that RF is going in direction as advised by Historic England. Will be helpful to advise on public engagement for Highways England.</p>	

	<p>The next version should have a series of questions to be answered that are easy to pull out</p> <p>MB: as PW has acknowledged, there aren't specific questions for some periods because there is so little information. Could identify questions for Roman period, but 'either side of Roman period (Prehistoric and Early Medieval) are too open.</p>	
3.4	<p>DL: responses should be received before Friday, 25 March in order to be incorporated in time for the internal review. Anyone on call who doesn't have draft of RF should inform CD asap to receive a copy for review</p>	<p>All: submit comments on RF prior to Friday, 25 March 2022 All: Let CD know if RF has not been received yet</p>
4.0	Evidence Plan – DL	
4.1	<p>In light of time, will discuss approach and collection of comments rather than going through point by point</p>	
4.2	<p>CD presented a quick recap of the purpose of the evidence plan. Explained that agreement log captures key issues raised by environment stakeholders and whether it has been agreed, still under discussion, etc</p> <ul style="list-style-type: none"> • A lot of heritage points are agreed but a few are still under discussion • Cumbria County Council has requested more detail on who has agreed various points <p>CD: limits of deviation have been defined to protect key features. Limits have been defined for vertical and horizontal but still need to be agreed. Setting out parameters for DCO that will be consented. Intention to discuss further in another TWG or in focus group. General limits are 1m vertical and 3m horizontal but more constrained in some locations. CD to share detail with the group.</p>	
4.3	<p>CD read out item from agreement log still under discussion. DL noted opportunities for public benefit are largely contained within RF and to be wrapped up with comments given on RF. DL: PW and other colleagues have been discussing work with DigVentures that have interesting implications on how public engagement will happen.</p>	
4.4	<p>CD read out item from agreement log still under discussion: is there potential for changes to water table in areas of archaeological interest? DL: modelling suggests there will be changes but in areas where waterlogged remains are not expected. Most of the changes are anticipated around Kirby Thore, where dry archaeology is expected. Around the Trout Beck and floodplain, the changes won't effect the water table. No particular comments from LM or DOM</p>	<p>CD to source who shared this query regarding water table. DL potentially add to assumptions & limitations section</p>

	<p>EP: regarding deposits, in terms of assessing in ES, PINS would expect something showing the anticipated location of deposits compared to locations of anticipated water table changes. DL: can CD identify source of query?</p>	
4.5	<p>CD read out item from agreement log still under discussion: risks associated with cuttings around Kirby Thore. DL: trenching did identify areas of archaeology around DCO boundary and approach will be laid out in mitigation strategy.</p>	
5.0	Survey Update – DL	
5.1	<p>At last TWG, DL mentioned that trenching is complete.</p> <p>Trenching reports are in process of being submitted:</p> <ul style="list-style-type: none"> • Draft Post Excavation Assessment for lot 1 - commented on and returned to contractors for minor adjustments. • Initial draft for lot 2 – returned to contractors with comments (didn't include results from January 2022) • Interim report for Lot 3 - received but not with post-ex assessment. <p>Reports will be issued to TWG and will be included in ES appendices. Have not shared interim reports/drafts due to varying states of completeness. Expect to issue lot 1 within next week, uncertain about other two being issued before next TWG.</p> <p>Initial draft of geophysics report has been commented on, which addresses concerns raised by DOM on phase 1 report and incorporates additional data from Autumn 2021 (additional 3ha around Kirkby Thore fort). Once surveys have been through collaborative review, the reports can be shared with TWG for information.</p> <p>Geochemical survey now complete around Kirkby Thore. Access reasons meant not as much was completed as anticipated. Survey area was increased to take into account access issues from trenching, which was the same area that was inaccessible for geochemical survey. Reporting is in early stages.</p> <ul style="list-style-type: none"> • Interim report from first area surveyed possibly indicates an area of heightened activity to south of Spital Farm near Temple Sowerby (south of old Roman road). Slightly to east of proposed compound location. 	All: confirm receipt of reports as they are issued
5.2	<p>May have an issue sending to some members of TWG due to file size restrictions. MB: previously set up space for file sharing (Objective Connect) and should still be open.</p>	
6.0	Date of Next Meeting – All	
6.1	<p>ES programme:</p> <ul style="list-style-type: none"> • Two weeks of internal document review • From 28 March, another two weeks of collaborative review with client <p>CD: do we feel as though we need another TWG? Will be moving into statements of common ground, issues still under</p>	All: Let CD know any

