

Phase One Heritage Sub-group

Birmingham

13th March 2018

Agenda

- Safety
- Welcome and introductions
- Agenda
 - Integrated design
 - Schedule 17
 - Break
 - Evaluation strategies
 - Landscape Archaeology: a case study
 - Woodland Grant Scheme

Integrated Design

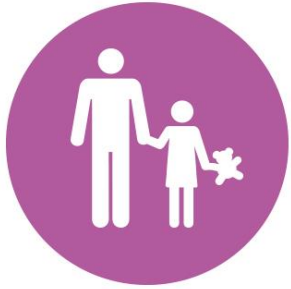
Landscape and urban design manager
13th March 2018

Three things to share

1. Design Vision & Design Handbook
2. Technical Standards, Assurance process and design development
3. Integrated and collaborative design

Case Studies:

- Edgcote
- Curzon Station



People

Design for everyone
to benefit and enjoy

- Design for the needs of our diverse audiences
- Engage with communities over the life of a project
- Inspire excellence through creative talent



Place

Design for a sense
of place

- Design places and spaces that support quality of life
- Celebrate the local within a coherent national narrative
- Demonstrate commitment to the natural world

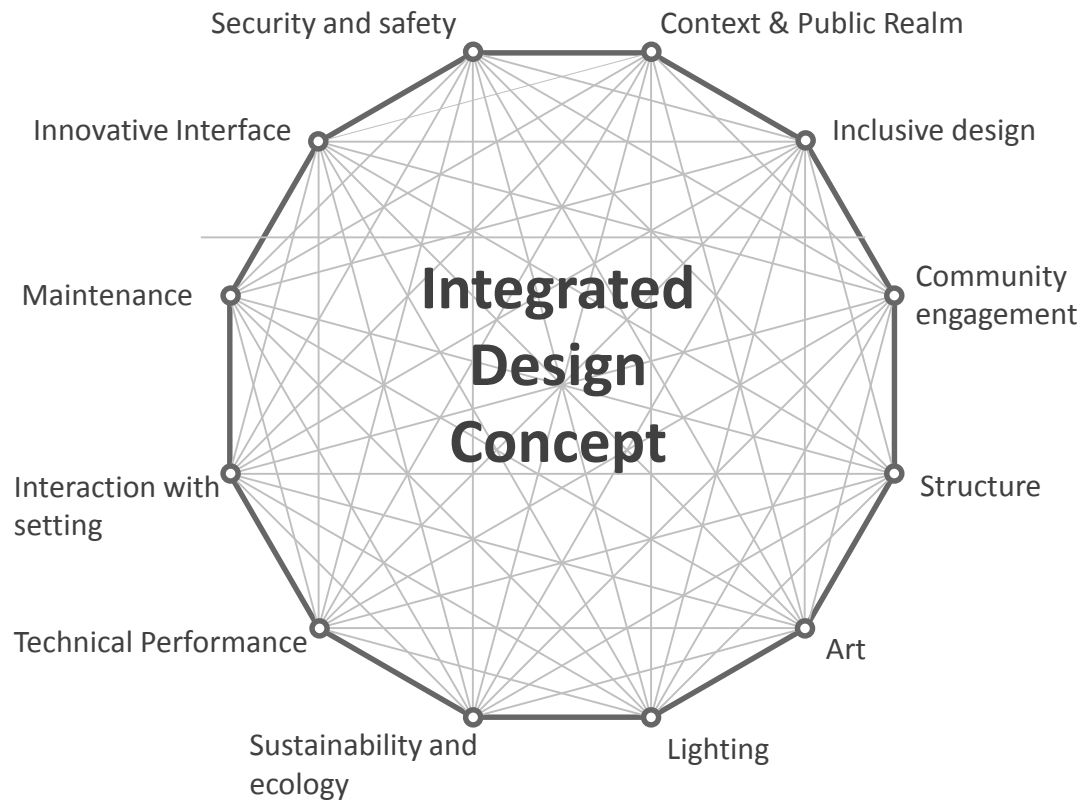


Time

Design to stand
the test of time

- Design to adapt for future generations
- Place a premium on the personal time of the customers
- Make the most of the time to design

Integrated design



Design handbook



48 HS2 Design Handbook

Design resources Open route structures

Open route structures are crucial to system performance. As well as being significant elements in the landscape, they are some of the most visible parts of HS2

Weissenbrunn Viaduct,
Forst, Germany

Issue 01, Autumn 2017 49

There will be major landmark structures as well as less overt infrastructure required to join up the needs of the railway with those of local communities, including interfaces with roads, footpaths, railways and waterways.