	<p>discussion or disagreed (one for each body rather than discipline). Waiting to hear from main stakeholder team but if moving forward, will be having stakeholder meetings through that process.</p> <p>LM proposed meeting to discuss next iteration of RF when ready.</p> <p>DL proposed next meeting to be after Easter, during the second half of April. Could limit agenda items (i.e. to RF and survey reports) if running parallel with statement of common ground meetings.</p>	<p>unavailable dates.</p> <p>Team to organise meeting to discuss next iteration of RF.</p>
7.0	AOB	
7.1	DL asked LM if they could discuss Scheduled Monument Consent separately offline. No other AOB.	

Minutes of Meeting

A66 NTP

Heritage discussion of design at Brougham

Purpose of Meeting: Heritage discussion of design at Brougham

Location: MS Teams

Time/Date: 24-03-21 at 10:00-10:30

Attendees: [REDACTED] (DL) – A66 Heritage Topic Lead at Amey/Arup
 [REDACTED] (CD) – A66 Environmental Stakeholder Deputy at Amey/Arup
 [REDACTED] (CB) – A66 EIA Coordinator for Package B at Amey/Arup
 [REDACTED] (SB) – A66 Package Manager for Package B at Amey/Arup
 [REDACTED] (AD) – Inspector of ancient monuments for the North West at Historic England

Apologies:

Circulation: All

Item	Minutes	Actions
1.0	Introductions	N/A
2.0	Overview of proposals at Brougham	
2.1	SB provided overview of proposals for Scheme 3 and encroachment into existing scheduled monument at Brougham. Scheme is in cutting in this area. Landowner has land either side of A66 and crosses several times a day using the central reservation crossing. Landowner has requested replacement crossing as the project would remove this. Without it a considerable detour through Kempley Bank would be required several times a day in an agricultural vehicle. An underpass has also been considered but was not considered to be the optimum solution overall. Work here is still at preliminary design stage. AD acknowledged need for continued access.	
2.2	SB added that overbridge was preferable to underbridge as there would be a lesser overall impact, but project team needs to understand requirements for foundations. Design has not been developed yet pending agreement to the principle of an overbridge. AD noted that an embankment could avoid underground intrusion, and that piles would reduce risk to underlying archaeology which is known to exist in this area from previous evaluations. AD noted that evaluation within the footprint may be worthwhile once design has been developed, as the scheduled area is where Historic England thinks archaeology may be present. If no remains are identified this could assist with the design of appropriate foundations. AD added that an embankment or ramp with small number of piles may be suitable options to look at.	

Item	Minutes	Actions
2.3	<p>AD noted that Historic England has registered overall comments on the geophysics report. DL and AD agreed that the section covering Brougham was acceptable and noted that it had registered some archaeology. DL showed a map of areas of archaeology in the area around the proposals, which matches the previous excavations reported. AP and Lidar showed potential for archaeology outside scheduled area. AD acknowledged the scheduled areas were previously based on available information at the time and set via field boundaries in some cases, so new information is useful.</p> <p>DL queried whether a resistivity survey in this area prior to trenching would be agreeable. AD agreed it would be sensible to adopt more than one approach. AD noted that previous investigation on depth demonstrated buried archaeology was at around 1m so development could be complete with minimal disturbance. SB asked if geophysics survey shows depth. DL confirmed not and that further surveys – e.g. test pits or GPR – may be needed to establish depth. AD agreed this would be sensible.</p> <p>CB asked if test pits would be done before trenching and if consents would be required. DL noted this is the invasive option and would required Scheduled Monument Consent (SMC). DL asked if this would go through [REDACTED] via the Section 42. AD said given this is quite isolated it could be arranged directly through AD, and SMC applications can be submitted via AD.</p> <p>DL queried timescales. AD explained the consent is administered on behalf of the Secretary of State (SoS) and Historic England advises. Standard timescale is up to 12 weeks, but if agreed in advance this can be much quicker. Project to consider providing AD with indicative plan of what is proposed to speed up process.</p> <p>DL noted this is required before DCO application to inform design. AD noted that SMC would last five years, but consent could be achieved before DCO if desired and a construction phase SMC can be applied for at the appropriate time if required.</p> <p>SB added that the project team is keen to progress with a design likely to be agreeable to Historic England, and is keen to avoid showstoppers. AD noted that while footbridge could be intrusive, Historic England would acknowledge the public benefit in preventing a significant detour for farm access, and that loss of a small part of the scheduled monument area may be acceptable with mitigation in the form of excavation and recording.</p> <p>DL noted the Countess Pillar is close to the location and may experience setting effects. AD noted this may not be significant</p>	<p>DL to consider if resistivity survey is to be proposed.</p> <p>DL to consider if test pits or GPR are to be proposed.</p> <p>DL to consider if/when this can be provided in advance.</p>

Item	Minutes	Actions
	<p>as the Countess Pillar is already on the edge of a deep cutting and adjacent to a major highway, so unlikely to experience a significant change in setting, but would be useful to see a visualisation. AD added that the Countess Pillar was always intended to stand by a roadway and this is part of its setting.</p> <p>DL raised proximity of proposed earthworks to Countess Pillar. SB gave overview and noted that at Llama Karma Kafe location, a car park and access would be provided to Countess Pillar. AD acknowledged this would be an access improvement benefit.</p> <p>DL raised the western end of the scheme with reference to scheduling under existing carriageway. AD noted this has not been reviewed since original road construction. SB confirmed very little, if any, intrusion likely in this location as it is already dualled and the only work will be tie-ins to existing carriageway. AD assumed existing dual carriageway had SMC originally, and unless proposal is to dig down 1m this should not require further consent. Existing consent could be varied if needed.</p>	<p>DL to liaise with EIA and design teams to identify if/when visualisation could be provided.</p> <p>AD to investigate if existing SMC can be provided to project team.</p>
	<p>AD noted he was recently contacted with regards to proposed geotechnical work. DL explained that the process for bringing on a GI contractor is running in parallel with heritage work, and includes the requirement for them to monitor works. Sub-contractor has been reminded that all project-related contact should be via [REDACTED] as the main point of contact.</p>	
3.0	AOB	
	<p>CB queried if there are any concerns about the Roman Camp at Warcop. AD advised main concern would be setting and proximity to the road. Group agreed a separate meeting would be useful to discuss this in further detail.</p>	<p>DL to arrange meeting about Roman Camp scheduled monument.</p>

Minutes of Meeting

A66 NTP

Purpose of Meeting A66 Rokeby – Discussion of Rokeby Junction options.

Location: MS Teams

Time/Date: 24-08-21 at 11:30-12:45

Attendees: ██████████ (CE) – A66 Environmental Stakeholder Lead Amey/Arup
 ██████████ (DL) – A66 Heritage Lead at Amey/Arup
 ██████████ (AT) – A66 Landscape and Visual Support at RSK
 ██████████ (PC) – A66 Design Lead at Amey/Arup
 ██████████ (BH) – Senior Conservation Officer at Durham County Council
 ██████████ (LMF) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66
 ██████████ (RH) – A66 Heritage Senior Consultant at Amey/Arup & minutes
 ██████████ (FM) – A66 Package Manager for Package D
 ██████████ (GL) – Principal Landscape Officer at Durham County Council
 ██████████ (GR) – Landscape Officer at Durham County Council
 ██████████ (HS) – A66 Stakeholder Integration Lead
 ██████████ (KW) – A66 Environment Lead at Amey/Arup
 ██████████ (MS) – DCO lead at Amey/Arup
 ██████████ (MM) – Senior Project Manager Infrastructure at Turner Townsend
 ██████████ (CM) – Landscape Architect at Historic England
 ██████████ (RA) – A66 Landscape and Visual Lead at RSK
 ██████████ (TH) – A66 Scheme Lead for Scheme 8 Cross Lanes to Rokeby