As a rule, the HS2 route will follow the contours of the land it crosses as closely as possible. Where the gradient is too extreme for a high-speed train, or where the route has to climb or drop to cross another, HS2 will accommodate the variation in level.

Design resources



Design development

Design stages

There are six levels of design, beginning with concept design and ending in detailed design. This diagram, from the Design Management Plan, shows each of these stages and describes the responsible directorate, who the design is undertaken by and a short description of the work in each stage.



Responsible Directorate	Design carried out by	Description of stage
Phase One and Phase Two	Professional Services Consultants (PSCs)	Business case design, pre-consultation design, and design changes to support post-consultation route announcement.
Phase One and Phase Two	Phase One and Phase 2a Phase 2b: Civil Design and Environmental Consultant (CDES)	The design required to achieve Royal Assent. Includes the design for the preparation of the hybrid Bill. Comprised of a concept scheme capable of being built, operated, maintained and developed to enable the Environmental Impact Assessment to be carried out, and to provide Bill cost assessment.
Technical directorate	Phase One and Phase 2a (PSCs) Phase 2b: CDES	The design required in order for HS2 Ltd to prepare specifications for design and construction contracts consistent with the chosen procurement route(s).
Phase One and Phase Two	Phase One: Multidisciplinary Design Consultants (MDC) and Engineering Delivery Partner (EDP) Phase Two: (to be confirmed)	The design required to provide sufficient scope definition to enter design and consultation contracts.
Phase One and Phase Two	Phase One Phase Two (to be confirmed)	The design required to set costs and obtain consents (approvals).
Phase One and Phase Two	Phase One Phase Two (to be confirmed)	The design required to develop the Scheme Design to a stage where manufacture and construction/assembly can take place.



Design resources

Review procedure

HS2 Design Review Procedure, review stages and stage gates, and change management procedures

The HS2 Design Review Procedure

The Design Management Plan contains detailed descriptions of processes and requirements for approving designs to make sure that they meet HS2 project requirements.

In each section of the plan, you will find an overview of the process and signposts to technical documents that you need to be aware of. What follows is a summary of the key sections of the Design Management Plan.

Design acceptance at HS2

HS2 operates a design policy of self-certification. Approximately 90% of the design work produced will be self-certified by designers as meeting project requirements, with 10% being subject to HS2 design review to check for compliance. It is a risk-based approach using Verification Activity Planning (VAP).

Design reviews

The objectives of a design review are to ensure that:

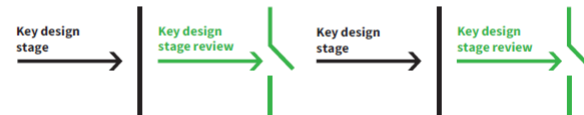
- All contributory factors, including interdisciplinary and cross-contractual issues, and reasonable design options have been considered
- The design meets the requirements as outlined in the Project Requirements Specification (PRS) and associated Contract Requirements Technical (CRT) documents, including safety, constructability and maintainability

HS2 operates a design policy of self-certification. Approximately 90% of the design work produced will be self-certified, with 10% subject to HS2 design review to check for compliance

Design review procedure

Stage Gate acceptance process

At each stage of the programme, the continuation of the process is decided by a series of Stage Gate reviews, overseen by a panel of discipline experts.



Stage Gate acceptance process

At each stage of the Phase Two programme, the continuation of the process is decided by a series of Stage Gate reviews, overseen by a panel of discipline experts. For Phase One, design acceptance at each key design stage is described in main works civil contracts works information (WI) 300 and WI310, for EWC WI 600. This procedure sets criteria by which submissions can be judged to be sufficiently developed and assured so that they can be accepted by HS2 and proceed to the next formal review.

Change Management Procedure

Design changes are managed in accordance with the HS2 Change Management Procedure. The HS2 Systems Integration Authority (SIA) assesses submissions and checks that proposals for change deliver the operational requirements and the external sponsor's requirements.



Further reading

HS2 Technical Assurance Plan:
HS2-HS2-SA-PLN-000-000003
HS2 Design Review Procedure:
HS2-HS2-DS-PRO-000-000002
Stage Gate Acceptance Process:
HS2-HS2-SA-PRO-000-000024
Change Management Procedure:
HS2-HS2-PC-PRO-000-000054
Route Development Procedure:
HS2-HS2-SA-PRO-000-000007
Document Management Procedure:
HS2-HS2-IM-PRO-000-000008
Client CDM Procedure:
HS2-HS2-HS-PRO-000-000010
Procedure for H&S in Design:
HS2-HS2-HS-PRO-000-000004
WI 300 Contractor's Design:
1MC01-HS2-PR-ITT-000-000420
WI 310 Contractor's assurance:
1MC01-HS2-PR-ITT-000-001212
HS2 Requirements Management Plan:
HS2-HS2-SA-PLN-000-000002
HS2 Configuration Management Plan:
HS2-HS2-SA-PLN-000-000004
Planning Consents Management Plan:
HS2-HS2-TP-STR-000-000002



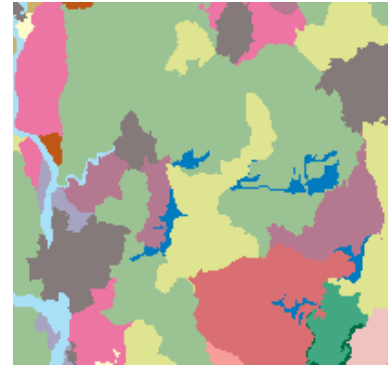
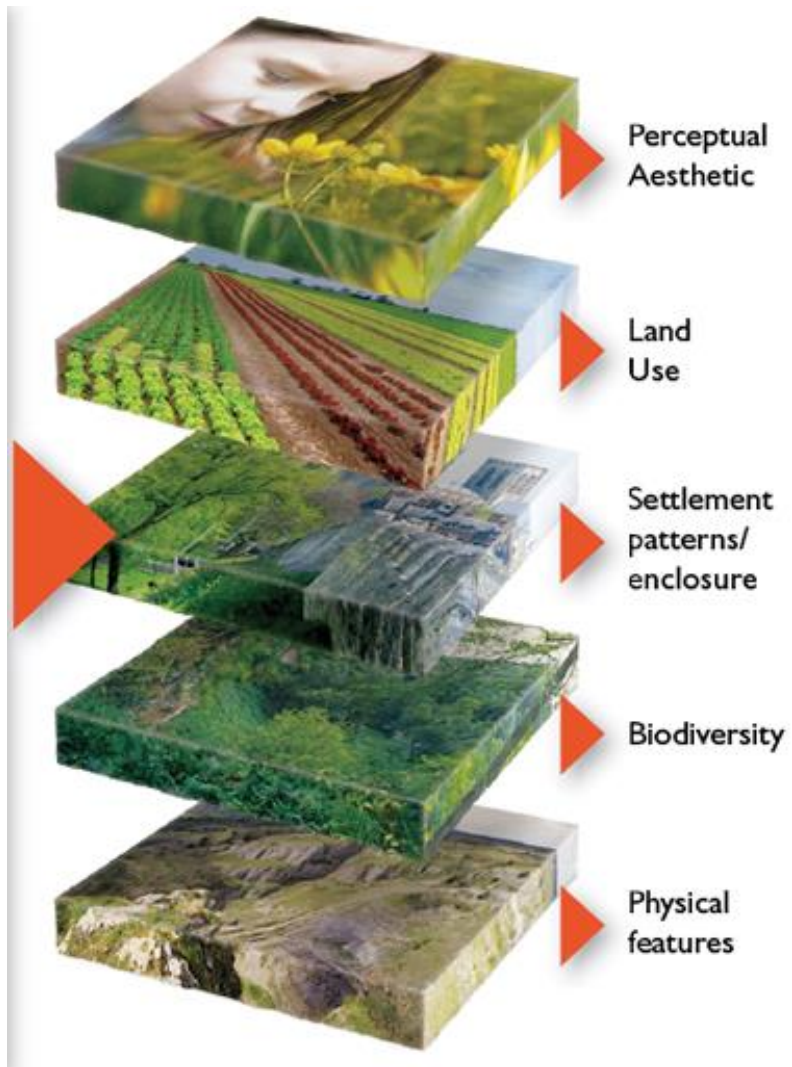
Assurance: Stage One Gateways

Stage One Gateway	Period after the Starting Date (Contract Award)
Start Up Meeting	One month
Gateway One	Two months
Gateway Two	Six months
Gateway Three	Nine months
Gateway Four	Twelve months
Gateway Five (draft final proposals for Stage Two)	Fourteen months
Gateway Six (final proposals for Stage Two)	Sixteen months
Notice to Proceed (to Stage Two)	Issued at the sole discretion of the Employer (est. 19 months)