Apologies: ██████████ – Planning Development Management at Durham County Council
 ██████████ – Principal Archaeologist at Durham County Council

Circulation: All

Item	Minutes	Actions
1.0	Introductions	
1.1	KW – Gave an introduction to the meeting	
2.0	Purpose of Meeting.	
2.1	PC – Described that the meeting was predominantly to address issues around the Rokeby options, the route to the west (junction) and east (RPG impacts). These options have been arrived at via a process of sifts and engagement. PC added that Highways England (HE) sponsorship group have indicated that the western option is the one they wish to proceed to	

Item	Minutes	Actions
	<p>stat con on the basis that the harm incurred by the eastern option makes the western option the lawful option. There is currently no exceptional circumstance for promoting the eastern option, and this has been conveyed to DCC (meeting on 23/08).</p>	
2.2	<p>BH – Asked for further information on the background of HE sponsorship group including an explanation of the process by which they selected the route to the west as the preferred option.</p> <p>PC – Explained that they ratified the project team’s (Arup/Amey) preferred option and this was not the result of a new consultation process undertaken at this stage of the project.</p>	
2.3	<p>KW – Harm and Loss: work has been carried out to understand the impacts of the eastern option on the Rokeby Registered Park (RPG) and Gardens and what can be done to mitigate these to prove that there is no harm/loss or exceptional circumstances to justify the case for the eastern option.</p> <p>CM – All Designated Assets are treated as individual cases when it comes to harm and loss. The primary reasons for RPGs being under threat are development and fragmentation. The eastern option will result in fragmentation that will result in harm; part of the RPG would be isolated from the core area resulting in a loss of significance. Harm should be avoided as a preference over mitigation.</p>	
3.0	Proposed mitigation for eastern option	
3.1	<p>AT – Project team have explored the possibility of landscape mitigation for the eastern option, creating a false cutting through a fairly gentle gradient of earthworks (1:8) before the junction runs into an underpass beneath the de-trunked section of A66. Also potential concealment of the overbridge at Church Plantation, excavating downwards to keep the ‘wooded skyline’ effect of the current landscape.</p> <p>TH – Based on the site visit, the plan has been amended to preserve a mature tree to the east of the eastern option. This has resulted in the length of the junction being extended, which in turn allows for a lower alignment of the cutting, to a greater depth of 2-2.5m. The new 1:8 gradient for the northern slope ties in more smoothly with the existing landform, whilst still concealing traffic (height example of HGV given) from the RPG.</p> <p>KW – Eastern option can be mitigated to a great extent with good design.</p> <p>CM – Acknowledged that the new design for the eastern option could be supportable and congratulated the team for their work. The eastern option still presents greater harm than the western option.</p>	

Item	Minutes	Actions
3.2	<p>PC – Confirmed that western option is still preferred option, unless new information comes to light during stat con.</p> <p>CM – Raised the potential impacts of the western option, which should still be considered for mitigation as it is not without impacts and significant effects.</p>	
3.3	<p>BH – Queried if the examining authority would agree that eastern option still results in substantial harm, even with mitigation.</p> <p>MS – Noted that exceptional circumstances are needed to justify the scheme, should substantial harm be present.</p> <p>BH – Raised that we should be agreed on which options incur substantial harm. Are Historic England saying that even with mitigation the eastern option would result in substantial harm?</p> <p>CM – The mitigated designs may result in less than substantial harm, but the harm incurred by the western option is still less, therefore this should be the preferred option.</p> <p>HS – Where two schemes both incur harm (but less than substantial) then we should be testing which scheme has greater public benefit.</p> <p>KW – Western option has much reduced impact on RPG therefore it has greater public benefit and less harm (substantial or not).</p> <p>GL – Reminded the group that other interests are in play and need to be balanced against the levels of harm.</p> <p>PC – No public benefit has yet been reported, only popularity of one option (east). Any case for public benefit has not yet been made.</p> <p>MS – Public benefit case may emerge at stat con.</p> <p>KW – No clear public benefit case currently means that the eastern option cannot be prioritised.</p>	
3.4	<p>CM – Confirmed that there are no current reasons why the western option (outside of the issues already raised) would not be supported by Historic England. Some environmental mitigation will still need to be confirmed to alleviate impacts on the setting of St. Mary’s and the RPG.</p>	
3.5	<p>FM – Highways England are in the process of acquiring the Old Rectory. What would Historic England’s opinion be, should the landowner express support for the online option, which would result in the demolition of the Old Rectory?</p> <p>LM – Historic England have clearly stated that they do not support the route remaining online to the south of St. Mary’s church. An increase in traffic will harm the setting of the asset. Historic</p>	

Item	Minutes	Actions
	<p>England would support Highways England buying the Old Rectory and putting it to a sustainable use but definitely would not support its demolition.</p> <p>CM – Raised that the moving of the route offline to the south of St. Mary’s is part of the mitigation strategy to protect the setting of the Church and the RPG.</p>	
3.6	<p>TH – Arup/Amey have now sent over the revised designs/reporting, and requested that Historic England review and update their previous response to reflect the updated work.</p>	<p>LM – will update Historic England letter</p>
3.7	<p>GL – Suggested that the western option creates a highway dominated landscape, which may be one of the reasons why it has less support. Suggests that the de-trunked road in front of the church should be considered for potential benefit by reducing traffic as much as possible along this route.</p> <p>TH – Explained that the majority of traffic that travels east leaves at the Rokeby Junction with the majority going west leaving at Bowes (barring HGVs). The majority of traffic therefore is going east to west. The eastern junction removes the majority of traffic from the de-trunked section at Rokeby (going north to Barnard Castle). The east bound slip road at Rokeby has been designed to encourage drivers to use this junction rather than Cross Lanes.</p> <p>GL – Queried if all traffic could be encouraged to leave A66 before the section in front of St. Mary’s resulting in complete de-trunking of the road?</p> <p>TH – Agreed this could be looked into.</p> <p>CM – Historic England would prefer to see the road maintained for a small amount of traffic to encourage users to visit the designated assets in a lower and slower traffic environment. CM gave example of RPG, where complete de-trunking of a road with no use other than access has resulted in harm to the asset through sterilisation of the landscape and instances of fly tipping etc.</p>	<p>TH – Will look at engineering alternatives around de-trunking of route outside of St. Mary’s Church.</p>

Minutes of Meeting

A66 NTP

Purpose of Meeting Design Development at Carkin Moor

Location: MS Teams

Time/Date: 08-07-21 at 13:00-14:00

Attendees: ██████████ (CE) – A66 Environmental Stakeholder Manager at Amey/Arup
 ██████████ (PR) – Principal Archaeologist at North Yorkshire County Council (also covering Richmond District Council)
 ██████████ (DL) – A66 Heritage Topic Lead at Amey/Arup
 ██████████ (TE) – A66 scheme design lead for scheme 9 Stephen Bank to Carkin Moor at Amey/Arup
 ██████████ (LM) – Inspector of Ancient Monuments at Historic England and Historic England lead on A66
 ██████████ (CA) – A66 Heritage topic support at Amey/Arup
 ██████████ (JM) – Structural engineer at Amey/Arup
 ██████████ (CPS) - Environmental coordinator for scheme 9 at Amey/Arup
 ██████████ (JK) – environmental coordination assistant for scheme 9 at Amey/Arup