Technical Standards: HS2 Design Policy

- HS2 Design Strategy (HS2-HS2-DS-STR-000-000002)
- HS2 Design Vision (HS2-HS2-DS-STR-000-000005)

Asset Information Management



Integrated design: components



Temporary



Highways



Earth works



Ecology



Fencing



Interface with
buildings & structures



Heritage &
Culture



Grassland



Access



Retaining
walls



Water



Soil



Public realm



Public Open Space,
Recreation & Play



Planting



Environmental
barriers



Management



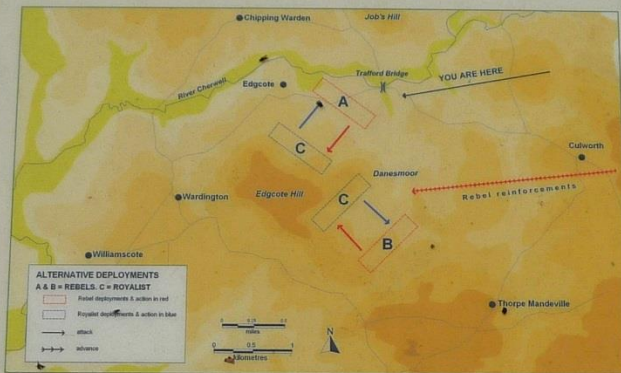
THE BATTLE OF EDGCOTE

26th July 1469



KNIGHT

Armour by Graham Turner, from Warner's, English Medieval Knight 1400-1500, Osprey Publishing Ltd, www.ospreypublishing.com



The Battle of Edgcote, or Danesmoor, was fought in the fields to the south of this location during the Wars of the Roses. An army commanded by the Earl of Pembroke was marching to join King Edward IV at Nottingham. Edward was threatened by a rebellion in the North led by a mysterious 'Robin of Redesdale'. Unknown to Pembroke, the rebels were marching south to join forces with the Earl of Warwick, 'the Kingmaker', a former ally of King Edward who was now plotting against him.

Pembroke encountered the rebel army at Edgcote on the 26th of July. Pembroke's army had been dangerously weakened because, supposedly after an argument the night before, the Earl of Devon had withdrawn his troops. This left Pembroke's mainly Welsh army both outnumbered and seriously short of archers.

The initial position of the Rebel army is uncertain. The map above shows the two most likely deployments: 'A' the rebels advancing from Trafford Bridge, and 'B' the rebels advancing from Thorpe Mandeville.