Circulation: All

Item	Minutes	Actions
1.0	Design Introduction	TE/JM
1.1	<p>TE/JM outlined the proposals at Carkin Moor, to widen to dual carriageway following the existing alignment of the A66 through the scheduled monument. The intention is to lift the road within the current cutting space.</p> <p>Visual and geometric standard constraints mean that it is difficult to lift the road to the top of the existing cutting.</p> <p>Design team is seeking a relaxation on stopping sight distance, which would require widening of the central reservation.</p> <p>The structural options focus on how to retain the ground behind the cutting:</p> <ul style="list-style-type: none"> - Naturally graded earthwork slopes – effectively as existing. Modelled based on 1 in 3, which should be achievable and could be improved. Lowest cost and likely to be safest from maintenance and highway use perspective. This has the greatest land take however. - Gravity wall options – lowest cost form of vertical retaining wall but sizeable footprint – 70% of width of retained height, plus room to build, plus temporary work slope behind. 	<p>TE/JM to share technical note with stakeholders</p>

Item	Minutes	Actions
	<ul style="list-style-type: none"> - Piled solution – highest cost, least safe in construction. This would be a series of vertical piles, which would provide the retention without interfacing with the material behind. 	
2.0	Discussion of design impact	
2.1	<p>The carriageway will be raised in order to allow the road to pass through the existing cutting.</p> <p>At both eastern and western ends of the scheduled monument earthworks may need to be founded on the monument. This will require a topsoil strip prior to imported fill being built up. A geotextile or similar marker layer could be put down following topsoil strip. There may be some tree removal required even outside the area as their roots could be undermined.</p> <p>PR enquired regarding source of the fill. TE replied that there is a surplus across the scheme. We could use material from cutting here immediately into the build-up locally as well.</p> <p>Excavation of material from the monument may be required - potentially up to 9-10m over 20-30m of length on the southern side – on the north the widening will take place within existing cutting.</p> <p>TE noted engineering preference for cut slope but suspected there will be a different preference from stakeholders.</p>	
2.2	<p>LM requested details of the width of incursion into the scheduled monument for the various options. They will all have an impact to differing extents. Construction methodology is also a relevant consideration, e.g. would machinery be on the slope or in the cutting. JM replied plan is to keep equipment out of the monument as much as possible. There will be a need to build a flat working platform on the highway side.</p> <p>LM noted that there is known late-prehistoric activity beyond fort.</p>	
2.3	<p>CA noted that in EIA terms non-scheduled remains of equivalent value remains would be treated identically.</p>	
2.4	<p>LM confirmed the need to know what would be impacted by the proposals. Building up involves exposing the archaeology and prehistoric remains could be destroyed through weight of new topsoil. We would need to look at the impact and mitigation. It would not be possible to confirm preservation in situ without more information. So, some trenches or test pits within the scheduled area would be needed.</p>	
2.5	<p>LM noted that any impact on the scheduled monument from the design iterations needs to be informed by evaluation. LM not averse to building up but subject to evaluation results and knowing what archaeology is present (and how dense, what it is and its significance). Broadly speaking building over is better than digging out.</p>	
2.6	<p>Discussion of previous investigation in the vicinity of the monument. PR noted the existence of a printed monograph resulting from the previous widening works - the fort ditch (approx. 1.5m wide, 1m deep) was found up to 1m of overburden present.</p>	
2.7	<p>LM noted the high-level information paper for Stage 2. LM observed that at Stage 2 HE expressed a preference to stay online as the monument had already been disturbed and there could be a greater effect on previously unrecorded archaeological</p>	LM to share high level info paper

Item	Minutes	Actions
	remains. So, staying online within minimum impact was the preferred.	
2.8	PR noted the existence of a report on the work on watermain refurbishment in 2003. DL enquired whether the Mainsgill report moved from in prep to deposition. PR has not seen the report. PR to supply a copy.	PR to supply copy of report
2.9	General arrangement drawings detailing works in the vicinity of the monument were shared – ponds proposed on each side of the fort on the southern side of the road. Reason is the topography (hill in the middle) and need to provide attenuation ponds to make sure there is no increased runoff.	
2.10	The largest of the ponds is a replacement of the existing in that location. Multiple ponds as separate ponds needed for NY and HE separation of assets. Possibly able to reduce number.	
2.11	Ponds are 1-2m deep, permanently wet in the base, rising and falling into a slight bund, but not necessarily depth to existing if a bund is present. PR noted in worst case scenario there could be options to bund up to avoid damage and possibly removing some ponds. TE responded that this possible to a point – still need to be lower than the pipes in the road.	
2.12	TE noted the potentially significant landscape impact if the carriageway raised higher and the need to balance impacts.	

Minutes of Meeting

A66 NTP

A66 Research Framework

Purpose of Meeting A discussion regarding the Cultural Heritage Research Framework

Location: MS Teams

Time/Date: 13-05-21 at 11:00-12:00

Attendees: ██████████ (LM) – Inspector of Ancient Monuments & Lead for A66, Historic England

 ██████████ (AD) – Inspector of Ancient Monuments in NW Region, Historic England

 ██████████ (DOM) – Science Advisor, Historic England

 ██████████ (DL) – A66 Cultural Heritage Topic Lead, Amey/Arup

 ██████████ (SBB) – A66 Cultural Heritage Team Member, Amey/Arup; minutes

 ██████████ (PW) – Roman Specialist, supporting Amey/Arup on Research Framework

 ██████████ (AW) – A66 Deputy Environment Lead, Amey/Arup

Apologies: ██████████ (CD) – A66 Environmental Stakeholder Deputy, Amey/Arup

 ██████████ (JH) – Principal Cultural Heritage Advisor, Highways England

Circulation: All

Item	Minutes	Actions
1.0	Apologies and Introductions	
2.0	Purpose of the Meeting	
2.1	<p>DL introduced PW and gave an overview of his role on the project, how it will be achieved, and to set the context on a discussion of Historic England (HE) expectation. In summary:</p> <ul style="list-style-type: none"> - Scope sent to PW with overview of what the A66 project team envisaged the framework would require. - Briefing note sent to LM. - Initial tasks: review existing research framework; review gazetteers, the archaeological and historical background, and the geophysical survey and remote sensing reports. - Preliminary output: initial draft Research Framework and resource needs. - Re-draft will be needed to incorporate changes to the project design and programme, and new surveys and available data (e.g. changes around Kirkby Thore). - Initial resource assessment to be reviewed and Research Framework amended accordingly. - Confirmed there will now be a geoarchaeological model for PW to review. <p>PW:</p>	

Item	Minutes	Actions
	<ul style="list-style-type: none"> - Noted that it will be more of an iterative process than a conventional HE research framework, though the basic process is one which everyone will be familiar with. - Currently awaiting access to available baseline info. <p>LM:</p> <ul style="list-style-type: none"> - Pleased the work is starting to get off the ground. - Would have been preferable to have framework prior to surveys, but keen for it to move forward quickly. - Queried when PW will have access to the available baseline info? <p>DL:</p> <ul style="list-style-type: none"> - Currently in contract negotiations. - Schedule of works identifies PW starting in May, but will require time to set up access to databases, networks, etc. - Web mapping should be easy to access for spatial data; as will MS Teams workspace where information is stored. - Once set up, PW will have access to all baseline data. 	
3.0	Contents of Framework	
3.1	<p>LM:</p> <ul style="list-style-type: none"> - Noted that NW Regional Research Framework has been updated. - Advised that NE Regional Research Framework is currently being updated, and information is available. LM can provide relevant links. - Does not want to see a presentation of all HER data, but rather to see PW assimilate and interpret that data and develop overall themes and highlight knowledge gaps (e.g. not much known about Roman military cemeteries in the north of England). - Needs to highlight what do we know and what we can expect. Geoarchaeological potential and potential survival of bones, ecofacts, etc? - Wider historic environment, not just archaeology. HE regional director has also expressed importance of this. - How can public engagement be incorporated? - Roman archaeology is important, but also Anglo Saxon archaeology in the west of the project – needs to be reflected. - Should help Highways England to prioritise where more archaeological resources/effort is needed and where less so. <p>AD:</p> <ul style="list-style-type: none"> - Expressed agreement with discussion noted above. - Questions about the transportation of ceremonial axes and what it tells us about the prehistoric period. - Similar questions about transport through all periods, such as railways in 19th century, of interest in terms of the local public and social connections. - Should be more a cultural heritage framework than an archaeological one. 	LM action
4.0	Naming & Approach of the Framework	