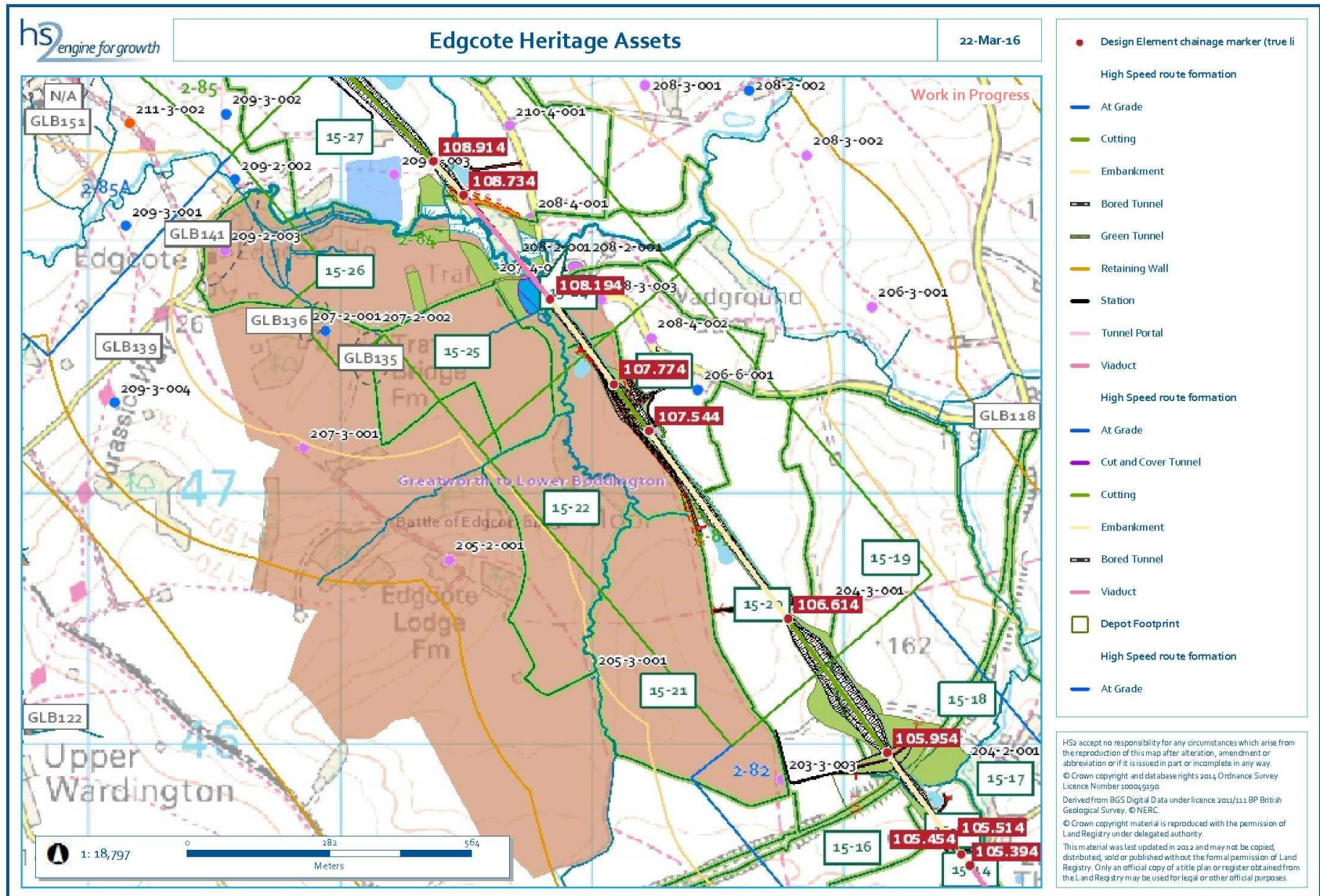
This panel is part of the 'Battlefield Trail' linking the battlefields of Edgcote, Creprey Bridge and Edgokill. To continue on the 'Battlefield Trail' follow the waymarkers. Leaflets are available from www.battlefieldstrust.com

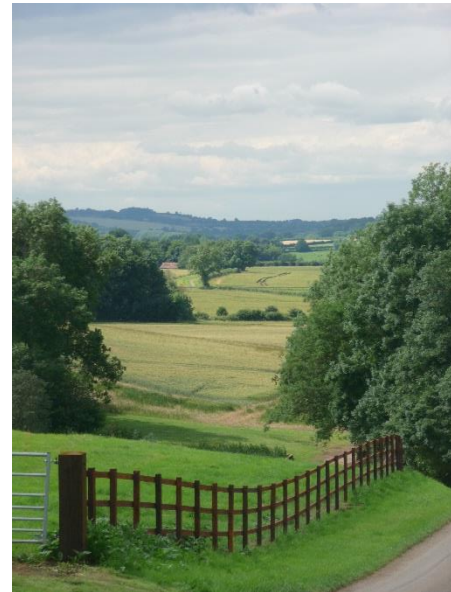


KNIGHT

Armour by Graham Turner, from Warner's, English Medieval Knight 1400-1500, Osprey Publishing Ltd, www.ospreypublishing.com

Edgecote Battlefield designation













Heritage design opportunities and constraints: Curzon Street Station

Document no.: s0037 EDP EV REP NS08 000001

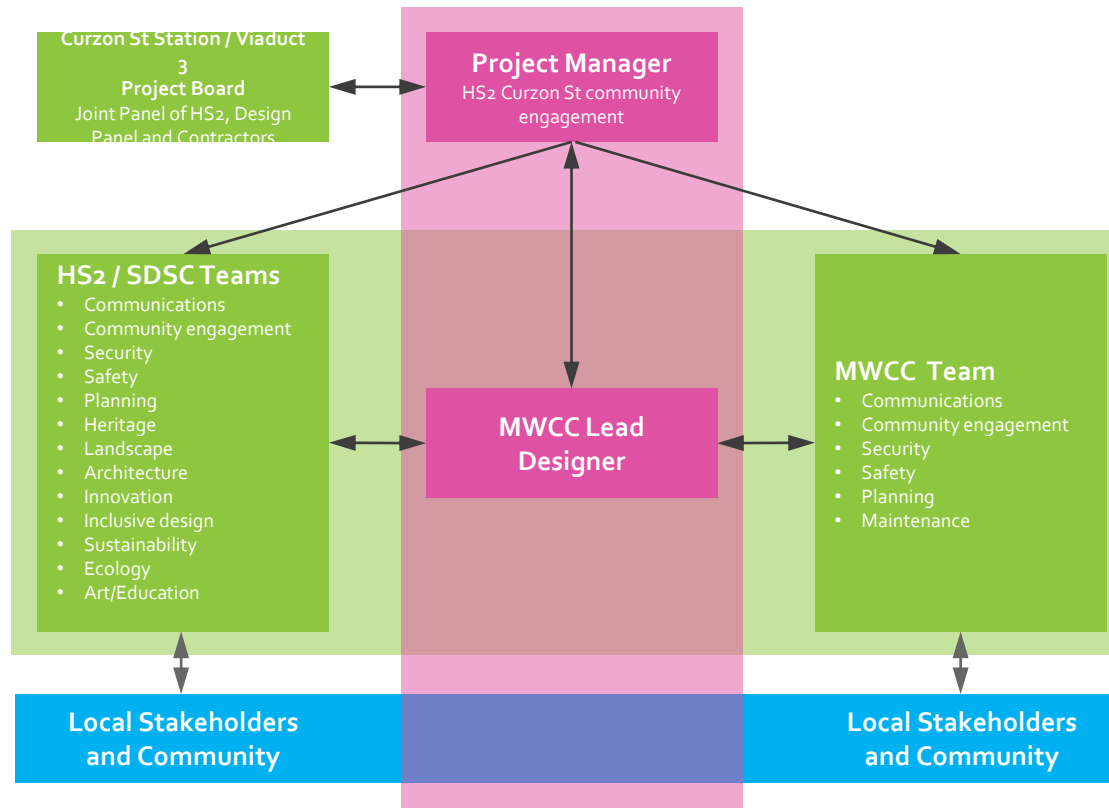
Revision	Author	Checked by	Approved by	Date approved	Reason for revision
Pos	Matthew Collins	Peter Deacon	Ker Sa 241	24/04/2018	For Acceptance

SECURITY CLASSIFICATION: OFFICIAL

Handling instructions: None



Design Collaboration Structure



Town Planning: Schedule 17

Heritage Sub-Group, 13th March 2018

Town Planning – S.17

- The Act (Feb 2017) grants deemed planning permission for development authorised by it – within our limits.
- Schedule 17 imposes conditions on that deemed planning permission including the need to seek approval of the detailed design – S.17
- A more stream-lined process. Fewer grounds for refusal, a target 8 weeks to determine, no validation period, limited conditions
- The process allows a level of local control, balanced with delivering a scheme of national significance.

Consents under Schedule 17

- Plans & Specifications

Design approval for most above ground permanent works

- Construction Arrangements

Class Approval, lorry route approval for construction traffic

- Site Restoration schemes

Restoration of sites occupied temporarily

- Bringing Into Use

Mitigation required for most Schedule 1 works

S.17 Process

- LPA Forward Plans – EWC, MWCC and SDSC Contractors to prepare a Forward Plan to issue to all Phase 1 LPA's every three months with a six month look ahead (last one issued 31st Jan). Forward Plans also issued to Statutory Consultees.
- Pre-submission – Early engagement with LPA's (following issue of Forward Plans). Extent of pre-submission dependant on size of consent. Pre-submission with Statutory Consultees will also take place where required.
- Submission – S.17 Pack submitted via Planning Portal (unless other methods have been agreed).
- Statutory Consultation – Appropriate SC's to be issued with S.17 pack within 5 days of submission with 21 days to respond to LPA. Where pre-submission with SC's have taken place, this will be referenced in the S.17
- Approval – 56 days (8 weeks) from date of submission

S.17 Score on the Doors

- Area North – 19 Submitted, 18 Approved
- Area Central – 33 Submitted, 28 Approved
- Area South – 2 Submitted, 1 Approved

Phase One Heritage Sub-group

Woodland Fund

HS2 Woodland Fund

- Constraints check against limited designated assets only
- FC in-house expertise and assessment of significance
- Use of HEFERs/FEPs
- Use of Heritage Gateway and its limitations
- Seeking expert LA archaeological advice and importance of the HER
- HS2WF links to agreed HS2 mitigation planting
- Guidance to applicants