Item	Minutes	Actions
4.1	<p>DL proposed using the title Cultural Heritage Research Framework. LM agreed.</p> <p>DOM:</p> <ul style="list-style-type: none"> - PW to be aware that the role of the Research Framework is to provide as much available knowledge before the start of the project, and to have as much knowledge as possible of the evidence from different periods. - Think about overarching elements of the archaeological work, i.e. dating and examination of remains across whole scheme. - Identify approaches that can be used across the whole scheme, to minimise redundant work. - Look at the applications of data, not just collecting it for the sake of it. <p>DL advised that construction programme is not yet available but is likely to be phased and that this highlights the need to carefully manage the budget, and use to the Research Framework to target spending.</p> <p>DOM:</p> <ul style="list-style-type: none"> - Some things which will be significant maybe best left to the end, such as dating schemes where the cost can be significant. - Importance of a olistic approach. <p>DL noted conversations have already been arranged with the following which will include opportunities to partner with Highways England to take forward designated funds proposals:</p> <ul style="list-style-type: none"> - The Milestone Society - The Roman Roads Research Association - The Churches Conservation Trust, especially around Ninian's and the early medieval & monastic site - Conversation with them looking at <p>PW noted that the Roman Roads Research Association is very active in fieldwork, and there may be potential for longer term public engagement with a clear and public benefit. DL noted it would be beneficial for PW to join conversation with Roman Roads Research Association.</p> <p>LM:</p> <ul style="list-style-type: none"> - Agreed with PW that it present a good example of the how the framework can link to public benefits. - Important to feed down to associated and local groups, which can also feed into mitigation and public engagement. - Keen to not have a dry archaeological report. It should provide an avenue for more accessible public information. - What's the result for cultural heritage at the end of the scheme? - Don't want the information to be lost to the public, but want to see them benefit, e.g. of local schools access. - Not to just be an academic benefit. - How can the framework facilitate getting information out to the wider public? 	

Item	Minutes	Actions
	<p>DL highlighted a need further engagement with Highways England to see where their focus lies.</p> <p>LM noted the framework goes beyond designated funds and should be part of the mitigation strategy. Designated funds is restrictive and can be difficult for heritage to access – seen as more of an added benefit. Focus instead should be on what mitigation strategies are to address impacts of the scheme? Public engagement needs to be a part of this.</p> <p>DL agreed that mitigation is not just the fieldwork, but also what to do with the results afterwards.</p> <p>LM gave the example of the A63 digital public engagement - will send a link.</p>	<p>LM to share link to A63 digital public engagement.</p>
5.0	AOB	
5.1	<p>AW noted it will be useful for DL/PW to draft a scope to make sure it incorporates what has been discussed. AW advised that there is nothing to stop PW working 'at risk' before formal appointment so access to the network/resources can be granted. DOM and LM noted that the PEIR, AP/LiDAR and Geophysical Survey reports are a good starting point for PW. DL will meet with PW to meet to discuss and AW to send confirmation that PW can be granted access.</p> <p>LM to confirm re the framework scope. HE looking for a narrative with overarching questions for the whole scheme that can be narrowed down as needed. Present a story of the landscape. This can then inform spending is applied appropriately.</p> <p>LM advised the HE team area available to PW for questions and to advise during the work. A rough schedule of when things will come in would be appreciated.</p> <p>DL noted that the project team should also update Technical Working Group and the county archaeologist. LM agrees with the above as the local authorities need to buy into the framework.</p> <p>Discussion required at TWG on how resources can/will be focused.</p>	<p>DL to arrange a meeting with PW re working 'at risk'.</p> <p>AW to confirm that PW can access working spaces / resources.</p> <p>LM to confirm framework scope.</p>